Effects of Full-Day Kindergarten on Academic Achievement and Social Development

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A meta-analysis found that attending full-day (or all-day) kindergarten had a positive association with academic achievement (compared to half-day kindergarten) equal to about one quarter standard deviation at the end of the kindergarten year. But the association disappeared by third grade. Reasons for this fade-out are discussed. Social development measures revealed mixed results. Evidence regarding child independence was inconclusive. Evidence was suggestive of a small positive association between full-day kindergarten and attendance and a more substantial positive association with the child’s self-confidence and ability to work and play with others. However, children may not have as positive an attitude toward school in full-day versus half-day kindergarten and may experience more behavior problems. In general, the research on full-day kindergarten would benefit from future studies that allow strong causal inferences and that include more nonacademic outcomes. The authors suggest that full-day kindergarten should be available to all children but not necessarily universally prescribed.

Keywords: achievement, elementary schools, meta-analysis.

To have an atmosphere in which the children naturally may be comfortable together.

To have the situations in school carried out as nearly as possible as they are in life outside of school.

To establish a relationship between the child and the teacher in which he feels secure and knows the teacher is a guide and friend.

To understand each child as a person and to further his development in light of his own personality that he may live as a cooperative person in a social group.

To have the curriculum grow out of the interests the children bring to school from their home and community living.

To help the child adjust to the routine necessary in a large school building.

Mink (1937, p. 265)

Grace Mink was the training supervisor at the Michigan Normal College when its lab school provided full-day kindergarten (FDK) for 36 children from small
towns in the surrounding area. Having kindergarten in the school was not unique, but having FDK in 1937 was becoming increasingly rare. Similar to circumstances today, Mink suggested that the primary impetus for providing FDK was not to meet academic goals. Rather, she wrote that “the transportation problem makes it impossible for the kindergarten children to be taken home until the rest of the school is dismissed. Therefore, they must remain in school from eight-thirty A.M. until three-fifteen P.M.” (p. 262). Still, Mink’s objectives for her kindergarteners (notwithstanding her gendered language) could be widely adopted today by educators focused on the developmental needs of young children.

For a variety of reasons, a renewed national debate has emerged about whether it is in the best interests of children, their families, and the broader society to provide kindergarten for a full school day. In this article, we examine the research evidence on the impact of FDK compared to half-day kindergarten (HDK) on the academic, social, and personal development of children. We also look at FDK effects on parents and teachers. In addition to examining a wide variety of outcome measures, we attempt to determine through a synthesis of past research whether any effects of FDK are lasting and, if so, for how long. Finally, by also synthesizing research that compares HDK, FDK in which children attend school every school day, and FDK that meets on alternate school days, we hope to shed light on the issue of whether it is the number of hours that children attend kindergarten or how those hours are arranged that is the locus for any effects.

Before turning to the research, however, we first present a brief history of kindergarten and of its prevalence in the United States, including reasons for the renewed interest in FDK. We also provide a list of both the positive and negative effects that the proponents and opponents of FDK have offered in both the research and policy literatures. Then, we summarize some of the characteristics of FDK programs that might influence whether FDK has positive, negative, or no effects. These were used to help us identify possible moderators and mediators of the outcomes of empirical comparisons between FDK and HDK. Finally, we present the conclusions about FDK that others have drawn from examining the research literature.

A Brief History of Kindergarten

Culminating in Germany in the 1840s, the idea of kindergarten was already nearly 100 years old when Mink wrote about her full-day program (for detailed histories of kindergarten, see Beatty, 1995; Shapiro, 1983). The term kindergarten was coined by the German educator and philosopher of education Friedrich Froebel (1782–1852). Froebel was one in a group of thinkers about early childhood education, usually described as having started with Johann Pestolozzi (1746–1853) but including Johann Herbart (1776–1841), Maria Montessori (1870–1952), and John Dewey (1859–1952). All these thinkers observed children carefully, developed a variety of educational practices, and had enormous influence on early childhood education in Germany, Switzerland, the United Kingdom, and the United States.

Froebel, as well as the other early childhood reformers of the time, divided early education into three stages—infancy, early childhood, and childhood. He was most interested in the years between ages 4 and 6, encompassing the transition of education from the family to the school. Froebel’s kindergarten, or “child garden,” was
for children of this age. The essential elements of Froebel’s kindergarten, according to Shapiro (1983), were,

First, the kindergarten was to be an institution where the child could congregate with his peers outside the restraints of the family and school. At the same time, the protective gardenlike atmosphere of the kindergarten [Froebel actually envisioned kindergarten taking place in gardens (Brosterman, 1997)] would guard the child against the corrupting influence of society and the dangers of nature. In the child garden, the mental, physical and social faculties of the child could be cultivated, unfolded and ripened. In the end kindergarten signified for Froebel more than an institution—it was an approach to early child training. (p. 22)

Froebel viewed children as possessing an innate desire for creative expression that would flower if left to its own devices (in the proper environment). Froebel’s romantic vision of childhood and early childhood education was in stark contrast to other contemporaneous conceptions of what young children could or should do and learn. On one hand was the notion of the child as innocent and full of important potential. On the other hand was the notion of the child as fundamentally sinful and needing to be trained into good behavior and thought. For example, Calvinism, a common strain of Protestantism at the time, saw children as born in ignorance and open to being led to Satan if not properly and carefully educated in the precepts of Christianity.

The philosophical roots of the first kindergartens in the United States remained firmly in the Romantic tradition. The first was opened in Wisconsin in 1856 and was operated by Margaret Meyer Schurz, who was trained by Froebel. Thus, these kindergartens not only adhered to Froebel’s philosophy but also were conducted using the German language. The first English-speaking kindergarten in the United States was opened in Boston in 1860 but still used Froebel’s method. Not surprisingly, the Transcendentalists of New England found a kindred spirit in Froebel. As the movement expanded, the content of kindergarten activities became more homegrown.

In the 1870s kindergartens were established for the children of immigrants and the urban poor. These typically were privately funded by charity organizations. The first kindergarten associated with public schools was established about the same time in St Louis, Missouri. Because of cost considerations, these first public kindergartens often operated on a half-day schedule.

In the late 1800s the kindergarten movement in the United States took a more pragmatic turn. Exemplary of this change was John Dewey’s direction of kindergarten at his lab school from 1896 to 1903 (Beatty, 1995). Dewey reacted to some of the interpretations of Froebel’s belief that kindergarten children should be left to their own devises. He did so in the larger context of having seen Montessori classrooms and his uniquely American valuing of independence and self-sufficiency. Dewey felt there was a middle ground between free play and formal instruction. He also felt that the play children engaged in should be grounded in real activities performed at home, which directly built on the work of Montessori. So rather than engaging in the abstract play that was a hallmark of Froebel’s approach, Dewey’s students played at washing clothes, weaving rugs, and cooking their own lunches (Weber, 1984).
During World War I and the period of a huge influx of immigrants from Europe to urban centers, many of the private kindergartens in the United States were incorporated into the public school system. These programs took on the added task of teaching the children of immigrants to speak English and introducing them to American culture.

During World War II, fewer kindergarten teachers were available and the half-day model became the most prevalent form of program delivery. And although Froebel’s philosophy still was the dominant approach (as Mink’s objectives attest), the emphasis on imparting academic skills to kindergarteners continued to grow. This push for the introduction of academics into kindergarten was further impelled in the 1950s during the cold war, when concern about global competition with our ideological adversaries led to a national desire for the acceleration of academic knowledge acquisition throughout the school years.

The 1960s and 1970s were times of significant expansion of state- and community-funded kindergartens (Elicker & Mathur, 1997). These largely remained half-day programs and maintained the focus on play, socialization, and the transition to more formal learning that would still be recognizable to Mink. But, Elicker and Mathur (1997) report, by the 1990s kindergarten had undergone a significant transformation:

Curriculum goals had become more academic and skill-oriented. A typical kindergarten morning (or afternoon) was packed with tightly-scheduled reading and writing instruction, mathematics lessons, and other structured activities. Play and socialization in many programs had taken a back seat to preparation for an increasingly rigorous first grade curriculum. (p. 460)

Another development during the 1990s was the reemergence of the FDK program.

In sum then, in many ways, conflicting views of the child as an agent in a process of discovery or an empty vessel to be filled by more or less well-intentioned influences still infuses the modern-day debate over kindergarten, what its goals should be, and whether it is best for children to attend kindergarten for an entire school day. Certainly, however, with the passage of time the context and content of the debate has changed dramatically.

A Contemporary Definition of Kindergarten

Because finding a place for gardens or Satan in our definition would be highly restrictive, for purposes of this article the definition of kindergarten is less infused with any particular philosophical perspective than would please the Romantics or the Calvinists. To mesh with today’s common understanding, we define kindergarten as (a) a formal program (b) offered in a school or school-like setting (c) during the year prior to entering first grade and (d) lasting one school year. Formal program means that the kindergarten activities are developed, organized, and supervised by at least one adult, typically at least one of whom has been credentialed to provide kindergarten instruction. School-like setting means that the kindergarten is attended by groups of children typically in a building that serves older school children, but some kindergarten programs are free standing. Children attending kindergarten are typically between the ages of 4 and 6.
FDK in the United States

As Mink’s description suggests, early in the history of kindergarten in the United States FDK was not rare and was especially popular in rural areas. But by 1977 only about one in four kindergarteners attended all day. By 2003, this figure had increased to two in three children in FDK (Child Trends Data Bank, 2003). These percentages were even higher among non-Hispanic Black children (80% were enrolled in FDK) and children from low-income families (71% from households with incomes between $15,000 and $30,000).

Reasons for the Increase in FDK

Most experts agree that there are four primary reasons for the recent increase in FDK (see Brewster & Railsback, 2002). First, the growth in single-parent families and two-parent families in which both parents work outside the home has heightened the need for full-day care for preschool children of all ages. Second, many young children in the United States do not speak English at home. It is widely held that these children require language instruction as early as possible so that the language barrier does not impede their academic progress. Third, the movements toward (a) increased accountability for schools and (b) rising state standards have heightened pressure on educators to accelerate students’ movement through the academic curriculum. And last, it has become a national priority to close the gap in achievement between children coming to school from disadvantaged and/or ethnic minority homes versus middle-class and/or White homes. One solution offered for each of these four societal concerns is to increase the time students spend in school and extend the availability of academic instruction to younger children.

Positive and Negative Effects of FDK

The notion that a full day of kindergarten will positively affect this array of social concerns has both its proponents and skeptics. Table 1 presents a summary of the positive effects of FDK that have been offered by its advocates. Principal among the benefits are the academic advantages. Often pointing to research (Pennsylvania Partnership for Children, 2003; WestEd, 2005), proponents of FDK claim that it contributes to increased school readiness by better preparing students for first grade, leads to higher grades and standardized test scores, and supports language development. They also suggest that FDK lessens the need for grade retention, remedial education, and special education placements. As indirect effects on achievement, FDK proponents suggest that it helps foster more independent learning and greater creativity.

Some proponents of FDK point as well to nonacademic benefits (Brannon, 2005; Brewster & Railsback, 2002). FDK advocates claim that it can improve children’s self-esteem and self-confidence and assist with their socialization and peer relations by providing more opportunities to interact with other children. Socialization includes learning more quickly to be more cooperative and properly interact with other children and adults. Finally, if school lunches are available, the nutrition of some children in FDK may improve (Pennsylvania Partnership for Children, 2003).

The mechanisms through which FDK leads to these positive effects are viewed by proponents as the result of salutary effects on teachers and classroom instruction.
**TABLE 1**

*Potential positive effects of full-day kindergarten compared to half-day kindergarten*

For students
- Better academic skill development
- Reading readiness
- Language development, especially for non-English-speaking students
- Higher standardized test scores
- Fewer grade retentions, less remediation
- Fewer referrals to special education services
- More independent learning
- Easier transition to first grade
- Better socialization and peer relations
- More cooperative behavior
- More opportunity to interact with other children and adults
- Positive influence on self-esteem, self-confidence
- Better nutrition

For instruction and teaching
- Better student attendance
- More individualized instruction
- Easier identification of problem areas
- Less hurried instruction
- More repetition of material
- Less transition time between activities
- Fewer total students for each teacher to track

For parents
- Lower child care costs
- Easier scheduling and transportation
- More contact with the teacher

For society
- Levels the playing field for disadvantaged children
- More learning opportunities for low income children
- Decreased cost because of reduced need for retention and remediation

(Brewster & Railsback, 2002; Ohio State Legislative Office of Education Oversight, 1997; Pennsylvania Partnership for Children, 2003; WestEd, 2005). They claim that FDK improves school attendance and provides time for more individualized instruction that can lead to earlier identification and remediation of learning problems. They say that instruction in FDK classrooms is less hurried and allows for more repetition. Less time is spent on transitions between activities; those activities that occur at the start and close of the school day consume a smaller portion of the day. Children’s attendance may improve. For teachers, the total number of students each must track is halved (assuming that HDK teachers have both a morning and an afternoon session).

With regard to parents and society at large, as previously noted, free public FDK can lower child care costs and ease scheduling and transportation concerns.
Also, because teachers have fewer students, parents may find the teacher is more accessible. From a broader societal perspective, proponents of FDK point to its potential to level the playing field for disadvantaged children and decrease the costs for retention and remediation in later grades (Brewster & Railsback, 2002; Le, Kirby, Barney, Setodji, & Gershwin, 2006; Weast, 2001; WestEd, 2005). Those who are skeptical about the benefits of FDK not only wonder whether it will deliver on its promises but also raise concerns about some possible negative effects on children (see Table 2). In The Hurried Child, David Elkind (2006) wrote,

> Although a developmentally appropriate kindergarten should be a half-day of hands-on learning experiences in the morning and nap and quiet time in the afternoon, this often does not happen. The kindergarten is now seen as a preparation for the first grade and a place where children learn their letters and numbers. (p. 67)

Thus, of most concern among the skeptics is that FDK may raise expectations about what children should know when they enter first grade. This occurs because first grade content is pushed down into kindergarten (Karweit, 1992). But the child may not be ready for the added rigor. Cruikshank (1986) argued that kindergarteners learn by doing: “A 5-year old is still a 5-year old. They need a developmental program that meets their cognitive (academic), social, emotional and motor needs”

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**TABLE 2**  
*Potential negative effects of full-day kindergarten compared to half-day kindergarten*

For students  
- Causes higher expectations for first graders  
- First grade pushed down to kindergarten  
- Pressure to achieve things before developmentally prepared  
- Kindergarten should be more learning by doing rather than worksheets and teacher-led instruction  
- Increased fatigue, irritability, aggression  
- Lengthened adjustment because of separation anxiety  
- Poor role models in lunchroom, playground  
- Loss of confidence, enjoyment of learning  
- Less time for informal learning  
- Part of day in home is also important  
- Fewer opportunities to visit informal education settings (e.g., museums)

For teachers and instruction  
- Less planning time  
- Greater fatigue because of handling same students all day

For parents  
- Child care needs of working parents still may not be met

For society  
- Diminished parent responsibility  
- Cost (salaries, space)  
- Takes resources from more effective interventions (e.g., smaller classes)  
- Access is still unequal for disadvantaged students
By bending to societal pressures, skeptical educators argue, kindergarteners may be asked to learn things they are not ready for developmentally, and the effort may have the opposite effects from those intended (Gullo, 1990).

Concerns about FDK go beyond a possible failed attempt to accelerate learning. Some kindergarten teachers worry that the longer school day will lead children to be tired, irritable, and aggressive and will increase the time children need for adjustment to school by prolonging separation anxiety from parents (Good, 1996). Also, they wonder whether exposure to poor role models (e.g., older children misbehaving in the lunchroom) will increase bad behavior on the part of children in FDK. All of this may actually result in a loss of confidence and enjoyment in learning (WestEd, 2005) rather than the boost in self-esteem envisioned by FDK proponents. And, some argue, there are opportunities for informal learning that arise at home and in the community that are lost when young children spend their day in school (e.g., visits to museums with parents; Berson, 1968; Brannon, 2005).

Also in contrast to the arguments of proponents, kindergarten teachers worry that instruction might be adversely affected by FDK because teachers will have less time for planning and be more fatigued because of handling the same students all day (Good, 1996). Working parents may find that even though the school day has been lengthened, it still does not meet their needs for child care, as the beginning or end of the school day does not coincide with the beginning or end of the work day (Olsen & Zigler, 1989). And finally, from a societal viewpoint, FDK may lead to an erosion of parents’ sense of responsibility for their children (Gullo, 1990), will increase costs that take resources away from other perhaps more efficacious programs (Karweit, 1992), and still may reveal unequal access that works against the more disadvantaged students (WestEd, 2005).

Factors That Might Influence the Effects of FDK

Program components and instructional techniques. One thing that both the proponents and the skeptics of FDK agree on is that, regardless of its length, the content and instructional strategies used in the kindergarten program are paramount to its success or failure. Thus, the list given earlier of potential effects of FDK on instructional and teacher practices might also be viewed as mediators of FDK effects on students; their presence or absence might determine whether FDK has positive, negative, or no effects on student outcomes. For example, FDK might lead some teachers to spend more time working with students individually whereas other FDK teachers do not. We might then expect the effects of FDK to be more positive for students in need of remediation in the former classrooms than the latter ones.

Miller (2002), citing a document from the ERIC Clearinghouse on Early Childhood Education, listed 11 characteristics of effective kindergarten programs, regardless of their length. Effective programs (a) integrate new learning with past experience in projects; (b) use mixed-ability, mixed-age groups of students; (c) provide an unhurried setting; (d) involve children in firsthand experience; (e) provide for informal interaction with objects, other children, and adults; (f) emphasize language development and preliteracy skills; (g) share information and build understanding with parents; (h) emphasize reading to children at school and at home; (i) balance small-group, large-group, and individual instruction; (j) assess
progress through close observation, and (k) develop social skills, including conflict resolution.

In keeping with most of these dicta, Clark (2001) cautioned that kindergarten providers should “resist the pressure to include more didactic academic instruction in all-day kindergarten programs. . . . An all-day kindergarten program can provide children with the opportunity to spend more time engaged in active, child-initiated, small-group activities” (p. 4). Thus, assuming these characteristics are indeed the keys to effective kindergarten programs, the extent to which FDK encourages, discourages, or leaves unaffected the use of these strategies should mediate the appearance of positive, negative, or no effects on children.

**Individual differences.** It is also recognized by those who study kindergarten that the potential exists for either positive or negative effects of FDK to occur depending on the readiness of the child for a longer day in a school-like setting. However, the issue of individual differences is complicated by the fact that individual differences that might be used to predict children’s reactions to FDK can also serve as the outcomes that FDK is meant to inculcate in children. For example, the list of potential positive effects of FDK includes the value of socialization to other children, whereas the list of negative effects includes concerns about separation anxiety. But a lack of separation anxiety and greater prior socialization to other children might also be individual differences that moderate whether or not a child will benefit from FDK in other areas of development.

The issue of individual differences in children’s reactions to FDK must consider how characteristics and abilities of children interact to determine who may benefit from FDK. For example, by far the most frequent individual differences mentioned as moderators of FDK effects are the child’s economic circumstances and whether or not English is spoken at home. However, children from a disadvantaged home where English is not spoken might gain the most from FDK but only if they possess the needed social skills and experience little separation anxiety.

**A Summary of Past Synthesis Findings**

Table 3 presents brief summaries of the conclusions reached by other scholars about the cumulative research on the effects of FDK. These syntheses suggest several areas of consensus and confusion. First, although the literature on FDK suggests a rich array of potential impacts on children, research has focused on only a small subset of these. Academic effects predominate. Although other measures of effects appear sporadically, they rarely are mentioned repeatedly by those who have examined the literature.

Second, the research methodologies used in FDK studies leave much to be desired. Reviewers bemoan the lack of studies that randomly assigned children to FDK and HDK programs. They also note that small sample sizes reduce the power of studies to detect small effects and that a lack of diverse student populations in most studies reduces researchers’ ability to examine the generality (and specificity) of effects.

That said, several past interpreters of FDK research do see in the literature support for immediate positive academic effects of FDK for children in general and
TABLE 3
Summary of conclusions of other reviews of the literature on the effects of full-day kindergarten

Puleo (1988)
Reviewed 19 studies with 30 outcomes related to basic academic skills. Found 22 outcomes favored FDK.
“Much of the research suffers from serious problems in internal and external validity” (p. 428). More recent studies (since 1980) favor FDK. Strong FDK effects for low SES children. “Research on long-term effects supports the value of full-day” (p. 431).
“Most investigators report that fatigue [among children] is not a problem” (p. 432).

Olsen and Zigler (1989)
“In general, extended-day programs do seem to bring about short-term increases in standardized test scores, particularly with children who are disadvantaged, bilingual, or ‘least-ready’ for school. There is little evidence to suggest, however, that positive changes in academic performance is maintained beyond the early elementary school years or that there are changes in motivation or general intellectual ability that would be likely to support significant long-term change” (p. 179).

Karweit (1992)
Mentioned 4 experiments and 12 quasi experiments. “The academic benefits of full-day kindergarten, then, are inconsistent and most clearly demonstrated in the case of at-risk populations. . . . Full-day kindergarten will have to compete with alternatives such as establishing prekindergartens, reducing class size in early grades, or providing tutors in early grades. Unfortunately, little research documents the relative effectiveness of these different approaches” (p. 83).

Clark and Kirk (2000)
“Most of the recent research on all-day kindergarten indicates positive benefits for children in terms of academic achievement and behavior” but “what children do in kindergarten may be more important than how long they are in the classroom each day” (p. 231).

Elicker (2000)
FDK students progress further academically compared to HDK or alternate-day students. Tentative evidence that FDK has stronger, longer-lasting academic benefits for children from low-income families. No current, strong evidence that academic achievement gains for FDK persist beyond first grade. No evidence of detrimental effects of FDK.

Jones (2002)
Meta-analysis of 22 studies that compared academic achievement of FDK and HDK students. Overall effect size was $d = 0.56$. FDK had a smaller effect on math than on reading or language.

Education Commission of the States (2004)
“Experts now are in general agreement that there are no detrimental effects to attending full-day kindergarten and, in fact, students in full-day programs show significantly stronger academic gains over the course of the kindergarten than their half-day counterparts. The research also finds that poor and minority students especially can benefit from participation in full-day programs. There is less agreement about the degree to which benefits gained from attending full-day kindergarten carry forward throughout the student’s academic career” (p. 1).

(continued)
TABLE 3 (continued)

Plucker (2005)
FDK “is associated with a wide range of positive outcomes, including increased student achievement and social and behavioral development.” “Positive effects appear larger for disadvantaged students.” FDK is expensive. Many comments regarding quantity versus quality but this is an oversimplification: FDK “fundamentally changes the nature of activities that occur in that program” (p. 6).

WestEd (2005)
“Children benefit from a developmentally appropriate, full-day program, most notably in terms of early academic achievement” (p. 1). Benefits include increased school readiness, higher academic achievement, improved student attendance, literacy and language development, social and emotional, decreased retention and remediation.

Le, Kirby, Barney, Setodji, and Gershwin (2006)
Definitive conclusions “have been stymied by studies with small sample sizes, lack of statistical control, potential self selection bias, and other methodological weaknesses. . . . There is no consistent definition of full-day kindergarten, and little research that explicates the nature, features, or structure of particular programs. As a result, generalizations about full-day versus half-day programs must be made with caution” (p. 6).

Note. FDK = full-day kindergarten; HDK = Half-day kindergarten.

for children from disadvantaged homes in particular. Lesser consensus exists about whether positive effects of FDK persist beyond the end of kindergarten or first grade. Here, some reviewers find more support than others.

The Present Synthesis

With this as background, we undertook the current synthesis with hopes of improving in several ways the current state of knowledge about the effects of FDK. In addition to conducting the most comprehensive meta-analysis of the effects of FDK on achievement, we were the first to use statistical methods to aggregate nonacademic effects of FDK. Also, we attempted to meta-analytically test the general consensus of past interpreters of the research that FDK has more positive effects for children from disadvantaged homes. Then, we looked at whether enough evidence had accumulated to draw conclusions about the moderating influence of other individual differences or program components. Next, we attempted to bring together all of the research on the long-term effects of FDK. This has been an area of contention among interpreters of the FDK research literature; the longitudinal evidence deserves a more thorough and systematic treatment than it has received in the past. Finally, we are the first to systematically integrate research that compared HDK and FDK programs that meet every school day to FDK programs that meet on alternate days. Alternate-day FDK (AD-FDK) is often adopted as a mechanism to save transportation costs without increasing instructional costs. Also, by gauging effects of the two FDK variations, we may be able to parse out
which, if any, FDK effects are from the longer school day or the increase in instructional time.

Method of Literature Search and Judging Study Relevance

Literature Search Procedures

First, we searched six different electronic reference databases for reports related to FDK: ERIC, PsycINFO, Sociological Abstracts, Dissertation Abstracts, EconLit, and Google Scholar. The searches were conducted during October 2009 and covered all years available in the database. The terms all day kindergarten or full day half day schedules were used in these searches. Two researchers then examined each title and abstract in the document file and judged whether they felt the document (a) was irrelevant (e.g., the document mentioned FDK only in passing but was primarily focused on another topic), (b) likely contained background information on FDK (e.g., an opinion piece or description of a program) but not empirical evidence on its effects, or (c) likely contained empirical evidence on FDK associations. If either researcher felt that the document might contain data relevant to FDK, we obtained the full document. In total, 655 document records were examined. Of these, 290 were deemed potentially relevant by at least one document record reader. We then obtained the 290 potentially relevant documents along with numerous documents we used “background” and examined these in their entirety.

Next, we employed two direct-contact strategies to ensure that we tapped sources that might have access to FDK research that would not be included in the reference databases. First, we contacted through e-mail 153 deans, associate deans, or chairs of colleges, schools, or departments of education at institutions of higher education and requested that they ask their faculty to share with us any research they had conducted that related to FDK. Second, we sent a similar e-mail request to the National Association of Test Directors, the Education Commission of the States, and the Regional Educational Laboratories.

Finally, we examined the references in previous syntheses of the FDK literature to determine whether these contained mention of any reports we had not encountered through the reference database and direct-contact searches.

Criteria for Including Studies

For a study to be included in the research synthesis, several criteria had to be met. Most obviously, the study had to have focused on the difference between kindergarten programs that operated on a half-day schedule versus a full-day schedule on a measure of student academic achievement or readiness, some other measure of student development or well-being, or some measure of classroom process.

We employed five additional screens to eliminate studies before coding began. First, we set aside studies that compared HDK to FDK that met on alternating school days. These studies were examined separately. Second, the only sampling restriction placed on studies was that they had to study kindergarten programs based in the United States or Canada ($k = 2$). Third, we eliminated studies that intentionallly confounded the FDK variable with another instructional intervention.
For example, we eliminated a study if the report stated that in addition to going to school all day students in FDK classes were also provided services not available to HDK students (e.g., special reading or literacy programs or medical services for FDK students only) or were instructed using a different curriculum. Fourth, we included only outcomes measured at the end of the kindergarten year or the beginning of first grade. Any data on the lasting effects of FDK were set aside for separate analysis. Finally, the report had to contain enough information to permit the calculation of an estimate of the relationship between the length of the kindergarten day and the outcome measure.

**Studies Comparing FDK to HDK at the Conclusion of the Kindergarten Year**

**Method**

*Information retrieved from studies.* Numerous different characteristics of each study were included in the database. These characteristics encompassed six broad distinctions among studies: (a) the research report, (b) the research design, (c) the kindergarten programs themselves, (d) the setting of the study and the sample of students, (e) the outcome measures, and (f) the estimate of the relationship between attending FDK versus HDK on the outcome variable. As is true in all meta-analyses, many of the study characteristics we coded either were not reported often enough or exhibited too little variability across studies to be examined as moderators of FDK effects. Full descriptions of all the coded characteristics are available on-line at http://rer.sagepub.com/supplemental/. All appendices referred to below are available on this website.

**Effect size estimation.** We used the standardized mean difference, or $d$-index, to estimate the effect of the length of the kindergarten day on student outcomes (Cohen, 1988). In the meta-analysis, we subtracted the HDK mean from the FDK mean and divided the difference by their weighted average standard deviation. Thus, positive $d$-indexes indicate that the students in FDK programs had better achievement or academic readiness or higher scores on other measures of development or well-being or that the classroom process occurred more frequently in FDK classes. If available, we calculated effect sizes based on the means and standard deviations of the student outcomes. If means and standard deviations were not available, we indirectly retrieved the information needed to calculate $d$-indexes from inferential statistics (see Borenstein, 2009). Effect sizes that adjusted or control for other variables also were retrieved or calculated if the needed information was available.

**Coder reliability.** Each research report was coded by two coders. If there was a discrepancy in coding, this was first discussed by the coders. If the disagreement could not be resolved, the first author (H.C.) was consulted. Because all studies were independently coded twice and continuing disagreements were resolved by a third independent coder, we did not calculate reliability for this process (which would have entailed training three more coders and having them code at least a subset of studies). Out of all possible codes, the two coders had an initial agreement rate of about 89%.
Methods of data integration. First, we examined the distribution of effect sizes to determine if any were statistical outliers. The Grubbs (1950) test, also called “the maximum normed residual test,” was applied (also see Barnett & Lewis, 1994). This test identifies outliers in univariate distributions and does so one observation at a time. If outliers were identified (using \( p < .05 \), two-tailed, as the significance level), these values were set at the value of their next nearest neighbor.

Publication bias. Even though we used several search techniques, there is still the possibility that we did not obtain all studies that have investigated the effects of FDK. Therefore, we used Duval and Tweedie’s (2000a, 2000b) trim-and-fill procedure to test whether the distribution of effect sizes used in the analyses was consistent with variation in effect sizes that would be predicted if the estimates were normally distributed. If the distribution of observed effect sizes was skewed, indicating a possible bias created either by the study retrieval procedures or by data censoring on the part of authors, the trim-and-fill method provides a way to estimate the values from missing studies that need to be present to approximate a normal distribution. Then, it imputes these missing values, permitting an estimate of the impact of data censoring on the observed distribution of effect sizes.

Calculating average effect sizes. We used a weighted procedure to calculate average effect sizes across all comparisons (Borenstein, Hedges, Higgins, & Rothstein, 2005). Also, 95% confidence intervals (CIs) were calculated for average effects. If the CI did not contain zero, then the null hypothesis of no FDK versus HDK difference can be rejected.

Identifying independent hypothesis tests. One problem that arises in calculating effect sizes involves deciding what constitutes an independent estimate of effect. Here, we used a shifting unit of analysis approach (Cooper, 2010). In this procedure, each effect size associated with a study is first coded as if it were an independent estimate of the relationship. For example, if a single sample of students permitted comparisons of FDK effects on math and reading readiness scores, two separate effect sizes were calculated. However, for estimating the overall effect of FDK, these two effect sizes were averaged prior to entry into the analysis, so that the sample contributed only one effect size. To calculate the overall weighted mean and CI, this one effect size would be weighted by the inverse of its variance. However, in an analysis that separately examined the effect of FDK on math and reading readiness scores, this sample would contribute one effect size to each estimate of a category mean effect size.

The shifting unit of analysis approach retains as much data as possible from each study while holding to a minimum any violations of the assumption that data points are independent. Also, because effect sizes are weighted by sample size in the calculation of averages, a study with many independent samples containing just a few participants will not have a larger impact on average effect size values than a study with only a single, or a few, large independent samples.

Tests for moderators of effects. Possible moderators of difference between FDK and HDK were tested using homogeneity analyses (Cooper, Hedges, & Valentine, 2009).
**Fixed and random effect.** When an effect size is said to be “fixed,” it assumes error is solely from differences among participants sampled in the study. However, it is also possible to view studies as containing other random influences, including differences in teachers, facilities, community economics, and so on. This view assumes kindergarten classrooms, schools, or even school districts in our meta-analysis also constitute a random sample drawn from a (vaguely defined) population of conditions under which kindergarten programs take place. If it is believed that such random variation in programs is a significant component of error, a random effect model should be used that takes into account this study-level variance in effect sizes (for a discussion of fixed and random effects, see Hedges & Vevea, 1998).

Rather than opt for a single model describing the underlying variation in effects, we chose to apply both models to our data. We conducted all our analyses twice, once employing fixed-effect assumptions and once random-effects assumptions. By employing this sensitivity analysis (Greenhouse & Iyengar, 2009), we could examine the effects of different assumptions on the outcomes of the synthesis. Differences in results based on different assumptions could then be part of our interpretation of results. For example, if an analysis reveals that a moderator variable is significant under fixed-effect assumptions but not under random-effects assumptions, this result suggests a limit on the generalizability of inferences about the moderator variable.

**Software.** All statistical analyses were conducted using the Comprehensive Meta-Analysis statistical software package (Borenstein et al., 2005). Only outcomes measures that were collected in studies described in at least four separate reports with at least four independent samples had meta-analytic procedures applied to them.

**Results**

The literature search located a total of 40 reports with usable data that compared students who attended FDK to students who attended HDK on some measure of immediate achievement. The 40 reports provided 254 separate effect sizes (152 unadjusted and 102 adjusted) based on 55 separate samples. The 40 reports appeared between 1979 and 2009. The sample sizes ranged from 7 to 12,790. Seven of these reports were published.

Of the 40 reports, 30 contained 43 separate samples with information that allowed FDK students to be compared to HDK students without statistical adjustments to the comparison. Of these, 16 reports and 23 samples also provided a comparison of FDK to HDK that was statistically adjusted post hoc to make the groups more comparable. There was an additional 10 reports containing 12 samples for which only an adjusted comparison could be obtained. Thus, a total of 26 reports containing 35 samples adjusted for various factors to make the groups more comparable.

Six reports that assessed achievement and two additional reports (including nine independent samples total) provided information on student attendance. The eight reports provided 12 separate effect sizes. The reports appeared between 1980 and 2007. The sample sizes ranged from 18 to 13,742. All of these reports were unpublished. Eight of these samples provided only an unadjusted comparison of
FDK to HDK student attendance, and one provided both an unadjusted comparison as well as a comparison statistically adjusted for various factors to make the groups more equivalent.

Five reports that assessed achievement and one additional report (six samples total) provided information on parent or teacher reports of improvement in students’ self-confidence and improvement in their ability to work and play with others. In all cases, these outcomes were assessed with single items from a questionnaire filled out by parents or teachers. The six samples provided eight separate effect sizes for self-confidence and seven for student ability to work and play with others. The six reports appeared between 1980 and 2005. The sample sizes ranged from 29 to 250. All of these reports were unpublished. Five of these samples provided only an unadjusted comparison of FDK to HDK on confidence and ability to work and play with others. One report provided an unadjusted effect as well as a comparison statistically adjusted for various factors to make the groups more equivalent.

Three reports that assessed achievement and one additional report (four samples total) provided information on improvement in student independence. The four reports provided four separate effect sizes. The four reports appeared between 1983 and 2005. The sample sizes ranged from 29 to 123. All of these reports were unpublished. All studies measured this outcome with a single item from a questionnaire filled out by either parents or teachers. All samples provided only an unadjusted comparison of FDK to HDK child independence.

Finally, five reports that assessed achievement and two additional reports (seven samples total) provided information on parent preference for FDK. In all cases, this outcome was assessed with a single questionnaire item asking parents to indicate their preferred choice for a kindergarten program. The seven reports provided eight separate effect sizes and appeared between 1980 and 2005. The sample sizes ranged from 83 to 250. Six of the reports were unpublished and one was published. Six of the samples provided only an unadjusted comparison of FDK to HDK preference, and one report provided an unadjusted effect as well as a comparison statistically adjusted for various factors to make the groups more equivalent.

Overall Association of FDK With Academic Achievement

Table 4 presents the results of the analyses examining the overall effect size for FDK using achievement and other indicators of adjustment and well-being as the outcome variable, after the test for statistical outliers and Winsorization (see Appendix D for details of the outlier tests and adjustments). The unadjusted effect sizes for FDK versus HDK on achievement ranged between \( d = -0.98 \) and +1.83. Of the 152 unadjusted effect sizes, 128 were in a positive direction, 23 were in a negative direction, and 1 was exactly zero. Using fixed-effect assumptions, the weighted mean \( d \)-index was 0.24 and was significantly different from 0 (95% CI = 0.23/0.25). Using a random-effects model the weighted average \( d \)-index was 0.31 (95% CI = 0.25/0.38).

The adjusted effect sizes on achievement varied between \( d = -0.98 \) and +1.82. Of the 102 adjusted effect sizes, 89 were in a positive direction and 13 in a negative
### TABLE 4

**Overall effects of full-day kindergarten on immediate outcomes**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Unadjusted d-index</th>
<th></th>
<th></th>
<th>Adjusted d-index</th>
<th></th>
<th></th>
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<tr>
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<td></td>
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<td>Random</td>
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<td>$k$</td>
</tr>
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<td>Achievement</td>
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<td>0.24</td>
<td>0.23/0.25</td>
<td>0.31</td>
<td>0.25/0.38</td>
<td>591.26***</td>
<td>35</td>
</tr>
<tr>
<td>Attendance</td>
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<td>0.08/0.13</td>
<td>0.10</td>
<td>0.06/0.15</td>
<td>9.26</td>
<td>1</td>
</tr>
<tr>
<td>Confidence</td>
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<td>0.56</td>
<td>0.41/0.72</td>
<td>0.55</td>
<td>0.32/0.79</td>
<td>10.56†</td>
<td>1</td>
</tr>
<tr>
<td>Ability to work or play with others</td>
<td>6</td>
<td>0.55</td>
<td>0.39/0.71</td>
<td>0.67</td>
<td>0.29/1.05</td>
<td>24.80***</td>
<td>1</td>
</tr>
<tr>
<td>Independence</td>
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<td>0.38</td>
<td>0.15/0.61</td>
<td>0.28</td>
<td>-0.25/0.80</td>
<td>14.37**</td>
<td>1</td>
</tr>
<tr>
<td>Preference for FDK</td>
<td>7</td>
<td>1.75</td>
<td>1.61/1.90</td>
<td>1.77</td>
<td>1.46/2.09</td>
<td>25.79***</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note.* CI = confidence interval; FDK = full-day kindergarten; HDK = half-day kindergarten.

†$p < .10$. **$p < .01$. ***$p < .001$. 
direction. Using fixed-effect assumptions, the weighted mean $d$-index was 0.33 and was significantly different from 0 (95% CI = 0.30/0.36). Using a random-effects model, the weighted average $d$-index was 0.35 (95% CI = 0.23/0.46).

The trim-and-fill analyses were conducted in several different ways (details can be found in Appendix E). Four different analyses involving the unadjusted effect sizes produced new distributions with imputed values that ranged from $d = 0.22$ to 0.27, and all remained statistically significant. For the adjusted effect sizes, no additional effect sizes were imputed. Thus, even when testing for possible data censoring, the effect of FDK on achievement was positive and significantly different from zero under all models.

**Overall Association of FDK With Nonacademic Outcomes**

As noted above, five nonacademic outcomes were studied often enough to warrant quantitative synthesis of results.

**Attendance.** The unadjusted effect sizes using attendance as the outcome variable varied between $d = -0.14$ and +0.27. Using fixed-effect assumptions, the weighted mean $d$-index for unadjusted effect sizes was $d = 0.10$ (95% CI = 0.08/0.13). Using a random-effects model, the weighted average $d$-index was also 0.10 (95% CI = 0.06/0.15). One study tested the adjusted effect size on attendance. It revealed a nonsignificant positive effect of FDK ($d = 0.09$, 95% CI = −0.32/0.50).

**Self-confidence.** The unadjusted effect sizes using self-confidence as the outcome variable varied between $d = +0.15$ and +0.99. Under fixed-effect assumptions, the weighted mean $d$-index was 0.56 (95% CI = 0.41/0.72). Under random-effects assumptions, the weighted mean $d$-index was 0.55 (95% CI = 0.32/0.79). One study tested the adjusted effect size on self-confidence. It revealed a significant positive effect size favoring FDK ($d = 1.36$, 95% CI = 0.91/1.82).

**Ability to work or play with others.** The unadjusted effect sizes for ability to work and play with others varied between $d = +0.18$ and +1.06. Using fixed-effect assumptions, the weighted mean $d$-index for unadjusted effects was 0.55 (95% CI = 0.39/0.71). Using a random-effects model, the weighted average $d$-index was 0.67 (95% CI = 0.29/1.05). One study tested the adjusted effect size on student ability to work and play with others. It revealed a significant positive effect size for FDK ($d = 1.06$, 95% CI = 0.63/1.49).

**Child independence.** The unadjusted effect sizes for child independence varied between $d = -0.36$ and +0.79. Using fixed-effect assumptions, the average $d$-index was 0.38 (95% CI = 0.15/0.61). Using a random-effects model, the average $d$-index was not significantly different from 0 ($d = 0.28$, 95% CI = −0.25/0.80). There were no tests of child independence that used adjusted effect sizes.

**Parent preference for FDK.** The unadjusted effect sizes for parent preference for FDK varied between $d = +1.09$ and +2.38. Using fixed-effect assumptions, the weighted mean $d$-index was 1.75 (95% CI = 1.61/1.90). Using a random-effects model, the...
model, the weighted average $d$-index was 1.77 (95% CI = 1.46/2.09). One study tested the adjusted effect size for preference for FDK. It revealed a nonsignificant negative effect size for FDK ($d = -0.11$, 95% CI = -0.52/0.30).

In sum then, we found sufficient data to conduct meta-analyses on five nonacademic outcomes that proponents claimed would be positively affected by FDK: attendance, self-confidence, ability to work and play with others, child independence, and parents’ preference for FDK. For proponents of FDK, the results were mixed. There was some evidence of a positive association between FDK and the child’s self-confidence and ability to work and play with others, but evidence of a positive association between FDK and child independence and attendance was more tentative.

**Methodological Moderators of the Association of FDK With Achievement**

Next, we conducted analyses exploring five moderators of the FDK–achievement association related to the methodology of the studies: (a) the type of report, (b) the organization in which the study was conducted, (c) the research design, that is, whether or not the study used some procedure to equate students in the FDK and HDK groups, (d) if students were equated, whether this was done on prior achievement only or on prior achievement plus other student differences, and (e) the total study sample size. Appendix F presents the details of these analyses. Below, we briefly summarize the results.

**Type of report.** The unadjusted effect size from published studies was not significantly different from unpublished studies using either fixed-effect or random-effects assumptions. Among the adjusted effect sizes, the effect sizes varied significantly for published ($d = 0.45$, 95% CI = 0.38/0.52) versus unpublished studies ($d = 0.30$, 95% CI = 0.27/0.33) under fixed-effect assumptions but not random-effects assumptions.

**Organization.** The average unadjusted effect size significantly varied by organization under a fixed-effect model but not under a random-effects model. Under fixed-effect assumptions, the unadjusted effect size was greater among studies conducted by researchers affiliated with a university ($d = 0.28$, 95% CI = 0.26/0.31) than a government agency ($d = 0.23$, 95% CI = 0.21/0.24). Among the adjusted effect sizes, the average effect size did not vary significantly by organization under either a fixed-effect model or a random-effects model.

**Research design.** Samples were considered to have employed a matching procedure if they matched individual students in FDK to individual students in HDK. Samples in which matching was conducted at the school level were not considered to have employed matching for the purposes of this analysis. Using both fixed-effect and random-effects models, the unadjusted effect size for matched designs (fixed-effect and random-effects: $d = 0.46$, 95% CI = 0.37/0.55) was significantly greater than that of nonmatched designs (fixed effect: $d = 0.24$, 95% CI = 0.22/0.25; random effects: $d = 0.30$, 95% CI = 0.23/0.37). In all reports for which a statistically adjusted effect size could be
obtained, a nonequivalent control group design with post hoc equating was employed. The adjusted effect size was significantly larger for matched designs compared to nonmatched designs under fixed-effect (matched: \( d = 0.40, 95\% \text{ CI} = 0.32/0.47 \); nonmatched: \( d = 0.31, 95\% \text{ CI} = 0.28/0.34 \)), but not random effects models.

One study (Elicker & Mathur, 1997) not included in the above analyses employed random assignment, making it a true experiment rather than a nonequivalent control group design. In this study, enrollment in four FDK classes was determined by randomly drawing from a pool of all incoming kindergarten students. The remaining students were assigned to eight half-day classes. At the end of the kindergarten year all students were evaluated by their teachers on their readiness to continue to first grade as well as a number of other academic outcomes measured at later time points. The researchers found that FDK students were rated by teachers to be more ready to continue to first grade compared to HDK students, controlling for a prekindergarten screening test and family income.

**Equating variables.** The association between the magnitude of effect sizes and the variables used to equate groups was examined. Under a fixed-effect model, the adjusted effect size was greater for samples adjusted on an achievement premeasure plus additional characteristics (\( d = 0.38, 95\% \text{ CI} = 0.32/0.44 \)) compared to samples adjusted on preachievement alone (\( d = 0.31, 95\% \text{ CI} = 0.27/0.34 \)). The effect size did not significantly vary by the equating variables under a random-effects model.

**Total sample size.** The unadjusted association of FDK with achievement varied for different total sample sizes under fixed-effect assumptions but not under random-effects assumptions. Contrasts revealed that the unadjusted effect size from samples with fewer than 200 participants (\( d = 0.35, 95\% \text{ CI} = 0.29/0.41 \)) was significantly greater than the unadjusted effect size from samples with 200 or greater participants (\( d = 0.24, 95\% \text{ CI} = 0.22/0.25 \)). The adjusted effect size significantly varied by total sample size under both fixed-effect assumptions and random-effects assumptions. Under a fixed-effect model, the adjusted effect size from samples with fewer than 100 participants (\( d = 0.63, 95\% \text{ CI} = 0.55/0.70 \)) was significantly greater than the adjusted effect size of samples with between 100 and 200 participants (\( d = 0.43, 95\% \text{ CI} = 0.36/0.49 \)). There was no difference between these groups under random-effects assumptions. The adjusted effect size for samples with 200 participants or more (fixed effect: \( d = 0.24, 95\% \text{ CI} = 0.20/0.27 \); random effects: \( d = 0.18, 95\% \text{ CI} = 0.06/0.30 \)) was significantly lower than the adjusted effect size for samples with fewer than 200 participants under both fixed-effect and random-effects models.

Taken together, the tests of methodological moderators revealed results not uncommon in meta-analyses. Published studies, studies conducted at universities, and studies with smaller samples tended to reveal larger effects. With regard to research design, studies using matching revealed larger effects than studies not using matching, and matching on more variables revealed larger effects than matching on only one variable.
We conducted moderator analyses of the effect of FDK on academic achievement using four moderators related to characteristics of the treatment and of the students. Table 5 presents these results.

**Year of kindergarten program.** We used the year of the report’s appearance to serve as a proxy for the year in which the FDK versus HDK comparison took place. Using a fixed-effect model, the unadjusted effect sizes indicated that the advantage for FDK was smaller in studies conducted before 1990 ($d = 0.19, 95\% CI = 0.18/0.21$) than in 1990 or after ($d = 0.34, 95\% CI = 0.32/0.36$). The relationship was in the same direction using a random-effects model, but the difference was not significant (pre-1990: $d = 0.28, 95\% CI = 0.18/0.38$; 1990 or after: $d = 0.36, 95\% CI = 0.28/0.43$). For adjusted effect sizes, both the fixed-effect and random-effects models revealed stronger associations after 1990 (fixed effect pre-1990: $d = 0.26, 95\% CI = 0.20/0.31$; 1990 or after: $d = 0.36, 95\% CI = 0.32/0.39$; random effects pre-1990: $d = 0.20, 95\% CI = 0.05/0.35$; 1990 or after: $d = 0.57, 95\% CI = 0.38/0.77$).

**FDK minutes per day.** Under a fixed-effect model, the unadjusted effect size when full-day students spent less than 360 minutes in school ($d = 0.30, 95\% CI = 0.27/0.33$) was significantly lower than the effect size when full-day students spent 360 or more minutes at school per day ($d = 0.37, 95\% CI = 0.32/0.41$). Under the random-effects model, the unadjusted effect size when full-day students spent less than 360 minutes in school ($d = 0.20, 95\% CI = 0.09/0.31$) was also significantly lower than the effect size when students spent 360 or more minutes at school per day ($d = 0.49, 95\% CI = 0.28/0.70$).

The adjusted effect size when full-day students spent less than 360 minutes in school (fixed effect: $d = 0.20, 95\% CI = 0.13/0.26$; random effects: $d = 0.07, 95\% CI = -0.11/0.25$) was again significantly lower than when full-day students spent 360 or more minutes at school per day (fixed effect: $d = 0.44, 95\% CI = 0.37/0.51$; random effects: $d = 0.43, 95\% CI = 0.18/0.67$) under both fixed-effect and random-effects assumptions.

**FDK selection.** Samples were grouped according to whether parents nominated students to be in FDK or if some characteristic of the students, such as low prior achievement or at-risk status, allowed them to be selected for FDK. In some studies, several procedures were employed sequentially. For example, first parents may have nominated their child to attend FDK, and then to further limit the number of students attending FDK a characteristic of the student was used to select from among parent-nominated children. In these cases, samples were classified by the primary mode of selection. So in the former example, this sample would have been classified in the parent-nomination category.

The unadjusted effect sizes did not significantly vary by FDK selection procedure under either fixed-effect or random-effects models. Adjusted effects sizes significantly varied by selection procedure under fixed-effect assumptions but not under random-effects assumptions. Under fixed effect, the adjusted effect size for samples in which FDK students were selected by parent nomination ($d = 0.55, 95\%$...
<table>
<thead>
<tr>
<th>Moderator</th>
<th>Unadjusted d-index</th>
<th></th>
<th></th>
<th></th>
<th>Adjusted d-index</th>
<th></th>
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<td>d</td>
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<td>0.32/0.36</td>
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<td>5.75*</td>
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<td>0.19/0.22</td>
<td>0.35</td>
<td>0.25/0.45</td>
<td>10</td>
<td>0.43</td>
<td>0.36/0.50</td>
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*Note.* FDK = full-day kindergarten.
*aFor the FDK selection moderator analysis, samples were grouped according to their primary mode of selecting students into the FDK classrooms. There may have been additional selection methods used to the primary method of selection.
*p < .05. **p < .01. ***p < .001.
CI = 0.40/0.70) was greater than the effect for samples in which FDK students were selected by a student characteristic (d = 0.20, 95% CI = 0.12/0.29).

Community. The unadjusted effect sizes varied significantly by type of community under fixed-effect assumptions but not random-effects assumptions. Under fixed effect, the unadjusted effect size for nonurban samples (d = 0.34, 95% CI = 0.21/0.47) was greater than the effect size for urban samples (d = 0.21, 95% CI = 0.19/0.22).

The adjusted effect sizes when participants came from an urban community (fixed effect: d = 0.43, 95% CI = 0.36/0.50; random effects: d = 0.49, 95% CI = 0.25/0.72) were significantly greater than the effect sizes when participants came from a nonurban community (fixed effect: d = 0.23, 95% CI = 0.15/0.31; random effects: d = 0.18, 95% CI = 0.02/0.35), under both fixed-effect and random-effects models.

Outcome Moderators of the Association Between FDK and Achievement

Finally, we conducted moderator analyses of the association between FDK and achievement using two moderators related to outcome variable. Table 6 presents these results.

Achievement measure. Outcomes were grouped according to whether a nationally standardized measure of achievement was used versus all other achievement outcomes, including researcher-created scales, class grades, teacher reports, and parent reports. The unadjusted effect size significantly varied by type of outcome measure under fixed-effect assumptions but not random-effects assumptions. Under fixed-effect assumptions, the unadjusted effect size for standardized achievement measures (d = 0.28, 95% CI = 0.26/0.30) was greater than the effect for other achievement measures (d = 0.22, 95% CI = 0.21/0.24).

The adjusted effect sizes significantly varied by type of achievement measure under a fixed-effect but not random-effects model. Using the fixed-effect model, the adjusted effect size for standardized achievement measures (d = 0.40, 95% CI = 0.36/0.45) was greater than the effect for other achievement measures (d = 0.28, 95% CI = 0.25/0.32).

Subject matter. Outcomes were grouped according to whether a measure of verbal achievement was used—including reading or reading readiness, writing, and language development—compared to a mathematics measure of achievement. Outcomes that could not be categorized as verbal or mathematics, including those outcomes that were general measures of achievement or measures assessing multiple subjects, were excluded from this analysis.

Under the fixed-effect model, the unadjusted effect size on mathematics achievement (d = 0.32, 95% CI = 0.30/0.34) was significantly greater than the effect size for verbal achievement (d = 0.17, 95% CI = 0.15/0.18). The unadjusted effect size did not significantly vary by subject matter under the random-effects model. However, for adjusted effect sizes, this pattern was reversed. The adjusted effect sizes for FDK significantly varied by type of subject matter under fixed-effect assumptions but not under random-effects assumptions. Under the
<table>
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*p < .10. ***p < .001.
fixed-effect model, the effect size for FDK on verbal achievement (d = 0.40, 95% CI = 0.37/0.44) was significantly greater than the effect size for mathematics achievement (d = 0.15, 95% CI = 0.09/0.22).

**Moderators of the Association Between FDK and Nonachievement Measures**

No moderator analyses were conducted for the nonacademic outcomes because the number of effect sizes (and effects sizes with the needed information) was too few.

**Studies Using Data From the Early Childhood Longitudinal Studies–Kindergarten**

In the fall of 1998 the National Center for Education Statistics sponsored a study that began collecting longitudinal data on the incoming class of kindergarten students. The Early Childhood Longitudinal Study–Kindergarten (ECLS-K) involved a nationally representative sample of more than 21,000 children (from an estimated 3,864,000 kindergarteners) and 3,300 of their teachers in 866 public and private schools.

The ECLS-K data represent the largest and broadest sample of kindergartener data assembled and the most in-depth data collection. Being a public database, it is not surprising to discover that it has been used in numerous studies that employed different subsamples of students and different analytic techniques. Many of these studies have included whether the children attended HDK or FDK programs as a variable in their analyses. Because they all draw data from the same sample of children, it would have been inappropriate to include all but one of them in the meta-analysis reported above. However, because studies using ECLS-K data test so many models and report rich data on numerous differences in FDK and HDK classrooms that go beyond achievement outcomes, a summary of these studies fills out our picture of difference between FDK and HDK in important ways.

**Methods used in ECLS-K data collection.** The ECLS-K kindergarten classes were in schools that also included other grades (some variation of 1st through 12th) or had preschool programs along with kindergarten. Stratified sampling was used in which counties or groups of counties were used to identify 1,277 public and private schools offering kindergarten. About two dozen children were then randomly chosen from each participating school, regardless of its size. Children were oversampled from private schools and from Asian or Pacific Islander ethnic groups. Weights were applied to adjust for the oversampling and to adjust for missing responses. These procedures allow for generalization to the national kindergarten population. A full description of the sample, sampling procedures, and measures can be found in the *Early Childhood Longitudinal Study: Kindergarten Class of 1998–99: Base Year Public-Use Data Files User’s Manual* (National Center for Education Statistics, 2001) and *ECLS-K K–5 Longitudinal Electronic Files and Codebook* (National Center for Education Statistics, 2006).

Researchers returned to schools and again collected data on the students in the original sample at the end of their kindergarten year (spring 1999) as well as the fall (testing a 27% subsample for purposes of estimating summer learning loss) and spring of first grade and the spring of third and fifth grades. However, the
testing interval in kindergarten and first grade was closer to 6 months than 9 months, suggesting any effects of HDK versus FDK may be underestimated.

Data were collected about the children and schools on a wide variety of variables from the children themselves, from school administrators, from the children’s teachers, and through computerized telephone interviews with parents. These data included assessments of children’s cognitive ability, behavior problems, and self-perceptions as well as demographics. School-level variables included geographic location, type of community, and class size. Classroom variables included questions about the teacher’s background as well as instructional techniques. Family variables included parents’ perceptions of their child’s progress along with other family variables, for example, maternal employment. Assessment of children’s cognitive abilities was collected in reading, mathematics, and general knowledge in kindergarten and first grade and reading, math, and science in third and fifth grade. A two-stage, untimed assessment technique was used in early-grade reading and math in which all children took the same initial test along with a second test based on their initial performance, which could then be used to place all children on a common scale. The reading test included subtests on basic reading skill, vocabulary, and reading comprehension. The math test measured seven early skill domains.

**Characteristics of FDK and HDK classrooms.** In the ECLS-K sample, about 56% of children attended FDK programs and 44% attended HDK programs. Denton, West, and Walston (2003) reported that FDK was more likely to be provided in the southern region of the United States and in urban and rural communities than in suburban ones. One of the more extensive analyses for the base year was conducted by Walston and West (2004). These researchers looked at several school, family, child, and instruction differences between HDK and FDK. They found that Catholic schools were more likely to provide FDK and both public and private schools had higher concentrations of minority (especially Black) and low-income students in FDK than Catholic schools. Although FDK teachers engaged in more teacher-directed whole-class, small-group, and individual instruction, the proportion of the day spent in each type of instructional grouping was roughly the same for HDK and FDK. Lee, Burkam, Ready, Honigman, and Meisels (2006), also using ECLS-K data, found that even though FDK classes generally last about twice as long as HDK classes, the amount of instructional time spent in FDK classes was not twice that in HDK classes. Across all subject areas, HDK classes spent about 12.4 hours in instruction whereas FDK spent about 17 hours per week (also see Rathburn, Walston, & Germino Hausken, 2000). FDK students received about 30% more language and reading instruction and 46% more time on math. FDK was more likely to use instructional groupings based on the achievement level of the students. Walston and West (2004) also reported that FDK classes were more likely to provide math, social studies, and science instruction every day and were more likely to focus on several reading and math subskills at least weekly. Some of the math subskills covered weekly in FDK classes were more likely to be part of the first grade curriculum.

**Outcomes differences.** Appendix G provides a summary of studies that examined the effects of the length of the day on student outcomes at the end of kindergarten and includes information on the subsample of students and measures used and the
findings. These studies used several different methods to analyze the ECLS-K data, many of which are regression based. They have also used a wide variety of other variables in various combinations in the models they have built. Although this is certainly another positive aspect of these studies, it always remains possible that the employed models omitted critical variables, the absence of which led to spurious results.

Similar to the meta-analysis results, the studies using ECLS-K data generally reveal a greater positive gain in reading and math for children in FDK programs than HDK programs at the end of kindergarten or beginning of first grade. This is true even though FDK students entering kindergarten are more likely to come from minority and poor families and begin the year with lower test scores. However, the data also reveal that FDK children may not have as positive an attitude toward school and may experience more behavior problems in school.

**Longitudinal Effects of FDK Versus HDK on Academic Achievement**

**Studies Using ECLS-K Data**

Appendix H presents results for studies using ECLS-K data that measured FDK versus HDK effects in first grade and beyond. Although we must recognize that these studies are all drawing samples from the same database, they do employ different subsamples. They also use a variety of different control variables and analytic techniques. Taken as a whole, these studies consistently find that the positive effect of FDK on achievement dissipates over time and appears to vanish for all subgroups of students by the end of third grade.

**Other Studies With Follow-Up Achievement Measures**

In addition to the ECLS-K, we found 20 other studies that compared FDK to HDK and included measures of achievement taken at a time other than the end of the kindergarten year. These studies are contained in Appendix I.

Performing a direct combination of the results of these studies at different time points is problematic; different studies would contribute to estimates at different times, meaning each time point estimate would be based on different sample compositions. Thus, there would be no indication of the trend over time in the individual samples. However, a subanalysis could be performed on only those studies that included measurements at two or more time points. Examination of the nine studies in Appendix I that truly are longitudinal reveals no consistent temporal pattern. Some studies show increases in a positive effect of FDK over time, others show decreases in the positive effect, and others with measures at more than two time points reveal both increases and decreases in no consistent pattern. Thus, unlike the ECLS-K data, there is no clear indication that the positive effect of FDK either increases or diminishes over time.

**Academic Achievement Outcomes of Alternate-Day FDK Versus (a) FDK Everyday or (b) HDK at the Conclusion of the Kindergarten Year**

In these analyses, we examined studies that compared AD-FDK programs to half-day programs or every-day, full-day programs. In AD-FDK programs students attend school for approximately the same amount of time as students in
HDK, but they do so by attending on alternating days rather than for half days every day.

In most instances, AD-FDK programs are instituted to save on transportation costs. By switching to such a schedule, school districts eliminate the need for the midday busing of kindergarten students. Because students are still in school only half-time, all other costs remain the same as under an HDK schedule. On the negative side, parents of students in AD-FDK programs express concern about (a) finding child care for kindergarteners when they are not in school and (b) the impact of the irregular schedule on their children’s sense of routine.

By comparing AD-FDK to HDK we could assess whether this effort to save money has implications for academic achievement. Also, by comparing AD-FDK to HDK and FDK we might get another indication of whether it is the arrangement of time in school or the amount of time in school that influences students’ academic performance. If the former comparison reveals no differences and the latter suggests a positive effect of FDK, this would argue that it is the time students spend in school that provides the benefit for academics. If the reverse findings emerge, it would suggest that it is the arrangement of time that is beneficial.

We found 17 studies that made comparisons between HDK and AD-FDK. Descriptions of the individual studies can be found in Appendix J. With regard to the direction of findings and effect sizes, the results do not clearly favor either program type. The directions of effect in five studies favored AD-FDK on all measures of achievement, whereas two studies uniformly favored HDK. Of six studies that produced a mixed array of effect sizes, two had a preponderance of findings favoring HDK, two favored AD-FDK, and two revealed no favored direction. Four studies simply reported no differences. The average effect size across all studies favored AD-FDK over HDK ($d = 0.27, 95\% \text{ CI} = 0.18/0.35$, using a fixed-error model and $d = 0.20, 95\% \text{ CI} = 0.00/0.39$, using a random-error model). However, it should be kept in mind that four studies finding no difference could not be used in the calculation of the average effect size.

Comparisons of AD-FDK with FDK (Appendix K) are fewer in number ($k = 7$) but did appear to favor FDK over AD-FDK. Five studies revealed effect sizes uniformly favoring FDK on achievement measures (immediately following kindergarten), whereas two studies showed a preponderance of mixed results favoring HDK. The average effect size across all studies favored FDK over AD-FDK ($d = 0.31, 95\% \text{ CI} = 0.16/0.46$, using a fixed-error model and $d = 0.43, 95\% \text{ CI} = 0.07/0.79$, using a random-error model).

In sum then, there appears to be tentative evidence that FDK has a more positive impact on achievement than AD-FDK, which seems to differ little from HDK.

**Discussion**

There are several conclusions about the effects of FDK that seem warranted by the results of this research synthesis. First, *at the end of the kindergarten year children who attend full-day programs perform better on tests of academic achievement than children who attend only half-day programs*. Regardless of whether this overall association is statistically adjusted to control for other influences on achievement potentially confounded with the length of the kindergarten day and regardless of whether a fixed-effect or random-effects model is used, *at the end of the kindergarten year children in FDK programs appear to score about*
one fifth to one third of a standard deviation higher on academic tests than children in HDK programs. And although there was evidence that the length of the kindergarten day might have different strengths of association with different subject matters, the association was positive and statistically significant for all tests, using adjusted and unadjusted effect sizes under fixed-effect and random-effects models on measures of verbal and mathematics achievement. All eight average estimates of association fell between $d = 0.15$ and 0.46. Also, the association of FDK and achievement was positive and significant using both standardized and unstandardized measures of achievement, with a stronger association for standardized tests (using fixed-effect assumptions). Finally, the meta-analysis indicated that over the past three decades as the movement to improve learning in schools has accelerated the difference between achievement in FDK and HDK has increased. Taken as a whole then, we find it reasonable to suggest that a first approximation for the positive association of FDK versus HDK on verbal or math achievement immediately after the kindergarten year would be about one quarter standard deviation. Expressing this association in a different metric, the average (50th percentile) child in FDK performed better on academic tests than 60% of children in HDK at the end of the kindergarten year.

There were several sources of evidence to suggest that the positive association of FDK with academic achievement is a result of the amount of time children spend in school rather than the arrangement of time within the school day. The meta-analysis revealed that children in FDK programs that lasted more than 360 minutes (6 hours) a day showed a larger positive advantage on achievement tests relative to their HDK counterparts than did FDK students attending school for less than 360 minutes. Also, although the comparisons were varied and difficult to combine, it appeared that results of evaluations involving AD-FDK programs were consistent with this finding. That is, comparisons of AD-FDK with HDK revealed a less consistent direction of findings than AD-FDK versus FDK comparisons, which tended to favor FDK.

We should be quick to point out however that simply adding time to the kindergarten day will not inevitably improve children’s achievement. As we stated in the introduction, both the proponents and the skeptics of FDK agree that the content and instructional strategies used in the kindergarten program are paramount to its success or failure. Although added time may create the opportunity for increased learning, it is how that time is used that will determine the FDK intervention’s ultimate effectiveness.

Regrettably, we were not able to use meta-analytic techniques to compare the strength of the association between FDK and HDK separately for children from disadvantaged and middle-class homes. However, we were able to meta-analytically compare evaluations conducted in urban versus nonurban settings. Interestingly, a significant difference was found for the unadjusted measures of achievement using a fixed-effect model (but not a random-effects model) favoring FDK for nonurban children. For adjusted measures FDK had a significantly stronger association with higher academic achievement for children attending programs in urban than in nonurban communities using both fixed and random effect models. And the size of this difference was quite large, with the association for urban children being about twice the size for nonurban children. If we make the assumption that children in urban settings were more likely to come from poorer
homes, then this can be taken as indirect evidence for a potentially greater impact of FDK for poorer children, given that the relation is causal.

Our synthesis of the data analyses using the ECLS-K revealed that although FDK children experienced greater growth during the kindergarten year, when subsequent years were added to the analyses, the HDK students showed a stronger growth trajectory and seemed to have made up any early FDK advantage by the end of third grade. This finding likely will gain considerable attention in policy debates. Therefore, we return to it below for an extended discussion of its potential causes.

Finally, as noted above, the use of outcome measures other than achievement in evaluations of FDK is relatively infrequent. Just a few nonacademic outcomes have generated enough data to warrant mention. The results of the meta-analysis suggested that the association of FDK versus HDK using nonacademic outcomes suggests no clear potential positive benefit. Evidence about child independence was inconclusive. There appeared to be a positive association between FDK and child independence (about two fifths of a standard deviation), but only when using a fixed-effect model did this association reach statistical significance. Furthermore, there appeared to be just a small positive association between FDK and attendance (about one tenth of a standard deviation), although this small association was significant under both fixed-effect and random-effects assumptions. Evidence was more suggestive of a positive association of FDK with the child’s self-confidence (slightly more than half a standard deviation) and ability to work and play with others (about one half to two thirds standard deviation). In contrast, the analyses of data from the ECLS-K suggested that FDK children may not have as positive an attitude toward school as HDK children and may experience more behavior problems in school. Again however, the nonexperimental nature of all these comparisons complicates their interpretation. To wit, it could be argued that because poor and minority students are more likely to be placed in FDK programs, we would expect children in these programs to perform worse on all of these measures, including attendance, self-confidence, and cooperative behaviors; the fact that they do not could be taken as evidence of a positive effect of FDK.

Two cautions need to be explicitly stated to properly contextualize the interpretation of the evidence we provide above. First, it needs to be stated that the research designs used to compare the effects of FDK with HDK generally do not permit strong causal inferences. Only one study employed random assignment of children to FDK and HDK programs. That said, the results of one randomized field trial did favor FDK. Also, the moderator analyses indicated that studies using matching revealed larger positive associations with FDK than studies not using matching, and matching on more variables revealed larger associations than matching on only one variable. Thus, although the studies do point to some tentative conclusions about the relative effects of FDK and HDK, more confident conclusions must await the conducting of multiple evaluations using stronger research designs, especially randomized field trials and regression discontinuity designs (Shadish, Cook, & Campbell, 2002).

Second, not surprisingly, the effects of FDK and HDK on measures of academic achievement dominate the outcome measures used in research. Many of the positive and negative effects of FDK versus HDK listed in Tables 1 and 2 are yet to be the focus of study, and those that have been studied have rarely appeared in more
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than one or two evaluations. This is an important point to make because the lack of evidence on many outcomes should not be used to narrow the debate about the relative effects of the two instructional strategies. Such a narrowing can happen in two ways. First, because certain outcomes have not been studied they may incorrectly be ignored in policy discussions. Second, the absence of evidence about an effect should not be taken as evidence of the absence of effect. Because certain effects of FDK versus HDK have not been studied does not mean these potential outcomes are unimportant or are proven to be uninfluenced by the intervention; to the extent that they are valued as outcomes for children they continue to deserve a place in considerations of which kindergarten program is preferable for children. Regrettably, however, the research literature is silent on these issues.

Explanations for the “Fade-Out” of the FDK Effect

Assuming the relation is causal, there are at least three possible explanations for the finding that the academic advantage gained by children in FDK programs disappears by the end of the third grade. First, it may simply be that the FDK “fade-out” is just that: The effect of FDK becomes a smaller and smaller influence as children accumulate more and more experiences in an academic setting. This explanation would suggest that because of its transitory nature, the argument that FDK leads to improved academics is specious in the long run.

Second, it is possible that because of the positive effect of FDK on academics at the end of kindergarten and persisting into first and second grades, children who benefitted from FDK were less likely than HDK children to be eligible for other support services in later grades. Over 3 years, this difference in eligibility may have allowed the HDK students to “catch up” to the FDK students (for a similar argument made regarding the “fade-out” of summer school effects, see Cooper, Charlton, Valentine, & Muhlenbruck, 2000). In this instance then, the achievement trajectories of students in FDK and HDK might or might not have been similar without the added support, but eventually the FDK advantage bestowed on participants was negated by provision of other compensatory services to HDK children.

Third, Votruba-Drzal, Grining, and Maldonado-Carreño (2008) pointed out that between one half (for reading) and one quarter (for math) of the postkindergarten growth advantage for HDK was associated with child and family variables. This argument brings us back to the fact that for all its positive aspects, the ECLS-K was not an experimental study. Therefore, because FDK classes were more likely to serve minority and poor children, the postkindergarten trajectories may be expressing school obstacles these children more frequently face in subsequent years. So although the direct comparison of FDK and HDK students by third grade shows no difference, the trajectory of poor and minority children would suggest that had the FDK intervention been truly inert the FDK group would have been behind the HDK group. If this is the case, FDK had a positive effect on children by boosting their end-of-kindergarten achievement, but it did not change their achievement trajectory.

Determining which, if any, of these explanations for the FDK “fade-out” is supported by the evidence will require new research. The best approach to assessing the third—different trajectories—explanation will require the use of experimental designs involving random assignment of children to FDK and HDK programs. Only in this way can researchers generate estimates of trajectories for children.
from different backgrounds that are independent from the impact of the kindergarten program. Such studies not only can estimate the immediate impact of FDK on children but also can determine whether FDK has an impact on the subsequent learning trajectory of children.

One impediment to conducting randomized field trials is the ethical concern of using chance to determine who does and does not receive a desirable service. The decision about which children will receive which kindergarten program typically is based on parent nomination or an administrative decision considering student characteristics. We suspect, however, that “natural experiments” (Shadish et al., 2002) occur in this area. That is, whenever an intervention leads more people to volunteer than can be accommodated and a lottery is used to choose participants, a natural experiment has occurred. Data collected from students who were assigned to kindergarten programs through lotteries can be used to obtain a stronger inference about the causal effect of the intervention than the designs that currently dominate FDK research.

Of course, natural experiments are not without problems. For example, in retrospective designs it may be difficult to track down children who received FDK and HDK many years ago. For both retrospective and prospective natural experiments, attrition and treatment cross-over can be problems. Furthermore, because these designs first require an overabundance of volunteers, the results may be generalizable only to children whose parents are interested in having them in FDK at all. Even with these limitations, the use of longitudinal data from natural experiments on FDK would be a welcomed addition to the evidence about this intervention and could give us a much needed assessment of the viability of not only FDK’s immediate effects but also whether the apparent fade-out of the effect is real or a function of different educational trajectories associated with differential provision of the program.

The second explanation for the FDK “fade-out”—differential provision of post-kindergarten remedial services—could easily be studied as part of the natural experiments described above. Rather than collecting data on achievement measures only, these longitudinal studies would also collect data on the frequency with which FDK and HDK children receive support services in subsequent years. Also, it is possible to use the ECLS-K study to get a first indication of the viability of this hypothesis. This could be done by examining whether children who were in FDK received fewer remedial academic services after the kindergarten year. Of course because FDK students were more likely to come from poor and minority homes, this student characteristic would need to be controlled in the data analysis. We found no previous use of the ECLS-K data to address this issue.

Finally, given the data, the first explanation for the FDK “fade-out”—that the positive effect of FDK diminishes as the child accumulates more academic-related experiences through the first three school grades—is the alternative hypothesis to the first two; it is simply an unmediated description of the research finding. In other words, we have the evidence that the leveling effect occurs.

Implications for Policy and Practice

We would speculate that, in fact, all three of the explanations for the FDK “fade-out” are operative; it is not necessary that only one prevail. Perhaps the best way to envision the issue is to not think about an “average” FDK effect that is
similar for all children but to think of the children in FDK and HDK as a collection of individuals who will be differently influenced by the intervention and its implications for latter instruction. For some FDK students who are from poor or minority families, the years subsequent to kindergarten will be filled with additional challenges that erode the academic advantage they obtained in FDK relative to their more fortunate and majority counterparts in HDK. For some HDK children who are struggling with academic material, the early “boost” provided by FDK they did not receive may be provided by services that come later in their schooling. And for some FDK and HDK students their experiences in later grades (e.g., the superior or subpar first grade teacher, exceptional or disruptive classmates) may serve to level out their achievement, diminishing the impact of their differential kindergarten experience. There is no reason why all three of these processes might not operate simultaneously but in different magnitudes depending on the child and the experiences their schools provide.

The implications for policymakers of these findings and our interpretation of them seem clear. First, FDK may not be the “magic bullet” that alters permanently poor and minority students’ academic trajectories. Rather, with regard to academics, FDK is probably best viewed as one in a continuing series of interventions needed to alter the academic success of students who enter and continue through school with disadvantages. Furthermore, other support services provided in later grades may be capable of providing similar levels of academic compensation when FDK is not an option for struggling students.

The results of research involving outcomes of FDK other than academics are sparse and inconsistent. However, it seems to us that the concerns voiced by many educators and scholars regarding the “hurried child” (Elkind, 2006) remain legitimate; there certainly are some children who are not ready for 6 hours of schooling at the age of 5. These children may not possess the emotional regulation or social maturity needed to benefit from the longer day of instruction. Their attitudes toward school may suffer, and they may be more prone to behavior problems when their attention wanders from the lesson.

That said, it is clear that parents with children in FDK have far more positive attitudes toward FDK than parents of children in HDK. And the availability of FDK serves an important need for single-parent families and families in which both parents work outside the home. What this suggests is that FDK ought to be an option available to families who desire it. Perhaps optimally, decisions about whether a child will benefit from FDK might best be made by parents in consultation with educators, who might assess the social and emotional maturity of children as well as their readiness to learn.

Conclusion

Similar to research on so many other educational programs and interventions, the evidence on the impact of FDK leaves much to be desired. The research designs are weak for making strong causal inferences, and many of the proposed outcomes for FDK are yet to be the focus of study. One positive note is the existence of the ECLS-K study, which provides a longer view of the impact of FDK than is available for many other interventions. Taken as a whole, however, we find that the evidence on FDK—again similar to so many other educational interventions—suggests that its overall effect on academic outcomes will be evident at first but
fade over time. For some students, its impact might even be negative on some nonacademic outcomes. Thus, FDK is not a magic bullet that will render meaningless all the impediments to school success that struggling students will face.

Instead, it would be best to think of FDK as one component in the array of interventions parents and educators can use to help all children grow to their full potential. It should be available to all but not necessarily universally prescribed for all. For some struggling students, it will prove an initial boost that, when coupled with other interventions initiated in later years, can help them overcome deficits that otherwise would be predictive of academic failure. For others it may be too much, too soon. Now the task for education researchers is to develop evidence-based algorithms that help educators and parents predict when, and for whom, the FDK experience will be most beneficial.

Notes

The authors wish to thank Jill Kahane and Megan Kuhfeld for their assistance with data retrieval. Correspondence should be sent to Harris Cooper at cooperh@duke.edu.

1Half-day kindergarten (HDK) programs typically last about 3 hours and full-day kindergarten (FDK) about 6 hours. Although there is variation around the length of HDK and FDK programs (and thus differences from study to study), we doubt that any program labeled HDK will be as long as an FDK program.

2Although it would have been ideal to include studies conducted in other countries, these were simply too few to permit us to include them for purposes of comparison to U.S. and Canadian studies. To include them and claim that findings thus generalized across cultures would have been unwarranted.

3For purposes of isolating the effects of an extended day, the provision of additional services and different curricula along with FDK prevents the estimation of the unique effect of extending the kindergarten day. By excluding these studies we can assume that HDK students received the same services as FDK students and were taught using the same curriculum. Thus, any effect is from FDK alone. This was not true in the excluded studies.

4Readers can find tables containing descriptions of the individual studies that were included in the meta-analyses on immediate academic outcomes (Appendix B) and immediate nonacademic outcomes (Appendix C).

5In the text, only weighted average $d$-indexes and their confidence intervals are reported. The number of samples involved in the analyses and the results of the tests for homogeneity (and their significance levels) can be found in Tables 4 to 6.

6The one study that employed random assignment of children to FDK and HDK programs (Elicker & Mathur, 1997) found a positive effect of FDK on reading achievement of approximately three quarters of a standard deviation. This estimate was based on an adjusted effect size, controlling for a prekindergarten screening test and family income.

7Significant fixed-effect analyses for study sample size suggested that smaller studies produced larger associations, often an indication that some data censoring (of smaller studies with smaller effect sizes) has occurred. However, the trim-and-fill analysis revealed an estimated fixed-effect association of $d = 0.23$ with imputed values added. And the effect size estimate for studies with samples greater than 200 children ranged from $d = 0.11$ to $d = 0.22$, leaving our rough one quarter standard deviation estimate unchanged.
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Full-Day Kindergarten: An Advocacy Guide

- Full-Day K Research
- Advocacy Strategies
- Coalition-Building Techniques
- Organizing Tools
- Policy Recommendations
- Political Considerations
- Effective Legislation
Full-Day Kindergarten: An Advocacy Guide was co-created by the National Education Association and Collaborative Communications Group.

The National Education Association (NEA), the nation’s largest professional employee organization, is committed to advancing the cause of public education. NEA’s 2.8 million members work at every level of education—from preschool to university graduate programs. NEA has affiliate organizations in every state and in more than 14,000 communities across the United States.

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Collaborative Communications Group is a strategic consulting firm that builds the capacity of individuals, organizations and networks to work collaboratively to create solutions that are better than any single entity could produce on its own. Through strategic consulting, dialogue and convening, creation of publications and tools, and community conversations, Collaborative helps organizations and networks to identify, share and apply what they know in ways that increase productivity and effectiveness. The ultimate objective of Collaborative’s work is the improvement of the quality of public education and community life.
# Full-Day Kindergarten: An Advocacy Guide

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Methodology

To develop this guide, we began by reviewing the contemporary research on full-day kindergarten. We then interviewed kindergarten teachers, experienced NEA state-level staff and elected leaders. The interviews were designed to gather information about what we should include in the guide—not just content, but tools and techniques that readers and activists would find helpful. Many of the people we interviewed had extensive experience as state-level activists in the areas of early childhood education and kindergarten. Finally, we conducted case studies, looking carefully at how NEA affiliates in the states of West Virginia and New Mexico worked to support the passage of state-wide full-day kindergarten policies.

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Kindergarten is a magical time in a child’s life. During kindergarten, children learn to get along with each other, they discover the joy and challenge of reading and writing, and they learn what it means to be in school.

We know that kindergarten is a key “bridge year” for children—a year for children to move from unstructured play and early learning to the more structured learning environment of formal schooling.

For children to grow and thrive in kindergarten, they need a few very simple things: they need care and attention from their teacher and education support professionals; they need developmentally appropriate activities that engage them as young learners; and they need time to process information and to move between activities. Quality full-day kindergarten programs ensure that children have the time and attention they need from their teachers to be successful learners.

Kindergarten teachers prefer full-day kindergarten to half-day kindergarten. Studies show that parents prefer full-day kindergarten as well. States and communities should support these views and provide resources to ensure that quality full-day kindergarten programs are available to every child. This includes resources for providing teachers and education support professionals with the training and support they need to succeed in kindergarten classrooms. Today approximately 60 percent of America’s children attend full-day kindergarten—it’s time that we make full-day kindergarten available to all of America’s children!
The National Education Association (NEA) has embarked on a broad-based initiative to close achievement gaps in American public education. As part of this process, NEA is developing tools and techniques to help affiliates address gaps on a range of fronts—including class size, parent involvement and early childhood education.

In this advocacy guide, we focus on the importance of full-day kindergarten as a strategy for closing gaps. Why full-day kindergarten? Full-day kindergarten provides an essential bridge between prekindergarten and the primary grades. It enables children to develop the academic, social and emotional skills they need to be successful. By laying a strong foundation, full-day kindergarten can boost student performance, access and attainment later in school.
How to Use the Guide

This guide is designed to give NEA leaders, members and staff the tools, resources and research you will need to successfully advocate for full-day kindergarten in your state. Early childhood advocates, parents and community groups can also use the guide to bring full-day kindergarten to their state or district. All audiences can use the guide as a starting point for gathering information and developing an effective legislative plan.

As you page through the guide, look at the overview of each section. In some instances, basic advocacy and organizing tips are given—experienced advocates may want to skip over these tips.

- **The first section** of the guide includes the latest research on full-day kindergarten, emphasized with vital talking points.
- **In the second section**, you’ll find tools for mapping the policy and political landscape pertaining to full-day kindergarten in your state.
- **In the third section**, we’ve included resources for planning your legislative strategy—advocacy tips, coalition building strategies, responses to opposition arguments, and communication techniques, among other tools.
- **The fourth section** outlines NEA’s full-day kindergarten policy priorities. This section also includes model legislation.
- **The last section** describes the passage of full-day kindergarten legislation in New Mexico and West Virginia. Take time to read through these state stories as you begin your own journey.
- **Throughout**, you’ll find examples of effective practices used by full-day kindergarten supporters across the United States.

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**Achievement Gaps Defined**

NEA identifies achievement gaps because we choose to include the many students who may not be achieving at the high standards needed to be successful. Most of us are familiar with the gaps associated with these student characteristics:

- **Race and ethnicity**
- **Income levels**
- **Language background**
- **Disability status**
- **Gender**

In addition, we recognize that gaps across these categories are evidenced in a variety of data, including but not limited to:

- **Performance**: Who is scoring at the proficient or above levels on standardized state assessments, the National Assessment for Educational Progress and the Scholastic Aptitude Test (SAT)?
- **Access**: Who is enrolled in Advanced Placement classes, who has access to algebra in the middle grades and who is taking college preparatory classes?
- **Attainment**: Who graduates on time, goes on to college or technical training, completes postsecondary education or attains advanced degrees?

—Source: NEA, *Closing Achievement Gaps: An Association Guide*
Full-Day Kindergarten Helps Close Achievement Gaps: What the Research Says

“Attempting to repair reading skills in fourth grade is far more expensive and risky than guaranteeing good reading skills in kindergarten.”

—Reg Weaver, President, National Education Association

SECTION OVERVIEW:
FULL-DAY KINDERGARTEN HELPS CLOSE ACHIEVEMENT GAPS: WHAT THE RESEARCH SAYS

- Full-Day Kindergarten Boosts Student Achievement p. 4
- Full-Day Kindergarten Improves Students’ Social and Emotional Skills p. 5
- Full-Day Kindergarten Is a Sound Educational Investment p. 5
- Teachers Prefer Full-Day Kindergarten p. 6
- Full-Day Kindergarten Is Optimal for Parents p. 7
Introduction

Full-day kindergarten is a sound educational investment. Research demonstrates that full-day kindergarten, though initially more costly than half-day kindergarten, is worth the expense. Full-day kindergarten not only boosts students’ academic achievement, it strengthens their social and emotional skills as well. Additionally, it offers benefits to teachers and parents—teachers have more time to work with and get to know students, and parents have access to better teaching and care for their children. Everyone gains!

Full-Day Kindergarten Boosts Student Achievement

Longitudinal data demonstrate that children in full-day classes show greater reading and mathematics achievement gains than those in half-day classes.

In their landmark longitudinal study of full-day versus half-day kindergarten, researchers Jill Walston and Jerry West found that students in full-day classes learned more in reading and mathematics than students in half-day classes—after adjusting for differences in race, poverty status and fall achievement levels, among other things.

All students experienced learning gains. By giving students and teachers more quality time to engage in constructive learning activities, full-day kindergarten benefits everyone.

Full-day kindergarten can produce long-term educational gains, especially for low-income and minority students.

In a study comparing national and Indiana research on full-day and half-day kindergarten programs, researchers found that compared to half-day kindergarten, full-day kindergarten leads to greater short-term and long-term gains.

In one Indiana district, for example, students in full-day kindergarten received significantly higher basic skills test scores in the third, fifth and seventh grades than students who attended half-day or did not attend kindergarten at all. The researchers also found that the long-term benefits of full-day kindergarten appeared to be greatest for students from disadvantaged backgrounds. And full-day kindergarten helped to narrow achievement gaps between groups of students.

In a study of over 17,000 students in Philadelphia, researchers found that “by the time they reached the third and fourth grades, former full-day kindergartners were more than twice as likely as children without any kindergarten experiences—and 26 percent more likely than graduates of half-day programs—to have made it there without having repeated a grade.”

—Deborah Viadero, Reporter, Education Week
Full-Day Kindergarten Improves Students’ Social and Emotional Skills

A full day of learning offers several social, emotional and intellectual benefits to kindergarteners. They have more time to focus on activities, to reflect on activities and to transition between activities.

If children are taught by quality teachers using age-appropriate curricula in small classroom settings, they can take full advantage of the additional learning time—social, emotional and intellectual—that a full day allows. Further, research demonstrates that children adjust well to the full-day format. While some parents worry that full-day kindergarten is too much for kids, research shows that 5-year-olds are more than ready for a longer day. They also do better in a setting that allows them time to learn and explore activities in depth.

Full-Day Kindergarten Is a Sound Educational Investment

Recent research has demonstrated that funds invested in quality early education programs produce powerful returns on investment.

Viewing half-day kindergarten as a vehicle for saving money is shortsighted. In recent years, a number of researchers have begun doing economic analyses of early childhood education programs. They are finding that investments in quality early childhood programs generate returns of 3-to-1 or even higher—that’s at least $3 for every $1 invested.

Robert Lynch, a researcher who has extensively studied this issue, points out, “Even economists who are particularly skeptical about government programs make an exception for high-quality early childhood development programs.”

By helping to develop students’ academic abilities, and by improving their social and emotional skills, effective early childhood programs can lower grade retention and dropout rates.

Full-day kindergarten provides a bridge between prekindergarten programs and the early elementary years.

Full-day kindergarten enables students to successfully navigate from prekindergarten to early elementary grades. In America today, an estimated 69 percent of children attend community-based prekindergarten programs. For most children, kindergarten is not their first full-day experience. For all children, even those who are away from home for the first time, full-day kindergarten sets the stage for first grade and beyond by helping students make the transition to more structured learning.

“The practice of scheduling kindergarten students for only half-day has been more a function of economics (less expensive to schedule two groups of children for half-day each) than of early childhood education concerns.”

—Sherrill Martinez, Director, Planning and Research Section, Kansas State Department of Education
Full-day kindergarten enables teachers to assess students’ needs and abilities more effectively, leading to early intervention.

Children spend more time in a formal school setting in full-day kindergarten. Teachers have more time to get to know kids, and to work with specialists to identify and evaluate kids’ needs, skills and abilities. School personnel can then work with parents to develop plans to address children’s learning challenges early. This saves money and resources over the long term, and increases the odds that children will be successful later in school.

**Teachers Prefer Full-Day Kindergarten**

Full-day kindergarten helps teachers improve student learning.

On average, students in full-day kindergarten spend about twice as much time in school as children in half-day programs do. As a result, teachers get to know students much better. They are able to develop a richer understanding of students’ needs and, in turn, to develop activities and lessons to meet those needs.

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**The Benefits of Full-Day Kindergarten: Teachers’ Perspectives**

In a study evaluating teachers’ views on full-day kindergarten, teachers reported a number of benefits for themselves as well as for children and parents, including:

- Participating in full-day (kindergarten) eased the transition to first grade, helping children adapt to the demands of a six-hour school day.
- A longer school day offered more flexibility and more time to do activities during free-choice times.
- Having more time made kindergarten less stressful and frustrating for children because they had time to develop interests and activities more fully.
- Participating in the full-day schedule allowed more appropriate challenges for children at all developmental levels.
- Children with developmental delays or those “at-risk” of experiencing school problems had more time for completing projects and for needed socializing with peers and teachers.
- More advanced students had time to complete long-term projects.
- Having full-day kindergarten assisted parents with child care.
- Having more time made child assessment and classroom record keeping more manageable for teachers.
- Switching to full-day kindergarten gave teachers more time for curriculum planning, incorporating a greater number of thematic units in the school year, and offering more in-depth coverage of each unit.

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Full-Day Kindergarten Helps Close Achievement Gaps: What the Research Says

Full-Day Kindergarten Is Optimal for Parents

Full-day kindergarten provides parents with better support for their children.

For parents who work outside the home, full-day kindergarten means that children do not have to be shuffled between home, school and child care. For all parents, there is more continuity in the child’s day, less disruption and more time for focused and independent learning.

A 2000 study published by the National Center for Educational Statistics found that after the second year of a full-day kindergarten program, 100 percent of full-day parents and 72 percent of half-day parents noted that, if given the opportunity again, they would have chosen full-day kindergarten for their child.

“Rhianna Wilson was worried that her son, Timothy, would be overwhelmed in an all-day program. He wasn’t. ‘He just learns more quickly,’ she said. ‘The other day he announced that he wanted to be a paleontologist.’”

—Tara Manthey, “What a Difference All Day Makes,” The News Tribune (Tacoma, WA)
“With all state-level decision makers operating under tight budgetary constraints, full-day kindergarten competes with other social and educational policy options—prekindergarten, increases in teacher salaries, higher education, special education—for legislative support and resources.”

—Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
A keen understanding of the political terrain is a crucial factor in organizing a campaign. This is especially true for full-day kindergarten, where politics and policies vary considerably from state to state and often from district to district.

This section is designed to help you map the landscape surrounding full-day kindergarten in your state and to gather the information needed to undertake your campaign. This section is divided into categories: Policies, Resources and People. As you read through the categories, answer the questions and begin to develop an action plan. Don’t be daunted by the number of questions. Rather, think of them as a starting point for discussion and reflection.

**Policies**

**Gaining an Understanding of Full-Day Kindergarten in Relation to Early Education and Prekindergarten**

Become familiar with the prekindergarten, early education or child care movement in your state. Are there coalitions organized around prekindergarten? Around child care? How do they view full-day kindergarten? How many private kindergarten providers are there in your state? How organized and vocal are these providers? What impact would public full-day kindergarten have on them?

Early education and prekindergarten advocates are well organized in many states. Look for ways to join forces with them. Full-day kindergarten should be part of every comprehensive early education initiative.

**Early Education for All**

In Massachusetts, a coalition of early education advocates teamed up to promote Early Education for All, a state-wide campaign with a provision for full-day kindergarten. Kathryn Boudreau, president of the Massachusetts Teachers Association, is a member of the Early Education for All advisory committee.

**Early Education for All has three primary goals:**

- Every preschool-aged child has access to a high-quality early childhood education that meets professionally accepted standards, is staffed by well-trained early educators, and is delivered through a mix of public and private programs

- Creation of a state system to improve the training, education and compensation of the work force specializing in early childhood and school-age education

- Access to high-quality, full-school-day public kindergarten for all families who desire it

For more information, visit www.strategiesforchildren.org/eea/eea_home.htm.
Mapping the Status of Kindergarten in Your State
As you think about what kindergarten should look like in your state, begin by thoroughly researching the current status of kindergarten in your state. How many children attend kindergarten? Of those, what percentage attend full-day versus half-day? What percentage of public schools in your state offer full-day kindergarten? How many children attend private kindergartens? Are children required to attend kindergarten? At what age are children required to attend school?

You should be able to obtain this information from your state department of education. The Education Commission of the States also tracks kindergarten attendance and legislation in each state at www.ecs.org.

Determining the Price Tag of Full-Day Kindergarten
Advocates for full-day kindergarten identify cost as the biggest challenge facing full-day kindergarten supporters. As you define what a full-day kindergarten program would look like in your state (see Section IV: What Full-Day Kindergarten Should Include, page 27), ask the following questions:

• How much would it cost to implement a comprehensive full-day kindergarten program throughout your state? Factors to consider include teacher salaries, teacher training and professional development, paraprofessional salaries, curriculum development, assessment, classroom space, school lunches, transportation and miscellaneous administrative costs associated with implementing full-day kindergarten.

• How do education funding formulas work in your state? Is kindergarten funded at the same level as other grades? In most states, it is not.

As you develop cost estimates, look for ways to save money. You could realize a net savings, for example, if buses ran only twice a day instead of three. You should also include calculations on the return on investment. Those numbers can be very persuasive to policymakers and the general public.

A Snapshot of Full-Day Kindergarten in the United States

• The Education Commission of the States estimates that over 60 percent of children in the United States attend full-day kindergarten. By contrast, in 1979 just over 25 percent of kindergartners were enrolled in full-day programs.

• Only nine states, most of which are located in the southeastern United States, require full-day kindergarten for all kindergartners.

To support full-day kindergarten programs, states employ a patchwork of funding programs—combining per-child funding formulas (which often differ between kindergarten and first grade), federal funds such as Title I, and state categorical funds. If not mandated by the state, full-day kindergarten programs remain vulnerable to funding cuts.
State Funding for Full-Day Kindergarten

Funding levels for full-day kindergarten vary considerably from state to state. Some states provide more or equivalent funding for kindergarten students than for post-kindergarten students; others provide significantly less than they do for students in first grade and beyond.

For comprehensive information on state kindergarten funding, see “How Most States Fund Full-Day Kindergarten,” Education Commission of the States, August 2005 (www.ecs.org/clearinghouse/63/10/6310.htm). Also visit the ECS Kindergarten Database at www.ecs.org/html/educationIssues/EarlyLearning/KDB_intro.asp.

Identifying Ways to Pay for Full-Day Kindergarten

As you formulate your legislative strategy, it is important to think about how your state can pay for full-day kindergarten—where will the funds come from? What other budget priorities are coming up in the next legislative session? Should you make full-day kindergarten part of a larger early education package? Or part of a larger education-spending package? What are your association’s other education priorities? How might full-day kindergarten compete with those priorities? Why should it take precedence over other priorities? If you are not able to pass a full-day kindergarten bill this year, how will you pass one next year, or the following year?

Scrutinizing the Money Flow: Paying for Full-Day Kindergarten Through Cost Savings

Think New Mexico, an organization advocating for full-day kindergarten in New Mexico, worked with a former state budget director to do a line-by-line review of the state budget. The team identified a number of programs that could be trimmed or eliminated. They then released a report to the press identifying these programs and explaining how the cost savings could be used to pay for full-day kindergarten. The strategy was successful—the New Mexico press highlighted Think New Mexico’s report, and presented full-day kindergarten as an affordable policy option.
Trims in State Budget Could Fund Full-Day Kindergarten

The following excerpt from an article published by The Santa Fe New Mexican illustrates how the newspaper presented full-day kindergarten as an affordable policy option.

A Santa Fe group claims the state government could afford to fund full-day kindergarten by eliminating wasteful and unnecessary spending from its existing budget.

“The bottom line is that there is already sufficient revenue to pay the cost of implementing full-day kindergarten,” concludes the group, called Think New Mexico, in a new report.

The report, “Setting Priorities: How to Pay for Full-Day Kindergarten,” was released this week as part of the think tank’s preparations for a lobbying campaign at the 2000 Legislature. The recommendations include calls for the state to stop operating its visitor-information centers, end preferential tax treatment for volume cigarette sales and horse racetracks, create new oversight for state agency contracts and eliminate jobs at the Public Regulation Commission.

The study comes as the state is moving toward “performance-based” budgeting that is intended to bring new scrutiny to longstanding programs, expenses and practices. About half of the state’s yearly budget is spent on education.

State law now mandates that schools offer a half day or 2 hours of kindergarten for 5-year-olds. About 15 percent of 5-year-olds in New Mexico attend full-day kindergarten, compared with a national average of nearly 55 percent.

Many politicians, including Martin Chavez, the Democratic gubernatorial candidate defeated last year by Gov. Gary Johnson, have made full-day kindergarten a campaign priority.

But the proposal has always been stopped at the legislature mostly because of costs.

“I don’t know of anybody that’s in opposition to mandatory full-day kindergarten. The stumbling block has always been the financial end of it,” said Sen. John Arthur Smith, D-Deming, NM.

Preparing a Legislative Strategy

As you prepare your campaign, think carefully about how to work with your state legislature. When will you begin the campaign? How will you get legislators on board? Who should you work with in the legislature to ensure passage of your bill? In West Virginia, advocates of full-day kindergarten worked closely with members of the education committees in both houses, as well as well-respected legislators outside of those committees. In New Mexico, full-day kindergarten supporters focused their efforts on members of the appropriations committees because supporters knew the primary debate would be about the affordability of full-day kindergarten.

Who will sponsor your legislation? Who will write the legislation? Do you have the governor’s support? If not, how will you get it? Does it make sense to try to pass a ballot initiative—if your state has that option, as many states in the West do—instead of going through the legislature? If so, what kind of campaign would that strategy require?

You will need to know what your state’s legislative calendar looks like as well. When is education legislation typically drafted? When do committees meet? For more information on when state legislatures meet and how they operate, visit the National Conference of State Legislatures Web site: www.ncsl.org/programs/legman/legman.htm.

RESOURCES

Assessing Your Organizational Commitment

This kind of campaign requires a long-term organizational commitment to be successful. Begin by determining who will lead this effort in your association. Think about the following: What organizational resources will the campaign require? (For more information, see see Section III: Organizing Tools on page 17.) Can your government relations, media and research teams work together on this campaign? Who will spearhead the campaign? How does this issue fit into your other organizational priorities? How will you sustain the campaign over time?

Finding Examples of Effective Full-Day Kindergarten Programs in Your State

Look for effective public full-day kindergarten programs in your state. Contact education researchers in your state to help you locate effective full-day programs. Go online to look for newspaper articles about effective programs in your state. How can you use those examples of effective programs to help make your case? Advocates in New Mexico used an evaluation comparing full-day and half-day kindergarten outcomes in an Albuquerque school to persuade lawmakers.

Networking With Other States

Advocates who have worked to support full-day kindergarten in other states are an important resource. What can you borrow from legislation that others have drafted?

• Go to NEA’s Closing the Achievement Gaps site (www.achievementgaps.org) to view examples of legislation from West Virginia and New Mexico. Contact NEA affiliates in states that have passed full-day kindergarten legislation.

• Also see the ECS Web site (www.ecs.org) for more detail on kindergarten legislation in each state.
PEOPLE—POTENTIAL SUPPORT AND OPPOSITION

Identifying Potential Coalition Partners

Take time to evaluate potential partners. Consider early education groups such as your local affiliate of the National Association for the Education of Young Children (www.naeyc.org) or a national group like Pre-K Now (www.preknow.org). Who else might you work with? Education associations? Parent groups? Social service agencies?

As you assess potential partners, look for nontraditional allies, like business groups. In New Mexico, support from the Hispanic business leaders association as well as the Association of Commerce & Industry of New Mexico, the equivalent of the state Chamber of Commerce, helped full-day kindergarten advocates gain ground in the state legislature and with the governor.

Also think about groups like the AFL-CIO, as well as ACORN (Association of Community Organizations for Reform Now) and other community activist groups. They can be important allies in this work.

Assessing Parents’ Views—Parents as Allies

Parents are perhaps the most important constituency on this issue—especially parents of small children. It is important to know where parents stand.

Have you surveyed parents to determine what their views are? (See the next section, Organizing Tools, for more information on surveys.) Look for ways to involve parents as allies. How does full-day kindergarten help them? If some parents are opposed to full-day kindergarten, find out why. How can you change their minds or counter their opposition? How can you involve the state Parent Teacher Association and local parent-teacher organizations in your campaign? Find out where they stand on this issue.

Assessing Kindergarten Teachers’ and Other Teachers’ Views—Teachers as Allies

Kindergarten teachers are a vital constituency. They work most closely with kindergartners and can provide crucial and credible voices in support of particular policies. Additionally, they will be directly affected by the outcome of your work. How will you engage them in your initiative? Have you surveyed them? Are they willing to support your efforts? What about 1-3 teachers? How will you involve your broader membership in the campaign? How does full-day kindergarten benefit them?

Successful organizing campaigns should include teachers as spokespersons and supporters. As you reach out to teachers, identify possible champions. Who will speak forcefully and effectively on your behalf?

“If I had to do it over again, I would have involved more kindergarten teachers in our campaign.”

—Perry Bryant, former lobbyist with the West Virginia Education Association
Assessing the Views of Education Support Professionals—Teacher Aides, Bus Drivers and Others as Allies

Like teachers, education support professionals such as teacher aides, bus drivers, cafeteria workers and others have an important stake in this issue. How would half-day to full-day schedule changes affect various support professionals? Where do they stand on this issue? How can you work with their unions to gain support for your work?

Assessing School Administrators’ and Local School Officials’ Views—Administrators as Allies

School administrators, administrators’ organizations and local school officials such as school board members can be valuable allies. Legislators look to these leaders for advice, and you will need their support to move your proposal forward. What do your state’s principals believe? Superintendents? The state board of education? How will you engage them as allies? How can you get their associations on board with you?

Enlisting Champions

As you assess your support, look for champions who are willing to join forces with you. Champions are important for several reasons. They can provide visible support for your work, they can use power and influence to sway the views of legislators and other leaders, and they can galvanize public opinion. Consider how parents, teachers, administrators, business leaders, celebrities and influential politicians—such as the governor, state legislators and national political leaders from your state—can be advocates for your work. Community leaders and researchers can also be helpful champions. As you identify possible candidates, think about what they can gain from working with you, and why this issue is important to them.

An Important Supporter of Full-Day Kindergarten

In New Mexico, supporters engaged the governor’s wife, Dee Johnson, as a champion of full-day kindergarten. This served a dual purpose—she publicly endorsed full-day kindergarten and she privately urged her husband, who had been critical of the initiative, to sign the full-day kindergarten bill once it was passed by the state legislature.

Assessing Your Opposition: Preparing to Respond

It is also important to know who your likely opponents will be, who their allies are, what arguments they will make and what strategies they will use to counter your work.

Opponents in New Mexico and West Virginia included:

- Fiscal conservatives in the state legislature
- Government officials who favored local control of education
- Principals and district leaders opposed to the structural changes embedded in moving from half-day to full-day kindergarten
- Conservative parent groups

Additionally, you are likely to face opposition from groups opposed to the NEA—those who see your work on this issue as just another way to bolster the power of the union or secure jobs for teachers. How will you rebut their arguments?
Organizing Tools—Before, During and After the Campaign

“Good information is essential, but if you don’t have the right people in place who care about your issues, you will face unnecessary roadblocks—lobbying begins at election time.”

—Jan Reinicke, Executive Director, Iowa State Education Association

SECTION OVERVIEW:
ORGANIZING TOOLS—BEFORE, DURING AND AFTER THE CAMPAIGN

- Getting Started p. 18
- Building a Coalition to Support Your Campaign p. 19
- Launching the Campaign p. 19
- Responding to Opposition—Counterarguments for Opposition Arguments You May Face p. 22
- Moving Forward After Passage—or Failure p. 26
Introduction

In organizing a campaign, it is essential to begin with a clear vision of where you want to go and know how you plan to get there. Included in this section are strategies, techniques and tools for undertaking a successful full-day kindergarten campaign in your state. This is just a starting place. Use it, along with the Web tools referenced here, as you begin organizing your initiative.

Getting Started

As you begin your campaign, review the factors discussed in Mapping the Landscape of Full-Day Kindergarten on page 9.

• Identify who will coordinate the campaign within your association.
• Note what resources you will need, including staff time for media relations, research and government relations; funds; and materials. As you determine what resources you will need, think long term. Advocates of full-day kindergarten often say that they wished they’d known how long the work would take. Legislative processes are slow—often campaigns like this take years. In addition to having the right idea, you have to be in the right place at the right time to make it happen, and you typically must make compromises along the way. Be prepared to dig in for the long haul.
• This guide contains much of the research you’ll need to get started. Draft a background paper or some talking points about the current state of kindergarten—and, more broadly, early education—in your state. Pinpoint what else you need to learn.
• Begin to develop a preliminary policy proposal. (Use the next section, What Full-Day Kindergarten Should Include: Policy Priorities, as a starting place.)

Grassroots Organizing on the Web

In addition to the NEA’s online Legislative Action Center (www.nea.org/lac/index.html), here are other advocacy toolkits available on the Web:

For more comprehensive information about NEA’s work on closing the achievement gaps, download Closing Achievement Gaps: An Association Guide at www.achievementgaps.org/nea/Associationguide.pdf.

For an excellent overview of legislative advocacy, visit the Community Toolbox Web site: http://ctb.ku.edu/tools/en/sub_section_main_1253.htm

For early education coalition building and other advocacy tips, see the National Association for the Education of Young Children’s Toolbox for Advocates at www.naeyc.org/policy/toolbox.asp.
Building a Coalition to Support Your Campaign

- As you begin to do research and develop a policy proposal, identify the groups you want and need to work with. Link up with allies, but also look for new partners, such as business groups, that can help accomplish your objectives. Groups like the Business Roundtable (www.businessroundtable.org/taskForces) and Corporate Voices for Working Families (www.cvworkingfamilies.org) are strong supporters of quality early childhood education.

- Next, begin reaching out. Meet with group representatives to share your policy proposal and answer their questions.

- Get buy-in and support. Make sure additional groups are willing to join your campaign. Often coalitions use a memorandum of agreement to ensure that everyone knows what resources they will be expected to provide, including public endorsements, staff time to work on legislation development, and lobbying assistance.

- Decide who will do what. You may want to lead the campaign or work with another group that will take the leadership role. An early education group or parent organization, for example, may be better positioned to lead the effort. Who leads is not as important as what the partnership accomplishes. All participants, however, must have a clear understanding—in writing—about who is responsible for what and who has sign-off authority on communications and legislative changes.

Launching the Campaign

- Work with partner groups to conduct additional research, if necessary, and flesh out your policy proposal.

- Develop a plan and a timeline for implementing your proposal—either through your state legislature or through a ballot initiative. Make sure to include the state department of education and the governor’s office in your plan. How will you work with them?

- Develop three to five key messages to support your campaign. Based on your mapping research, develop messages that promote your idea and address key arguments of the opposition. These messages are can serve as organizing tools for building coalitions and developing communications plans.

- Put together a communications plan. What information do you want to release to the press? When will you release it? How will you counter opposition? Who will handle press calls? Requests for interviews? Make sure to develop talking points for everyone who communicates with the press so that you put forth a consistent message.

Surveying Parents, Teachers and Administrators

Surveys are a powerful tool in advocacy campaigns. They give lawmakers insight into the views of their constituents, and they give advocates public opinion research to back claims from scientists and researchers.

In the case of full-day kindergarten, surveys or, at the very least, focus groups, are essential. In New Mexico, advocates used parent, teacher and administrative survey data to convince legislators that there was broad-based support for full-day kindergarten.

There are a number of tools advocates can use to develop, administer and analyze surveys, such as Survey Monkey (www.surveymonkey.com), an easy-to-use “one-stop shop” for online surveys.
• Decide how you will fund your proposal. Advocates of full-day kindergarten identify cost as the most important issue. A number of states with full-day kindergarten programs have phased them in, providing state funds to the neediest schools first. What would a phase-in program in your state look like? Are there state funds that could be used to jump-start the program?

• Create a legislative strategy. Decide who will sponsor your legislation—and be strategic about your choice. Determine which techniques will get the number of votes needed for passage of the legislation—in-person lobbying, dissemination of research, legislative forums, media coverage and letter writing, for example.

• Be prepared to respond to opposition. What are your opponents’ arguments? How will you counter them? Strategize with advocates in other states, such as New Mexico and Maryland, with full-day kindergarten programs already in place. What strategies did they find most successful? What lessons did they learn?

**Getting Positive—and Free—Press for Your Campaign**

In New Mexico, positive media coverage was a crucial factor in the passage of full-day kindergarten legislation. Think New Mexico, the primary advocate for full-day kindergarten in New Mexico, used a number of press strategies to gain positive media coverage.

“We knew that the best way to get to the legislature—and the only way to get the public involved—was to go to the media and get their support,” Nathan (Think New Mexico’s director) said. From September through the legislative session, representatives from Think New Mexico met with writers and editors from the state’s major newspapers (The Santa Fe New Mexican, The Albuquerque Journal and The Albuquerque Tribune), which responded with extensive coverage and several enthusiastic editorial endorsements. Nathan also wrote op-ed articles published in local papers.

As the three major newspapers began to cover the legislation and campaign, the organization received interview requests from radio and television stations across the state, as well as from smaller regional and local newspapers. Within a span of five months, Nathan conducted dozens of interviews with print journalists and appeared on radio and television on at least six separate occasions. The press also frequently quoted the legislative sponsors and prominent Think New Mexico board members.

Nathan went out of his way to provide journalists with information or to encourage coverage of breaking developments. “He knew the media very well,” said one reporter who recalled Nathan walking into the capitol media room on an almost daily basis. The reporter commented that while Nathan’s knowledge and intellectual honesty gave him credibility, his “persistence sometimes annoyed the capitol beat reporters.” As the vote neared, Think New Mexico maximized the free media coverage to reach legislators; on one occasion, for example, the organization distributed copies of a positive article about the legislation to the offices of every legislator in the Senate and House.

—Source: Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*
• If you decide to undertake a state-wide initiative, determine how many signatures you need to get the initiative on the ballot, decide how you will get those signatures, and map out a media strategy and a public relations campaign for gaining public support. Study other successful ballot initiatives. What strategies have they used?

• Involve members in letter writing or e-mail campaigns to help ensure passage of the legislation. See NEA’s Legislative Action Center (www.nea.org/lac/writing.html) for effective letter writing and e-mail techniques.

• Create a set of short fact sheets to promote the campaign. Persuasive, data-driven fact sheets describe the benefits of full-day kindergarten, outline your campaign’s policy goals and counter opponent’s arguments. They can be useful as background material for meetings with the media and champions and as a general advocacy tool.

• Consider collective bargaining as a tool in your advocacy campaign. Look for ways to build full-day kindergarten issues—such as class size, class time, professional development and appropriate curricula—into teachers’ contracts. For more information on using collective bargaining as an advocacy tool, see Closing Achievement Gaps: An Association Guide (www.achievementgaps.org/nea/Associationguide.pdf).

• Make sure you have the support of the governor. If your legislation passes, you will need the governor’s signature before your bill becomes a law. Use coalition partners and other supporters to ensure the governor is on your side. See the New Mexico case study on page 36 for more information about how advocates worked with the governor’s wife as well as the New Mexico business community to urge the governor to sign full-day kindergarten legislation.

• Prepare to negotiate. Although the goal of the campaign is to achieve certain policy objectives, any legislative process will include negotiation on a number of topics. Before moving forward with your legislative strategy, determine which issues you will be willing to negotiate, and which ones are deal breakers.

“It is really important to reach primary teachers in this campaign who may be less politically involved than teachers who teach older students. They know what kids need and what teachers need.”

—Amanda Rutledge, Vice Chair, Early Childhood Educator’s Caucus, Former Kindergarten Teacher, Texas Education Association
Responding to Opposition
Here are some arguments against full-day kindergarten and counterarguments you can make:

**ARGUMENT I:**

“Full-day kindergarten is too expensive.”

**COUNTERARGUMENTS:**

“It is not as expensive as you might think.”
Know what the cost of full-day kindergarten will be in your state. In Arizona, for example, Governor Janet Napolitano asked for $21 million in 2005 to expand full-day kindergarten. This would have brought the total cost for full-day kindergarten in Arizona to $46 million out of a budget of nearly $8 billion.

“We can pay for it.”
Have a plan ready for how the state will pay for it—perhaps beginning with a phase-in period. Once cost estimates had been done in the state of New Mexico, for example, Think New Mexico conducted a systematic assessment of the state budget and identified programs that could be cut to pay for full-day kindergarten.

“We save money in the long run.”
Though the initial cost might be higher than half-day kindergarten, kids in full-day kindergarten learn more, are less likely to experience grade retention, are more likely to succeed later in school, etc.

“Quality early childhood programs have at least a 3-1 return on investment.”
Be able to produce the evidence. Show what the long-term cost savings will be for your program.

**ARGUMENT II:**

“There are other more important priorities—for example, the state should spend money on prekindergarten instead of full-day kindergarten.”

**COUNTERARGUMENTS:**

“Full-day kindergarten should be part of any comprehensive early education program.”
For supporting evidence, see the Early Education for All Web site: www.strategiesforchildren.org/eea/eea_home.htm.

“This is a simple step we can take as we move toward implementing a comprehensive early education program.”
ARGUMENT III:

“Full-day kindergarten cuts into family time.”

COUNTERARGUMENTS:

“Full-day kindergarten enriches family time by improving children’s learning and their adjustment to elementary school.”

“Comparison studies show that parents prefer full-day kindergarten to half-day kindergarten.”

“Full-day kindergarten saves families’ time and energy. Children do not have to be shuffled between school and child care.”

ARGUMENT IV:

“Five-year-olds aren’t ready to spend a full day in school.”

COUNTERARGUMENTS:

“Research shows that 5-year-olds are ready to spend a full day in school.”

Be ready to cite the studies.

“Research also shows that full-day kindergarten is preferable for kids—socially, emotionally and intellectually.”

Children have time to learn and explore at a slower pace and in more depth.

“Teachers get to know kids better in full-day kindergarten.”

Teachers are better able to nurture and care for children in a full-day setting.

ARGUMENT V:

“Children don’t need full-day kindergarten; they learn more during time with their parents or family members.”

COUNTERARGUMENTS:

“Research shows that all children learn more in full-day kindergarten.”

“Full-day kindergarten provides an ideal learning setting for all children.”

This includes those children with stay-at-home parents. Kindergartners are taught by certified teachers who specialize in the needs and learning styles of young children.

“Many children don’t spend much time with parents and family members during the day.”

Instead, they are shuffled between kindergarten and child care.

As you read through these arguments, think about the strategies your opponents and their allies may use. If they release research with findings that counter your research, how will you respond? Who are their supporters in the state legislature? How powerful are they? Who can you enlist on your side to help ensure that you will win the day?
1. Full-Day Kindergarten Boosts Student Achievement

Longitudinal data demonstrates that children in full-day classes show greater reading and mathematics achievement gains than those in half-day classes.


Full-day kindergarten can produce long-term educational gains, especially for low-income and minority students.


2. Full-Day Kindergarten Improves Students’ Social and Emotional Skills

A full day of learning offers social, emotional and intellectual benefits to kindergartners. They have more time to focus on activities, to reflect on activities and to transition between activities.


3. Full-Day Kindergarten Is a Sound Educational Investment

Recent research has demonstrated that funds invested in quality early education programs produce powerful returns on investment.


Full-day kindergarten provides a bridge between prekindergarten programs and the early elementary years.


Full-day kindergarten enables teachers to assess students’ needs and abilities more effectively, leading to early intervention.


4. Teachers Prefer Full-Day Kindergarten

Teachers get to know students better; they are able to develop a richer understanding of students’ needs and, in turn, to develop activities and lessons to meet those needs.


5. Full-Day Kindergarten Is Optimal for Parents

Comparison studies demonstrate that parents prefer full-day kindergarten.


“One of the things we have learned from doing this work for many years is that you have to be in it for the long term—don’t give up. Adjust to changes and build support among a broad coalition of groups.”

—Jim Griess, Executive Director, and Jay Sears, Director of Instructional Advocacy, Nebraska Education Association

Moving Forward After Passage—or Failure

• If your initiative is successful, your work is far from over. You will need to help ensure that the legislation is successfully enacted. Consider creating an implementation working group within your coalition. This group can help oversee issues such as funding, professional development and curriculum development, among others. As you develop your campaign plan, include this phase of the process in your plan.

• If your proposal is unsuccessful, decide where you will go next. Work with your coalition to determine why the campaign failed. Was it too costly? If so, why? Who were your primary opponents? Why were they opposed to your campaign? How can you hold them accountable for their opposition? Determine what your next steps will be. Do you want to reintroduce the legislation in the next session? Should you make alterations to it first?
“NEA knows what works in the classroom—the same ingredients that are supported by research, by parents, and by teachers and education support professionals: strong parental involvement, qualified and certified teachers, small class sizes that allow for individual attention, and books and materials aligned with high standards—and high expectations—for every child.”

—Reg Weaver, President, National Education Association
Introduction

For children to reap the benefits of full-day kindergarten, they need more than just additional time for school. Research demonstrates that the most successful full-day kindergarten environments are staffed by licensed, certified teachers and paraprofessionals who receive ongoing professional development, teach in small classroom settings and involve parents as partners in the learning process.

Both the structure of the learning environment and the curriculum should be aligned with that of other primary grades and with prekindergarten, so that kindergarten can serve as a bridge year for children. Activities should engage children’s minds and bodies, allowing them to improve literacy and numeracy skills, as well as social and emotional abilities.

NEA’s Commitment to Full-Day Kindergarten

At its 2003 representative assembly, NEA committed to work toward the following goals:

That all 3- and 4-year-old children in the United States should have access to a full-day public school prekindergarten that is of the highest possible quality, universally offered and funded with public money not taken from any other education program.

That full-day kindergarten for all 5-year-old children should be mandated in every public school in this country. These kindergartens should support the gains children made in prekindergarten, provide time for children to explore topics in depth, give teachers opportunities to individualize instruction and offer parents opportunities to become involved in their children’s classrooms.

—Source: NEA on Prekindergarten and Kindergarten
### NEA’s Full-Day Kindergarten Policy Priorities

<table>
<thead>
<tr>
<th>Issue</th>
<th>Commitment</th>
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| **Mandatory Full-Day Attendance** | Full-day does not designate a specific number of hours but means that kindergarten should be in accord with the regular school day.  
Full-day kindergarten should be universal (available in all schools) and mandatory. |
| **Teacher Certification**      | Kindergarten teachers, support professionals and administrators should be considered qualified if they hold the license or certification that the state grade requires for their employment. |
| **Class Size**                | NEA supports an optimum class size of 15 students for regular programs and smaller class sizes for programs that include students with exceptional needs. As with prekindergarten, smaller classes generate the greatest gains for younger children. |
| **Alignment**                 | State policymakers should ensure learning standards for kindergarten are created and aligned both with early learning standards and standards for first grade and beyond.  
The Education Commission of the States recommends that learning standards for kindergarten be implemented comprehensively across five key domains: physical and motor development, social and emotional development, approaches toward learning, cognitive development, and language and literacy development. |
| **Professional Development**  | Educators—teachers, support professionals and administrators—should have access to high-quality, continuous professional development that is required to gain and improve knowledge and skills and that is provided at school district expense. |
| **Funding**                   | Kindergarten should be funded in the same manner as the rest of the public school program, but the money should come from new funding sources. This does not necessarily mean that new taxes should be imposed. It does, however, mean that the necessary financing for mandatory, full-day, public school kindergarten, including the need to recruit and equitably pay qualified teacher and support professionals, should not be obtained at the expense of other public school programs.  
Public funds should not be used to pay for children to attend private kindergarten. Any portion of public money, even “new” money, going to private kindergartens, which are open to some but not all children, will reduce resources available to public school kindergartens, which are available to all children. |
| **Parent Involvement**        | Because kindergarten is the bridge to the more structured school experience, training programs should be made available to help parents and guardians take an active role in the education of their kindergarten children. Parents and guardians should be encouraged to visit their children’s schools and maintain contact with teachers and other school personnel. |
| **Curriculum**                | In kindergarten, as with prekindergarten, all areas of a child’s development should be addressed: fostering thinking and problem solving, developing social and physical skills, and instilling basic academic skills. |
| **Assessment**                | Assessment of the child’s progress should also address all areas of a child’s development: physical, social, emotional and cognitive. Many sources of information should be used and children should be given opportunities to demonstrate their skills in different ways, allowing for variability in learning pace and for different cultural backgrounds. As in prekindergarten, large-scale standardized testing is inappropriate. The purpose of assessment should be to improve the quality of education by providing information to teachers, identifying children with special needs and developing baseline data. |
| **Teacher Assistants**        | Adult supervision is vital. Each kindergarten teacher should have the support of a full-time teacher assistant. |
| **Flexibility in Age Requirements** | To give children the best possible chances to benefit from kindergarten, NEA recommends that 5 be the uniform entrance age for kindergarten. The minimum entrance age (of 5) and the maximum allowed age (of 6) should not be applied rigidly, however. In joint consultation with parents and teachers, a school district should be allowed to make case-by-case exceptions to age requirements. |
NEA Model Legislation
The following model legislation has been developed by NEA to assist you as you draft legislation appropriate for your state. Use it as a starting point for conversation with partners, lawmakers and colleagues.

To establish a preschool and full-day kindergarten program, and for other purposes.

January x, 200X

A BILL

Be it enacted by the xxxx and the xxxxx of the State of _____________

Section 1. Short Title.
This Act may be cited as 'The Prekindergarten and Full Day Kindergarten Act.'

Section 2. Findings.
The Legislature finds the following:
(1) Prekindergarten programs are essential to supporting the cognitive, social, emotional, and physical development of young children.
(2) Kindergarten programs are essential to ensuring the school readiness of children when they enter the 1st grade.

Section 3. Purpose.
The purpose of this Act is expand preschool and full-day kindergarten opportunities for children aged three, four, and five.

Section 4. Program Authorization.
The State Department of Education (hereinafter referred to as the designated State agency) shall establish a program to provide for the development of –

(1) High-quality full-day, full-calendar-year universal prekindergarten for all children age 3 and 4; and
(2) Full day kindergarten program for all children age 5 in the State.

Section 5. Plan and Requirements.
(a) State Plan--The designated State agency shall develop a plan to implement the program described in section 4. Such plan shall include each of the following:

(1) A description of the universal prekindergarten program that will be established and how it will support children’s cognitive, social, emotional, and physical development.
(2) A description of the full day kindergarten program that will be established and how it will ensure school readiness for such children.
(3) A statement of the goals for the universal prekindergarten and the full day kindergarten programs and how such goals will be measured through program outcomes and other means.
(4) A description of how the designated State agency will involve representatives of early childhood program providers that sponsor programs addressing children 3, 4, and 5 years old.
(5) A description of how the designated State agency will coordinate with existing State-funded prekindergarten programs, federally funded programs (such as Head Start programs), public school programs, and child care providers.
(6) A plan to address the shortages of qualified early childhood education teachers, including how to increase such teachers’ compensation to be comparable to that of public school teachers.
(7) How the designated State agency will provide ongoing professional development opportunities to help increase the number of teachers in early childhood programs who meet the State’s education or credential requirements for prekindergarten teachers.
(8) A plan to address how the programs will meet the needs of children with disabilities, limited English proficiency, and other special needs.
(9) A plan to provide transportation for children to and from the programs.
(10) A plan to ensure parents of children enrolled in the program are actively involved with and engaged in their child's education.

(b) Local Requirements.

(1) In General- An eligible program provider receiving funding under this Act shall—
(A) Maintain a maximum class size of 15 children;
(B) Maintain a ratio of not more than 10 children for each member of the teaching staff;
(C) (i) Ensure that all prekindergarten and kindergarten teachers meet State requirements for teachers under applicable State law; and
(ii) Document that the State is demonstrating significant progress in assisting such teachers on working toward a bachelor of arts degree with training in early childhood development or early childhood education;
(D) Meet all health and safety standards required for prekindergarten programs.
(2) Local Application- Program providers under this Act shall submit an application to the designated State agency under this Act containing the following:
(A) A description of the program to be provided.
(B) A statement of the demonstrated need for a program, or an enhanced or expanded program, in the area served by the eligible program provider.
(C) A description of the age-appropriate and developmentally appropriate educational curriculum to be provided that will help children be ready for school and assist them in the transition to kindergarten (as applicable to prekindergarten programs).
(D) A description of how the eligible program provider will collaborate with existing community-based child care providers and Head Start programs, as appropriate.
(E) A description of how students and families will be assisted in obtaining supportive services available in their communities.
(F) A plan to promote parental involvement in the program.
(G) A description of how teachers will receive ongoing professional development in early childhood development and education.

Section 6. Professional Development Set-Aside.
A designated State agency may set aside a portion of funding under this Act for ongoing professional development activities for teachers and staff at prekindergarten and kindergarten programs that wish to participate in the programs under this Act. Funds set aside under this subsection may be used for ongoing professional development—
(1) To provide prekindergarten and kindergarten teachers and staff with the knowledge and skills for the application of recent research on child cognitive, social, emotional, and physical development, including language and literacy development, and on early childhood pedagogy;
(2) To provide the cost of education needed to obtain a credential or degree with specific training in early childhood development or education;
(3) To work with children who have limited English proficiency, disabilities, and other special needs; and
(4) To select and use developmentally appropriate screening and diagnostic assessments to improve teaching and learning and make appropriate referrals for services to support the development and learning of children in such programs.

Section 7. Definition.
In this Act the term `eligible program provider' means a prekindergarten program provider that is—
(A) A public school;
or
(B) A Head Start program.
“Our central message was always an educational message: full-day kindergarten provides long-term educational benefits. An investment in full-day kindergarten is an investment in the educational future of our children.”

—Charles Bowyer, Government Relations, Professional Issues and Research, National Education Association-New Mexico

SECTION OVERVIEW:
STATE STORIES

- West Virginia—Meeting the Needs of Students, Parents and Teachers p. 34
- New Mexico—A Lesson in Patience, Persistence, Compromise and Focus p. 36
West Virginia—Meeting the Needs of Students, Parents and Teachers

West Virginia is one of nine states, most of which are located in the southeastern United States, with mandatory full-day kindergarten. The West Virginia law requiring full-day kindergarten was passed in the early 1990s, and full-day kindergarten was implemented throughout the state by the mid-1990s.

The West Virginia Education Association (WVEA) was actively involved in the passage of full-day kindergarten legislation because it made sense from educational and economic perspectives.

At the time full-day kindergarten legislation was passed, a number of districts in the state—especially in the western part—faced declining enrollment. Schools were closing and teachers were being transferred or fired. Additionally, as a rural state, West Virginia could not afford to have multiple bus schedules to accommodate kindergartners.

Full-day kindergarten provided a way of more effectively meeting the needs of students while at the same time saving teachers’ jobs and saving districts’ money. Because enrollments were declining in a large portion of the state, the need for additional classroom space was an issue only for districts in the eastern panhandle—where population was growing at the time and continues to grow.

“Full-day kindergarten made sense for West Virginia—from an educational and an economic perspective.”

—Perry Bryant, former lobbyist with the West Virginia Education Association
The WVEA teamed up with county superintendents to support passage of full-day kindergarten legislation. The group worked with the education committees of the West Virginia House and Senate, and gained the support of influential legislators. At the time, there was not significant opposition to the bill.

The passage and subsequent implementation of full-day kindergarten in West Virginia was not without challenges, however. Some schools in the eastern panhandle struggled to find classroom space and some parents voiced concern about how longer days—in some cases, coupled with long bus rides—would affect their children.

“Looking back, one of the things we would have done differently,” notes Bryant, “is involve more parents as supporters.”

Full-day kindergarten has provided a number of benefits to parents, however. As Cathy Jones, who coordinates early education program at the West Virginia Department of Education, notes, “West Virginia has a lot of working parents. Public full-day kindergarten programs ensure working parents that their children are well educated and well cared for. All parents receive those benefits.”

Currently, the WVEA is working in partnership with early education groups in the state to support the passage of a comprehensive public prekindergarten program. “The work we did on full-day kindergarten really helped set the stage for the work we are doing now,” explains Bryant.

### A snapshot of full-day kindergarten in West Virginia:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Meets NEA Policy Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory Full-Day Attendance</strong></td>
<td>YES—Kindergarten is “full day/every day” and tied to the regular school calendar. Kindergarten is universal (available in all schools) and mandatory.</td>
</tr>
<tr>
<td><strong>Teacher Certification</strong></td>
<td>YES—Kindergarten teachers must be appropriately certified. The state requires a kindergarten certificate.</td>
</tr>
<tr>
<td><strong>Class Size</strong></td>
<td>NO—Classes are capped at 20 students.</td>
</tr>
<tr>
<td><strong>Alignment</strong></td>
<td>YES—Content standards are required for each grade. Alignment is built into content standards that are followed in each grade.</td>
</tr>
<tr>
<td><strong>Professional Development</strong></td>
<td>YES—The state provides ongoing professional development for teachers and principals.</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>YES—Full-day kindergarten is fully funded by the state.</td>
</tr>
<tr>
<td><strong>Parent Involvement</strong></td>
<td>SOMEWHAT—Parents are required to register children and participate in pre-screening programs.</td>
</tr>
<tr>
<td><strong>Curriculum</strong></td>
<td>YES—The state of West Virginia has a mandated state-wide curriculum for each grade, including kindergarten.</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>NO—Informal assessments are mandated by the state, but no formal assessments are required in kindergarten.</td>
</tr>
<tr>
<td><strong>Teacher Assistants</strong></td>
<td>YES—The law stipulates that if there are 11 or more students, teachers must have an aide in the classroom.</td>
</tr>
<tr>
<td><strong>Flexibility in Age Requirements</strong></td>
<td>NO—The kindergarten age requirement is uniform throughout the state.</td>
</tr>
</tbody>
</table>
New Mexico—A Lesson in Patience, Persistence, Compromise and Focus

The state of New Mexico began implementing a state-wide full-day kindergarten program in the 2000-2001 school year. Now, kindergartners attend school full day in every school in the state. Though New Mexico eventually ended up phasing in full-day kindergarten, proponents of full-day kindergarten did not initially envision a phase-in period. An important part of New Mexico’s story is how the phase-in solution was eventually reached and the benefits it offered.

The push for full-day kindergarten in New Mexico began in the early 1990s. Mike Gladden, a school superintendent concerned about the academic preparedness of the young children in his school system, worked with his state senator, Pete Campos, to pass a memorial to study the feasibility of offering full-day kindergarten throughout the state of New Mexico. In summer 1993 the state’s Public Education Department teamed up with the New Mexico legislature’s Education Study Committee to form a full-day kindergarten task force.

The task force conducted a literature review and surveyed parents, teachers and school administrators about their attitudes toward the expansion of full-day kindergarten. A majority of parents and teachers supported full-day kindergarten, and all of the administrators surveyed with full-day programs in place favored the full-day approach. The task force then drafted a report, making the case for full-day kindergarten. The report included cost calculations for implementing full-day kindergarten and referenced an Albuquerque school evaluation that favorably compared full-day classes to half-day classes.

“Our central message was always an educational message: full-day kindergarten provides long-term educational benefits. An investment in full-day kindergarten is an investment in the educational future of our children.”

—Charles Bowyer, Government Relations, Professional Issues and Research, National Education Association-New Mexico

Key Steps in the New Mexico Full-Day Kindergarten Advocacy Process

With abundant experience at confronting the political and budgetary realities that state policymakers face, full-day kindergarten supporters effectively:

• Defined a problem (inadequate student achievement)

• Offered a policy solution (full-day kindergarten)

• Built political pressure and momentum (through media coverage and endorsements and the support of influential individuals and constituencies)

• Provided policymakers with funding solutions and implementation strategies (recalculating projected costs, identifying funding sources)

• Monitored and influenced implementation after passage of the legislation (attending to the selection of schools; offering teacher training opportunities)

—Source: Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
Based on this report, supporters introduced a bill in the 1994 legislative session to begin implementing full-day kindergarten in selected districts. Though the bill appeared to have popular support, it ultimately failed in committee. In his case study of full-day kindergarten in New Mexico, Anthony Raden notes that the bill was likely defeated for two reasons: there were concerns about funding equity in districts with low property values, and some conservative parents were opposed to the bill on the grounds that it constituted state intervention in family life.

For several years, the drive to pass a full-day kindergarten bill gave way to other education priorities. Gary Johnson, a conservative businessman, was elected governor in 1994 on an education platform that included an emphasis on local control. Though he initially professed support for full-day kindergarten, his first legislative package did not include funds for the program, and public education supporters found themselves battling the governor on other fronts, including the voucher issue.

The full-day kindergarten issue continued to resurface, though. In 1998 another full-day kindergarten bill was introduced. But after the New Mexico Public Education Department increased the estimated amount of funds required to implement the program to approximately $103 million—with $38 million for teacher salaries, $65 million for additional classroom space and $500,000 for transportation—again the bill failed in committee. In response, supporters of full-day kindergarten proposed a three-year phase-in period, and managed to pass a prekindergarten package that included funds for full-day kindergarten in 1999. In a larger battle with the legislature over vouchers, the governor then vetoed the package, along with a number of other education provisions.

A key turning point for full-day kindergarten in New Mexico was the founding of Think New Mexico (TNM), a bipartisan research and advocacy organization created by Fred Nathan, an attorney and former special counsel in the New Mexico attorney general’s office. As special counsel, Nathan worked with the New Mexico legislature for seven years. When he left the attorney general’s office to found Think New Mexico, he intended to focus on important yet seemingly intractable issues facing New Mexico. He built a high-profile bipartisan board of directors, and with a few small grants from New Mexico foundations, set about working on TNM’s first issue: full-day kindergarten.

Interviews with Anthony Raden, Nathan and TNM board members point to several reasons why they selected full-day kindergarten as their first issue:

• The board members agreed that New Mexico needed to do much more on the early education front.

• Full-day kindergarten was a manageable piece of the larger pre-K issue.

• It was a “potentially winnable issue.” As Nathan put it, “I thought that it would be a long shot, but achievable.”

TNM’s strategy was simple, yet effective. Though the concept of full-day kindergarten had been gathering support in New Mexico for a number of years, advocates had not managed to successfully implement a full-day kindergarten program. The TNM board and staff knew that

“Think New Mexico pointed out that while 54.7% of 5-year-olds attended full-day kindergarten programs nationally, only 14.7% did so in New Mexico. New Mexico children were way behind their peers in educational achievement.”

—Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
they would need to win over the governor, which would require the support of the business community, and they would need to convince legislators that New Mexico could afford full-day kindergarten. With these two factors in mind, they began their campaign.

- First, they issued a report, making the case for full-day kindergarten—framing it as an essential and affordable program—and held a press conference to announce the findings in the report. As the legislative session drew near, they issued a second report, outlining how the state could pay for full-day kindergarten by cutting some costly, and arguably unnecessary, programs.

- They worked hard to get free positive media coverage—writing op-eds, meeting with writers and editors at the state’s major papers, and giving radio and TV interviews.

- They identified and worked with popular legislators on both sides of the aisle to cosponsor the legislation.

- Using the connections of a powerful board, they gained the support of New Mexico’s political and business leaders—including the governor’s wife, Dee Johnson, and the Association of Commerce and Industry, New Mexico’s most powerful business organization. This set the stage for the governor to eventually sign the legislation into law.

- Finally, TNM members “staffed the legislature” by acting as legislators’ aides before the vote. In a state where legislators receive very little compensation and little to no staff support, this kind of attention made a huge difference.

Raden notes in his case study that “teachers unions” were reluctant to support the passage of full-day kindergarten. Not so, says Charles Bowyer, National Education Association-New Mexico’s government relations, research and professional issues coordinator.

“We were always supportive of full-day kindergarten, but we wanted to make sure that there was enough funding for the program,” explains Bowyer. “We were concerned about how the passage of full-day kindergarten would impact other programs, vis-à-vis funding. At the time, we were working on other legislation….We wanted to make sure that this reform was not at the expense of other reforms.”

When asked what NEA-NM would have done differently, Bowyer notes that they would have started by supporting a phase-in process for implementing full-day kindergarten. “It took us (the coalition supporting full-day kindergarten) a long time to reach that compromise. If we had begun with a phase-in approach, we could have saved a lot of time and frustration—it was just too expensive otherwise,” explains Bowyer.

### Staffing the Legislature

Every morning during the session, Nathan checked in personally with the legislative sponsors (Taylor, Wilson and Smith). If they needed anything—a typed speech, talking points, photocopies—he and his staff took care of it. Nathan and his allies spoke to every legislator in the House and Senate, shaping arguments to appeal to the person’s ideological leanings and legislative priorities.

“We tried to make a marketing package that was attractive to everyone to counter all objections out there,” Senator Smith said. To Republicans, in particular, they tended to emphasize that the reform could be done in a fiscally prudent manner and would bring a high return on investment. To all politicians, they claimed that full-day kindergarten would boost student achievement—an affordable and popular reform that made enormous sense educationally and politically.

—Source: Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
Ultimately, the phase-in compromise was appealing to a wide range of people. It was much more palatable to legislators, and it enabled NEA-NM to simultaneously work for salary increases for teachers and support full-day kindergarten.

The Right Solution at the Right Time

Andy Lenderman, a journalist who covered the education beat for *The Albuquerque Tribune*, points to several conditions and factors that made the timing ideal for passage of full-day kindergarten legislation. First, parents in the state, “tired of being dead last in every single education category,” were anxious for educational change and improved student outcomes. Second, with a booming economy, the state was “flush,” with a significant budgetary surplus from which new programs could be funded. Finally, legislators (who were up for re-election) and the governor (who endured criticism for vetoing the previous year’s budget and various education initiatives) had pledged to take action to revitalize the state’s educational system. Political and economic forces, therefore, converged to allow full-day kindergarten, an idea drifting on the political landscape for years, to emerge as a feasible and popular reform strategy on the state’s legislative agenda.

—Source: Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*

### A snapshot of full-day kindergarten in New Mexico:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Meets NEA Policy Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Full-Day Attendance</td>
<td><strong>NO</strong>—Full-day kindergarten is universal (available in all schools), but not mandatory. More than 98 percent of parents choose to send their children to full-day kindergarten.</td>
</tr>
<tr>
<td>Teacher Certification</td>
<td><strong>YES</strong>—Kindergarten teachers must be appropriately certified.</td>
</tr>
<tr>
<td>Class Size</td>
<td><strong>YES</strong>—The ratio between teacher and students is 1 to 15. Classes with 15 to 20 students must be provided with a teacher’s assistant.</td>
</tr>
<tr>
<td>Alignment</td>
<td>Not specified in the statute (according to the ECS Kindergarten Database).</td>
</tr>
<tr>
<td>Professional Development</td>
<td><strong>YES</strong>—The state provides ongoing professional development for teachers and principals.</td>
</tr>
<tr>
<td>Funding</td>
<td><strong>YES</strong>—Full-day kindergarten was phased in across the state from 2000–2001 to 2004–2005. It is now fully funded by the state as part of the state’s regular education funding formula.</td>
</tr>
<tr>
<td>Parent Involvement</td>
<td>Not specified in the statute (according to the ECS Kindergarten Database).</td>
</tr>
<tr>
<td>Curriculum</td>
<td><strong>NO</strong>—There is no mandated state curriculum. However, the statute specifies that programs must contain an early literacy program tied to reading research, and that they must be child-centered and developmentally appropriate.</td>
</tr>
<tr>
<td>Assessments</td>
<td><strong>YES</strong>—Schools are required to conduct a variety of assessments, including reading and literacy assessments.</td>
</tr>
<tr>
<td>Teacher Assistants</td>
<td><strong>YES</strong>—The law stipulates that if there are 15 to 20 students, teachers must have an assistant in the classroom.</td>
</tr>
<tr>
<td>Flexibility in Age Requirements</td>
<td><strong>NO</strong>—The age requirement (5) is mandatory throughout the state. All students must attend at least half-day kindergarten if they turn 5 by September 1.</td>
</tr>
</tbody>
</table>
NEA Resources


NEA’s Legislative Action Center, www.nea.org/lac.

National Association for the Education of Young Children in collaboration with NEA and other organizations. “Why We Care About the K in K-12.” *Young Children,* NAEYC, March 2005. www.journal.naeyc.org/btj/200503/05aftetal.asp.

**Kindergarten and Early Education Research**


“Expanding kindergarten to full day is wise move.” *AZCentral.com,* February 27, 2005. www.azcentral.com/specials/special42/articles/0227alldayk0227.html.


**Additional Organizations/Web Sites**

**Early Education for All**  
www.strategiesforchildren.org/eea/eea_home.htm. This Massachusetts campaign is a coalition of leaders from business, early childhood, labor, religion, health care, education and philanthropy, working in partnership with parents, grassroots leaders and state policymakers to make publicly funded, high-quality preschool education and full-day public school kindergarten available to every Massachusetts child. The Web site features full-day kindergarten research as well as draft legislation.

**Full-Day Kindergarten: Exploring an Option for Extended Learning**  


**National Association for the Education of Young Children**  
www.naeyc.org. NAEYC is dedicated to improving the well-being of all young children with a focus on birth to age 8. See the Early Childhood Issues section of their Web site for research and advocacy information.

**National Conference of State Legislatures**  
www.ncsl.org. Maintains detailed information about state legislatures, including when they meet and how they are structured.

**National Institute for Early Education Research**  
www.nieer.org. NIEER supports early childhood education initiatives by providing objective, nonpartisan information based on research. The NIEER Web site contains an Expert Database with profiles and contact information for experts in early childhood education.

**Pre-K Now—Resources**  
www.preknow.org. Pre-K Now is a public education and advocacy organization that advances high-quality, voluntary prekindergarten for all 3- and 4-year-olds. Visit the Resources section of their Web site for more information about the early education climates in different states.
New Research: Children With Strong Social Skills in Kindergarten More Likely to Thrive as Adults

July 16, 2015

Princeton, N.J.—A 20-year study shows a link between children's social skills in kindergarten and their well-being in early adulthood, according to the findings published today in the American Journal of Public Health. Children who were more likely to “share” or “be helpful” in kindergarten were also more likely to obtain higher education and hold full-time jobs nearly two decades later, the study found. Students who lacked these “social competence” skills were more likely to face more negative outcomes by the age of 25, including substance abuse problems, challenges finding employment or run-ins with the law.

“This study shows that helping children develop social and emotional skills is one of the most important things we can do to prepare them for a healthy future,” said Kristin Schubert, program director at the Robert Wood Johnson Foundation, which funded the research. “From an early age, these skills can determine whether a child goes to college or prison, and whether they end up employed or addicted.”

How the Study Worked

Researchers from Pennsylvania State and Duke Universities analyzed what happened to nearly 800 kindergarteners from four locations after their teachers measured their social competency skills in 1991. The children were evaluated on a range of social behaviors, such as whether they resolve peer problems, listen to others, share materials, cooperate, and are helpful. Each student then received a composite score representing his or her overall level of positive social skills/behavior, on a scale from 0 (“not at all”) to 4 (“very well”).

The research team monitored these students and the positive and negative milestones each obtained until they turned 25. Using a variety of data sources, including official records; reports from parents; and self-reporting by the participants, researchers recorded whether the students obtained high school diplomas, college degrees, and full-time jobs. They also kept track of whether students developed a criminal record or substance abuse problems, among other negative outcomes.

Key Research Findings

For every one-point increase in a child’s social competence score in kindergarten, he/she was:

- Twice as likely to attain a college degree in early adulthood;
- 54% more likely to earn a high school diploma; and
- 46% more likely to have a full-time job at the age of 25.

For every one-point decrease in a child’s social competence score in kindergarten, he/she had:

- 64% higher chance of having spent time in juvenile detention;
- 67% higher chance of having been arrested by early adulthood;
- 52% higher rate of recent binge drinking and 82% higher rate of recent marijuana usage; and
- 82% higher chance of being in or on a waiting list for public housing.

Implications for Action

This latest study comes on the heels of a growing body of findings that prove early learning and development have a significant impact on a child’s overall prosperity and health throughout their life. Not only does this new research emphasize the value of early learning, it shows the particular importance of focusing those early learning efforts on the development of social and emotional skills.

“The good news is that social and emotional skills can improve,” said Damon Jones, PhD, a senior research associate at Pennsylvania State and one of the authors of this study. “This research by itself doesn’t prove that higher social competence can lead to better outcomes later on. But when combined with other research, it is clear that helping children develop these skills increases their chances of success in school, work, and life.”

Across the country, dozens of school-based programs proven to boost kids’ social and emotional development before and after kindergarten can serve as models for others. In addition to making the case for expanding these programs, this new research lends weight to the idea that screening social skills should be more widespread. Using a simple, easy-to-use assessment like the one used in this study, schools could determine which students need additional assistance and intervene accordingly to eliminate future problems before they start.

Additionally, while this study did not analyze the economic benefits of social and emotional skill development, the researchers believe that effective, evidence-based programs to improve skills could provide significant cost-savings over time. The money saved from reduced incarceration costs, drug treatment programs and government assistance coupled with the increased revenues from higher employment rates makes it especially cost-effective to expand programs that boost social and emotional learning, starting in a child’s earliest years.

“As a society, we have tools to give every child a strong foundation for healthy social and emotional development,” said Robert H. Dugger, managing partner for Hanover Provident Capital and co-founder of ReadyNation, which works to improve business competitiveness by helping children get a good start in life. “More than anything else, this research tells us that we have an enormous incentive to put those tools to widespread use and to give children the support they need as early as possible.”
For more than 40 years the Robert Wood Johnson Foundation has worked to improve health and health care. We are striving to build a national Culture of Health that will enable all to live longer, healthier lives now and for generations to come. For more information, visit www.rwjf.org. Follow the Foundation on Twitter at www.rwjf.org/twitter or on Facebook at www.rwjf.org/facebook.

Media Contacts

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Robert Wood Johnson Foundation
media@rwjf.org
(609) 627-5937

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Our mission: to improve the health and health care of all Americans.
Full-Day Kindergarten:  
A Review of the Evidence and Benefit-Cost Analysis

The Washington State legislature directed the Washington State Institute for Public Policy (WSIPP) to develop “a repository of research and evaluations of the cost-benefits of various K–12 educational programs and services.”

In this report, we analyze a K–12 policy question: do the long-term benefits of full-day kindergarten (in comparison with half-day) outweigh the costs?

We researched this question by reviewing all credible evaluation studies from the United States and elsewhere. We systematically analyzed the studies to estimate whether full-day kindergarten has a cause-and-effect relationship with student outcomes. We then calculated whether the long-term monetary benefits of full-day kindergarten exceed the operating and capital costs.

In this report, we describe our research approach and highlight our findings on full-day kindergarten. An appendix provides technical details.

Summary

WSIPP updated its 2007 analysis of the research evidence regarding full-day kindergarten.

Over half of Washington’s public school kindergarteners attend full-day programs, and the state is expanding funding for this option. In this report, we analyze average impacts on student outcomes from full-day kindergarten across the United States and elsewhere. We also examine whether benefits are likely to exceed costs.

To investigate, we conducted a systematic review of research by collecting all studies we could find on the topic. We screened for scientific rigor and only analyzed studies with strong research methods.

We identified ten credible evaluations of full-day kindergarten’s cause-and-effect relationship with student test score outcomes. The studies estimate the relative impact of full-day in comparison with half-day programs.

Improvement in standardized test scores was the only outcome measured in the studies that we reviewed. Other outcomes of interest such as social and emotional learning and high school graduation have not been examined consistently in the research literature.

Our bottom-line findings. Full-day kindergarten leads to higher standardized test scores than half-day programs, but this effect appears to fade out within a few years.

More information about how to sustain the early gains from investments in full-day kindergarten is needed as Washington State continues to expand this option for public school students.


1 Engrossed Substitute Senate Bill 6386, Chapter 372, Laws of 2006.
I. Research Approach

When WSIPP carries out assignments from the legislature to identify what works (and what does not) in public policy, we implement a three-step research approach.

**Step 1: What Works? What Does Not?**

In the first research step, we estimate whether various public policies and programs can achieve desired outcomes, such as improved test scores. We carefully analyze all high-quality studies from the United States and elsewhere to identify policy options tried, tested, and found to impact outcomes. We look for research studies with strong evaluation designs and exclude studies with weak research methods.

Our empirical approach follows a meta-analytic framework to assess systematically all credible evaluations we can locate on a given topic. Given the weight of the evidence, we calculate an average expected effect of a policy on a particular outcome of interest, as well as an estimate of the margin of error for that effect.

**Step 2: What Makes Economic Sense?**

Next, we insert costs and benefits into the analysis by answering two questions:

- How much would it cost Washington taxpayers to produce the results found in Step 1?
- How much would it be worth to people in Washington State to achieve the improved outcome?

That is, in dollars and cents terms, what are the costs and benefits of each policy option?

To answer these questions, we developed, and continue to refine, an economic model that estimates benefits and costs. The model provides an internally consistent monetary valuation so policy options can be compared on an apples-to-apples basis. Our benefit-cost results include standard financial statistics: net present values and benefit-cost ratios.

We present monetary estimates from three perspectives:

a) program participants,  

b) taxpayers, and  

c) other people in society (for example, we estimate “spillover” effects to society of increases in education).  

The sum of the three perspectives provides a “total Washington” view on whether a policy or program produces benefits that exceed costs.

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**Step 3: What is the Risk in the Benefit-Cost Findings?**

Any tabulation of benefits and costs involves a degree of risk about the estimates calculated. This is expected in any investment analysis, whether in the private or public sector. To assess the riskiness of our conclusions, we perform a “Monte Carlo simulation” in which we vary key factors in our calculations. The purpose of this analysis is to determine the odds that a particular policy option will at least break even.

Thus we produce two “big picture” findings: expected benefit-cost results and, given our understanding of the risks, the odds that the policy will at least have benefits that are greater than the costs. Readers interested in an in-depth description of the research methods for these three steps can reference our Technical Manual. A brief Technical Appendix is included at the end of this report.

**II. Full-Day Kindergarten**

In the United States, the percentage of students attending full-day kindergarten has steadily increased since the 1970s. In 2012, 76% of students in the United States attended full-day kindergarten, compared with 28% in 1977. Many public school districts have adopted full-day kindergarten as a strategy to support academically at-risk students.

Currently, 11 states and Washington, D.C. fund full-day kindergarten for all students. In most states, however, the decision to offer full-day kindergarten is made at the local level.

Washington State began to fund voluntary full-day kindergarten for schools with the highest poverty levels during the 2007-08 school year. The 2007 Legislature established the goal of funding full-day kindergarten in all public schools by the 2017-18 school year. Almost half of Washington’s public school kindergarteners attend full-day kindergarten. In 2012, 22% were enrolled in a full-day program funded by the state. An additional 25% of Washington kindergarteners attending public

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7 RCW 28A.150.315

school were enrolled in full-day programs funded by local sources or tuition.9

WSIPP previously published findings on full-day kindergarten in 2007.10 This report updates our analysis of evaluations of full-day kindergarten compared with half-day kindergarten. The studies we include in our analysis meet our minimum standards for scientific rigor (such as having a valid comparison group; see the Technical Appendix for details). These criteria give us increased confidence that any changes in outcomes are caused by the intervention and not by unknown factors.

This analysis examines the short-term impact of full-day kindergarten on standardized academic test scores. Unfortunately, longer-term measures such as high school graduation or labor market outcomes were not measured consistently across studies and, thus, could not be analyzed for this report.

We only examine academic outcomes in this report. “Non-cognitive” outcomes such as social and emotional learning are a growing area of research and of interest to the legislature and educators.11 However, we could not include these outcomes in our analysis for two reasons. First, the studies we reviewed did not measure social and emotional learning consistently. Second, we do not currently have sufficient data to link full-day kindergarten to social and emotional outcomes and subsequent monetary benefits and costs. As scientific consensus emerges on “non-cognitive” skills, WSIPP’s findings will be updated to incorporate monetary benefits from these outcomes.

Meta-Analysis Findings

We identified ten studies that met our criteria for scientific rigor and measured academic test scores of full-day kindergarteners in comparison with half-day. Most studies measured student test scores at the end of kindergarten. A few followed students for additional years (in grades one through five), which allows us to examine whether the early test score impacts persist over time.

The results of our updated meta-analysis are similar to our 2007 findings and are displayed in Exhibit 1. On average, students in full-day kindergarten had significantly higher test scores at the end of the school year in comparison with similar students in half-day kindergarten (effect size=0.16). The initial boost in test scores, however, appears to fade out to almost zero by grades two through five.

This meta-analytic finding represents the average impact of full-day kindergarten for all students, regardless of income level or other characteristics. Since full-day kindergarten is often used as an intervention for disadvantaged students, we also examined the average effect size among low-income students.

The results are similar for low-income students. We estimate a positive effect immediately after kindergarten (effect size=0.12), but, again, the impact fades out to nearly zero by grades two through five.

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Exhibit 1
Meta-Analytic Findings for Full-Day Kindergarten (versus Half-Day)

Grade level when test scores were measured (number of effect sizes)

95% confidence intervals are shown for each effect size
Benefit-Cost Analysis

As noted earlier, we use WSIPP’s standard benefit-cost model to determine whether the early gains from full-day programs offset the operating and capital investments necessary to expand the school day for kindergarteners. We estimate that it costs approximately $2,650 per student to expand from half-day to full-day kindergarten. The estimated costs are described in detail in the Technical Appendix. We assume that a portion of full-day kindergarten costs would be offset by lower participation in state-subsidized child care.

We estimate that over their lifetimes, full-day kindergarten participants—because their cognitive skills improved only slightly over the long term—make just $833 more in labor market earnings than half-day kindergarten participants, on average.

These labor market benefits, based on test scores alone, are less than the program cost. Thus, this policy has a relatively low probability of monetarily breaking even (14%).

This unfavorable result for full-day kindergarten depends critically on the degree to which the initial test score gains fade out in later grades. In Exhibit 2 we show benefit-cost analyses for three scenarios: (a) the test score gains fade out as reported in Exhibit 1; (b) the gains fade out at a rate typical of early childhood education programs; and (c) the gains are sustained through the end of high school.\textsuperscript{12}

<table>
<thead>
<tr>
<th>Summary statistics</th>
<th>Benefits minus costs (net present value)</th>
<th>Benefit to cost ratio</th>
<th>Odds of a positive net present value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits from labor market earnings</td>
<td>“Deadweight” cost of taxation</td>
<td>Net benefits</td>
<td>Net program costs</td>
</tr>
<tr>
<td>(a) Full-day kindergarten with test score fadeout as reported in this study</td>
<td>$833</td>
<td>($1,323)</td>
<td>($490)</td>
</tr>
<tr>
<td>(b) Full-day kindergarten with typical early childhood education test score fadeout</td>
<td>$4,882</td>
<td>($1,323)</td>
<td>$3,559</td>
</tr>
<tr>
<td>(c) Full-day kindergarten with no test score fadeout</td>
<td>$16,506</td>
<td>($1,318)</td>
<td>$15,188</td>
</tr>
</tbody>
</table>

The estimates are present-value, life-cycle benefits and costs expressed in 2012 dollars. See the Technical Appendix for additional detail. Net program costs differ due to the use of uncertainty ranges in the Monte Carlo simulation.

If the test score gains faded out at a rate typical of early childhood education programs, we would expect a $4,882 benefit per participant from increased labor market earnings. In this case, the benefits would outweigh the costs by $912 per participant with a 63% chance that the investment at least breaks even.

If the test score gains did not fade out over time, the expected benefits from labor market earnings would be $16,506 per participant. In this case, the benefits would outweigh the costs by $12,540 per participant with a 98% chance that the investment at least breaks even.

III. Conclusions and Study Limitations

The weight of the evidence suggests that the benefits of investing in full-day kindergarten are unlikely to outweigh the costs because the initial test score gains are not typically sustained.

One limitation of this analysis is the possibility that the greatest benefits from full-day kindergarten are not measured by test scores alone. The research literature does not consistently measure social and emotional learning or longer-term outcomes such as high school graduation rates.

More information about how to sustain the early gains from investments in full-day kindergarten is needed as Washington State continues to expand this option for public school students. If the initial boost in test scores persisted, full-day kindergarten has the potential to be cost-beneficial with relatively low risk.
A1. Meta-Analysis Methodology

A1a. Study Selection and Coding Criteria

A meta-analysis is only as good as the selection and coding criteria used to conduct the study. Following are the key choices we made and implemented.

**Study Selection.** We use four primary means to locate studies for meta-analysis of programs: (1) we consult the bibliographies of systematic and narrative reviews of the research literature in the various topic areas; (2) we examine the citations in the individual studies themselves; (3) we conduct independent literature searches of research databases using search engines such as Google, Proquest, Ebsco, ERIC, PubMed, and SAGE; and (4) we contact authors of primary research to learn about ongoing or unpublished evaluation work. After first identifying all possible studies via these search methods, we attempt to determine whether the study is an outcome evaluation that has a valid comparison group. If a study meets this criterion, we secure a full copy of the study for our review.

**Peer-Reviewed and Other Studies.** We examine all evaluation studies we can locate with these search procedures. Many studies are published in peer-reviewed academic journals while others are from reports obtained from the agencies themselves. It is important to include non-peer reviewed studies, because it has been suggested that peer-reviewed publications may be biased to show positive program effects. Therefore, our meta-analysis includes all available studies that meet our other criteria, regardless of publication source.

**Control and Comparison Group Studies.** Our analysis only includes studies that have a control or comparison group or use a quasi-experimental design such as regression discontinuity with multiple, sophisticated controls. We do not include studies with a single-group, pre-post research design. This choice was made because it is only through rigorous studies that causal relationships can be reliably estimated.

**Random Assignment and Quasi-Experiments.** Random assignment studies are preferred for inclusion in our review, but we also include non-randomly assigned comparison groups. We only include quasi-experimental studies if sufficient information is provided to demonstrate comparability between the treatment and comparison groups on important pre-existing conditions such as age, gender, and pre-treatment characteristics such as test scores.

---

13 All studies used in the meta-analysis are identified in the references to this paper. Many other studies were reviewed but did not meet the criteria set for this analysis.
**Enough Information to Calculate an Effect Size.** Following the statistical procedures in Lipsey and Wilson, a study has to provide the necessary information to calculate an effect size. If the necessary information is not provided, and we are unable to obtain the necessary information directly from the study’s author(s), the study is not included in our review.

**Mean-Difference Effect Sizes.** For this study, we code mean-difference effect sizes for continuous measures following the procedures outlined in Lipsey and Wilson. For dichotomous measures, we use the d-Cox transformation to approximate the mean difference effect size, as described in Sánchez-Meca, Marín-Martínez, and Chacón-Moscoso. We choose to use the mean-difference effect size rather than the odds ratio effect size because we frequently code both dichotomous and continuous outcomes (odds ratio effect sizes could also be used with appropriate transformations).

**Outcome Measures of Interest.** In this analysis we are interested in academic achievement, long-term outcomes and social and emotional learning. We include standardized, validated assessments of student learning. Reading and math test scores are the most frequently measured outcomes.

Since long-term outcomes and social and emotional learning were not measured consistently in the studies we reviewed, they are not included in this report.

**A1b. Procedures for Calculating Effect Sizes**

Effect sizes summarize the degree to which a program or policy affects an outcome. In experimental settings this involves comparing the outcomes of treated participants relative to untreated participants. Several methods are used by analysts to calculate effect sizes, as described in Lipsey and Wilson. The most common effect size statistic is the standardized mean difference effect size and that is the measure we use in this analysis.

**Weighted Mean Different Effect Size.** The mean difference effect size is designed to accommodate continuous outcome data, such as student test scores, where the differences are in the means of the outcome. The standardized mean difference effect size is computed with:

\[
ES = \frac{M_t - M_c}{\sqrt{\frac{(N_t - 1)SD_t^2 + (N_c - 1)SD_c^2}{N_t + N_c - 2}}}
\]

In this formula, \(ES\) is the estimated effect size for a particular program; \(M_t\) is the mean value of an outcome for the treatment or experimental group; \(M_c\) is the mean value of an outcome for the control group; \(SD_t\) is the standard deviation of the treatment group; and \(SD_c\) is the standard deviation of the control group; \(N_t\) is the number of subjects in the treatment group; and \(N_c\) is the number of subjects in the control group. The variance of the mean difference effect size statistic in equation (1) is computed with:

\[
ES^2 = \frac{N_t + N_c}{N_tN_c} + \frac{ES^2}{2(N_t + N_c)}
\]

---

15 Ibid.
18 Ibid, Table B10, equation 1, p. 198.
19 Ibid, Table 3.2, p. 72.
In some random assignment studies or studies where treatment and comparison groups are well-matched, authors provide only statistical results from a t-test. In those cases, we calculate the mean difference effect size using:

\[ ES = t \sqrt{\frac{N_t + N_c}{N_t N_c}} \]

(3) 

In many research studies, the numerator in equation (1), \( M_t - M_c \), is obtained from a coefficient in a regression equation, not from experimental studies of separate treatment and control groups. For such studies, the denominator in equation (1) is the standard deviation for the entire sample. In these types of regression studies, unless information is presented that allows the number of subjects in the treatment condition to be separated from the total number in a regression analysis, the total \( N \) from the regression is used for the sum of \( N_t \) and \( N_c \), and the product term \( N_t N_c \) is set to equal \((N/2)^2\).

**Pre/Post Measures.** When authors report pre- and post-treatment measures without other statistical adjustments, we start by calculating two between-groups effect sizes: (a) at pre-treatment and, (b) at post-treatment. Then, we calculate the overall effect size by subtracting the post-treatment effect size from the pre-treatment effect size.

**Adjusting Effect Sizes for Small Samples.** Since some studies have very small sample sizes, we follow the recommendation of many meta-analysts and adjust for this. Small sample sizes have been shown to upwardly bias effect sizes, especially when samples are less than 20. Following Hedges,\(^{21}\) Lipsey and Wilson\(^{22}\) report the “Hedges correction factor,” which we use to adjust all mean-difference effect sizes, (where \( N \) is the total sample size of the combined treatment and comparison groups):

\[ ES'_m = \left[ 1 - \frac{3}{4N - 9} \right] * ES_m \]

(4) 

**Adjusting Effect Sizes and Variances for Multi-Level Data Structures.** Most studies in the education field use data that are hierarchical in nature. That is, students are clustered in classrooms, classrooms are clustered within schools, schools are clustered within districts, and districts are clustered within states. Analyses that do not account for clustering will underestimate the variance in outcomes at the student level (the denominator in equation 1 and, thus, may over-estimate the precision of magnitude on effect sizes). In studies that do not account for clustering, effect sizes and their variance require additional adjustments.\(^{23}\) There are two types of studies, each requiring a different set of adjustments. First, for student-level studies that ignore the variance due to clustering, we make adjustments to the mean effect size and its variance,

\[ ES_p = ES_m * \sqrt{1 - \frac{2(n - 1)\rho}{N - 2}} \]

(5) 

\(^{20}\) Ibid, Table B10, equation 2, p. 198.


\(^{22}\) Lipsey & Wilson, (2001), equation 3.22, p. 49.

\(^{23}\) Studies that employ hierarchical linear modeling, or fixed effects with robust standard errors, or random effects models account for variance and need no further adjustment for computing the effect size, but adjustments are made to the inverse variance weights for meta-analysis using these methods.

where $\rho$ is the intraclass correlation, the ratio of the variance between clusters to the total variance; $N$ is the total number of individuals in the treatment group, $N_t$, and the comparison group, $N_c$; and $n$ is the average number of persons in a cluster, $K$. In the educational field, clusters can be classes, schools, or districts. We used 2006 Washington Assessment of Student Learning (WASL) data to calculate values of $\rho$ for the school-level ($\rho = 0.114$) and the district level ($\rho = 0.052$). Class-level data were not available, so we use a value of $\rho = 0.200$ for class-level studies.

Second, for studies that report means and standard deviations at a cluster level, we make adjustments to the mean effect size and its variance:

\[ (6) \ V(ES_T) = \left( \frac{N_t + N_c}{N_t N_c} \right) [1 + (n - 1)\rho] + ES_T^2 \left( \frac{(N - 2)(1 - \rho)^2 + n(N - 2n)\rho^2 + 2(N - 2n)\rho(1 - \rho)}{2(N - 2)(N - 2(n - 1)\rho)} \right) \]

We do not adjust effect sizes in studies reporting dichotomous outcomes. This is because the $d$-Cox transformation assumes the entire normal distribution at the student level. However, when outcomes are dichotomous, or an effect size is calculated from studies where authors control for clustering with robust standard errors or hierarchical linear modeling, we use the “design effect” to calculate the “effective sample size.” The design effect is given by:

\[ (9) \ D = 1 + (n - 1)\rho \]

The effective sample size is the actual sample size divided by the design effect. For example, the effective sample size for the treatment group is:

\[ (10) \ N_{t(\text{eff})} = \frac{N_t}{D} \]

### A1c. Adjusting Effect Sizes for Study Design, Research Involvement and Study Setting

In this report we show the results of our meta-analyses calculated with the standard meta-analytic formulas described above. Typically, we list the “Adjusted Effect Size” that is used in the benefit-cost analysis in our reports. These adjusted effect sizes, which are derived from the unadjusted results, may be smaller, larger, or equal to the unadjusted effect sizes we report. In this analysis we considered adjusting effect sizes for research design, researcher involvement in the intervention, and laboratory (not “real world”) settings. For a full description of the rationale for these adjustments see WSIPP’s Technical Manual.

Since the studies we reviewed for our analysis of full-day kindergarten all had similar research designs, we could not conduct a meta-regression to determine if there were systematic differences due to research design. We, therefore, made adjustments for research design based on our analysis of early childhood education.

\[ ^{25} \text{Mark Lipsey (personal communication, November 11, 2007).} \]
\[ ^{26} \text{Formulas for design effect and effective sample size were obtained from the Cochrane Reviewers Handbook, section 16.3.4, Approximate analyses of cluster-randomized trials for a meta-analysis: effective sample sizes. http://www.cochrane-handbook.org/} \]
programs. For early childhood education programs we found that research design did predict the magnitude of the effect size, thus no adjustments were made for this factor in the full-day kindergarten analysis. None of the full-day kindergarten studies took place in a setting that was not a "real world" environment and no researchers were involved in the implementation of these studies; therefore, no adjustments were made for these conditions.

In this report, we refer to all effect sizes as weighted average effect sizes since no adjustments were made for study design, researcher involvement, or study setting.

**Computing Weighted Average Effect Sizes, Confidence Intervals, and Homogeneity Tests.** Once effect sizes are calculated for each program effect, and any necessary adjustments for clustering are made, the individual measures are summed to produce a weighted average effect size for a program area. We calculate the inverse variance weight for each program effect and these weights are used to compute the average. The calculations involve three steps. First, the standard error, $SE_T$ of each mean effect size is computed with:

$$SE_T = \sqrt{\frac{N_t + N_c}{N_t N_c} + \frac{ES^2}{2(N_t + N_c)}}$$

Next, the inverse variance weight $w$ is computed for each mean effect size with:

$$w = \frac{1}{SE_T^2}$$

The weighted mean effect size for a group with $i$ studies is computed with:

$$ES = \frac{\sum(w_i ES_T)}{\sum w_i}$$

Confidence intervals around this mean are then computed by first calculating the standard error of the mean with:

$$SE_{ES} = \frac{1}{\sum w_i}$$

Next, the lower, $ES_L$, and upper limits, $ES_U$, of the confidence interval are computed with:

$$ES_L = ES - z_{(1-\alpha)} \left( SE_{ES} \right)$$

$$ES_U = ES + z_{(1-\alpha)} \left( SE_{ES} \right)$$

In equations (15) and (16), $z_{(1-\alpha)}$ is the critical value for the $z$-distribution (1.96 for $\alpha = .05$). The test for homogeneity, which provides a measure of the dispersion of the effect sizes around their mean, is given by:

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29 Lipsey & Wilson, (2001), equation 3.23, p. 49.
30 Ibid., equation 3.24, p. 49.
31 Ibid., p. 114.
32 Ibid.
33 Ibid.
34 Ibid., p. 116.
The Q-test is distributed as a chi-square with $k-1$ degrees of freedom (where $k$ is the number of effect sizes).

**Computing Random Effects Weighted Average Effect Sizes and Confidence Intervals.** Next, a random effects model is used to calculate the weighted average effect size. Random effects models allow us to account for between-study variance in addition to within-study variance.\(^{35}\) This is accomplished by first calculating the random effects variance component, $v$:\(^{36}\)

\[(17) Q_i = \left( \sum w_i ES_i^2 \right) - \frac{\left( \sum w_i ES_i^2 \right)}{\sum w_i}\]

Where $wsq_i$ is the square of the weight of $ES_i$. This random variance factor is then added to the variance of each effect size and finally all inverse variance weights are recomputed, as are the other meta-analytic test statistics. If the value of $Q$ is less than the degrees of freedom ($k-1$), there is no excess variation between studies and the initial variance estimate is used.

### A2. Full-Day Kindergarten Meta-Analysis and Cost Estimation

**Meta-analysis**

We located ten evaluations of full-day kindergarten (versus half-day programs) that met our criteria for meta-analysis. Three studies used state or school district data; seven studies used the Early Childhood Longitudinal Program Kindergarten Class of 1998-99 (ECLS-K), a large national study that followed a cohort of children from kindergarten to middle school.\(^{37}\) To account for the use of the same data set, we computed an average effect size for the seven studies that used ECLS-K data and included this summary effect size in the meta-analysis. Thus, for the immediate post-kindergarten measurement, four effect sizes are included: the ECLS-K summary effect and the three state/district effects.

We reviewed all studies included in the previous full-day kindergarten meta-analysis using our criteria for scientific rigor and method for coding effect sizes. Seventeen studies that were included in the previous WSIPP analysis were not included in the current analysis because they did not meet the criteria for strong research design or provide sufficient information to compute an effect size.\(^{38}\)

Some of the studies followed students in later grade levels. **Exhibit A1** presents meta-analytic results for students at the end of kindergarten, first grade, and later grades (two through five). At the end of the kindergarten school year, students in full-day kindergarten had higher test scores (unadjusted $ES = 0.16$), on average, than students in half-day programs. That impact, however, appears to fade out in subsequent years (unadjusted $ES = 0.01$ in grades two through five).\(^{39}\)

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\(^{36}\) Ibid., p. 134.

\(^{37}\) http://nces.ed.gov/ecls/kindergarten.asp

\(^{38}\) After re-reviewing the studies in our 2007 analysis, we concluded that a number of the studies did not have adequate comparison groups or sufficient statistical controls to include in our current review.

Exhibit A1

Meta-Analysis Results: Full-Day Kindergarten Impacts on Test Scores
(in Comparison with Half-Day Programs)

<table>
<thead>
<tr>
<th>Follow-up time (end of school year)</th>
<th>No. effect sizes</th>
<th>Weighted average effect size</th>
<th>Standard error</th>
<th>p-value</th>
<th>Combined N in treatment group</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten</td>
<td>4</td>
<td>0.16</td>
<td>0.03</td>
<td>0.00</td>
<td>53,818</td>
</tr>
<tr>
<td>First grade</td>
<td>2</td>
<td>0.06</td>
<td>0.06</td>
<td>0.28</td>
<td>39,566</td>
</tr>
<tr>
<td>2nd-5th grades</td>
<td>3</td>
<td>0.01</td>
<td>0.05</td>
<td>0.27</td>
<td>27,100</td>
</tr>
<tr>
<td>Low-income students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten</td>
<td>2</td>
<td>0.12</td>
<td>0.03</td>
<td>0.00</td>
<td>48,870</td>
</tr>
<tr>
<td>First grade</td>
<td>2</td>
<td>0.00</td>
<td>0.04</td>
<td>0.98</td>
<td>33,339</td>
</tr>
<tr>
<td>2nd-5th grades</td>
<td>2</td>
<td>0.00</td>
<td>0.04</td>
<td>0.99</td>
<td>21,184</td>
</tr>
</tbody>
</table>

Since the relationships in the economic literature between test scores and labor market earnings are based on test scores late in high school, it is critical to adjust earlier measurements of test scores appropriately for use in the benefit-cost model. Typically, the magnitude of gains in standardized test scores of children who participate in an educational intervention does not remain constant over time. WSIPP has modeled test score decay or “fadeout” based on our meta-analysis of early childhood education programs. \(^{40}\) To calculate the impact of full-day kindergarten on test scores at the end of high school we use the effect size at the highest grade level of measurement in the studies we reviewed and then use the fadeout model to estimate the test score decay to age 17. Using this methodology, we estimate the impact of full-day kindergarten on test scores at the end of high school as 54% of the 2nd-5th grade effect size.

We also estimate effect sizes at the end of high school for two hypothetical cases of fadeout in order to calculate the benefits and costs for these scenarios. In the first hypothetical scenario we assume that test scores fadeout is the same as a typical early childhood education program. Using the model of early childhood education program fadeout described above, we estimate the impact of full-day kindergarten on test scores in the hypothetical scenario as 31% of the end of kindergarten effect size. The second hypothetical scenario assumes a case where there is no test score fadeout. For this scenario we use the effect size at the end of kindergarten as the effect size at the end of high school.

\(^{40}\) Kay & Pennucci, (2014).
The Per-Student Cost of Full-Day vs. Half-Day Kindergarten

We use the same estimates as in our previous report on full-day kindergarten for the average per-student cost of moving from half-day to full-day kindergarten. We estimate both operating and capital costs on a per-participant basis.

The cost estimate is driven by the following seven parameters, shown at the bottom of Exhibit A2:

1) Average annual teacher salary in an average classroom (non-wage benefits included, 2012 dollars)
2) Total number of public kindergarten students in Washington (or any geographic sub-unit)
3) Average kindergarten students per classroom
4) Average square feet per average K–12 classroom
5) Construction cost for K–12 classrooms (dollars per square foot, 2012 dollars)
6) Length of bonds for new construction
7) Interest rate on bonds.

The difference in operating costs is estimated as simply the difference in average teacher salary (and non-salary compensation) for a full-time equivalent (FTE) teacher, given an average kindergarten class size. This estimate does not include any estimated effects on pupil transportation costs of moving from half-day to full-day kindergarten. The capital cost calculations estimate the number of additional classrooms needed, times the number of square feet per student, and the cost per square foot of new construction. This product is then financed over an assumed bond term and interest rate. The result is then divided by the student population to estimate a per-student capital cost.

We also estimate the offsets to child-care costs for students who attend school for full-day, rather than a half-day. Washington State’s Department of Health and Human Services provides subsidized child care to families whose income is up to 200% of the federal poverty level through the Child Care Subsidy Programs (CCSP). We calculated the reduction in the use of CCSP based on the percentage of children eligible for free or reduced-priced meals and the assumption that 50% of eligible children would use subsidized child care (Exhibit A3). We estimate that an average of $505 in child care subsidies per student are distributed to half-day kindergarten students that are not distributed to full-day kindergarten students.
### Exhibit A2
Per-Student Cost Estimates of Full-Day Kindergarten (Versus Half-Day)

<table>
<thead>
<tr>
<th></th>
<th>Half-day k</th>
<th>Full-day k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in cohort (October 2012 headcount)</td>
<td>80,923</td>
<td>80,923</td>
</tr>
<tr>
<td>Full-time equivalent (FTE) teacher per classroom</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Average kindergarten class size</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>FTE teachers needed</td>
<td>2023</td>
<td>4046</td>
</tr>
<tr>
<td>Teacher cost per student (includes marginal non-teacher salary operating expenses)</td>
<td>$2,518.56</td>
<td>$5,037.12</td>
</tr>
<tr>
<td><strong>Difference in operating cost per student</strong></td>
<td>$2,518.56</td>
<td>$2,518.56</td>
</tr>
<tr>
<td>Number of classrooms needed</td>
<td>2,023</td>
<td>4,046</td>
</tr>
<tr>
<td>Total square footage of classroom</td>
<td>3,641,535</td>
<td>7,283,070</td>
</tr>
<tr>
<td>Change in square footage</td>
<td></td>
<td>3,641,535</td>
</tr>
<tr>
<td>Construction cost for change in square footage</td>
<td>$686,611,424</td>
<td></td>
</tr>
<tr>
<td>Annual payment to capital</td>
<td></td>
<td>$51,186,437</td>
</tr>
<tr>
<td><strong>Capital payment per student</strong></td>
<td></td>
<td>$632.53</td>
</tr>
<tr>
<td><strong>Total cost per student to expand from half-day to full-day kindergarten</strong></td>
<td><strong>$3,151.09</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Assumed parameters in cost calculation
- Average annual teacher salary in an average classroom (non-wage benefits included, 2012 dollars. Source: OSPI, School District Personnel Summary Files, Table 19) | $83,952
- Marginal non-teacher salary operating expenses (as percent of teacher salaries) | 20% 
- Average kindergarten class size | 20 
- Average square feet of classroom space per student | 90 
- Construction cost for K–12 classrooms (dollars per square foot, 2012) | $188.55 
- Length of bonds for new construction | 25 
- Interest rate on bonds | 5.50%
**Exhibit A3**

Per-Student Cost Estimates of a Half-Day of State-Subsidized Child Care

<table>
<thead>
<tr>
<th>Half-day child care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average school year per-student cost of half-day child care at a center or licensed family home</td>
</tr>
<tr>
<td>Percentage of students who are eligible for free and reduced-price meals*</td>
</tr>
<tr>
<td>Estimated percentage of eligible families who use child care subsidies</td>
</tr>
<tr>
<td><strong>Average per-student annual cost of state subsidized child care</strong></td>
</tr>
</tbody>
</table>

**Assumed parameters in cost calculation**

<table>
<thead>
<tr>
<th>Days in the school year</th>
<th>180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average cost per day of child care at a center or licensed family home for school-aged children**</td>
<td>$11.74</td>
</tr>
</tbody>
</table>


**Department of Early Learning. (2013). Child Care Subsidy Rates.**

http://www.del.wa.gov/publications/subsidy/docs/ChildCareSubsidyRates.pdf

---

**Exhibit A4**

Summary of Per-Student Full-Day Kindergarten Costs

<table>
<thead>
<tr>
<th>Full-day kindergarten (vs. half-day)</th>
<th>Comparison (half-day child care)</th>
<th>Summary</th>
<th>Uncertainty (+ or – %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual cost</td>
<td>Annual cost</td>
<td>Net program costs</td>
<td></td>
</tr>
<tr>
<td>$3,151</td>
<td>$505</td>
<td>$2,646</td>
<td>10%</td>
</tr>
</tbody>
</table>

The figures shown are estimates of the per-student costs to implement full-day kindergarten in Washington State. The uncertainty range is used in Monte Carlo risk simulation, described in WSIPP’s Technical Manual.
**Benefit-Cost Results**

*Exhibit A5* summarizes our benefit-cost results. The estimates are present-value, life-cycle benefits and costs expressed in 2012 dollars. The economic discount rates and other relevant parameters are described in detail in WSIPP’s Technical Manual.41

**Exhibit A5**

Main Benefit-Cost Results

<table>
<thead>
<tr>
<th>Benefit-cost summary</th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(a) Full-day kindergarten program benefits</strong></td>
<td></td>
</tr>
<tr>
<td>Participants (labor market earnings)</td>
<td>$433</td>
</tr>
<tr>
<td>Taxpayers</td>
<td>$185</td>
</tr>
<tr>
<td>Other</td>
<td>$215</td>
</tr>
<tr>
<td>Other indirect*</td>
<td>($1,323)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>($490)</td>
</tr>
<tr>
<td><strong>Costs</strong></td>
<td>($2,649)**</td>
</tr>
<tr>
<td><strong>Benefit minus cost</strong></td>
<td>($3,140)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>(b) Full-day kindergarten with typical early childhood education test score fadeout (hypothetical)</strong></th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants (labor market earnings)</td>
<td>$2,540</td>
</tr>
<tr>
<td>Taxpayers</td>
<td>$1,083</td>
</tr>
<tr>
<td>Other</td>
<td>$1,258</td>
</tr>
<tr>
<td>Other indirect*</td>
<td>($1,323)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$3,559</td>
</tr>
<tr>
<td><strong>Costs</strong></td>
<td>($2,646)**</td>
</tr>
<tr>
<td><strong>Benefit minus cost</strong></td>
<td>$912</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>(c) Full-day kindergarten with no test score fadeout (hypothetical)</strong></th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants (labor market earnings)</td>
<td>$8,597</td>
</tr>
<tr>
<td>Taxpayers</td>
<td>$3,667</td>
</tr>
<tr>
<td>Other</td>
<td>$4,242</td>
</tr>
<tr>
<td>Other indirect*</td>
<td>($1,318)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$15,188</td>
</tr>
<tr>
<td><strong>Costs</strong></td>
<td>($2,648)**</td>
</tr>
<tr>
<td><strong>Benefit minus cost</strong></td>
<td>$12,540</td>
</tr>
</tbody>
</table>

*Adjustment for deadweight cost of program. See WSIPP’s Technical Manual for further detail.

**Does not match Exhibit A4 due to the use uncertainty ranges in Monte Carlo simulation.


The Washington State Legislature created the Washington State Institute for Public Policy in 1983. A Board of Directors—representing the legislature, the governor, and public universities—governs WSIPP and guides the development of all activities. WSIPP’s mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.
Full-Day Kindergarten: An Advocacy Guide

- Full-Day K Research
- Advocacy Strategies
- Coalition-Building Techniques
- Organizing Tools
- Policy Recommendations
- Political Considerations
- Effective Legislation
Full-Day Kindergarten: An Advocacy Guide was co-created by the National Education Association and Collaborative Communications Group.

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The National Education Association (NEA), the nation’s largest professional employee organization, is committed to advancing the cause of public education. NEA’s 2.8 million members work at every level of education—from preschool to university graduate programs. NEA has affiliate organizations in every state and in more than 14,000 communities across the United States.

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Collaborative Communications Group is a strategic consulting firm that builds the capacity of individuals, organizations and networks to work collaboratively to create solutions that are better than any single entity could produce on its own. Through strategic consulting, dialogue and convening, creation of publications and tools, and community conversations, Collaborative helps organizations and networks to identify, share and apply what they know in ways that increase productivity and effectiveness. The ultimate objective of Collaborative’s work is the improvement of the quality of public education and community life.
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Methodology

To develop this guide, we began by reviewing the contemporary research on full-day kindergarten. We then interviewed kindergarten teachers, experienced NEA state-level staff and elected leaders. The interviews were designed to gather information about what we should include in the guide—not just content, but tools and techniques that readers and activists would find helpful. Many of the people we interviewed had extensive experience as state-level activists in the areas of early childhood education and kindergarten. Finally, we conducted case studies, looking carefully at how NEA affiliates in the states of West Virginia and New Mexico worked to support the passage of state-wide full-day kindergarten policies.

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Kindergarten is a magical time in a child’s life. During kindergarten, children learn to get along with each other, they discover the joy and challenge of reading and writing, and they learn what it means to be in school.

We know that kindergarten is a key “bridge year” for children—a year for children to move from unstructured play and early learning to the more structured learning environment of formal schooling.

For children to grow and thrive in kindergarten, they need a few very simple things: they need care and attention from their teacher and education support professionals; they need developmentally appropriate activities that engage them as young learners; and they need time to process information and to move between activities. Quality full-day kindergarten programs ensure that children have the time and attention they need from their teachers to be successful learners.

Kindergarten teachers prefer full-day kindergarten to half-day kindergarten. Studies show that parents prefer full-day kindergarten as well. States and communities should support these views and provide resources to ensure that quality full-day kindergarten programs are available to every child. This includes resources for providing teachers and education support professionals with the training and support they need to succeed in kindergarten classrooms.

Today approximately 60 percent of America’s children attend full-day kindergarten—it’s time that we make full-day kindergarten available to all of America’s children!

Reg Weaver, President
National Education Association
The National Education Association (NEA) has embarked on a broad-based initiative to close achievement gaps in American public education. As part of this process, NEA is developing tools and techniques to help affiliates address gaps on a range of fronts—including class size, parent involvement and early childhood education.

In this advocacy guide, we focus on the importance of full-day kindergarten as a strategy for closing gaps. Why full-day kindergarten? Full-day kindergarten provides an essential bridge between prekindergarten and the primary grades. It enables children to develop the academic, social and emotional skills they need to be successful. By laying a strong foundation, full-day kindergarten can boost student performance, access and attainment later in school.

“Without question, today the number one challenge facing American public education is the achievement gaps among different students. And, also without question, NEA is committed to doing everything within its power to close these gaps.”

—Reg Weaver, President and John I. Wilson, Executive Director, National Education Association
Achievement Gaps Defined

NEA identifies achievement gaps because we choose to include the many students who may not be achieving at the high standards needed to be successful. Most of us are familiar with the gaps associated with these student characteristics:

• Race and ethnicity  
• Income levels  
• Language background  
• Disability status  
• Gender

In addition, we recognize that gaps across these categories are evidenced in a variety of data, including but not limited to:

• **Performance:** Who is scoring at the proficient or above levels on standardized state assessments, the National Assessment for Educational Progress and the Scholastic Aptitude Test (SAT)?

• **Access:** Who is enrolled in Advanced Placement classes, who has access to algebra in the middle grades and who is taking college preparatory classes?

• **Attainment:** Who graduates on time, goes on to college or technical training, completes postsecondary education or attains advanced degrees?

—Source: NEA, Closing Achievement Gaps: An Association Guide

How to Use the Guide

This guide is designed to give NEA leaders, members and staff the tools, resources and research you will need to successfully advocate for full-day kindergarten in your state. Early childhood advocates, parents and community groups can also use the guide to bring full-day kindergarten to their state or district. All audiences can use the guide as a starting point for gathering information and developing an effective legislative plan.

As you page through the guide, look at the overview of each section. In some instances, basic advocacy and organizing tips are given—experienced advocates may want to skip over these tips.

• **The first section** of the guide includes the latest research on full-day kindergarten, emphasized with vital talking points.

• **In the second section,** you’ll find tools for mapping the policy and political landscape pertaining to full-day kindergarten in your state.

• **In the third section,** we’ve included resources for planning your legislative strategy—advocacy tips, coalition building strategies, responses to opposition arguments, and communication techniques, among other tools.

• **The fourth section** outlines NEA’s full-day kindergarten policy priorities. This section also includes model legislation.

• **The last section** describes the passage of full-day kindergarten legislation in New Mexico and West Virginia. Take time to read through these state stories as you begin your own journey.

• **Throughout,** you’ll find examples of effective practices used by full-day kindergarten supporters across the United States.
Full-Day Kindergarten Helps Close Achievement Gaps: What the Research Says

“Attempting to repair reading skills in fourth grade is far more expensive and risky than guaranteeing good reading skills in kindergarten.”

—Reg Weaver, President, National Education Association
Introduction

Full-day kindergarten is a sound educational investment. Research demonstrates that full-day kindergarten, though initially more costly than half-day kindergarten, is worth the expense. Full-day kindergarten not only boosts students’ academic achievement, it strengthens their social and emotional skills as well. Additionally, it offers benefits to teachers and parents—teachers have more time to work with and get to know students, and parents have access to better teaching and care for their children. Everyone gains!

Full-Day Kindergarten Boosts Student Achievement

Longitudinal data demonstrate that children in full-day classes show greater reading and mathematics achievement gains than those in half-day classes.

In their landmark longitudinal study of full-day versus half-day kindergarten, researchers Jill Walston and Jerry West found that students in full-day classes learned more in reading and mathematics than students in half-day classes—after adjusting for differences in race, poverty status and fall achievement levels, among other things.

All students experienced learning gains. By giving students and teachers more quality time to engage in constructive learning activities, full-day kindergarten benefits everyone.

Full-day kindergarten can produce long-term educational gains, especially for low-income and minority students.

In a study comparing national and Indiana research on full-day and half-day kindergarten programs, researchers found that compared to half-day kindergarten, full-day kindergarten leads to greater short-term and long-term gains.

In one Indiana district, for example, students in full-day kindergarten received significantly higher basic skills test scores in the third, fifth and seventh grades than students who attended half-day or did not attend kindergarten at all. The researchers also found that the long-term benefits of full-day kindergarten appeared to be greatest for students from disadvantaged backgrounds. And full-day kindergarten helped to narrow achievement gaps between groups of students.

In a study of over 17,000 students in Philadelphia, researchers found that “by the time they reached the third and fourth grades, former full-day kindergartners were more than twice as likely as children without any kindergarten experiences—and 26 percent more likely than graduates of half-day programs—to have made it there without having repeated a grade.”

—Deborah Viadero, Reporter, Education Week
Full-Day Kindergarten Improves Students’ Social and Emotional Skills

A full day of learning offers several social, emotional and intellectual benefits to kindergarteners. They have more time to focus on activities, to reflect on activities and to transition between activities.

If children are taught by quality teachers using age-appropriate curricula in small classroom settings, they can take full advantage of the additional learning time—social, emotional and intellectual—that a full day allows. Further, research demonstrates that children adjust well to the full-day format. While some parents worry that full-day kindergarten is too much for kids, research shows that 5-year-olds are more than ready for a longer day. They also do better in a setting that allows them time to learn and explore activities in depth.

Full-Day Kindergarten Is a Sound Educational Investment

Recent research has demonstrated that funds invested in quality early education programs produce powerful returns on investment.

Viewing half-day kindergarten as a vehicle for saving money is shortsighted. In recent years, a number of researchers have begun doing economic analyses of early childhood education programs. They are finding that investments in quality early childhood programs generate returns of 3-to-1 or even higher—that’s at least $3 for every $1 invested.

Robert Lynch, a researcher who has extensively studied this issue, points out, “Even economists who are particularly skeptical about government programs make an exception for high-quality early childhood development programs.”

By helping to develop students’ academic abilities, and by improving their social and emotional skills, effective early childhood programs can lower grade retention and dropout rates.

Full-day kindergarten provides a bridge between prekindergarten programs and the early elementary years.

Full-day kindergarten enables students to successfully navigate from prekindergarten to early elementary grades. In America today, an estimated 69 percent of children attend community-based prekindergarten programs. For most children, kindergarten is not their first full-day experience. For all children, even those who are away from home for the first time, full-day kindergarten sets the stage for first grade and beyond by helping students make the transition to more structured learning.
Full-day kindergarten enables teachers to assess students’ needs and abilities more effectively, leading to early intervention.

Children spend more time in a formal school setting in full-day kindergarten. Teachers have more time to get to know kids, and to work with specialists to identify and evaluate kids’ needs, skills and abilities. School personnel can then work with parents to develop plans to address children’s learning challenges early. This saves money and resources over the long term, and increases the odds that children will be successful later in school.

Teachers Prefer Full-Day Kindergarten

Full-day kindergarten helps teachers improve student learning.

On average, students in full-day kindergarten spend about twice as much time in school as children in half-day programs do. As a result, teachers get to know students much better. They are able to develop a richer understanding of students’ needs and, in turn, to develop activities and lessons to meet those needs.

The Benefits of Full-Day Kindergarten: Teachers’ Perspectives

In a study evaluating teachers’ views on full-day kindergarten, teachers reported a number of benefits for themselves as well as for children and parents, including:

- Participating in full-day (kindergarten) eased the transition to first grade, helping children adapt to the demands of a six-hour school day.
- A longer school day offered more flexibility and more time to do activities during free-choice times.
- Having more time made kindergarten less stressful and frustrating for children because they had time to develop interests and activities more fully.
- Participating in the full-day schedule allowed more appropriate challenges for children at all developmental levels.
- Children with developmental delays or those “at-risk” of experiencing school problems had more time for completing projects and for needed socializing with peers and teachers.
- More advanced students had time to complete long-term projects.
- Having full-day kindergarten assisted parents with child care.
- Having more time made child assessment and classroom record keeping more manageable for teachers.
- Switching to full-day kindergarten gave teachers more time for curriculum planning, incorporating a greater number of thematic units in the school year, and offering more in-depth coverage of each unit.

Full-Day Kindergarten Helps Close Achievement Gaps: What the Research Says

SECTION I

Full-Day Kindergarten Is Optimal for Parents

Full-day kindergarten provides parents with better support for their children.

For parents who work outside the home, full-day kindergarten means that children do not have to be shuffled between home, school and child care. For all parents, there is more continuity in the child’s day, less disruption and more time for focused and independent learning.

A 2000 study published by the National Center for Educational Statistics found that after the second year of a full-day kindergarten program, 100 percent of full-day parents and 72 percent of half-day parents noted that, if given the opportunity again, they would have chosen full-day kindergarten for their child.

“Rhianna Wilson was worried that her son, Timothy, would be overwhelmed in an all-day program. He wasn’t. ‘He just learns more quickly,’ she said. ‘The other day he announced that he wanted to be a paleontologist.’”

—Tara Manthey, “What a Difference All Day Makes,” The News Tribune (Tacoma, WA)
“With all state-level decision makers operating under tight budgetary constraints, full-day kindergarten competes with other social and educational policy options—prekindergarten, increases in teacher salaries, higher education, special education—for legislative support and resources.”

—Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*
Introduction

A keen understanding of the political terrain is a crucial factor in organizing a campaign. This is especially true for full-day kindergarten, where politics and policies vary considerably from state to state and often from district to district.

This section is designed to help you map the landscape surrounding full-day kindergarten in your state and to gather the information needed to undertake your campaign. This section is divided into categories: Policies, Resources and People. As you read through the categories, answer the questions and begin to develop an action plan. Don’t be daunted by the number of questions. Rather, think of them as a starting point for discussion and reflection.

Policies

Gaining an Understanding of Full-Day Kindergarten in Relation to Early Education and Prekindergarten

Become familiar with the prekindergarten, early education or child care movement in your state. Are there coalitions organized around prekindergarten? Around child care? How do they view full-day kindergarten? How many private kindergarten providers are there in your state? How organized and vocal are these providers? What impact would public full-day kindergarten have on them?

Early education and prekindergarten advocates are well organized in many states. Look for ways to join forces with them. Full-day kindergarten should be part of every comprehensive early education initiative.

Early Education for All

In Massachusetts, a coalition of early education advocates teamed up to promote Early Education for All, a state-wide campaign with a provision for full-day kindergarten. Kathryn Boudreau, president of the Massachusetts Teachers Association, is a member of the Early Education for All advisory committee.

Early Education for All has three primary goals:

- Every preschool-aged child has access to a high-quality early childhood education that meets professionally accepted standards, is staffed by well-trained early educators, and is delivered through a mix of public and private programs
- Creation of a state system to improve the training, education and compensation of the workforce specializing in early childhood and school-age education
- Access to high-quality, full-school-day public kindergarten for all families who desire it

For more information, visit www.strategiesforchildren.org/eea/eea_home.htm.
Mapping the Status of Kindergarten in Your State

As you think about what kindergarten should look like in your state, begin by thoroughly researching the current status of kindergarten in your state. How many children attend kindergarten? Of those, what percentage attend full-day versus half-day? What percentage of public schools in your state offer full-day kindergarten? How many children attend private kindergartens? Are children required to attend kindergarten? At what age are children required to attend school?

You should be able to obtain this information from your state department of education. The Education Commission of the States also tracks kindergarten attendance and legislation in each state at www.ecs.org.

Determining the Price Tag of Full-Day Kindergarten

Advocates for full-day kindergarten identify cost as the biggest challenge facing full-day kindergarten supporters. As you define what a full-day kindergarten program would look like in your state (see Section IV: What Full-Day Kindergarten Should Include, page 27), ask the following questions:

• How much would it cost to implement a comprehensive full-day kindergarten program throughout your state? Factors to consider include teacher salaries, teacher training and professional development, paraprofessional salaries, curriculum development, assessment, classroom space, school lunches, transportation and miscellaneous administrative costs associated with implementing full-day kindergarten.

• How do education funding formulas work in your state? Is kindergarten funded at the same level as other grades? In most states, it is not.

As you develop cost estimates, look for ways to save money. You could realize a net savings, for example, if buses ran only twice a day instead of three. You should also include calculations on the return on investment. Those numbers can be very persuasive to policymakers and the general public.

A Snapshot of Full-Day Kindergarten in the United States

• The Education Commission of the States estimates that over 60 percent of children in the United States attend full-day kindergarten. By contrast, in 1979 just over 25 percent of kindergartners were enrolled in full-day programs.

• Only nine states, most of which are located in the southeastern United States, require full-day kindergarten for all kindergartners.

To support full-day kindergarten programs, states employ a patchwork of funding programs—combining per-child funding formulas (which often differ between kindergarten and first grade), federal funds such as Title I, and state categorical funds. If not mandated by the state, full-day kindergarten programs remain vulnerable to funding cuts.
State Funding for Full-Day Kindergarten

Funding levels for full-day kindergarten vary considerably from state to state. Some states provide more or equivalent funding for kindergarten students than for post-kindergarten students; others provide significantly less than they do for students in first grade and beyond.

For comprehensive information on state kindergarten funding, see “How Most States Fund Full-Day Kindergarten,” Education Commission of the States, August 2005 (www.ecs.org/clearinghouse/63/10/6310.htm). Also visit the ECS Kindergarten Database at www.ecs.org/html/educationIssues/EarlyLearning/KDB_intro.asp.

Identifying Ways to Pay for Full-Day Kindergarten

As you formulate your legislative strategy, it is important to think about how your state can pay for full-day kindergarten—where will the funds come from? What other budget priorities are coming up in the next legislative session? Should you make full-day kindergarten part of a larger early education package? Or part of a larger education-spending package? What are your association’s other education priorities? How might full-day kindergarten compete with those priorities? Why should it take precedence over other priorities? If you are not able to pass a full-day kindergarten bill this year, how will you pass one next year, or the following year?

Scrutinizing the Money Flow: Paying for Full-Day Kindergarten Through Cost Savings

Think New Mexico, an organization advocating for full-day kindergarten in New Mexico, worked with a former state budget director to do a line-by-line review of the state budget. The team identified a number of programs that could be trimmed or eliminated. They then released a report to the press identifying these programs and explaining how the cost savings could be used to pay for full-day kindergarten. The strategy was successful—the New Mexico press highlighted Think New Mexico’s report, and presented full-day kindergarten as an affordable policy option.
Trims in State Budget Could Fund Full-Day Kindergarten

The following excerpt from an article published by *The Santa Fe New Mexican* illustrates how the newspaper presented full-day kindergarten as an affordable policy option.

A Santa Fe group claims the state government could afford to fund full-day kindergarten by eliminating wasteful and unnecessary spending from its existing budget.

“The bottom line is that there is already sufficient revenue to pay the cost of implementing full-day kindergarten,” concludes the group, called Think New Mexico, in a new report.

The report, “Setting Priorities: How to Pay for Full-Day Kindergarten,” was released this week as part of the think tank’s preparations for a lobbying campaign at the 2000 Legislature. The recommendations include calls for the state to stop operating its visitor-information centers, end preferential tax treatment for volume cigarette sales and horse racetracks, create new oversight for state agency contracts and eliminate jobs at the Public Regulation Commission.

The study comes as the state is moving toward “performance-based” budgeting that is intended to bring new scrutiny to longstanding programs, expenses and practices. About half of the state’s yearly budget is spent on education.

State law now mandates that schools offer a half day or 2 hours of kindergarten for 5-year-olds. About 15 percent of 5-year-olds in New Mexico attend full-day kindergarten, compared with a national average of nearly 55 percent.

Many politicians, including Martin Chavez, the Democratic gubernatorial candidate defeated last year by Gov. Gary Johnson, have made full-day kindergarten a campaign priority.

But the proposal has always been stopped at the legislature mostly because of costs.

“I don’t know of anybody that’s in opposition to mandatory full-day kindergarten. The stumbling block has always been the financial end of it,” said Sen. John Arthur Smith, D-Deming, who intends to introduce a bill in the 2000 Legislature calling for the full-day change.

“We recognized,” think-tank founder Fred Nathan said, “that full-day kindergarten carries a price tag with it and, therefore, we felt an obligation to explain how the state could pay for it.”

Preparing a Legislative Strategy
As you prepare your campaign, think carefully about how to work with your state legislature. When will you begin the campaign? How will you get legislators on board? Who should you work with in the legislature to ensure passage of your bill? In West Virginia, advocates of full-day kindergarten worked closely with members of the education committees in both houses, as well as well-respected legislators outside of those committees. In New Mexico, full-day kindergarten supporters focused their efforts on members of the appropriations committees because supporters knew the primary debate would be about the affordability of full-day kindergarten.

Who will sponsor your legislation? Who will write the legislation? Do you have the governor’s support? If not, how will you get it? Does it make sense to try to pass a ballot initiative—if your state has that option, as many states in the West do—instead of going through the legislature? If so, what kind of campaign would that strategy require?

You will need to know what your state’s legislative calendar looks like as well. When is education legislation typically drafted? When do committees meet? For more information on when state legislatures meet and how they operate, visit the National Conference of State Legislatures Web site: www.ncsl.org/programs/legman/legman.htm.

RESOURCES

Assessing Your Organizational Commitment
This kind of campaign requires a long-term organizational commitment to be successful. Begin by determining who will lead this effort in your association. Think about the following: What organizational resources will the campaign require? (For more information, see see Section III: Organizing Tools on page 17.) Can your government relations, media and research teams work together on this campaign? Who will spearhead the campaign? How does this issue fit into your other organizational priorities? How will you sustain the campaign over time?

Finding Examples of Effective Full-Day Kindergarten Programs in Your State
Look for effective public full-day kindergarten programs in your state. Contact education researchers in your state to help you locate effective full-day programs. Go online to look for newspaper articles about effective programs in your state. How can you use those examples of effective programs to help make your case? Advocates in New Mexico used an evaluation comparing full-day and half-day kindergarten outcomes in an Albuquerque school to persuade lawmakers.

Networking With Other States
Advocates who have worked to support full-day kindergarten in other states are an important resource. What can you borrow from legislation that others have drafted?

• Go to NEA’s Closing the Achievement Gaps site (www.achievementgaps.org) to view examples of legislation from West Virginia and New Mexico. Contact NEA affiliates in states that have passed full-day kindergarten legislation.

• Also see the ECS Web site (www.ecs.org) for more detail on kindergarten legislation in each state.
Mapping the Landscape of Full-Day Kindergarten in Your State

SECTION II

PEOPLE—POTENTIAL SUPPORT AND OPPOSITION

Identifying Potential Coalition Partners

Take time to evaluate potential partners. Consider early education groups such as your local affiliate of the National Association for the Education of Young Children (www.naeyc.org) or a national group like Pre-K Now (www.preknow.org). Who else might you work with? Education associations? Parent groups? Social service agencies?

As you assess potential partners, look for nontraditional allies, like business groups. In New Mexico, support from the Hispanic business leaders association as well as the Association of Commerce & Industry of New Mexico, the equivalent of the state Chamber of Commerce, helped full-day kindergarten advocates gain ground in the state legislature and with the governor.

Also think about groups like the AFL-CIO, as well as ACORN (Association of Community Organizations for Reform Now) and other community activist groups. They can be important allies in this work.

Assessing Parents’ Views—Parents as Allies

Parents are perhaps the most important constituency on this issue—especially parents of small children. It is important to know where parents stand.

Have you surveyed parents to determine what their views are? (See the next section, Organizing Tools, for more information on surveys.) Look for ways to involve parents as allies. How does full-day kindergarten help them? If some parents are opposed to full-day kindergarten, find out why. How can you change their minds or counter their opposition? How can you involve the state Parent Teacher Association and local parent-teacher organizations in your campaign? Find out where they stand on this issue.

Assessing Kindergarten Teachers’ and Other Teachers’ Views—Teachers as Allies

Kindergarten teachers are a vital constituency. They work most closely with kindergartners and can provide crucial and credible voices in support of particular policies. Additionally, they will be directly affected by the outcome of your work. How will you engage them in your initiative? Have you surveyed them? Are they willing to support your efforts? What about 1-3 teachers? How will you involve your broader membership in the campaign? How does full-day kindergarten benefit them?

Successful organizing campaigns should include teachers as spokespersons and supporters. As you reach out to teachers, identify possible champions. Who will speak forcefully and effectively on your behalf?

“If I had to do it over again, I would have involved more kindergarten teachers in our campaign.”

—Perry Bryant, former lobbyist with the West Virginia Education Association
Assessing the Views of Education Support Professionals—Teacher Aides, Bus Drivers and Others as Allies

Like teachers, education support professionals such as teacher aides, bus drivers, cafeteria workers and others have an important stake in this issue. How would half-day to full-day schedule changes affect various support professionals? Where do they stand on this issue? How can you work with their unions to gain support for your work?

Assessing School Administrators’ and Local School Officials’ Views—Administrators as Allies

School administrators, administrators’ organizations and local school officials such as school board members can be valuable allies. Legislators look to these leaders for advice, and you will need their support to move your proposal forward. What do your state’s principals believe? Superintendents? The state board of education? How will you engage them as allies? How can you get their associations on board with you?

Enlisting Champions

As you assess your support, look for champions who are willing to join forces with you. Champions are important for several reasons. They can provide visible support for your work, they can use power and influence to sway the views of legislators and other leaders, and they can galvanize public opinion. Consider how parents, teachers, administrators, business leaders, celebrities and influential politicians—such as the governor, state legislators and national political leaders from your state—can be advocates for your work. Community leaders and researchers can also be helpful champions. As you identify possible candidates, think about what they can gain from working with you, and why this issue is important to them.

An Important Supporter of Full-Day Kindergarten

In New Mexico, supporters engaged the governor’s wife, Dee Johnson, as a champion of full-day kindergarten. This served a dual purpose—she publicly endorsed full-day kindergarten and she privately urged her husband, who had been critical of the initiative, to sign the full-day kindergarten bill once it was passed by the state legislature.

Assessing Your Opposition: Preparing to Respond

It is also important to know who your likely opponents will be, who their allies are, what arguments they will make and what strategies they will use to counter your work.

Opponents in New Mexico and West Virginia included:

• Fiscal conservatives in the state legislature
• Government officials who favored local control of education
• Principals and district leaders opposed to the structural changes embedded in moving from half-day to full-day kindergarten
• Conservative parent groups

Additionally, you are likely to face opposition from groups opposed to the NEA—those who see your work on this issue as just another way to bolster the power of the union or secure jobs for teachers. How will you rebut their arguments?
Organizing Tools—Before, During and After the Campaign

“Good information is essential, but if you don’t have the right people in place who care about your issues, you will face unnecessary roadblocks—lobbying begins at election time.”

—Jan Reinicke, Executive Director, Iowa State Education Association

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ORGANIZING TOOLS—BEFORE, DURING AND AFTER THE CAMPAIGN

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Introduction

In organizing a campaign, it is essential to begin with a clear vision of where you want to go and know how you plan to get there. Included in this section are strategies, techniques and tools for undertaking a successful full-day kindergarten campaign in your state. This is just a starting place. Use it, along with the Web tools referenced here, as you begin organizing your initiative.

Getting Started

As you begin your campaign, review the factors discussed in Mapping the Landscape of Full-Day Kindergarten on page 9.

• Identify who will coordinate the campaign within your association.

• Note what resources you will need, including staff time for media relations, research and government relations; funds; and materials. As you determine what resources you will need, think long term. Advocates of full-day kindergarten often say that they wished they’d known how long the work would take. Legislative processes are slow—often campaigns like this take years. In addition to having the right idea, you have to be in the right place at the right time to make it happen, and you typically must make compromises along the way. Be prepared to dig in for the long haul.

• This guide contains much of the research you’ll need to get started. Draft a background paper or some talking points about the current state of kindergarten—and, more broadly, early education—in your state. Pinpoint what else you need to learn.

• Begin to develop a preliminary policy proposal. (Use the next section, What Full-Day Kindergarten Should Include: Policy Priorities, as a starting place.)

Grassroots Organizing on the Web

In addition to the NEA’s online Legislative Action Center (www.nea.org/lac/index.html), here are other advocacy toolkits available on the Web:

For more comprehensive information about NEA’s work on closing the achievement gaps, download Closing Achievement Gaps: An Association Guide at www.achievementgaps.org/nea/Associationguide.pdf.

For an excellent overview of legislative advocacy, visit the Community Toolbox Web site: http://ctb.ku.edu/tools/en/sub_section_main_1253.htm

For early education coalition building and other advocacy tips, see the National Association for the Education of Young Children’s Toolbox for Advocates at www.naeyc.org/policy/toolbox.asp.
Building a Coalition to Support Your Campaign

- As you begin to do research and develop a policy proposal, identify the groups you want and need to work with. Link up with allies, but also look for new partners, such as business groups, that can help accomplish your objectives. Groups like the Business Roundtable (www.businessroundtable.org/taskForces) and Corporate Voices for Working Families (www.cvworkingfamilies.org) are strong supporters of quality early childhood education.
- Next, begin reaching out. Meet with group representatives to share your policy proposal and answer their questions.
- Get buy-in and support. Make sure additional groups are willing to join your campaign. Often coalitions use a memorandum of agreement to ensure that everyone knows what resources they will be expected to provide, including public endorsements, staff time to work on legislation development, and lobbying assistance.
- Decide who will do what. You may want to lead the campaign or work with another group that will take the leadership role. An early education group or parent organization, for example, may be better positioned to lead the effort. Who leads is not as important as what the partnership accomplishes. All participants, however, must have a clear understanding—in writing—about who is responsible for what and who has sign-off authority on communications and legislative changes.

Launching the Campaign

- Work with partner groups to conduct additional research, if necessary, and flesh out your policy proposal.
- Develop a plan and a timeline for implementing your proposal—either through your state legislature or through a ballot initiative. Make sure to include the state department of education and the governor’s office in your plan. How will you work with them?
- Develop three to five key messages to support your campaign. Based on your mapping research, develop messages that promote your idea and address key arguments of the opposition. These messages can serve as organizing tools for building coalitions and developing communications plans.
- Put together a communications plan. What information do you want to release to the press? When will you release it? How will you counter opposition? Who will handle press calls? Requests for interviews? Make sure to develop talking points for everyone who communicates with the press so that you put forth a consistent message.

Surveying Parents, Teachers and Administrators

Surveys are a powerful tool in advocacy campaigns. They give lawmakers insight into the views of their constituents, and they give advocates public opinion research to back claims from scientists and researchers.

In the case of full-day kindergarten, surveys or, at the very least, focus groups, are essential. In New Mexico, advocates used parent, teacher and administrative survey data to convince legislators that there was broad-based support for full-day kindergarten.

There are a number of tools advocates can use to develop, administer and analyze surveys, such as Survey Monkey (www.surveymonkey.com), an easy-to-use “one-stop shop” for online surveys.
• Decide how you will fund your proposal. Advocates of full-day kindergarten identify cost as the most important issue. A number of states with full-day kindergarten programs have phased them in, providing state funds to the neediest schools first. What would a phase-in program in your state look like? Are there state funds that could be used to jump-start the program?

• Create a legislative strategy. Decide who will sponsor your legislation—and be strategic about your choice. Determine which techniques will get the number of votes needed for passage of the legislation—in-person lobbying, dissemination of research, legislative forums, media coverage and letter writing, for example.

• Be prepared to respond to opposition. What are your opponents’ arguments? How will you counter them? Strategize with advocates in other states, such as New Mexico and Maryland, with full-day kindergarten programs already in place. What strategies did they find most successful? What lessons did they learn?

Getting Positive—and Free—Press for Your Campaign

In New Mexico, positive media coverage was a crucial factor in the passage of full-day kindergarten legislation. Think New Mexico, the primary advocate for full-day kindergarten in New Mexico, used a number of press strategies to gain positive media coverage.

“We knew that the best way to get to the legislature—and the only way to get the public involved—was to go to the media and get their support,” Nathan (Think New Mexico’s director) said. From September through the legislative session, representatives from Think New Mexico met with writers and editors from the state’s major newspapers (The Santa Fe New Mexican, The Albuquerque Journal and The Albuquerque Tribune), which responded with extensive coverage and several enthusiastic editorial endorsements. Nathan also wrote op-ed articles published in local papers.

As the three major newspapers began to cover the legislation and campaign, the organization received interview requests from radio and television stations across the state, as well as from smaller regional and local newspapers. Within a span of five months, Nathan conducted dozens of interviews with print journalists and appeared on radio and television on at least six separate occasions. The press also frequently quoted the legislative sponsors and prominent Think New Mexico board members.

Nathan went out of his way to provide journalists with information or to encourage coverage of breaking developments. “He knew the media very well,” said one reporter who recalled Nathan walking into the capitol media room on an almost daily basis. The reporter commented that while Nathan’s knowledge and intellectual honesty gave him credibility, his “persistence sometimes annoyed the capitol beat reporters.” As the vote neared, Think New Mexico maximized the free media coverage to reach legislators; on one occasion, for example, the organization distributed copies of a positive article about the legislation to the offices of every legislator in the Senate and House.

—Source: Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
If you decide to undertake a state-wide initiative, determine how many signatures you need to get the initiative on the ballot, decide how you will get those signatures, and map out a media strategy and a public relations campaign for gaining public support. Study other successful ballot initiatives. What strategies have they used?

- Involve members in letter writing or e-mail campaigns to help ensure passage of the legislation. See NEA’s Legislative Action Center (www.nea.org/lac/writing.html) for effective letter writing and e-mail techniques.

- Create a set of short fact sheets to promote the campaign. Persuasive, data-driven fact sheets describe the benefits of full-day kindergarten, outline your campaign’s policy goals and counter opponent’s arguments. They can be useful as background material for meetings with the media and champions and as a general advocacy tool.

- Consider collective bargaining as a tool in your advocacy campaign. Look for ways to build full-day kindergarten issues—such as class size, class time, professional development and appropriate curricula—into teachers’ contracts. For more information on using collective bargaining as an advocacy tool, see Closing Achievement Gaps: An Association Guide (www.achievementgaps.org/nea/Associationguide.pdf).

- Make sure you have the support of the governor. If your legislation passes, you will need the governor’s signature before your bill becomes a law. Use coalition partners and other supporters to ensure the governor is on your side. See the New Mexico case study on page 36 for more information about how advocates worked with the governor’s wife as well as the New Mexico business community to urge the governor to sign full-day kindergarten legislation.

- Prepare to negotiate. Although the goal of the campaign is to achieve certain policy objectives, any legislative process will include negotiation on a number of topics. Before moving forward with your legislative strategy, determine which issues you will be willing to negotiate, and which ones are deal breakers.

“It is really important to reach primary teachers in this campaign who may be less politically involved than teachers who teach older students. They know what kids need and what teachers need.”

—Amanda Rutledge, Vice Chair, Early Childhood Educator’s Caucus, Former Kindergarten Teacher, Texas Education Association
Responding to Opposition

Here are some arguments against full-day kindergarten and counterarguments you can make:

**ARGUMENT I:**

“Full-day kindergarten is too expensive.”

**COUNTERARGUMENTS:**

“It is not as expensive as you might think.”

Know what the cost of full-day kindergarten will be in your state. In Arizona, for example, Governor Janet Napolitano asked for $21 million in 2005 to expand full-day kindergarten. This would have brought the total cost for full-day kindergarten in Arizona to $46 million out of a budget of nearly $8 billion.

“We can pay for it.”

Have a plan ready for how the state will pay for it—perhaps beginning with a phase-in period. Once cost estimates had been done in the state of New Mexico, for example, Think New Mexico conducted a systematic assessment of the state budget and identified programs that could be cut to pay for full-day kindergarten.

“We save money in the long run.”

Though the initial cost might be higher than half-day kindergarten, kids in full-day kindergarten learn more, are less likely to experience grade retention, are more likely to succeed later in school, etc.

“Quality early childhood programs have at least a 3-1 return on investment.”

Be able to produce the evidence. Show what the long-term cost savings will be for your program.

**ARGUMENT II:**

“There are other more important priorities—for example, the state should spend money on prekindergarten instead of full-day kindergarten.”

**COUNTERARGUMENTS:**

“Full-day kindergarten should be part of any comprehensive early education program.”

For supporting evidence, see the Early Education for All Web site: www.strategiesforchildren.org/eea/eea_home.htm.

“This is a simple step we can take as we move toward implementing a comprehensive early education program.”
ARGUMENT III:

“Full-day kindergarten cuts into family time.”

COUNTERARGUMENTS:

“Full-day kindergarten enriches family time by improving children’s learning and their adjustment to elementary school.”

“Comparison studies show that parents prefer full-day kindergarten to half-day kindergarten.”

“Full-day kindergarten saves families’ time and energy. Children do not have to be shuffled between school and child care.”

ARGUMENT IV:

“Five-year-olds aren’t ready to spend a full day in school.”

COUNTERARGUMENTS:

“Research shows that 5-year-olds are ready to spend a full day in school.”

Be ready to cite the studies.

“Research also shows that full-day kindergarten is preferable for kids—socially, emotionally and intellectually.”

Children have time to learn and explore at a slower pace and in more depth.

“Teachers get to know kids better in full-day kindergarten.”

Teachers are better able to nurture and care for children in a full-day setting.

ARGUMENT V:

“Children don’t need full-day kindergarten; they learn more during time with their parents or family members.”

COUNTERARGUMENTS:

“Research shows that all children learn more in full-day kindergarten.”

“Full-day kindergarten provides an ideal learning setting for all children.”

This includes those children with stay-at-home parents. Kindergartners are taught by certified teachers who specialize in the needs and learning styles of young children.

“Many children don’t spend much time with parents and family members during the day.”

Instead, they are shuffled between kindergarten and child care.

As you read through these arguments, think about the strategies your opponents and their allies may use. If they release research with findings that counter your research, how will you respond? Who are their supporters in the state legislature? How powerful are they? Who can you enlist on your side to help ensure that you will win the day?
**TALKING POINTS—WHAT THE RESEARCH SAYS**

### 1. Full-Day Kindergarten Boosts Student Achievement

**Longitudinal data demonstrates that children in full-day classes show greater reading and mathematics achievement gains than those in half-day classes.**


**Full-day kindergarten can produce long-term educational gains, especially for low-income and minority students.**


### 2. Full-Day Kindergarten Improves Students’ Social and Emotional Skills

*A full day of learning offers social, emotional and intellectual benefits to kindergartners. They have more time to focus on activities, to reflect on activities and to transition between activities.*


3. Full-Day Kindergarten Is a Sound Educational Investment

Recent research has demonstrated that funds invested in quality early education programs produce powerful returns on investment.


Full-day kindergarten provides a bridge between prekindergarten programs and the early elementary years.


Full-day kindergarten enables teachers to assess students' needs and abilities more effectively, leading to early intervention.


4. Teachers Prefer Full-Day Kindergarten

Teachers get to know students better; they are able to develop a richer understanding of students' needs and, in turn, to develop activities and lessons to meet those needs.


5. Full-Day Kindergarten Is Optimal for Parents

Comparison studies demonstrate that parents prefer full-day kindergarten.


“One of the things we have learned from doing this work for many years is that you have to be in it for the long term—don’t give up. Adjust to changes and build support among a broad coalition of groups.”

—Jim Griess, Executive Director, and Jay Sears, Director of Instructional Advocacy, Nebraska Education Association

**Moving Forward After Passage—or Failure**

- **If your initiative is successful,** your work is far from over. You will need to help ensure that the legislation is successfully enacted. Consider creating an implementation working group within your coalition. This group can help oversee issues such as funding, professional development and curriculum development, among others. As you develop your campaign plan, include this phase of the process in your plan.

- **If your proposal is unsuccessful,** decide where you will go next. Work with your coalition to determine why the campaign failed. Was it too costly? If so, why? Who were your primary opponents? Why were they opposed to your campaign? How can you hold them accountable for their opposition? Determine what your next steps will be. Do you want to reintroduce the legislation in the next session? Should you make alterations to it first?
What Full-Day Kindergarten Should Include: Policy Priorities

“NEA knows what works in the classroom—the same ingredients that are supported by research, by parents, and by teachers and education support professionals: strong parental involvement, qualified and certified teachers, small class sizes that allow for individual attention, and books and materials aligned with high standards—and high expectations—for every child.”

—Reg Weaver, President, National Education Association

SECTION OVERVIEW:
WHAT FULL-DAY KINDERGARTEN SHOULD INCLUDE: POLICY PRIORITIES

- NEA’S Full-Day Kindergarten Policy Priorities p. 29
- NEA Model Legislation p. 30
Introduction

For children to reap the benefits of full-day kindergarten, they need more than just additional time for school. Research demonstrates that the most successful full-day kindergarten environments are staffed by licensed, certified teachers and paraprofessionals who receive ongoing professional development, teach in small classroom settings and involve parents as partners in the learning process.

Both the structure of the learning environment and the curriculum should be aligned with that of other primary grades and with prekindergarten, so that kindergarten can serve as a bridge year for children. Activities should engage children’s minds and bodies, allowing them to improve literacy and numeracy skills, as well as social and emotional abilities.

NEA’s Commitment to Full-Day Kindergarten

At its 2003 representative assembly, NEA committed to work toward the following goals:

That all 3- and 4-year-old children in the United States should have access to a full-day public school prekindergarten that is of the highest possible quality, universally offered and funded with public money not taken from any other education program.

That full-day kindergarten for all 5-year-old children should be mandated in every public school in this country. These kindergartens should support the gains children made in prekindergarten, provide time for children to explore topics in depth, give teachers opportunities to individualize instruction and offer parents opportunities to become involved in their children’s classrooms.

—Source: NEA on Prekindergarten and Kindergarten
# NEA’s Full-Day Kindergarten Policy Priorities

<table>
<thead>
<tr>
<th>Issue</th>
<th>Commitment</th>
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<tbody>
<tr>
<td><strong>Mandatory Full-Day Attendance</strong></td>
<td>Full-day does not designate a specific number of hours but means that kindergarten should be in accord with the regular school day.</td>
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<td></td>
<td>Full-day kindergarten should be universal (available in all schools) and mandatory.</td>
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<tr>
<td><strong>Teacher Certification</strong></td>
<td>Kindergarten teachers, support professionals and administrators should be considered qualified if they hold the license or certification that the state grade requires for their employment.</td>
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<tr>
<td><strong>Class Size</strong></td>
<td>NEA supports an optimum class size of 15 students for regular programs and smaller class sizes for programs that include students with exceptional needs. As with prekindergarten, smaller classes generate the greatest gains for younger children.</td>
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<td><strong>Alignment</strong></td>
<td>State policymakers should ensure learning standards for kindergarten are created and aligned both with early learning standards and standards for first grade and beyond.</td>
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<td></td>
<td>The Education Commission of the States recommends that learning standards for kindergarten be implemented comprehensively across five key domains: physical and motor development, social and emotional development, approaches toward learning, cognitive development, and language and literacy development.</td>
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<tr>
<td><strong>Professional Development</strong></td>
<td>Educators—teachers, support professionals and administrators—should have access to high-quality, continuous professional development that is required to gain and improve knowledge and skills and that is provided at school district expense.</td>
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<tr>
<td><strong>Funding</strong></td>
<td>Kindergarten should be funded in the same manner as the rest of the public school program, but the money should come from new funding sources. This does not necessarily mean that new taxes should be imposed. It does, however, mean that the necessary financing for mandatory, full-day, public school kindergarten, including the need to recruit and equitably pay qualified teacher and support professionals, should not be obtained at the expense of other public school programs.</td>
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<td></td>
<td>Public funds should not be used to pay for children to attend private kindergarten. Any portion of public money, even “new” money, going to private kindergartens, which are open to some but not all children, will reduce resources available to public school kindergartens, which are available to all children.</td>
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<tr>
<td><strong>Parent Involvement</strong></td>
<td>Because kindergarten is the bridge to the more structured school experience, training programs should be made available to help parents and guardians take an active role in the education of their kindergarten children. Parents and guardians should be encouraged to visit their children’s schools and maintain contact with teachers and other school personnel.</td>
</tr>
<tr>
<td><strong>Curriculum</strong></td>
<td>In kindergarten, as with prekindergarten, all areas of a child’s development should be addressed: fostering thinking and problem solving, developing social and physical skills, and instilling basic academic skills.</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>Assessment of the child’s progress should also address all areas of a child’s development: physical, social, emotional and cognitive. Many sources of information should be used and children should be given opportunities to demonstrate their skills in different ways, allowing for variability in learning pace and for different cultural backgrounds. As in prekindergarten, large-scale standardized testing is inappropriate. The purpose of assessment should be to improve the quality of education by providing information to teachers, identifying children with special needs and developing baseline data.</td>
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<tr>
<td><strong>Teacher Assistants</strong></td>
<td>Adult supervision is vital. Each kindergarten teacher should have the support of a full-time teacher assistant.</td>
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<tr>
<td><strong>Flexibility in Age Requirements</strong></td>
<td>To give children the best possible chances to benefit from kindergarten, NEA recommends that 5 be the uniform entrance age for kindergarten. The minimum entrance age (of 5) and the maximum allowed age (of 6) should not be applied rigidly, however. In joint consultation with parents and teachers, a school district should be allowed to make case-by-case exceptions to age requirements.</td>
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**NEA Model Legislation**

The following model legislation has been developed by NEA to assist you as you draft legislation appropriate for your state. Use it as a starting point for conversation with partners, lawmakers and colleagues.

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To establish a preschool and full-day kindergarten program, and for other purposes.

January x, 200X

A BILL

Be it enacted by the xxxx and the xxxxx of the State of _____________

Section 1. Short Title.
This Act may be cited as 'The Prekindergarten and Full Day Kindergarten Act.'

Section 2. Findings.
The Legislature finds the following:
(1) Prekindergarten programs are essential to supporting the cognitive, social, emotional, and physical development of young children.
(2) Kindergarten programs are essential to ensuring the school readiness of children when they enter the 1st grade.

Section 3. Purpose.
The purpose of this Act is expand preschool and full-day kindergarten opportunities for children aged three, four, and five.

Section 4. Program Authorization.
The State Department of Education (hereinafter referred to as the designated State agency) shall establish a program to provide for the development of –

(1) High-quality full-day, full-calendar-year universal prekindergarten for all children age 3 and 4; and
(2) Full day kindergarten program for all children age 5 in the State.

Section 5. Plan and Requirements.
(a) State Plan--The designated State agency shall develop a plan to implement the program described in section 4. Such plan shall include each of the following:

(1) A description of the universal prekindergarten program that will be established and how it will support children’s cognitive, social, emotional, and physical development.
(2) A description of the full day kindergarten program that will be established and how it will ensure school readiness for such children.
(3) A statement of the goals for the universal prekindergarten and the full day kindergarten programs and how such goals will be measured through program outcomes and other means.
(4) A description of how the designated State agency will involve representatives of early childhood program providers that sponsor programs addressing children 3, 4, and 5 years old.
(5) A description of how the designated State agency will coordinate with existing State-funded prekindergarten programs, federally funded programs (such as Head Start programs), public school programs, and child care providers.
(6) A plan to address the shortages of qualified early childhood education teachers, including how to increase such teachers’ compensation to be comparable to that of public school teachers.
(7) How the designated State agency will provide ongoing professional development opportunities to help increase the number of teachers in early childhood programs who meet the State’s education or credential requirements for prekindergarten teachers.
(8) A plan to address how the programs will meet the needs of children with disabilities, limited English proficiency, and other special needs.
(9) A plan to provide transportation for children to and from the programs.
(10) A plan to ensure parents of children enrolled in the program are actively involved with and engaged in their child's education.

(b) Local Requirements.

(1) In General- An eligible program provider receiving funding under this Act shall--
(A) Maintain a maximum class size of 15 children;
(B) Maintain a ratio of not more than 10 children for each member of the teaching staff;
(C) (i) Ensure that all prekindergarten and kindergarten teachers meet State requirements for teachers under applicable State law; and
(ii) Document that the State is demonstrating significant progress in assisting such teachers on working toward a bachelor of arts degree with training in early childhood development or early childhood education;
(D) Meet all health and safety standards required for prekindergarten programs.
(2) Local Application- Program providers under this Act shall submit an application to the designated State agency under this Act containing the following:
(A) A description of the program to be provided.
(B) A statement of the demonstrated need for a program, or an enhanced or expanded program, in the area served by the eligible program provider.
(C) A description of the age-appropriate and developmentally appropriate educational curriculum to be provided that will help children be ready for school and assist them in the transition to kindergarten (as applicable to prekindergarten programs).
(D) A description of how the eligible program provider will collaborate with existing community-based child care providers and Head Start programs, as appropriate.
(E) A description of how students and families will be assisted in obtaining supportive services available in their communities.
(F) A plan to promote parental involvement in the program.
(G) A description of how teachers will receive ongoing professional development in early childhood development and education.

Section 6. Professional Development Set-Aside.
A designated State agency may set aside a portion of funding under this Act for ongoing professional development activities for teachers and staff at prekindergarten and kindergarten programs that wish to participate in the programs under this Act. Funds set aside under this subsection may be used for ongoing professional development—
(1) To provide prekindergarten and kindergarten teachers and staff with the knowledge and skills for the application of recent research on child cognitive, social, emotional, and physical development, including language and literacy development, and on early childhood pedagogy;
(2) To provide the cost of education needed to obtain a credential or degree with specific training in early childhood development or education;
(3) To work with children who have limited English proficiency, disabilities, and other special needs; and
(4) To select and use developmentally appropriate screening and diagnostic assessments to improve teaching and learning and make appropriate referrals for services to support the development and learning of children in such programs.

Section 7. Definition.
In this Act the term `eligible program provider' means a prekindergarten program provider that is—
(A) A public school; or
(B) A Head Start program.
“Our central message was always an educational message: full-day kindergarten provides long-term educational benefits. An investment in full-day kindergarten is an investment in the educational future of our children.”

—Charles Bowyer, Government Relations, Professional Issues and Research, National Education Association—New Mexico

SECTION OVERVIEW:
STATE STORIES

- West Virginia—Meeting the Needs of Students, Parents and Teachers p. 34
- New Mexico—A Lesson in Patience, Persistence, Compromise and Focus p. 36
West Virginia—Meeting the Needs of Students, Parents and Teachers

West Virginia is one of nine states, most of which are located in the southeastern United States, with mandatory full-day kindergarten. The West Virginia law requiring full-day kindergarten was passed in the early 1990s, and full-day kindergarten was implemented throughout the state by the mid-1990s.

The West Virginia Education Association (WVEA) was actively involved in the passage of full-day kindergarten legislation because it made sense from educational and economic perspectives.

At the time full-day kindergarten legislation was passed, a number of districts in the state—especially in the western part—faced declining enrollment. Schools were closing and teachers were being transferred or fired. Additionally, as a rural state, West Virginia could not afford to have multiple bus schedules to accommodate kindergartners.

Full-day kindergarten provided a way of more effectively meeting the needs of students while at the same time saving teachers’ jobs and saving districts’ money. Because enrollments were declining in a large portion of the state, the need for additional classroom space was an issue only for districts in the eastern panhandle—where population was growing at the time and continues to grow.

“Full-day kindergarten made sense for West Virginia—from an educational and an economic perspective.”

—Perry Bryant, former lobbyist with the West Virginia Education Association
The WVEA teamed up with county superintendents to support passage of full-day kindergarten legislation. The group worked with the education committees of the West Virginia House and Senate, and gained the support of influential legislators. At the time, there was not significant opposition to the bill.

The passage and subsequent implementation of full-day kindergarten in West Virginia was not without challenges, however. Some schools in the eastern panhandle struggled to find classroom space and some parents voiced concern about how longer days—in some cases, coupled with long bus rides—would affect their children.

“Looking back, one of the things we would have done differently,” notes Bryant, “is involve more parents as supporters.”

Full-day kindergarten has provided a number of benefits to parents, however. As Cathy Jones, who coordinates early education program at the West Virginia Department of Education, notes, “West Virginia has a lot of working parents. Public full-day kindergarten programs ensure working parents that their children are well educated and well cared for. All parents receive those benefits.”

Currently, the WVEA is working in partnership with early education groups in the state to support the passage of a comprehensive public prekindergarten program. “The work we did on full-day kindergarten really helped set the stage for the work we are doing now,” explains Bryant.

### A snapshot of full-day kindergarten in West Virginia:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Meets NEA Policy Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Full-Day Attendance</td>
<td>YES—Kindergarten is “full day/every day” and tied to the regular school calendar. Kindergarten is universal (available in all schools) and mandatory.</td>
</tr>
<tr>
<td>Teacher Certification</td>
<td>YES—Kindergarten teachers must be appropriately certified. The state requires a kindergarten certificate.</td>
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<tr>
<td>Class Size</td>
<td>NO—Classes are capped at 20 students.</td>
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<tr>
<td>Alignment</td>
<td>YES—Content standards are required for each grade. Alignment is built into content standards that are followed in each grade.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>YES—The state provides ongoing professional development for teachers and principals.</td>
</tr>
<tr>
<td>Funding</td>
<td>YES—Full-day kindergarten is fully funded by the state.</td>
</tr>
<tr>
<td>Parent Involvement</td>
<td>SOMEWHAT—Parents are required to register children and participate in pre-screening programs.</td>
</tr>
<tr>
<td>Curriculum</td>
<td>YES—The state of West Virginia has a mandated state-wide curriculum for each grade, including kindergarten.</td>
</tr>
<tr>
<td>Assessment</td>
<td>NO—Informal assessments are mandated by the state, but no formal assessments are required in kindergarten.</td>
</tr>
<tr>
<td>Teacher Assistants</td>
<td>YES—The law stipulates that if there are 11 or more students, teachers must have an aide in the classroom.</td>
</tr>
<tr>
<td>Flexibility in Age Requirements</td>
<td>NO—The kindergarten age requirement is uniform throughout the state.</td>
</tr>
</tbody>
</table>
New Mexico—A Lesson in Patience, Persistence, Compromise and Focus

The state of New Mexico began implementing a state-wide full-day kindergarten program in the 2000-2001 school year. Now, kindergartners attend school full day in every school in the state. Though New Mexico eventually ended up phasing in full-day kindergarten, proponents of full-day kindergarten did not initially envision a phase-in period. An important part of New Mexico's story is how the phase-in solution was eventually reached and the benefits it offered.

The push for full-day kindergarten in New Mexico began in the early 1990s. Mike Gladden, a school superintendent concerned about the academic preparedness of the young children in his school system, worked with his state senator, Pete Campos, to pass a memorial to study the feasibility of offering full-day kindergarten throughout the state of New Mexico. In summer 1993 the state’s Public Education Department teamed up with the New Mexico legislature’s Education Study Committee to form a full-day kindergarten task force.

The task force conducted a literature review and surveyed parents, teachers and school administrators about their attitudes toward the expansion of full-day kindergarten. A majority of parents and teachers supported full-day kindergarten, and all of the administrators surveyed with full-day programs in place favored the full-day approach. The task force then drafted a report, making the case for full-day kindergarten. The report included cost calculations for implementing full-day kindergarten and referenced an Albuquerque school evaluation that favorably compared full-day classes to half-day classes.

“Our central message was always an educational message: full-day kindergarten provides long-term educational benefits. An investment in full-day kindergarten is an investment in the educational future of our children.”

—Charles Bowyer, Government Relations, Professional Issues and Research, National Education Association-New Mexico

Key Steps in the New Mexico Full-Day Kindergarten Advocacy Process

With abundant experience at confronting the political and budgetary realities that state policymakers face, full-day kindergarten supporters effectively:

• Defined a problem (inadequate student achievement)

• Offered a policy solution (full-day kindergarten)

• Built political pressure and momentum (through media coverage and endorsements and the support of influential individuals and constituencies)

• Provided policymakers with funding solutions and implementation strategies (recalculating projected costs, identifying funding sources)

• Monitored and influenced implementation after passage of the legislation (attending to the selection of schools; offering teacher training opportunities)

—Source: Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
Based on this report, supporters introduced a bill in the 1994 legislative session to begin implementing full-day kindergarten in selected districts. Though the bill appeared to have popular support, it ultimately failed in committee. In his case study of full-day kindergarten in New Mexico, Anthony Raden notes that the bill was likely defeated for two reasons: there were concerns about funding equity in districts with low property values, and some conservative parents were opposed to the bill on the grounds that it constituted state intervention in family life.

For several years, the drive to pass a full-day kindergarten bill gave way to other education priorities. Gary Johnson, a conservative businessman, was elected governor in 1994 on an education platform that included an emphasis on local control. Though he initially professed support for full-day kindergarten, his first legislative package did not include funds for the program, and public education supporters found themselves battling the governor on other fronts, including the voucher issue.

The full-day kindergarten issue continued to resurface, though. In 1998 another full-day kindergarten bill was introduced. But after the New Mexico Public Education Department increased the estimated amount of funds required to implement the program to approximately $103 million—with $38 million for teacher salaries, $65 million for additional classroom space and $500,000 for transportation—again the bill failed in committee. In response, supporters of full-day kindergarten proposed a three-year phase-in period, and managed to pass a prekindergarten package that included funds for full-day kindergarten in 1999. In a larger battle with the legislature over vouchers, the governor then vetoed the package, along with a number of other education provisions.

A key turning point for full-day kindergarten in New Mexico was the founding of Think New Mexico (TNM), a bipartisan research and advocacy organization created by Fred Nathan, an attorney and former special counsel in the New Mexico attorney general’s office. As special counsel, Nathan worked with the New Mexico legislature for seven years. When he left the attorney general’s office to found Think New Mexico, he intended to focus on important yet seemingly intractable issues facing New Mexico. He built a high-profile bipartisan board of directors, and with a few small grants from New Mexico foundations, set about working on TNM’s first issue: full-day kindergarten.

Interviews with Anthony Raden, Nathan and TNM board members point to several reasons why they selected full-day kindergarten as their first issue:

• The board members agreed that New Mexico needed to do much more on the early education front.

• Full-day kindergarten was a manageable piece of the larger pre-K issue.

• It was a “potentially winnable issue.” As Nathan put it, “I thought that it would be a long shot, but achievable.”

TNM’s strategy was simple, yet effective. Though the concept of full-day kindergarten had been gathering support in New Mexico for a number of years, advocates had not managed to successfully implement a full-day kindergarten program. The TNM board and staff knew that

“Think New Mexico pointed out that while 54.7% of 5-year-olds attended full-day kindergarten programs nationally, only 14.7% did so in New Mexico. New Mexico children were way behind their peers in educational achievement.”

—Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
they would need to win over the governor, which would require the support of the business community, and they would need to convince legislators that New Mexico could afford full-day kindergarten. With these two factors in mind, they began their campaign.

• First, they issued a report, making the case for full-day kindergarten—framing it as an essential and affordable program—and held a press conference to announce the findings in the report. As the legislative session drew near, they issued a second report, outlining how the state could pay for full-day kindergarten by cutting some costly, and arguably unnecessary, programs.

• They worked hard to get free positive media coverage—writing op-eds, meeting with writers and editors at the state’s major papers, and giving radio and TV interviews.

• They identified and worked with popular legislators on both sides of the aisle to cosponsor the legislation.

• Using the connections of a powerful board, they gained the support of New Mexico’s political and business leaders—including the governor’s wife, Dee Johnson, and the Association of Commerce and Industry, New Mexico’s most powerful business organization. This set the stage for the governor to eventually sign the legislation into law.

• Finally, TNM members “staffed the legislature” by acting as legislators’ aides before the vote. In a state where legislators receive very little compensation and little to no staff support, this kind of attention made a huge difference.

Raden notes in his case study that “teachers unions” were reluctant to support the passage of full-day kindergarten. Not so, says Charles Bowyer, National Education Association-New Mexico’s government relations, research and professional issues coordinator.

“We were always supportive of full-day kindergarten, but we wanted to make sure that there was enough funding for the program,” explains Bowyer. “We were concerned about how the passage of full-day kindergarten would impact other programs, vis-à-vis funding. At the time, we were working on other legislation….We wanted to make sure that this reform was not at the expense of other reforms.”

When asked what NEA-NM would have done differently, Bowyer notes that they would have started by supporting a phase-in process for implementing full-day kindergarten. “It took us (the coalition supporting full-day kindergarten) a long time to reach that compromise. If we had begun with a phase-in approach, we could have saved a lot of time and frustration—it was just too expensive otherwise,” explains Bowyer.

**Staffing the Legislature**

Every morning during the session, Nathan checked in personally with the legislative sponsors (Taylor, Wilson and Smith). If they needed anything—a typed speech, talking points, photocopies—he and his staff took care of it. Nathan and his allies spoke to every legislator in the House and Senate, shaping arguments to appeal to the person’s ideological leanings and legislative priorities. “We tried to make a marketing package that was attractive to everyone to counter all objections out there,” Senator Smith said. To Republicans, in particular, they tended to emphasize that the reform could be done in a fiscally prudent manner and would bring a high return on investment. To all politicians, they claimed that full-day kindergarten would boost student achievement—an affordable and popular reform that made enormous sense educationally and politically.

—Source: Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*
Ultimately, the phase-in compromise was appealing to a wide range of people. It was much more palatable to legislators, and it enabled NEA-NM to simultaneously work for salary increases for teachers and support full-day kindergarten.

The Right Solution at the Right Time

Andy Lenderman, a journalist who covered the education beat for *The Albuquerque Tribune*, points to several conditions and factors that made the timing ideal for passage of full-day kindergarten legislation. First, parents in the state, “tired of being dead last in every single education category,” were anxious for educational change and improved student outcomes. Second, with a booming economy, the state was “flush,” with a significant budgetary surplus from which new programs could be funded. Finally, legislators (who were up for re-election) and the governor (who endured criticism for vetoing the previous year’s budget and various education initiatives) had pledged to take action to revitalize the state’s educational system. Political and economic forces, therefore, converged to allow full-day kindergarten, an idea drifting on the political landscape for years, to emerge as a feasible and popular reform strategy on the state’s legislative agenda.

—Source: Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*

A snapshot of full-day kindergarten in New Mexico:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Meets NEA Policy Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Full-Day Attendance</td>
<td>NO—Full-day kindergarten is universal (available in all schools), but not mandatory. More than 98 percent of parents choose to send their children to full-day kindergarten.</td>
</tr>
<tr>
<td>Teacher Certification</td>
<td>YES—Kindergarten teachers must be appropriately certified.</td>
</tr>
<tr>
<td>Class Size</td>
<td>YES—The ratio between teacher and students is 1 to 15. Classes with 15 to 20 students must be provided with a teacher’s assistant.</td>
</tr>
<tr>
<td>Alignment</td>
<td>Not specified in the statute (according to the ECS Kindergarten Database).</td>
</tr>
<tr>
<td>Professional Development</td>
<td>YES—The state provides ongoing professional development for teachers and principals.</td>
</tr>
<tr>
<td>Funding</td>
<td>YES—Full-day kindergarten was phased in across the state from 2000–2001 to 2004–2005. It is now fully funded by the state as part of the state’s regular education funding formula.</td>
</tr>
<tr>
<td>Parent Involvement</td>
<td>Not specified in the statute (according to the ECS Kindergarten Database).</td>
</tr>
<tr>
<td>Curriculum</td>
<td>NO—There is no mandated state curriculum. However, the statute specifies that programs must contain an early literacy program tied to reading research, and that they must be child-centered and developmentally appropriate.</td>
</tr>
<tr>
<td>Assessments</td>
<td>YES—Schools are required to conduct a variety of assessments, including reading and literacy assessments.</td>
</tr>
<tr>
<td>Teacher Assistants</td>
<td>YES—The law stipulates that if there are 15 to 20 students, teachers must have an assistant in the classroom.</td>
</tr>
<tr>
<td>Flexibility in Age Requirements</td>
<td>NO—The age requirement (5) is mandatory throughout the state. All students must attend at least half-day kindergarten if they turn 5 by September 1.</td>
</tr>
</tbody>
</table>
NEA Resources


NEA’s Legislative Action Center, www.nea.org/lac.


Kindergarten and Early Education Research


**Additional Organizations/Web Sites**

**Early Education for All**
www.strategiesforchildren.org/eea/eea_home.htm. This Massachusetts campaign is a coalition of leaders from business, early childhood, labor, religion, health care, education and philanthropy, working in partnership with parents, grassroots leaders and state policymakers to make publicly funded, high-quality preschool education and full-day public school kindergarten available to every Massachusetts child. The Web site features full-day kindergarten research as well as draft legislation.

**Full-Day Kindergarten: Exploring an Option for Extended Learning**


**National Association for the Education of Young Children**
www.naeyc.org. NAEYC is dedicated to improving the well-being of all young children with a focus on birth to age 8. See the Early Childhood Issues section of their Web site for research and advocacy information.

**National Conference of State Legislatures**
www.ncsl.org. Maintains detailed information about state legislatures, including when they meet and how they are structured.

**National Institute for Early Education Research**
www.nieer.org. NIEER supports early childhood education initiatives by providing objective, nonpartisan information based on research. The NIEER Web site contains an Expert Database with profiles and contact information for experts in early childhood education.

**Pre-K Now—Resources**
www.preknow.org. Pre-K Now is a public education and advocacy organization that advances high-quality, voluntary prekindergarten for all 3- and 4-year-olds. Visit the Resources section of their Web site for more information about the early education climates in different states.
New Research: Children With Strong Social Skills in Kindergarten More Likely to Thrive as Adults

July 16, 2015

Princeton, N.J.—A 20-year study shows a link between children’s social skills in kindergarten and their well-being in early adulthood, according to the findings published today in the American Journal of Public Health. Children who were more likely to “share” or “be helpful” in kindergarten were also more likely to obtain higher education and hold full-time jobs nearly two decades later, the study found. Students who lacked these “social competence” skills were more likely to face more negative outcomes by the age of 25, including substance abuse problems, challenges finding employment or run-ins with the law.

“This study shows that helping children develop social and emotional skills is one of the most important things we can do to prepare them for a healthy future,” said Kristin Schubert, program director at the Robert Wood Johnson Foundation, which funded the research. “From an early age, these skills can determine whether a child goes to college or prison, and whether they end up employed or addicted.”

How the Study Worked
Researchers from Pennsylvania State and Duke Universities analyzed what happened to nearly 800 kindergarteners from four locations after their teachers measured their social competency skills in 1991. The children were evaluated on a range of social behaviors, such as whether they resolve peer problems, listen to others, share materials, cooperate, and are helpful. Each student then received a composite score representing his or her overall level of positive social skills/behavior, on a scale from 0 (“not at all”) to 4 (“very well”).

The research team monitored these students and the positive and negative milestones each obtained until they turned 25. Using a variety of data sources, including official records; reports from parents; and self-reporting by the participants, researchers recorded whether the students obtained high school diplomas, college degrees, and full-time jobs. They also kept track of whether students developed a criminal record or substance abuse problems, among other negative outcomes.

Key Research Findings
For every one-point increase in a child’s social competence score in kindergarten, he/she was:

- Twice as likely to attain a college degree in early adulthood;
- 54% more likely to earn a high school diploma; and
- 46% more likely to have a full-time job at the age of 25.

For every one-point decrease in a child’s social competence score in kindergarten, he/she had:

- 64% higher chance of having spent time in juvenile detention;
- 67% higher chance of having been arrested by early adulthood;
- 52% higher rate of recent binge drinking and 82% higher rate of recent marijuana usage; and
- 82% higher chance of being in or on a waiting list for public housing.

Implications for Action
This latest study comes on the heels of a growing body of findings that prove early learning and development have a significant impact on a child’s overall prosperity and health throughout their life. Not only does this new research emphasize the value of early learning, it shows the particular importance of focusing those early learning efforts on the development of social and emotional skills.

“The good news is that social and emotional skills can improve,” said Damon Jones, PhD, a senior research associate at Pennsylvania State and one of the authors of this study. “This research by itself doesn’t prove that higher social competence can lead to better outcomes later on. But when combined with other research, it is clear that helping children develop these skills increases their chances of success in school, work, and life.”

Across the country, dozens of school-based programs proven to boost kids’ social and emotional development before and after kindergarten can serve as models for others. In addition to making the case for expanding these programs, this new research lends weight to the idea that screening social skills should be more widespread. Using a simple, easy-to-use assessment like the one used in this study, schools could determine which students need additional assistance and intervene accordingly to eliminate future problems before they start.

Additionally, while this study did not analyze the economic benefits of social and emotional skill development, the researchers believe that effective, evidence-based programs to improve skills could provide significant cost-savings over time. The money saved from reduced incarceration costs, drug treatment programs and government assistance coupled with the increased revenues from higher employment rates makes it especially cost-effective to expand programs that boost social and emotional learning, starting in a child’s earliest years.

“As a society, we have tools to give every child a strong foundation for healthy social and emotional development,” said Robert H. Dugger, managing partner for Hanover Provident Capital and co-founder of ReadyNation, which works to improve business competitiveness by helping children get a good start in life. “More than anything else, this research tells us that we have an enormous incentive to put those tools to widespread use and to give children the support they need as early as possible.”
The Washington State legislature directed the Washington State Institute for Public Policy (WSIPP) to develop “a repository of research and evaluations of the cost-benefits of various K–12 educational programs and services.”

In this report, we analyze a K–12 policy question: do the long-term benefits of full-day kindergarten (in comparison with half-day) outweigh the costs?

We researched this question by reviewing all credible evaluation studies from the United States and elsewhere. We systematically analyzed the studies to estimate whether full-day kindergarten has a cause-and-effect relationship with student outcomes. We then calculated whether the long-term monetary benefits of full-day kindergarten exceed the operating and capital costs.

In this report, we describe our research approach and highlight our findings on full-day kindergarten. An appendix provides technical details.

Summary

WSIPP updated its 2007 analysis of the research evidence regarding full-day kindergarten.

Over half of Washington’s public school kindergarteners attend full-day programs, and the state is expanding funding for this option. In this report, we analyze average impacts on student outcomes from full-day kindergarten across the United States and elsewhere. We also examine whether benefits are likely to exceed costs.

To investigate, we conducted a systematic review of research by collecting all studies we could find on the topic. We screened for scientific rigor and only analyzed studies with strong research methods.

We identified ten credible evaluations of full-day kindergarten’s cause-and-effect relationship with student test score outcomes. The studies estimate the relative impact of full-day in comparison with half-day programs.

Improvement in standardized test scores was the only outcome measured in the studies that we reviewed. Other outcomes of interest such as social and emotional learning and high school graduation have not been examined consistently in the research literature.

Our bottom-line findings. Full-day kindergarten leads to higher standardized test scores than half-day programs, but this effect appears to fade out within a few years.

More information about how to sustain the early gains from investments in full-day kindergarten is needed as Washington State continues to expand this option for public school students.


1 Engrossed Substitute Senate Bill 6386, Chapter 372, Laws of 2006.
I. Research Approach

When WSIPP carries out assignments from the legislature to identify what works (and what does not) in public policy, we implement a three-step research approach.

**Step 1: What Works? What Does Not?**

In the first research step, we estimate whether various public policies and programs can achieve desired outcomes, such as improved test scores. We carefully analyze all high-quality studies from the United States and elsewhere to identify policy options tried, tested, and found to impact outcomes. We look for research studies with strong evaluation designs and exclude studies with weak research methods.

Our empirical approach follows a meta-analytic framework to assess systematically all credible evaluations we can locate on a given topic. Given the weight of the evidence, we calculate an average expected effect of a policy on a particular outcome of interest, as well as an estimate of the margin of error for that effect.

**Step 2: What Makes Economic Sense?**

Next, we insert costs and benefits into the analysis by answering two questions:

- How much would it cost Washington taxpayers to produce the results found in Step 1?
- How much would it be worth to people in Washington State to achieve the improved outcome?

That is, in dollars and cents terms, what are the costs and benefits of each policy option?

To answer these questions, we developed, and continue to refine, an economic model that estimates benefits and costs. The model provides an internally consistent monetary valuation so policy options can be compared on an apples-to-apples basis. Our benefit-cost results include standard financial statistics: net present values and benefit-cost ratios.

We present monetary estimates from three perspectives:

- a) program participants,
- b) taxpayers, and
- c) other people in society (for example, we estimate “spillover” effects to society of increases in education).²

The sum of the three perspectives provides a “total Washington” view on whether a policy or program produces benefits that exceed costs.

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Step 3: What is the Risk in the Benefit-Cost Findings?

Any tabulation of benefits and costs involves a degree of risk about the estimates calculated. This is expected in any investment analysis, whether in the private or public sector. To assess the riskiness of our conclusions, we perform a "Monte Carlo simulation" in which we vary key factors in our calculations. The purpose of this analysis is to determine the odds that a particular policy option will at least break even.

Thus we produce two “big picture” findings: expected benefit-cost results and, given our understanding of the risks, the odds that the policy will at least have benefits that are greater than the costs. Readers interested in an in-depth description of the research methods for these three steps can reference our Technical Manual. A brief Technical Appendix is included at the end of this report.

II. Full-Day Kindergarten

In the United States, the percentage of students attending full-day kindergarten has steadily increased since the 1970s. In 2012, 76% of students in the United States attended full-day kindergarten, compared with 28% in 1977. Many public school districts have adopted full-day kindergarten as a strategy to support academically at-risk students.

Currently, 11 states and Washington, D.C. fund full-day kindergarten for all students. In most states, however, the decision to offer full-day kindergarten is made at the local level.

Washington State began to fund voluntary full-day kindergarten for schools with the highest poverty levels during the 2007-08 school year. The 2007 Legislature established the goal of funding full-day kindergarten in all public schools by the 2017-18 school year.

Almost half of Washington’s public school kindergarteners attend full-day kindergarten. In 2012, 22% were enrolled in a full-day program funded by the state. An additional 25% of Washington kindergarteners attending public

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7 RCW 28A.150.315

WSIPP previously published findings on full-day kindergarten in 2007. This report updates our analysis of evaluations of full-day kindergarten compared with half-day kindergarten. The studies we include in our analysis meet our minimum standards for scientific rigor (such as having a valid comparison group; see the Technical Appendix for details). These criteria give us increased confidence that any changes in outcomes are caused by the intervention and not by unknown factors.

This analysis examines the short-term impact of full-day kindergarten on standardized academic test scores. Unfortunately, longer-term measures such as high school graduation or labor market outcomes were not measured consistently across studies and, thus, could not be analyzed for this report.

We only examine academic outcomes in this report. “Non-cognitive” outcomes such as social and emotional learning are a growing area of research and of interest to the legislature and educators. However, we could not include these outcomes in our analysis for two reasons. First, the studies we reviewed did not measure social and emotional learning consistently. Second, we do not currently have sufficient data to link full-day kindergarten to social and emotional outcomes and subsequent monetary benefits and costs. As scientific consensus emerges on “non-cognitive” skills, WSIPP’s findings will be updated to incorporate monetary benefits from these outcomes.

Meta-Analysis Findings

We identified ten studies that met our criteria for scientific rigor and measured academic test scores of full-day kindergarteners in comparison with half-day. Most studies measured student test scores at the end of kindergarten. A few followed students for additional years (in grades one through five), which allows us to examine whether the early test score impacts persist over time.

The results of our updated meta-analysis are similar to our 2007 findings and are displayed in Exhibit 1. On average, students in full-day kindergarten had significantly higher test scores at the end of the school year in comparison with similar students in half-day kindergarten (effect size=0.16). The initial boost in test scores, however, appears to fade out to almost zero by grades two through five.

This meta-analytic finding represents the average impact of full-day kindergarten for all students, regardless of income level or other characteristics. Since full-day kindergarten is often used as an intervention for disadvantaged students, we also examined the average effect size among low-income students.

The results are similar for low-income students. We estimate a positive effect immediately after kindergarten (effect size=0.12), but, again, the impact fades out to nearly zero by grades two through five.
95% confidence intervals are shown for each effect size.

Exhibit 1
Meta-Analytic Findings for Full-Day Kindergarten (versus Half-Day)

Grade level when test scores were measured (number of effect sizes)

95% confidence intervals are shown for each effect size.
Benefit-Cost Analysis

As noted earlier, we use WSIPP’s standard benefit-cost model to determine whether the early gains from full-day programs offset the operating and capital investments necessary to expand the school day for kindergarteners. We estimate that it costs approximately $2,650 per student to expand from half-day to full-day kindergarten. The estimated costs are described in detail in the Technical Appendix. We assume that a portion of full-day kindergarten costs would be offset by lower participation in state-subsidized child care.

We estimate that over their lifetimes, full-day kindergarten participants—because their cognitive skills improved only slightly over the long term—make just $833 more in labor market earnings than half-day kindergarten participants, on average.

These labor market benefits, based on test scores alone, are less than the program cost. Thus, this policy has a relatively low probability of monetarily breaking even (14%).

This unfavorable result for full-day kindergarten depends critically on the degree to which the initial test score gains fade out in later grades. In Exhibit 2 we show benefit-cost analyses for three scenarios: (a) the test score gains fade out as reported in Exhibit 1; (b) the gains fade out at a rate typical of early childhood education programs; and (c) the gains are sustained through the end of high school.12

Exhibit 2
Benefit-Cost Results: Full-Day Kindergarten (versus Half-Day)

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Costs</th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits from labor market earnings</td>
<td>Benefits minus costs (net present value)</td>
<td>Odds of a positive net present value</td>
</tr>
<tr>
<td>“Deadweight” cost of taxation</td>
<td>Net program costs</td>
<td>Benefit to cost ratio</td>
</tr>
<tr>
<td>Net benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits from labor market earnings</td>
<td>$833 ($1,323)</td>
<td>($2,649) ($3,140) ($0.19) 14%</td>
</tr>
<tr>
<td>“Deadweight” cost of taxation</td>
<td>($1,323)</td>
<td>($490) ($490) ($0.19) 14%</td>
</tr>
<tr>
<td>Net benefits</td>
<td>($2,649)</td>
<td>($3,140) ($0.19) 14%</td>
</tr>
<tr>
<td>“Deadweight” cost of taxation</td>
<td>Net program costs</td>
<td>Benefit to cost ratio</td>
</tr>
<tr>
<td>Net benefits</td>
<td>$3,559 ($2,646)</td>
<td>($912 $1.35) 63%</td>
</tr>
<tr>
<td>“Deadweight” cost of taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net program costs</td>
<td>$15,188 ($2,648)</td>
<td>($12,540 $5.75) 98%</td>
</tr>
<tr>
<td>Net program costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits from labor market earnings</td>
<td>$16,506 ($1,318)</td>
<td>($12,540 $5.75) 98%</td>
</tr>
<tr>
<td>“Deadweight” cost of taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net program costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Full-day kindergarten with test score fadeout as reported in this study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Full-day kindergarten with typical early childhood education test score fadeout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Full-day kindergarten with no test score fadeout</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The estimates are present-value, life-cycle benefits and costs expressed in 2012 dollars. See the Technical Appendix for additional detail. Net program costs differ due to the use of uncertainty ranges in the Monte Carlo simulation.

If the test score gains faded out at a rate typical of early childhood education programs, we would expect a $4,882 benefit per participant from increased labor market earnings. In this case, the benefits would outweigh the costs by $912 per participant with a 63% chance that the investment at least breaks even.

If the test score gains did not fade out over time, the expected benefits from labor market earnings would be $16,506 per participant. In this case, the benefits would outweigh the costs by $12,540 per participant with a 98% chance that the investment at least breaks even.

### III. Conclusions and Study Limitations

The weight of the evidence suggests that the benefits of investing in full-day kindergarten are unlikely to outweigh the costs because the initial test score gains are not typically sustained.

One limitation of this analysis is the possibility that the greatest benefits from full-day kindergarten are not measured by test scores alone. The research literature does not consistently measure social and emotional learning or longer-term outcomes such as high school graduation rates.

More information about how to sustain the early gains from investments in full-day kindergarten is needed as Washington State continues to expand this option for public school students. If the initial boost in test scores persisted, full-day kindergarten has the potential to be cost-beneficial with relatively low risk.
A1. Meta-Analysis Methodology

A1a. Study Selection and Coding Criteria

A meta-analysis is only as good as the selection and coding criteria used to conduct the study. Following are the key choices we made and implemented.

**Study Selection.** We use four primary means to locate studies for meta-analysis of programs: (1) we consult the bibliographies of systematic and narrative reviews of the research literature in the various topic areas; (2) we examine the citations in the individual studies themselves; (3) we conduct independent literature searches of research databases using search engines such as Google, Proquest, Ebsco, ERIC, PubMed, and SAGE; and (4) we contact authors of primary research to learn about ongoing or unpublished evaluation work. After first identifying all possible studies via these search methods, we attempt to determine whether the study is an outcome evaluation that has a valid comparison group. If a study meets this criterion, we secure a full copy of the study for our review.

**Peer-Reviewed and Other Studies.** We examine all evaluation studies we can locate with these search procedures. Many studies are published in peer-reviewed academic journals while others are from reports obtained from the agencies themselves. It is important to include non-peer reviewed studies, because it has been suggested that peer-reviewed publications may be biased to show positive program effects. Therefore, our meta-analysis includes all available studies that meet our other criteria, regardless of publication source.

**Control and Comparison Group Studies.** Our analysis only includes studies that have a control or comparison group or use a quasi-experimental design such as regression discontinuity with multiple, sophisticated controls. We do not include studies with a single-group, pre-post research design. This choice was made because it is only through rigorous studies that causal relationships can be reliably estimated.

**Random Assignment and Quasi-Experiments.** Random assignment studies are preferred for inclusion in our review, but we also include non-randomly assigned comparison groups. We only include quasi-experimental studies if sufficient information is provided to demonstrate comparability between the treatment and comparison groups on important pre-existing conditions such as age, gender, and pre-treatment characteristics such as test scores.

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13 All studies used in the meta-analysis are identified in the references to this paper. Many other studies were reviewed but did not meet the criteria set for this analysis.
**Enough Information to Calculate an Effect Size.** Following the statistical procedures in Lipsey and Wilson, a study has to provide the necessary information to calculate an effect size. If the necessary information is not provided, and we are unable to obtain the necessary information directly from the study's author(s), the study is not included in our review.

**Mean-Difference Effect Sizes.** For this study, we code mean-difference effect sizes for continuous measures following the procedures outlined in Lipsey and Wilson. For dichotomous measures, we use the d-Cox transformation to approximate the mean difference effect size, as described in Sánchez-Meca, Marín-Martínez, and Chacón-Moscoso. We choose to use the mean-difference effect size rather than the odds ratio effect size because we frequently code both dichotomous and continuous outcomes (odds ratio effect sizes could also be used with appropriate transformations).

**Outcome Measures of Interest.** In this analysis we are interested in academic achievement, long-term outcomes and social and emotional learning. We include standardized, validated assessments of student learning. Reading and math test scores are the most frequently measured outcomes. Since long-term outcomes and social and emotional learning were not measured consistently in the studies we reviewed, they are not included in this report.

**A1b. Procedures for Calculating Effect Sizes**

Effect sizes summarize the degree to which a program or policy affects an outcome. In experimental settings this involves comparing the outcomes of treated participants relative to untreated participants. Several methods are used by analysts to calculate effect sizes, as described in Lipsey and Wilson. The most common effect size statistic is the standardized mean difference effect size and that is the measure we use in this analysis.

**Weighted Mean Different Effect Size.** The mean difference effect size is designed to accommodate continuous outcome data, such as student test scores, where the differences are in the means of the outcome. The standardized mean difference effect size is computed with:

\[
ES = \frac{M_t - M_c}{\sqrt{\frac{(N_t - 1)SD_t^2 + (N_c - 1)SD_c^2}{N_t + N_c - 2}}}
\]

In this formula, \(ES\) is the estimated effect size for a particular program; \(M_t\) is the mean value of an outcome for the treatment or experimental group; \(M_c\) is the mean value of an outcome for the control group; \(SD_t\) is the standard deviation of the treatment group; and \(SD_c\) is the standard deviation of the control group; \(N_t\) is the number of subjects in the treatment group; and \(N_c\) is the number of subjects in the control group. The variance of the mean difference effect size statistic in equation (1) is computed with:

\[
ES\text{Var} = \frac{N_t + N_c}{N_tN_c} + \frac{ES^2}{2(N_t + N_c)}
\]

15 Ibid.
18 Ibid, Table B10, equation 1, p. 198.
19 Ibid, Table 3.2, p. 72.
In some random assignment studies or studies where treatment and comparison groups are well-matched, authors provide only statistical results from a t-test. In those cases, we calculate the mean difference effect size using:

\[ (3) \quad ES = t \sqrt{\frac{N_t + N_c}{N_t N_c}} \]

In many research studies, the numerator in equation (1), \( M_t - M_c \), is obtained from a coefficient in a regression equation, not from experimental studies of separate treatment and control groups. For such studies, the denominator in equation (1) is the standard deviation for the entire sample. In these types of regression studies, unless information is presented that allows the number of subjects in the treatment condition to be separated from the total number in a regression analysis, the total \( N \) from the regression is used for the sum of \( N_t \) and \( N_c \), and the product term \( N_t N_c \) is set to equal \( (N/2)^2 \).

**Pre/Post Measures.** When authors report pre- and post-treatment measures without other statistical adjustments, we start by calculating two between-groups effect sizes: (a) at pre-treatment and, (b) at post-treatment. Then, we calculate the overall effect size by subtracting the post-treatment effect size from the pre-treatment effect size.

**Adjusting Effect Sizes for Small Samples.** Since some studies have very small sample sizes, we follow the recommendation of many meta-analysts and adjust for this. Small sample sizes have been shown to upwardly bias effect sizes, especially when samples are less than 20. Following Hedges, Lipsey and Wilson report the “Hedges correction factor,” which we use to adjust all mean-difference effect sizes, (where \( N \) is the total sample size of the combined treatment and comparison groups):

\[ (4) \quad ES'_m = \left[ 1 - \frac{3}{4N - 9} \right] \cdot ES_m \]

**Adjusting Effect Sizes and Variances for Multi-Level Data Structures.** Most studies in the education field use data that are hierarchical in nature. That is, students are clustered in classrooms, classrooms are clustered within schools, schools are clustered within districts, and districts are clustered within states. Analyses that do not account for clustering will underestimate the variance in outcomes at the student level (the denominator in equation 1 and, thus, may over-estimate the precision of magnitude on effect sizes). In studies that do not account for clustering, effect sizes and their variance require additional adjustments. There are two types of studies, each requiring a different set of adjustments. First, for student-level studies that ignore the variance due to clustering, we make adjustments to the mean effect size and its variance,

\[ (5) \quad ES_p = ES_m \cdot \sqrt{1 - \frac{2(n - 1)\rho}{N - 2}} \]

---

20 Ibid, Table B10, equation 2, p. 198.
23 Studies that employ hierarchical linear modeling, or fixed effects with robust standard errors, or random effects models account for variance and need no further adjustment for computing the effect size, but adjustments are made to the inverse variance weights for meta-analysis using these methods.
where \( \rho \) is the intraclass correlation, the ratio of the variance between clusters to the total variance; \( N \) is the total number of individuals in the treatment group, \( N_t \), and the comparison group, \( N_c \); and \( n \) is the average number of persons in a cluster, \( K \). In the educational field, clusters can be classes, schools, or districts. We used 2006 Washington Assessment of Student Learning (WASL) data to calculate values of \( \rho \) for the school-level (\( \rho = 0.114 \)) and the district level (\( \rho = 0.052 \)). Class-level data were not available, so we use a value of \( \rho = 0.200 \) for class-level studies.

Second, for studies that report means and standard deviations at a cluster level, we make adjustments to the mean effect size and its variance:

\[
(6) \quad V\{ES_T\} = \left( \frac{N_t + N_c}{N_t N_c} \right) \left[ 1 + (n - 1) \rho \right] + \frac{ES_T^2}{2} \left( \frac{(N - 2)(1 - \rho)^2 + n(N - 2n)\rho^2 + 2(N - 2n)\rho(1 - \rho)}{(N - 2)[(N - 2) - 2(n - 1)\rho]} \right)
\]

We do not adjust effect sizes in studies reporting dichotomous outcomes. This is because the d-Cox transformation assumes the entire normal distribution at the student level.\(^{25} \) However, when outcomes are dichotomous, or an effect size is calculated from studies where authors control for clustering with robust standard errors or hierarchical linear modeling, we use the “design effect” to calculate the “effective sample size.”\(^{26} \) The design effect is given by:

\[
(9) \quad D = 1 + (n - 1)\rho
\]

The effective sample size is the actual sample size divided by the design effect. For example, the effective sample size for the treatment group is:

\[
(10) \quad N_{t(\text{eff})} = \frac{N_t}{D}
\]

**A1c. Adjusting Effect Sizes for Study Design, Research Involvement and Study Setting**

In this report we show the results of our meta-analyses calculated with the standard meta-analytic formulas described above. Typically, we list the “Adjusted Effect Size” that is used in the benefit-cost analysis in our reports. These adjusted effect sizes, which are derived from the unadjusted results, may be smaller, larger, or equal to the unadjusted effect sizes we report. In this analysis we considered adjusting effect sizes for research design, researcher involvement in the intervention, and laboratory (not “real world”) settings. For a full description of the rationale for these adjustments see WSIPP’s Technical Manual.\(^{27} \)

Since the studies we reviewed for our analysis of full-day kindergarten all had similar research designs, we could not conduct a meta-regression to determine if there were systematic differences due to research design. We, therefore, made adjustments for research design based on our analysis of early childhood education

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\(^{25}\) Mark Lipsey (personal communication, November 11, 2007).

\(^{26}\) Formulas for design effect and effective sample size were obtained from the Cochrane Reviewers Handbook, section 16.3.4, Approximate analyses of cluster-randomized trials for a meta-analysis: effective sample sizes. http://www.cochrane-handbook.org/

programs. For early childhood education programs we found that research design did predict the magnitude of the effect size, thus no adjustments were made for this factor in the full-day kindergarten analysis. None of the full-day kindergarten studies took place in a setting that was not a “real world” environment and no researchers were involved in the implementation of these studies; therefore, no adjustments were made for these conditions.

In this report, we refer to all effect sizes as weighted average effect sizes since no adjustments were made for study design, researcher involvement, or study setting.

**Computing Weighted Average Effect Sizes, Confidence Intervals, and Homogeneity Tests.** Once effect sizes are calculated for each program effect, and any necessary adjustments for clustering are made, the individual measures are summed to produce a weighted average effect size for a program area. We calculate the inverse variance weight for each program effect and these weights are used to compute the average. The calculations involve three steps. First, the standard error, \( SE_T \) of each mean effect size is computed with:  

\[
SE_T = \sqrt{\frac{N_t + N_c}{N_t N_c} + \frac{ES^2}{2(N_t + N_c)}}
\]

Next, the inverse variance weight \( w \) is computed for each mean effect size with:  

\[
w = \frac{1}{SE_T^2}
\]

The weighted mean effect size for a group with \( i \) studies is computed with:  

\[
\overline{ES} = \frac{\sum (w_i ES_{T,i})}{\sum w_i}
\]

Confidence intervals around this mean are then computed by first calculating the standard error of the mean with:  

\[
SE_{\overline{ES}} = \frac{1}{\sqrt{\sum w_i}}
\]

Next, the lower, \( ES_L \), and upper limits, \( ES_U \), of the confidence interval are computed with:  

\[
ES_L = \overline{ES} - z_{(1-\alpha)} (SE_{\overline{ES}})
\]

\[
ES_U = \overline{ES} + z_{(1-\alpha)} (SE_{\overline{ES}})
\]

In equations (15) and (16), \( z_{(1-\alpha)} \) is the critical value for the \( z \)-distribution (1.96 for \( \alpha = .05 \)). The test for homogeneity, which provides a measure of the dispersion of the effect sizes around their mean, is given by:  

\[
\sum_{i=1}^{i=n} \sum_{j=1}^{j=m} (w_{ij} ES_{T,ij} - \overline{ES})^2 / \sum w_{ij}
\]

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29 Lipsey & Wilson, (2001), equation 3.23, p. 49.
30 Ibid., equation 3.24, p. 49.
31 Ibid., p. 114.
32 Ibid.
33 Ibid.
34 Ibid., p. 116.
The Q-test is distributed as a chi-square with \( k-1 \) degrees of freedom (where \( k \) is the number of effect sizes).

**Computing Random Effects Weighted Average Effect Sizes and Confidence Intervals.** Next, a random effects model is used to calculate the weighted average effect size. Random effects models allow us to account for between-study variance in addition to within-study variance.\(^{35}\) This is accomplished by first calculating the random effects variance component, \( v \).\(^{36}\)

\[
(17) \ Q_i = \left( \sum w_i ES_i^2 \right) - \frac{\left( \sum w_i ES_i^2 \right)}{\sum w_i}
\]

Where \( w_i \) is the weight of \( ES_i \). This random variance factor is then added to the variance of each effect size and finally all inverse variance weights are recomputed, as are the other meta-analytic test statistics. If the value of \( Q \) is less than the degrees of freedom \((k-1)\), there is no excess variation between studies and the initial variance estimate is used.

### A2. Full-Day Kindergarten Meta-Analysis and Cost Estimation

**Meta-analysis**

We located ten evaluations of full-day kindergarten (versus half-day programs) that met our criteria for meta-analysis. Three studies used state or school district data; seven studies used the Early Childhood Longitudinal Program Kindergarten Class of 1998-99 (ECLS-K), a large national study that followed a cohort of children from kindergarten to middle school.\(^{37}\) To account for the use of the same data set, we computed an average effect size for the seven studies that used ECLS-K data and included this summary effect size in the meta-analysis. Thus, for the immediate post-kindergarten measurement, four effect sizes are included: the ECLS-K summary effect and the three state/district effects.

We reviewed all studies included in the previous full-day kindergarten meta-analysis using our criteria for scientific rigor and method for coding effect sizes. Seventeen studies that were included in the previous WSIPP analysis were not included in the current analysis because they did not meet the criteria for strong research design or provide sufficient information to compute an effect size.\(^{38}\)

Some of the studies followed students in later grade levels. **Exhibit A1** presents meta-analytic results for students at the end of kindergarten, first grade, and later grades (two through five). At the end of the kindergarten school year, students in full-day kindergarten had higher test scores (unadjusted ES = 0.16), on average, than students in half-day programs. That impact, however, appears to fade out in subsequent years (unadjusted ES = 0.01 in grades two through five).\(^{39}\)

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\(^{36}\) Ibid., p. 134.

\(^{37}\) http://nces.ed.gov/ecls/kindergarten.asp

\(^{38}\) After re-reviewing the studies in our 2007 analysis, we concluded that a number of the studies did not have adequate comparison groups or sufficient statistical controls to include in our current review.

Exhibit A1
Meta-Analysis Results: Full-Day Kindergarten Impacts on Test Scores (in Comparison with Half-Day Programs)

<table>
<thead>
<tr>
<th>Follow-up time (end of school year)</th>
<th>No. effect sizes</th>
<th>Weighted average effect size</th>
<th>Standard error</th>
<th>p-value</th>
<th>Combined N in treatment group</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten</td>
<td>4</td>
<td>0.16</td>
<td>0.03</td>
<td>0.00</td>
<td>53,818</td>
</tr>
<tr>
<td>First grade</td>
<td>2</td>
<td>0.06</td>
<td>0.06</td>
<td>0.28</td>
<td>39,566</td>
</tr>
<tr>
<td>2nd-5th grades</td>
<td>3</td>
<td>0.01</td>
<td>0.05</td>
<td>0.27</td>
<td>27,100</td>
</tr>
<tr>
<td>Low-income students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten</td>
<td>2</td>
<td>0.12</td>
<td>0.03</td>
<td>0.00</td>
<td>48,870</td>
</tr>
<tr>
<td>First grade</td>
<td>2</td>
<td>0.00</td>
<td>0.04</td>
<td>0.98</td>
<td>33,339</td>
</tr>
<tr>
<td>2nd-5th grades</td>
<td>2</td>
<td>0.00</td>
<td>0.04</td>
<td>0.99</td>
<td>21,184</td>
</tr>
</tbody>
</table>

Since the relationships in the economic literature between test scores and labor market earnings are based on test scores late in high school, it is critical to adjust earlier measurements of test scores appropriately for use in the benefit-cost model. Typically, the magnitude of gains in standardized test scores of children who participate in an educational intervention does not remain constant over time. WSIPP has modeled test score decay or “fadeout” based on our meta-analysis of early childhood education programs. To calculate the impact of full-day kindergarten on test scores at the end of high school we use the effect size at the highest grade level of measurement in the studies we reviewed and then use the fadeout model to estimate the test score decay to age 17. Using this methodology, we estimate the impact of full-day kindergarten on test scores at the end of high school as 54% of the 2nd-5th grade effect size.

We also estimate effect sizes at the end of high school for two hypothetical cases of fadeout in order to calculate the benefits and costs for these scenarios. In the first hypothetical scenario we assume that test scores fadeout is the same as a typical early childhood education program. Using the model of early childhood education program fadeout described above, we estimate the impact of full-day kindergarten on test scores in the hypothetical scenario as 31% of the end of kindergarten effect size. The second hypothetical scenario assumes a case where there is no test score fadeout. For this scenario we use the effect size at the end of kindergarten as the effect size at the end of high school.

The Per-Student Cost of Full-Day vs. Half-Day Kindergarten

We use the same estimates as in our previous report on full-day kindergarten for the average per-student cost of moving from half-day to full-day kindergarten. We estimate both operating and capital costs on a per-participant basis.

The cost estimate is driven by the following seven parameters, shown at the bottom of Exhibit A2:

1) Average annual teacher salary in an average classroom (non-wage benefits included, 2012 dollars)
2) Total number of public kindergarten students in Washington (or any geographic sub-unit)
3) Average kindergarten students per classroom
4) Average square feet per average K–12 classroom
5) Construction cost for K–12 classrooms (dollars per square foot, 2012 dollars)
6) Length of bonds for new construction
7) Interest rate on bonds.

The difference in operating costs is estimated as simply the difference in average teacher salary (and non-salary compensation) for a full-time equivalent (FTE) teacher, given an average kindergarten class size. This estimate does not include any estimated effects on pupil transportation costs of moving from half-day to full-day kindergarten. The capital cost calculations estimate the number of additional classrooms needed, times the number of square feet per student, and the cost per square foot of new construction. This product is then financed over an assumed bond term and interest rate. The result is then divided by the student population to estimate a per-student capital cost.

We also estimate the offsets to child-care costs for students who attend school for full-day, rather than a half-day. Washington State’s Department of Health and Human Services provides subsidized child care to families whose income is up to 200% of the federal poverty level through the Child Care Subsidy Programs (CCSP). We calculated the reduction in the use of CCSP based on the percentage of children eligible for free or reduced-priced meals and the assumption that 50% of eligible children would use subsidized child care (Exhibit A3). We estimate that an average of $505 in child care subsidies per student are distributed to half-day kindergarten students that are not distributed to full-day kindergarten students.
### Exhibit A2
Per-Student Cost Estimates of Full-Day Kindergarten (Versus Half-Day)

<table>
<thead>
<tr>
<th></th>
<th>Half-day k</th>
<th>Full-day k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in cohort (October 2012 headcount)</td>
<td>80,923</td>
<td>80,923</td>
</tr>
<tr>
<td>Full-time equivalent (FTE) teacher per classroom</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Average kindergarten class size</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>FTE teachers needed</td>
<td>2023</td>
<td>4046</td>
</tr>
<tr>
<td>Teacher cost per student (includes marginal non-teacher salary operating expenses)</td>
<td>$2,518.56</td>
<td>$5,037.12</td>
</tr>
<tr>
<td><strong>Difference in operating cost per student</strong></td>
<td><strong>$2,518.56</strong></td>
<td><strong>$2,518.56</strong></td>
</tr>
<tr>
<td>Number of classrooms needed</td>
<td>2,023</td>
<td>4,046</td>
</tr>
<tr>
<td>Total square footage of classroom</td>
<td>3,641,535</td>
<td>7,283,070</td>
</tr>
<tr>
<td>Change in square footage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction cost for change in square footage</td>
<td>$686,611,424</td>
<td></td>
</tr>
<tr>
<td>Annual payment to capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capital payment per student</strong></td>
<td></td>
<td>$632.53</td>
</tr>
<tr>
<td><strong>Total cost per student to expand from half-day to full-day kindergarten</strong></td>
<td><strong>$3,151.09</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Assumed parameters in cost calculation**

- Average annual teacher salary in an average classroom (non-wage benefits included, 2012 dollars. Source: OSPI, School District Personnel Summary Files, Table 19) $83,952
- Marginal non-teacher salary operating expenses (as percent of teacher salaries) 20%
- Average kindergarten class size 20
- Average square feet of classroom space per student 90
- Construction cost for K–12 classrooms (dollars per square foot, 2012) $188.55
- Length of bonds for new construction 25
- Interest rate on bonds 5.50%
**Exhibit A3**  
Per-Student Cost Estimates of a Half-Day of State-Subsidized Child Care

<table>
<thead>
<tr>
<th>Description</th>
<th>Half-day child care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average school year per-student cost of half-day child care at a center or licensed family home</td>
<td>$2063.96</td>
</tr>
<tr>
<td>Percentage of students who are eligible for free and reduced-price meals*</td>
<td>48.91%</td>
</tr>
<tr>
<td>Estimated percentage of eligible families who use child care subsidies</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Average per-student annual cost of state subsidized child care</strong></td>
<td><strong>$504.74</strong></td>
</tr>
</tbody>
</table>

**Assumed parameters in cost calculation**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days in the school year</td>
<td>180</td>
</tr>
<tr>
<td>Average cost per day of child care at a center or licensed family home for school-aged children**</td>
<td>$11.74</td>
</tr>
</tbody>
</table>


**Exhibit A4**  
Summary of Per-Student Full-Day Kindergarten Costs

<table>
<thead>
<tr>
<th>Full-day kindergarten (vs. half-day)</th>
<th>Comparison (half-day child care)</th>
<th>Summary</th>
<th>Uncertainty (+ or – %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual cost</td>
<td>Annual cost</td>
<td>Net program costs</td>
<td></td>
</tr>
<tr>
<td>$3,151</td>
<td>$505</td>
<td>$2,646</td>
<td>10%</td>
</tr>
</tbody>
</table>

The figures shown are estimates of the per-student costs to implement full-day kindergarten in Washington State. The uncertainty range is used in Monte Carlo risk simulation, described in WSIPP’s Technical Manual.
**Benefit-Cost Results**

Exhibit A5 summarizes our benefit-cost results. The estimates are present-value, life-cycle benefits and costs expressed in 2012 dollars. The economic discount rates and other relevant parameters are described in detail in WSIPP’s Technical Manual.41

### Exhibit A5
Main Benefit-Cost Results

<table>
<thead>
<tr>
<th>Benefit-cost summary</th>
<th>(a) Full-day kindergarten program benefits</th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants (labor market earnings)</td>
<td>$433</td>
<td>Benefit to cost ratio ($0.19)</td>
</tr>
<tr>
<td>Taxpayers</td>
<td>$185</td>
<td>Benefits minus costs ($3,140)</td>
</tr>
<tr>
<td>Other</td>
<td>$215</td>
<td>Probability of a positive net present value 14%</td>
</tr>
<tr>
<td>Other indirect*</td>
<td>($1,323)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>($490)</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>($2,649)**</td>
<td></td>
</tr>
<tr>
<td>Benefit minus cost</td>
<td>($3,140)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>(b) Full-day kindergarten with typical early childhood education test score fadeout (hypothetical)</th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants (labor market earnings)</td>
<td>$2,540</td>
<td>Benefit to cost ratio 1.35</td>
</tr>
<tr>
<td>Taxpayers</td>
<td>$1,083</td>
<td>Benefits minus costs $912</td>
</tr>
<tr>
<td>Other</td>
<td>$1,258</td>
<td>Probability of a positive net present value 63%</td>
</tr>
<tr>
<td>Other indirect*</td>
<td>($1,323)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$3,559</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>($2,646)**</td>
<td></td>
</tr>
<tr>
<td>Benefit minus cost</td>
<td>$912</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>(c) Full-day kindergarten with no test score fadeout (hypothetical)</th>
<th>Summary statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants (labor market earnings)</td>
<td>$8,597</td>
<td>Benefit to cost ratio 5.75</td>
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<td>Taxpayers</td>
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<td>Benefits minus costs $12,540</td>
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<td>Other</td>
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<td>Probability of a positive net present value 98%</td>
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<tr>
<td>Other indirect*</td>
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<td>Total</td>
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<tr>
<td>Costs</td>
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<tr>
<td>Benefit minus cost</td>
<td>$12,540</td>
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*Adjustment for deadweight cost of program. See WSIPP’s Technical Manual for further detail.

**Does not match Exhibit A4 due to the use uncertainty ranges in Monte Carlo simulation.

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A3. Studies Used in the Meta-Analyses


The Washington State Legislature created the Washington State Institute for Public Policy in 1983. A Board of Directors—representing the legislature, the governor, and public universities—governs WSIPP and guides the development of all activities. WSIPP’s mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.
New Research: Children With Strong Social Skills in Kindergarten More Likely to Thrive as Adults

July 16, 2015

Princeton, N.J.—A 20-year study shows a link between children's social skills in kindergarten and their well-being in early adulthood, according to the findings published today in the American Journal of Public Health.

Children who were more likely to “share” or “be helpful” in kindergarten were also more likely to obtain higher education and hold full-time jobs nearly two decades later, the study found. Students who lacked these “social competence” skills were more likely to face more negative outcomes by the age of 25, including substance abuse problems, challenges finding employment or run-ins with the law.

“This study shows that helping children develop social and emotional skills is one of the most important things we can do to prepare them for a healthy future,” said Kristin Schubert, program director at the Robert Wood Johnson Foundation, which funded the research. “From an early age, these skills can determine whether a child goes to college or prison, and whether they end up employed or addicted.”

How the Study Worked

Researchers from Pennsylvania State and Duke Universities analyzed what happened to nearly 800 kindergarteners from four locations after their teachers measured their social competency skills in 1991. The children were evaluated on a range of social behaviors, such as whether they resolve peer problems, listen to others, share materials, cooperate, and are helpful. Each student then received a composite score representing his or her overall level of positive social skills/behavior, on a scale from 0 (“not at all”) to 4 (“very well”).

The research team monitored these students and the positive and negative milestones each obtained until they turned 25.

Using a variety of data sources, including official records; reports from parents; and self-reporting by the participants, researchers recorded whether the students obtained high school diplomas, college degrees, and full-time jobs. They also kept track of whether students developed a criminal record or substance abuse problems, among other negative outcomes.

Key Research Findings

For every one-point increase in a child’s social competence score in kindergarten, he/she was:
- Twice as likely to attain a college degree in early adulthood;
- 54% more likely to earn a high school diploma; and
- 46% more likely to have a full-time job at the age of 25.

For every one-point decrease in a child’s social competence score in kindergarten, he/she had:
- 64% higher chance of having spent time in juvenile detention;
- 67% higher chance of having been arrested by early adulthood;
- 52% higher rate of recent binge drinking and 82% higher rate of recent marijuana usage; and
- 82% higher chance of being in or on a waiting list for public housing.

Implications for Action

This latest study comes on the heels of a growing body of findings that prove early learning and development have a significant impact on a child’s overall prosperity and health throughout their life. Not only does this new research emphasize the value of early learning, it shows the particular importance of focusing those early learning efforts on the development of social and emotional skills.

“The good news is that social and emotional skills can improve,” said Damon Jones, PhD, a senior research associate at Pennsylvania State and one of the authors of this study. “This research by itself doesn’t prove that higher social competence can lead to better outcomes later on. But when combined with other research, it is clear that helping children develop these skills increases their chances of success in school, work, and life.”

Across the country, dozens of school-based programs proven to boost kids’ social and emotional development before and after kindergarten can serve as models for others. In addition to making the case for expanding these programs, this new research lends weight to the idea that screening social skills should be more widespread. Using a simple, easy-to-use assessment like the one used in this study, schools could determine which students need additional assistance and intervene accordingly to eliminate future problems before they start.

Additionally, while this study did not analyze the economic benefits of social and emotional skill development, the researchers believe that effective, evidence-based programs to improve skills could provide significant cost-savings over time. The money saved from reduced incarceration costs, drug treatment programs and government assistance coupled with the increased revenues from higher employment rates makes it especially cost-effective to expand programs that boost social and emotional learning, starting in a child’s earliest years.

“As a society, we have tools to give every child a strong foundation for healthy social and emotional development,” said Robert H. Dugger, managing partner for Hanover Provident Capital and co-founder of ReadyNation, which works to improve business competitiveness by helping children get a good start in life. “More than anything else, this research tells us that we have an enormous incentive to put those tools to widespread use and to give children the support they need as early as possible.”
The Washington State legislature directed the Washington State Institute for Public Policy (WSIPP) to develop “a repository of research and evaluations of the cost-benefits of various K–12 educational programs and services.”  

In this report, we analyze a K–12 policy question: do the long-term benefits of full-day kindergarten (in comparison with half-day) outweigh the costs?

We researched this question by reviewing all credible evaluation studies from the United States and elsewhere. We systematically analyzed the studies to estimate whether full-day kindergarten has a cause-and-effect relationship with student outcomes. We then calculated whether the long-term monetary benefits of full-day kindergarten exceed the operating and capital costs.

In this report, we describe our research approach and highlight our findings on full-day kindergarten. An appendix provides technical details.

Summary
WSIPP updated its 2007 analysis of the research evidence regarding full-day kindergarten.

Over half of Washington’s public school kindergarteners attend full-day programs, and the state is expanding funding for this option. In this report, we analyze average impacts on student outcomes from full-day kindergarten across the United States and elsewhere. We also examine whether benefits are likely to exceed costs.

To investigate, we conducted a systematic review of research by collecting all studies we could find on the topic. We screened for scientific rigor and only analyzed studies with strong research methods.

We identified ten credible evaluations of full-day kindergarten’s cause-and-effect relationship with student test score outcomes. The studies estimate the relative impact of full-day in comparison with half-day programs.

Improvement in standardized test scores was the only outcome measured in the studies that we reviewed. Other outcomes of interest such as social and emotional learning and high school graduation have not been examined consistently in the research literature.

Our bottom-line findings. Full-day kindergarten leads to higher standardized test scores than half-day programs, but this effect appears to fade out within a few years.

More information about how to sustain the early gains from investments in full-day kindergarten is needed as Washington State continues to expand this option for public school students.
Exhibit 1
Meta-Analytic Findings for Full-Day Kindergarten (versus Half-Day)

Grade level when test scores were measured (number of effect sizes)

95% confidence intervals are shown for each effect size
For further information, contact:
Noa Kay at 360.586.2794, noa.kay@wsipp.wa.gov

Washington State Institute for Public Policy

The Washington State Legislature created the Washington State Institute for Public Policy in 1983. A Board of Directors—representing the legislature, the governor, and public universities—governs WSIPP and guides the development of all activities. WSIPP's mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.
Full-Day Kindergarten: An Advocacy Guide

Full-Day K Research

Advocacy Strategies

Coalition-Building Techniques

Organizing Tools

Policy Recommendations

Political Considerations

Effective Legislation
The National Education Association (NEA), the nation’s largest professional employee organization, is committed to advancing the cause of public education. NEA’s 2.8 million members work at every level of education—from preschool to university graduate programs. NEA has affiliate organizations in every state and in more than 14,000 communities across the United States.

National Education Association Officers
Reg Weaver, President
Dennis Van Roekel, Vice President
Lily Eskelsen, Secretary-Treasurer
John I. Wilson, Executive Director

Collaborative Communications Group is a strategic consulting firm that builds the capacity of individuals, organizations and networks to work collaboratively to create solutions that are better than any single entity could produce on its own. Through strategic consulting, dialogue and convening, creation of publications and tools, and community conversations, Collaborative helps organizations and networks to identify, share and apply what they know in ways that increase productivity and effectiveness. The ultimate objective of Collaborative’s work is the improvement of the quality of public education and community life.
**Full-Day Kindergarten: An Advocacy Guide**

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Methodology

To develop this guide, we began by reviewing the contemporary research on full-day kindergarten. We then interviewed kindergarten teachers, experienced NEA state-level staff and elected leaders. The interviews were designed to gather information about what we should include in the guide—not just content, but tools and techniques that readers and activists would find helpful. Many of the people we interviewed had extensive experience as state-level activists in the areas of early childhood education and kindergarten. Finally, we conducted case studies, looking carefully at how NEA affiliates in the states of West Virginia and New Mexico worked to support the passage of state-wide full-day kindergarten policies.

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Kindergarten is a magical time in a child’s life. During kindergarten, children learn to get along with each other, they discover the joy and challenge of reading and writing, and they learn what it means to be in school.

We know that kindergarten is a key “bridge year” for children—a year for children to move from unstructured play and early learning to the more structured learning environment of formal schooling.

For children to grow and thrive in kindergarten, they need a few very simple things: they need care and attention from their teacher and education support professionals; they need developmentally appropriate activities that engage them as young learners; and they need time to process information and to move between activities. Quality full-day kindergarten programs ensure that children have the time and attention they need from their teachers to be successful learners.

Kindergarten teachers prefer full-day kindergarten to half-day kindergarten. Studies show that parents prefer full-day kindergarten as well. States and communities should support these views and provide resources to ensure that quality full-day kindergarten programs are available to every child. This includes resources for providing teachers and education support professionals with the training and support they need to succeed in kindergarten classrooms.

Today approximately 60 percent of America’s children attend full-day kindergarten—it’s time that we make full-day kindergarten available to all of America’s children!
The National Education Association (NEA) has embarked on a broad-based initiative to close achievement gaps in American public education. As part of this process, NEA is developing tools and techniques to help affiliates address gaps on a range of fronts—including class size, parent involvement and early childhood education.

In this advocacy guide, we focus on the importance of full-day kindergarten as a strategy for closing gaps. Why full-day kindergarten? Full-day kindergarten provides an essential bridge between prekindergarten and the primary grades. It enables children to develop the academic, social and emotional skills they need to be successful. By laying a strong foundation, full-day kindergarten can boost student performance, access and attainment later in school.

—Reg Weaver, President and John I. Wilson, Executive Director, National Education Association
Achievement Gaps Defined

NEA identifies achievement gaps because we choose to include the many students who may not be achieving at the high standards needed to be successful. Most of us are familiar with the gaps associated with these student characteristics:

• Race and ethnicity
• Income levels
• Language background
• Disability status
• Gender

In addition, we recognize that gaps across these categories are evidenced in a variety of data, including but not limited to:

• Performance: Who is scoring at the proficient or above levels on standardized state assessments, the National Assessment for Educational Progress and the Scholastic Aptitude Test (SAT)?

• Access: Who is enrolled in Advanced Placement classes, who has access to algebra in the middle grades and who is taking college preparatory classes?

• Attainment: Who graduates on time, goes on to college or technical training, completes postsecondary education or attains advanced degrees?

—Source: NEA, Closing Achievement Gaps: An Association Guide

How to Use the Guide

This guide is designed to give NEA leaders, members and staff the tools, resources and research you will need to successfully advocate for full-day kindergarten in your state. Early childhood advocates, parents and community groups can also use the guide to bring full-day kindergarten to their state or district. All audiences can use the guide as a starting point for gathering information and developing an effective legislative plan.

As you page through the guide, look at the overview of each section. In some instances, basic advocacy and organizing tips are given—experienced advocates may want to skip over these tips.

• The first section of the guide includes the latest research on full-day kindergarten, emphasized with vital talking points.

• In the second section, you’ll find tools for mapping the policy and political landscape pertaining to full-day kindergarten in your state.

• In the third section, we’ve included resources for planning your legislative strategy—advocacy tips, coalition building strategies, responses to opposition arguments, and communication techniques, among other tools.

• The fourth section outlines NEA’s full-day kindergarten policy priorities. This section also includes model legislation.

• The last section describes the passage of full-day kindergarten legislation in New Mexico and West Virginia. Take time to read through these state stories as you begin your own journey.

• Throughout, you’ll find examples of effective practices used by full-day kindergarten supporters across the United States.
“Attempting to repair reading skills in fourth grade is far more expensive and risky than guaranteeing good reading skills in kindergarten.”

—Reg Weaver, President, National Education Association
Introduction

Full-day kindergarten is a sound educational investment. Research demonstrates that full-day kindergarten, though initially more costly than half-day kindergarten, is worth the expense. Full-day kindergarten not only boosts students’ academic achievement, it strengthens their social and emotional skills as well. Additionally, it offers benefits to teachers and parents—teachers have more time to work with and get to know students, and parents have access to better teaching and care for their children. Everyone gains!

Full-Day Kindergarten Boosts Student Achievement

Longitudinal data demonstrate that children in full-day classes show greater reading and mathematics achievement gains than those in half-day classes.

In their landmark longitudinal study of full-day versus half-day kindergarten, researchers Jill Walston and Jerry West found that students in full-day classes learned more in reading and mathematics than students in half-day classes—after adjusting for differences in race, poverty status and fall achievement levels, among other things.

All students experienced learning gains. By giving students and teachers more quality time to engage in constructive learning activities, full-day kindergarten benefits everyone.

Full-day kindergarten can produce long-term educational gains, especially for low-income and minority students.

In a study comparing national and Indiana research on full-day and half-day kindergarten programs, researchers found that compared to half-day kindergarten, full-day kindergarten leads to greater short-term and long-term gains.

In one Indiana district, for example, students in full-day kindergarten received significantly higher basic skills test scores in the third, fifth and seventh grades than students who attended half-day or did not attend kindergarten at all. The researchers also found that the long-term benefits of full-day kindergarten appeared to be greatest for students from disadvantaged backgrounds. And full-day kindergarten helped to narrow achievement gaps between groups of students.

In a study of over 17,000 students in Philadelphia, researchers found that “by the time they reached the third and fourth grades, former full-day kindergartners were more than twice as likely as children without any kindergarten experiences—and 26 percent more likely than graduates of half-day programs—to have made it there without having repeated a grade.”

—Deborah Viadero, Reporter, Education Week
Full-Day Kindergarten Improves Students’ Social and Emotional Skills

A full day of learning offers several social, emotional and intellectual benefits to kindergarteners. They have more time to focus on activities, to reflect on activities and to transition between activities.

If children are taught by quality teachers using age-appropriate curricula in small classroom settings, they can take full advantage of the additional learning time—social, emotional and intellectual—that a full day allows. Further, research demonstrates that children adjust well to the full-day format. While some parents worry that full-day kindergarten is too much for kids, research shows that 5-year-olds are more than ready for a longer day. They also do better in a setting that allows them time to learn and explore activities in depth.

Full-Day Kindergarten Is a Sound Educational Investment

Recent research has demonstrated that funds invested in quality early education programs produce powerful returns on investment.

Viewing half-day kindergarten as a vehicle for saving money is shortsighted. In recent years, a number of researchers have begun doing economic analyses of early childhood education programs. They are finding that investments in quality early childhood programs generate returns of 3-to-1 or even higher—that’s at least $3 for every $1 invested.

Robert Lynch, a researcher who has extensively studied this issue, points out, “Even economists who are particularly skeptical about government programs make an exception for high-quality early childhood development programs.”

By helping to develop students’ academic abilities, and by improving their social and emotional skills, effective early childhood programs can lower grade retention and dropout rates.

Full-day kindergarten provides a bridge between prekindergarten programs and the early elementary years.

Full-day kindergarten enables students to successfully navigate from prekindergarten to early elementary grades. In America today, an estimated 69 percent of children attend community-based prekindergarten programs. For most children, kindergarten is not their first full-day experience. For all children, even those who are away from home for the first time, full-day kindergarten sets the stage for first grade and beyond by helping students make the transition to more structured learning.
Full-day kindergarten enables teachers to assess students’ needs and abilities more effectively, leading to early intervention.

Children spend more time in a formal school setting in full-day kindergarten. Teachers have more time to get to know kids, and to work with specialists to identify and evaluate kids’ needs, skills and abilities. School personnel can then work with parents to develop plans to address children’s learning challenges early. This saves money and resources over the long term, and increases the odds that children will be successful later in school.

**Teachers Prefer Full-Day Kindergarten**

Full-day kindergarten helps teachers improve student learning.

On average, students in full-day kindergarten spend about twice as much time in school as children in half-day programs do. As a result, teachers get to know students much better. They are able to develop a richer understanding of students’ needs and, in turn, to develop activities and lessons to meet those needs.

**The Benefits of Full-Day Kindergarten: Teachers’ Perspectives**

In a study evaluating teachers’ views on full-day kindergarten, teachers reported a number of benefits for themselves as well as for children and parents, including:

- Participating in full-day (kindergarten) eased the transition to first grade, helping children adapt to the demands of a six-hour school day.
- A longer school day offered more flexibility and more time to do activities during free-choice times.
- Having more time made kindergarten less stressful and frustrating for children because they had time to develop interests and activities more fully.
- Participating in the full-day schedule allowed more appropriate challenges for children at all developmental levels.
- Children with developmental delays or those “at-risk” of experiencing school problems had more time for completing projects and for needed socializing with peers and teachers.
- More advanced students had time to complete long-term projects.
- Having full-day kindergarten assisted parents with child care.
- Having more time made child assessment and classroom record keeping more manageable for teachers.
- Switching to full-day kindergarten gave teachers more time for curriculum planning, incorporating a greater number of thematic units in the school year, and offering more in-depth coverage of each unit.

Full-Day Kindergarten Helps Close Achievement Gaps: What the Research Says

SECTION I

Full-Day Kindergarten Is Optimal for Parents

Full-day kindergarten provides parents with better support for their children.

For parents who work outside the home, full-day kindergarten means that children do not have to be shuffled between home, school and child care. For all parents, there is more continuity in the child’s day, less disruption and more time for focused and independent learning.

A 2000 study published by the National Center for Educational Statistics found that after the second year of a full-day kindergarten program, 100 percent of full-day parents and 72 percent of half-day parents noted that, if given the opportunity again, they would have chosen full-day kindergarten for their child.

“Rhianna Wilson was worried that her son, Timothy, would be overwhelmed in an all-day program. He wasn’t. ‘He just learns more quickly,’ she said. ‘The other day he announced that he wanted to be a paleontologist.’”

—Tara Manthey, “What a Difference All Day Makes,” The News Tribune (Tacoma, WA)
“With all state-level decision makers operating under tight budgetary constraints, full-day kindergarten competes with other social and educational policy options—prekindergarten, increases in teacher salaries, higher education, special education—for legislative support and resources.”

—Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
A keen understanding of the political terrain is a crucial factor in organizing a campaign. This is especially true for full-day kindergarten, where politics and policies vary considerably from state to state and often from district to district.

This section is designed to help you map the landscape surrounding full-day kindergarten in your state and to gather the information needed to undertake your campaign. This section is divided into categories: Policies, Resources and People. As you read through the categories, answer the questions and begin to develop an action plan. Don’t be daunted by the number of questions. Rather, think of them as a starting point for discussion and reflection.

**POLICIES**

**Gaining an Understanding of Full-Day Kindergarten in Relation to Early Education and Prekindergarten**

Become familiar with the prekindergarten, early education or child care movement in your state. Are there coalitions organized around prekindergarten? Around child care? How do they view full-day kindergarten? How many private kindergarten providers are there in your state? How organized and vocal are these providers? What impact would public full-day kindergarten have on them?

Early education and prekindergarten advocates are well organized in many states. Look for ways to join forces with them. Full-day kindergarten should be part of every comprehensive early education initiative.

**Early Education for All**

In Massachusetts, a coalition of early education advocates teamed up to promote Early Education for All, a state-wide campaign with a provision for full-day kindergarten. Kathryn Boudreau, president of the Massachusetts Teachers Association, is a member of the Early Education for All advisory committee.

**Early Education for All has three primary goals:**

- **Every preschool-aged child has access to a high-quality early childhood education that meets professionally accepted standards, is staffed by well-trained early educators, and is delivered through a mix of public and private programs**

- **Creation of a state system to improve the training, education and compensation of the workforce specializing in early childhood and school-age education**

- **Access to high-quality, full-school-day public kindergarten for all families who desire it**

For more information, visit www.strategiesforchildren.org/eea/eea_home.htm.
Mapping the Status of Kindergarten in Your State

As you think about what kindergarten should look like in your state, begin by thoroughly researching the current status of kindergarten in your state. How many children attend kindergarten? Of those, what percentage attend full-day versus half-day? What percentage of public schools in your state offer full-day kindergarten? How many children attend private kindergartens? Are children required to attend kindergarten? At what age are children required to attend school?

You should be able to obtain this information from your state department of education. The Education Commission of the States also tracks kindergarten attendance and legislation in each state at www.ecs.org.

Determining the Price Tag of Full-Day Kindergarten

Advocates for full-day kindergarten identify cost as the biggest challenge facing full-day kindergarten supporters. As you define what a full-day kindergarten program would look like in your state (see Section IV: What Full-Day Kindergarten Should Include, page 27), ask the following questions:

• How much would it cost to implement a comprehensive full-day kindergarten program throughout your state? Factors to consider include teacher salaries, teacher training and professional development, paraprofessional salaries, curriculum development, assessment, classroom space, school lunches, transportation and miscellaneous administrative costs associated with implementing full-day kindergarten.

• How do education funding formulas work in your state? Is kindergarten funded at the same level as other grades? In most states, it is not.

As you develop cost estimates, look for ways to save money. You could realize a net savings, for example, if buses ran only twice a day instead of three. You should also include calculations on the return on investment. Those numbers can be very persuasive to policymakers and the general public.

A Snapshot of Full-Day Kindergarten in the United States

• The Education Commission of the States estimates that over 60 percent of children in the United States attend full-day kindergarten. By contrast, in 1979 just over 25 percent of kindergartners were enrolled in full-day programs.

• Only nine states, most of which are located in the southeastern United States, require full-day kindergarten for all kindergartners.

To support full-day kindergarten programs, states employ a patchwork of funding programs—combining per-child funding formulas (which often differ between kindergarten and first grade), federal funds such as Title I, and state categorical funds. If not mandated by the state, full-day kindergarten programs remain vulnerable to funding cuts.
Identifying Ways to Pay for Full-Day Kindergarten

As you formulate your legislative strategy, it is important to think about how your state can pay for full-day kindergarten—where will the funds come from? What other budget priorities are coming up in the next legislative session? Should you make full-day kindergarten part of a larger early education package? Or part of a larger education-spending package? What are your association’s other education priorities? How might full-day kindergarten compete with those priorities? Why should it take precedence over other priorities? If you are not able to pass a full-day kindergarten bill this year, how will you pass one next year, or the following year?

Scrutinizing the Money Flow: Paying for Full-Day Kindergarten Through Cost Savings

Think New Mexico, an organization advocating for full-day kindergarten in New Mexico, worked with a former state budget director to do a line-by-line review of the state budget. The team identified a number of programs that could be trimmed or eliminated. They then released a report to the press identifying these programs and explaining how the cost savings could be used to pay for full-day kindergarten. The strategy was successful—the New Mexico press highlighted Think New Mexico’s report, and presented full-day kindergarten as an affordable policy option.
Trims in State Budget Could Fund Full-Day Kindergarten

The following excerpt from an article published by The Santa Fe New Mexican illustrates how the newspaper presented full-day kindergarten as an affordable policy option.

A Santa Fe group claims the state government could afford to fund full-day kindergarten by eliminating wasteful and unnecessary spending from its existing budget.

“The bottom line is that there is already sufficient revenue to pay the cost of implementing full-day kindergarten,” concludes the group, called Think New Mexico, in a new report.

The report, “Setting Priorities: How to Pay for Full-Day Kindergarten,” was released this week as part of the think tank’s preparations for a lobbying campaign at the 2000 Legislature. The recommendations include calls for the state to stop operating its visitor-information centers, end preferential tax treatment for volume cigarette sales and horse racetracks, create new oversight for state agency contracts and eliminate jobs at the Public Regulation Commission.

The study comes as the state is moving toward “performance-based” budgeting that is intended to bring new scrutiny to longstanding programs, expenses and practices. About half of the state’s yearly budget is spent on education.

State law now mandates that schools offer a half day or 2 hours of kindergarten for 5-year-olds. About 15 percent of 5-year-olds in New Mexico attend full-day kindergarten, compared with a national average of nearly 55 percent.

Many politicians, including Martin Chavez, the Democratic gubernatorial candidate defeated last year by Gov. Gary Johnson, have made full-day kindergarten a campaign priority.

But the proposal has always been stopped at the legislature mostly because of costs.

“I don’t know of anybody that’s in opposition to mandatory full-day kindergarten. The stumbling block has always been the financial end of it,” said Sen. John Arthur Smith, D-Deming, NM.

“We recognized,” think-tank founder Fred Nathan said, “that full-day kindergarten carries a price tag with it and, therefore, we felt an obligation to explain how the state could pay for it.”

Preparing a Legislative Strategy

As you prepare your campaign, think carefully about how to work with your state legislature. When will you begin the campaign? How will you get legislators on board? Who should you work with in the legislature to ensure passage of your bill? In West Virginia, advocates of full-day kindergarten worked closely with members of the education committees in both houses, as well as well-respected legislators outside of those committees. In New Mexico, full-day kindergarten supporters focused their efforts on members of the appropriations committees because supporters knew the primary debate would be about the affordability of full-day kindergarten.

Who will sponsor your legislation? Who will write the legislation? Do you have the governor’s support? If not, how will you get it? Does it make sense to try to pass a ballot initiative—if your state has that option, as many states in the West do—instead of going through the legislature? If so, what kind of campaign would that strategy require?

You will need to know what your state’s legislative calendar looks like as well. When is education legislation typically drafted? When do committees meet? For more information on when state legislatures meet and how they operate, visit the National Conference of State Legislatures Web site: www.ncsl.org/programs/legman/legman.htm.

RESOURCES

Assessing Your Organizational Commitment

This kind of campaign requires a long-term organizational commitment to be successful. Begin by determining who will lead this effort in your association. Think about the following: What organizational resources will the campaign require? (For more information, see see Section III: Organizing Tools on page 17.) Can your government relations, media and research teams work together on this campaign? Who will spearhead the campaign? How does this issue fit into your other organizational priorities? How will you sustain the campaign over time?

Finding Examples of Effective Full-Day Kindergarten Programs in Your State

Look for effective public full-day kindergarten programs in your state. Contact education researchers in your state to help you locate effective full-day programs. Go online to look for newspaper articles about effective programs in your state. How can you use those examples of effective programs to help make your case? Advocates in New Mexico used an evaluation comparing full-day and half-day kindergarten outcomes in an Albuquerque school to persuade lawmakers.

Networking With Other States

Advocates who have worked to support full-day kindergarten in other states are an important resource. What can you borrow from legislation that others have drafted?

• Go to NEA’s Closing the Achievement Gaps site (www.achievementgaps.org) to view examples of legislation from West Virginia and New Mexico. Contact NEA affiliates in states that have passed full-day kindergarten legislation.

• Also see the ECS Web site (www.ecs.org) for more detail on kindergarten legislation in each state.
PEOPLE—POTENTIAL SUPPORT AND OPPOSITION

Identifying Potential Coalition Partners
Take time to evaluate potential partners. Consider early education groups such as your local affiliate of the National Association for the Education of Young Children (www.naeyc.org) or a national group like Pre-K Now (www.preknow.org). Who else might you work with? Education associations? Parent groups? Social service agencies?

As you assess potential partners, look for nontraditional allies, like business groups. In New Mexico, support from the Hispanic business leaders association as well as the Association of Commerce & Industry of New Mexico, the equivalent of the state Chamber of Commerce, helped full-day kindergarten advocates gain ground in the state legislature and with the governor.

Also think about groups like the AFL-CIO, as well as ACORN (Association of Community Organizations for Reform Now) and other community activist groups. They can be important allies in this work.

Assessing Parents’ Views—Parents as Allies
Parents are perhaps the most important constituency on this issue—especially parents of small children. It is important to know where parents stand.

Have you surveyed parents to determine what their views are? (See the next section, Organizing Tools, for more information on surveys.) Look for ways to involve parents as allies. How does full-day kindergarten help them? If some parents are opposed to full-day kindergarten, find out why. How can you change their minds or counter their opposition? How can you involve the state Parent Teacher Association and local parent-teacher organizations in your campaign? Find out where they stand on this issue.

Assessing Kindergarten Teachers’ and Other Teachers’ Views—Teachers as Allies
Kindergarten teachers are a vital constituency. They work most closely with kindergartners and can provide crucial and credible voices in support of particular policies. Additionally, they will be directly affected by the outcome of your work. How will you engage them in your initiative? Have you surveyed them? Are they willing to support your efforts? What about 1-3 teachers? How will you involve your broader membership in the campaign? How does full-day kindergarten benefit them?

Successful organizing campaigns should include teachers as spokespersons and supporters. As you reach out to teachers, identify possible champions. Who will speak forcefully and effectively on your behalf?

“If I had to do it over again, I would have involved more kindergarten teachers in our campaign.”

—Perry Bryant, former lobbyist with the West Virginia Education Association
Assessing the Views of Education Support Professionals—Teacher Aides, Bus Drivers and Others as Allies
Like teachers, education support professionals such as teacher aides, bus drivers, cafeteria workers and others have an important stake in this issue. How would half-day to full-day schedule changes affect various support professionals? Where do they stand on this issue? How can you work with their unions to gain support for your work?

Assessing School Administrators’ and Local School Officials’ Views—Administrators as Allies
School administrators, administrators’ organizations and local school officials such as school board members can be valuable allies. Legislators look to these leaders for advice, and you will need their support to move your proposal forward. What do your state’s principals believe? Superintendents? The state board of education? How will you engage them as allies? How can you get their associations on board with you?

Enlisting Champions
As you assess your support, look for champions who are willing to join forces with you. Champions are important for several reasons. They can provide visible support for your work, they can use power and influence to sway the views of legislators and other leaders, and they can galvanize public opinion. Consider how parents, teachers, administrators, business leaders, celebrities and influential politicians—such as the governor, state legislators and national political leaders from your state—can be advocates for your work. Community leaders and researchers can also be helpful champions. As you identify possible candidates, think about what they can gain from working with you, and why this issue is important to them.

An Important Supporter of Full-Day Kindergarten
In New Mexico, supporters engaged the governor’s wife, Dee Johnson, as a champion of full-day kindergarten. This served a dual purpose—she publicly endorsed full-day kindergarten and she privately urged her husband, who had been critical of the initiative, to sign the full-day kindergarten bill once it was passed by the state legislature.

Assessing Your Opposition: Preparing to Respond
It is also important to know who your likely opponents will be, who their allies are, what arguments they will make and what strategies they will use to counter your work.

Opponents in New Mexico and West Virginia included:
• Fiscal conservatives in the state legislature
• Government officials who favored local control of education
• Principals and district leaders opposed to the structural changes embedded in moving from half-day to full-day kindergarten
• Conservative parent groups

Additionally, you are likely to face opposition from groups opposed to the NEA—those who see your work on this issue as just another way to bolster the power of the union or secure jobs for teachers. How will you rebut their arguments?
“Good information is essential, but if you don’t have the right people in place who care about your issues, you will face unnecessary roadblocks—lobbying begins at election time.”

—Jan Reinicke, Executive Director, Iowa State Education Association
Introduction

In organizing a campaign, it is essential to begin with a clear vision of where you want to go and know how you plan to get there. Included in this section are strategies, techniques and tools for undertaking a successful full-day kindergarten campaign in your state. This is just a starting place. Use it, along with the Web tools referenced here, as you begin organizing your initiative.

Getting Started

As you begin your campaign, review the factors discussed in Mapping the Landscape of Full-Day Kindergarten on page 9.

- Identify who will coordinate the campaign within your association.
- Note what resources you will need, including staff time for media relations, research and government relations; funds; and materials. As you determine what resources you will need, think long term. Advocates of full-day kindergarten often say that they wished they’d known how long the work would take. Legislative processes are slow—often campaigns like this take years. In addition to having the right idea, you have to be in the right place at the right time to make it happen, and you typically must make compromises along the way. Be prepared to dig in for the long haul.
- This guide contains much of the research you’ll need to get started. Draft a background paper or some talking points about the current state of kindergarten—and, more broadly, early education—in your state. Pinpoint what else you need to learn.
- Begin to develop a preliminary policy proposal. (Use the next section, What Full-Day Kindergarten Should Include: Policy Priorities, as a starting place.)

Grassroots Organizing on the Web

In addition to the NEA’s online Legislative Action Center (www.nea.org/lac/index.html), here are other advocacy toolkits available on the Web:

For more comprehensive information about NEA’s work on closing the achievement gaps, download Closing Achievement Gaps: An Association Guide at www.achievementgaps.org/nea/Associationguide.pdf.

For an excellent overview of legislative advocacy, visit the Community Toolbox Web site: http://ctb.ku.edu/tools/en/sub_section_main_1253.htm

For early education coalition building and other advocacy tips, see the National Association for the Education of Young Children’s Toolbox for Advocates at www.naeyc.org/policy/toolbox.asp.
Building a Coalition to Support Your Campaign

• As you begin to do research and develop a policy proposal, identify the groups you want and need to work with. Link up with allies, but also look for new partners, such as business groups, that can help accomplish your objectives. Groups like the Business Roundtable (www.businessroundtable.org/taskForces) and Corporate Voices for Working Families (www.cvworkingfamilies.org) are strong supporters of quality early childhood education.

• Next, begin reaching out. Meet with group representatives to share your policy proposal and answer their questions.

• Get buy-in and support. Make sure additional groups are willing to join your campaign. Often coalitions use a memorandum of agreement to ensure that everyone knows what resources they will be expected to provide, including public endorsements, staff time to work on legislation development, and lobbying assistance.

• Decide who will do what. You may want to lead the campaign or work with another group that will take the leadership role. An early education group or parent organization, for example, may be better positioned to lead the effort. Who leads is not as important as what the partnership accomplishes. All participants, however, must have a clear understanding—in writing—about who is responsible for what and who has sign-off authority on communications and legislative changes.

Launching the Campaign

• Work with partner groups to conduct additional research, if necessary, and flesh out your policy proposal.

• Develop a plan and a timeline for implementing your proposal—either through your state legislature or through a ballot initiative. Make sure to include the state department of education and the governor’s office in your plan. How will you work with them?

• Develop three to five key messages to support your campaign. Based on your mapping research, develop messages that promote your idea and address key arguments of the opposition. These messages are can serve as organizing tools for building coalitions and developing communications plans.

• Put together a communications plan. What information do you want to release to the press? When will you release it? How will you counter opposition? Who will handle press calls? Requests for interviews? Make sure to develop talking points for everyone who communicates with the press so that you put forth a consistent message.

Surveying Parents, Teachers and Administrators

Surveys are a powerful tool in advocacy campaigns. They give lawmakers insight into the views of their constituents, and they give advocates public opinion research to back claims from scientists and researchers.

In the case of full-day kindergarten, surveys or, at the very least, focus groups, are essential. In New Mexico, advocates used parent, teacher and administrative survey data to convince legislators that there was broad-based support for full-day kindergarten.

There are a number of tools advocates can use to develop, administer and analyze surveys, such as Survey Monkey (www.surveymonkey.com), an easy-to-use “one-stop shop” for online surveys.
• Decide how you will fund your proposal. Advocates of full-day kindergarten identify cost as the most important issue. A number of states with full-day kindergarten programs have phased them in, providing state funds to the neediest schools first. What would a phase-in program in your state look like? Are there state funds that could be used to jump-start the program?

• Create a legislative strategy. Decide who will sponsor your legislation—and be strategic about your choice. Determine which techniques will get the number of votes needed for passage of the legislation—in-person lobbying, dissemination of research, legislative forums, media coverage and letter writing, for example.

• Be prepared to respond to opposition. What are your opponents’ arguments? How will you counter them? Strategize with advocates in other states, such as New Mexico and Maryland, with full-day kindergarten programs already in place. What strategies did they find most successful? What lessons did they learn?

Getting Positive—and Free—Press for Your Campaign

In New Mexico, positive media coverage was a crucial factor in the passage of full-day kindergarten legislation. Think New Mexico, the primary advocate for full-day kindergarten in New Mexico, used a number of press strategies to gain positive media coverage.

“We knew that the best way to get to the legislature—and the only way to get the public involved—was to go to the media and get their support,” Nathan (Think New Mexico’s director) said. From September through the legislative session, representatives from Think New Mexico met with writers and editors from the state’s major newspapers (The Santa Fe New Mexican, The Albuquerque Journal and The Albuquerque Tribune), which responded with extensive coverage and several enthusiastic editorial endorsements. Nathan also wrote op-ed articles published in local papers.

As the three major newspapers began to cover the legislation and campaign, the organization received interview requests from radio and television stations across the state, as well as from smaller regional and local newspapers. Within a span of five months, Nathan conducted dozens of interviews with print journalists and appeared on radio and television on at least six separate occasions. The press also frequently quoted the legislative sponsors and prominent Think New Mexico board members.

Nathan went out of his way to provide journalists with information or to encourage coverage of breaking developments. “He knew the media very well,” said one reporter who recalled Nathan walking into the capitol media room on an almost daily basis. The reporter commented that while Nathan’s knowledge and intellectual honesty gave him credibility, his “persistence sometimes annoyed the capitol beat reporters.” As the vote neared, Think New Mexico maximized the free media coverage to reach legislators; on one occasion, for example, the organization distributed copies of a positive article about the legislation to the offices of every legislator in the Senate and House.

—Source: Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
• If you decide to undertake a state-wide initiative, determine how many signatures you need to get the initiative on the ballot, decide how you will get those signatures, and map out a media strategy and a public relations campaign for gaining public support. Study other successful ballot initiatives. What strategies have they used?

• Involve members in letter writing or e-mail campaigns to help ensure passage of the legislation. See NEA’s Legislative Action Center (www.nea.org/lac/writing.html) for effective letter writing and e-mail techniques.

• Create a set of short fact sheets to promote the campaign. Persuasive, data-driven fact sheets describe the benefits of full-day kindergarten, outline your campaign’s policy goals and counter opponent’s arguments. They can be useful as background material for meetings with the media and champions and as a general advocacy tool.

• Consider collective bargaining as a tool in your advocacy campaign. Look for ways to build full-day kindergarten issues—such as class size, class time, professional development and appropriate curricula—into teachers’ contracts. For more information on using collective bargaining as an advocacy tool, see Closing Achievement Gaps: An Association Guide (www.achievementgaps.org/nea/Associationguide.pdf).

• Make sure you have the support of the governor. If your legislation passes, you will need the governor’s signature before your bill becomes a law. Use coalition partners and other supporters to ensure the governor is on your side. See the New Mexico case study on page 36 for more information about how advocates worked with the governor’s wife as well as the New Mexico business community to urge the governor to sign full-day kindergarten legislation.

• Prepare to negotiate. Although the goal of the campaign is to achieve certain policy objectives, any legislative process will include negotiation on a number of topics. Before moving forward with your legislative strategy, determine which issues you will be willing to negotiate, and which ones are deal breakers.

“It is really important to reach primary teachers in this campaign who may be less politically involved than teachers who teach older students. They know what kids need and what teachers need.”

—Amanda Rutledge, Vice Chair, Early Childhood Educator’s Caucus, Former Kindergarten Teacher, Texas Education Association
Responding to Opposition

Here are some arguments against full-day kindergarten and counterarguments you can make:

**ARGUMENT I:**

“Full-day kindergarten is too expensive.”

**COUNTERARGUMENTS:**

“It is not as expensive as you might think.”

Know what the cost of full-day kindergarten will be in your state. In Arizona, for example, Governor Janet Napolitano asked for $21 million in 2005 to expand full-day kindergarten. This would have brought the total cost for full-day kindergarten in Arizona to $46 million out of a budget of nearly $8 billion.

“We can pay for it.”

Have a plan ready for how the state will pay for it—perhaps beginning with a phase-in period. Once cost estimates had been done in the state of New Mexico, for example, Think New Mexico conducted a systematic assessment of the state budget and identified programs that could be cut to pay for full-day kindergarten.

“We save money in the long run.”

Though the initial cost might be higher than half-day kindergarten, kids in full-day kindergarten learn more, are less likely to experience grade retention, are more likely to succeed later in school, etc.

“Quality early childhood programs have at least a 3-1 return on investment.”

Be able to produce the evidence. Show what the long-term cost savings will be for your program.

**ARGUMENT II:**

“There are other more important priorities—for example, the state should spend money on prekindergarten instead of full-day kindergarten.”

**COUNTERARGUMENTS:**

“Full-day kindergarten should be part of any comprehensive early education program.”

For supporting evidence, see the Early Education for All Web site: www.strategiesforchildren.org/eea/eea_home.htm.

“This is a simple step we can take as we move toward implementing a comprehensive early education program.”
ARGUMENT III:

“Full-day kindergarten cuts into family time.”

COUNTERARGUMENTS:

“Full-day kindergarten enriches family time by improving children’s learning and their adjustment to elementary school.”

“Comparison studies show that parents prefer full-day kindergarten to half-day kindergarten.”

“Full-day kindergarten saves families’ time and energy. Children do not have to be shuffled between school and child care.”

ARGUMENT IV:

“Five-year-olds aren’t ready to spend a full day in school.”

COUNTERARGUMENTS:

“Research shows that 5-year-olds are ready to spend a full day in school.”

*Be ready to cite the studies.*

“Research also shows that full-day kindergarten is preferable for kids—socially, emotionally and intellectually.”

*Children have time to learn and explore at a slower pace and in more depth.*

“Teachers get to know kids better in full-day kindergarten.”

*Teachers are better able to nurture and care for children in a full-day setting.*

ARGUMENT V:

“Children don’t need full-day kindergarten; they learn more during time with their parents or family members.”

COUNTERARGUMENTS:

“Research shows that all children learn more in full-day kindergarten.”

“Full-day kindergarten provides an ideal learning setting for all children.”

*This includes those children with stay-at-home parents. Kindergartners are taught by certified teachers who specialize in the needs and learning styles of young children.*

“Many children don’t spend much time with parents and family members during the day.”

*Instead, they are shuffled between kindergarten and child care.*

As you read through these arguments, think about the strategies your opponents and their allies may use. If they release research with findings that counter your research, how will you respond? Who are their supporters in the state legislature? How powerful are they? Who can you enlist on your side to help ensure that you will win the day?
TALKING POINTS—WHAT THE RESEARCH SAYS

1. Full-Day Kindergarten Boosts Student Achievement

Longitudinal data demonstrates that children in full-day classes show greater reading and mathematics achievement gains than those in half-day classes.


Full-day kindergarten can produce long-term educational gains, especially for low-income and minority students.


2. Full-Day Kindergarten Improves Students’ Social and Emotional Skills

A full day of learning offers social, emotional and intellectual benefits to kindergartners. They have more time to focus on activities, to reflect on activities and to transition between activities.


3. Full-Day Kindergarten Is a Sound Educational Investment

Recent research has demonstrated that funds invested in quality early education programs produce powerful returns on investment.


Full-day kindergarten provides a bridge between prekindergarten programs and the early elementary years.


Full-day kindergarten enables teachers to assess students’ needs and abilities more effectively, leading to early intervention.


4. Teachers Prefer Full-Day Kindergarten

Teachers get to know students better; they are able to develop a richer understanding of students’ needs and, in turn, to develop activities and lessons to meet those needs.


5. Full-Day Kindergarten Is Optimal for Parents

Comparison studies demonstrate that parents prefer full-day kindergarten.


“One of the things we have learned from doing this work for many years is that you have to be in it for the long term—don’t give up. Adjust to changes and build support among a broad coalition of groups.”

—Jim Griess, Executive Director, and Jay Sears, Director of Instructional Advocacy, Nebraska Education Association

**Moving Forward After Passage—or Failure**

- **If your initiative is successful,** your work is far from over. You will need to help ensure that the legislation is successfully enacted. Consider creating an implementation working group within your coalition. This group can help oversee issues such as funding, professional development and curriculum development, among others. As you develop your campaign plan, include this phase of the process in your plan.

- **If your proposal is unsuccessful,** decide where you will go next. Work with your coalition to determine why the campaign failed. Was it too costly? If so, why? Who were your primary opponents? Why were they opposed to your campaign? How can you hold them accountable for their opposition? Determine what your next steps will be. Do you want to reintroduce the legislation in the next session? Should you make alterations to it first?
“NEA knows what works in the classroom—the same ingredients that are supported by research, by parents, and by teachers and education support professionals: strong parental involvement, qualified and certified teachers, small class sizes that allow for individual attention, and books and materials aligned with high standards—and high expectations—for every child.”

—Reg Weaver, President, National Education Association
Introduction

For children to reap the benefits of full-day kindergarten, they need more than just additional time for school. Research demonstrates that the most successful full-day kindergarten environments are staffed by licensed, certified teachers and paraprofessionals who receive ongoing professional development, teach in small classroom settings and involve parents as partners in the learning process.

Both the structure of the learning environment and the curriculum should be aligned with that of other primary grades and with prekindergarten, so that kindergarten can serve as a bridge year for children. Activities should engage children’s minds and bodies, allowing them to improve literacy and numeracy skills, as well as social and emotional abilities.

NEA’s Commitment to Full-Day Kindergarten

At its 2003 representative assembly, NEA committed to work toward the following goals:

That all 3- and 4-year-old children in the United States should have access to a full-day public school prekindergarten that is of the highest possible quality, universally offered and funded with public money not taken from any other education program.

That full-day kindergarten for all 5-year-old children should be mandated in every public school in this country. These kindergartens should support the gains children made in prekindergarten, provide time for children to explore topics in depth, give teachers opportunities to individualize instruction and offer parents opportunities to become involved in their children’s classrooms.

—Source: NEA on Prekindergarten and Kindergarten
NEA’s Full-Day Kindergarten Policy Priorities

<table>
<thead>
<tr>
<th>Issue</th>
<th>Commitment</th>
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<tr>
<td>Mandatory Full-Day Attendance</td>
<td>Full-day does not designate a specific number of hours but means that kindergarten should be in accord with the regular school day. Full-day kindergarten should be universal (available in all schools) and mandatory.</td>
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<tr>
<td>Teacher Certification</td>
<td>Kindergarten teachers, support professionals and administrators should be considered qualified if they hold the license or certification that the state grade requires for their employment.</td>
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<td>Class Size</td>
<td>NEA supports an optimum class size of 15 students for regular programs and smaller class sizes for programs that include students with exceptional needs. As with prekindergarten, smaller classes generate the greatest gains for younger children.</td>
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<tr>
<td>Alignment</td>
<td>State policymakers should ensure learning standards for kindergarten are created and aligned both with early learning standards and standards for first grade and beyond. The Education Commission of the States recommends that learning standards for kindergarten be implemented comprehensively across five key domains: physical and motor development, social and emotional development, approaches toward learning, cognitive development, and language and literacy development.</td>
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<tr>
<td>Professional Development</td>
<td>Educators—teachers, support professionals and administrators—should have access to high-quality, continuous professional development that is required to gain and improve knowledge and skills and that is provided at school district expense.</td>
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<tr>
<td>Funding</td>
<td>Kindergarten should be funded in the same manner as the rest of the public school program, but the money should come from new funding sources. This does not necessarily mean that new taxes should be imposed. It does, however, mean that the necessary financing for mandatory, full-day, public school kindergarten, including the need to recruit and equitably pay qualified teacher and support professionals, should not be obtained at the expense of other public school programs. Public funds should not be used to pay for children to attend private kindergarten. Any portion of public money, even “new” money, going to private kindergartens, which are open to some but not all children, will reduce resources available to public school kindergartens, which are available to all children.</td>
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<tr>
<td>Parent Involvement</td>
<td>Because kindergarten is the bridge to the more structured school experience, training programs should be made available to help parents and guardians take an active role in the education of their kindergarten children. Parents and guardians should be encouraged to visit their children’s schools and maintain contact with teachers and other school personnel.</td>
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<tr>
<td>Curriculum</td>
<td>In kindergarten, as with prekindergarten, all areas of a child’s development should be addressed: fostering thinking and problem solving, developing social and physical skills, and instilling basic academic skills.</td>
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<tr>
<td>Assessment</td>
<td>Assessment of the child’s progress should also address all areas of a child’s development: physical, social, emotional and cognitive. Many sources of information should be used and children should be given opportunities to demonstrate their skills in different ways, allowing for variability in learning pace and for different cultural backgrounds. As in prekindergarten, large-scale standardized testing is inappropriate. The purpose of assessment should be to improve the quality of education by providing information to teachers, identifying children with special needs and developing baseline data.</td>
</tr>
<tr>
<td>Teacher Assistants</td>
<td>Adult supervision is vital. Each kindergarten teacher should have the support of a full-time teacher assistant.</td>
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<tr>
<td>Flexibility in Age Requirements</td>
<td>To give children the best possible chances to benefit from kindergarten, NEA recommends that 5 be the uniform entrance age for kindergarten. The minimum entrance age (of 5) and the maximum allowed age (of 6) should not be applied rigidly, however. In joint consultation with parents and teachers, a school district should be allowed to make case-by-case exceptions to age requirements.</td>
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NEA Model Legislation

The following model legislation has been developed by NEA to assist you as you draft legislation appropriate for your state. Use it as a starting point for conversation with partners, lawmakers and colleagues.

To establish a preschool and full-day kindergarten program, and for other purposes.

January x, 200X

A BILL

Be it enacted by the xxxx and the xxxxi of the State of ____________

Section 1. Short Title.
This Act may be cited as ‘The Prekindergarten and Full Day Kindergarten Act.’

Section 2. Findings.
The Legislature finds the following:
(1) Prekindergarten programs are essential to supporting the cognitive, social, emotional, and physical development of young children.
(2) Kindergarten programs are essential to ensuring the school readiness of children when they enter the 1st grade.

Section 3. Purpose.
The purpose of this Act is expand preschool and full-day kindergarten opportunities for children aged three, four, and five.

Section 4. Program Authorization.
The State Department of Education (hereinafter referred to as the designated State agency) shall establish a program to provide for the development of –
(1) High-quality full-day, full-calendar-year universal prekindergarten for all children age 3 and 4; and
(2) Full day kindergarten program for all children age 5 in the State.

Section 5. Plan and Requirements.
(a) State Plan—The designated State agency shall develop a plan to implement the program described in section 4. Such plan shall include each of the following:
(1) A description of the universal prekindergarten program that will be established and how it will support children’s cognitive, social, emotional, and physical development.
(2) A description of the full day kindergarten program that will be established and how it will ensure school readiness for such children.
(3) A statement of the goals for the universal prekindergarten and the full day kindergarten programs and how such goals will be measured through program outcomes and other means.
(4) A description of how the designated State agency will involve representatives of early childhood program providers that sponsor programs addressing children 3, 4, and 5 years old.
(5) A description of how the designated State agency will coordinate with existing State-funded prekindergarten programs, federally funded programs (such as Head Start programs), public school programs, and child care providers.
(6) A plan to address the shortages of qualified early childhood education teachers, including how to increase such teachers’ compensation to be comparable to that of public school teachers.
(7) How the designated State agency will provide ongoing professional development opportunities to help increase the number of teachers in early childhood programs who meet the State’s education or credential requirements for prekindergarten teachers.
(8) A plan to address how the programs will meet the needs of children with disabilities, limited English proficiency, and other special needs.
(9) A plan to provide transportation for children to and from the programs.
(10) A plan to ensure parents of children enrolled in the program are actively involved with and engaged in their child’s education.

(b) Local Requirements.

(1) In General- An eligible program provider receiving funding under this Act shall--
(A) Maintain a maximum class size of 15 children;
(B) Maintain a ratio of not more than 10 children for each member of the teaching staff;
(C) (i) Ensure that all prekindergarten and kindergarten teachers meet State requirements for teachers under applicable State law; and
(ii) Document that the State is demonstrating significant progress in assisting such teachers on working toward a bachelor of arts degree with training in early childhood development or early childhood education;
(D) Meet all health and safety standards required for prekindergarten programs.
(2) Local Application- Program providers under this Act shall submit an application to the designated State agency under this Act containing the following:
(A) A description of the program to be provided.
(B) A statement of the demonstrated need for a program, or an enhanced or expanded program, in the area served by the eligible program provider.
(C) A description of the age-appropriate and developmentally appropriate educational curriculum to be provided that will help children be ready for school and assist them in the transition to kindergarten (as applicable to prekindergarten programs).
(D) A description of how the eligible program provider will collaborate with existing community-based child care providers and Head Start programs, as appropriate.
(E) A description of how students and families will be assisted in obtaining supportive services available in their communities.
(F) A plan to promote parental involvement in the program.
(G) A description of how teachers will receive ongoing professional development in early childhood development and education.

Section 6. Professional Development Set-Aside.
A designated State agency may set aside a portion of funding under this Act for ongoing professional development activities for teachers and staff at prekindergarten and kindergarten programs that wish to participate in the programs under this Act. Funds set aside under this subsection may be used for ongoing professional development—
(1) To provide prekindergarten and kindergarten teachers and staff with the knowledge and skills for the application of recent research on child cognitive, social, emotional, and physical development, including language and literacy development, and on early childhood pedagogy;
(2) To provide the cost of education needed to obtain a credential or degree with specific training in early childhood development or education;
(3) To work with children who have limited English proficiency, disabilities, and other special needs; and
(4) To select and use developmentally appropriate screening and diagnostic assessments to improve teaching and learning and make appropriate referrals for services to support the development and learning of children in such programs.

Section 7. Definition.
In this Act the term ‘eligible program provider’ means a prekindergarten program provider that is—
(A) A public school;
or
(B) A Head Start program.
“Our central message was always an educational message: full-day kindergarten provides long-term educational benefits. An investment in full-day kindergarten is an investment in the educational future of our children.”

—Charles Bowyer, Government Relations, Professional Issues and Research, National Education Association-New Mexico

SECTION OVERVIEW:
STATE STORIES

- West Virginia—Meeting the Needs of Students, Parents and Teachers p. 34
- New Mexico—A Lesson in Patience, Persistence, Compromise and Focus p. 36
West Virginia—Meeting the Needs of Students, Parents and Teachers

West Virginia is one of nine states, most of which are located in the southeastern United States, with mandatory full-day kindergarten. The West Virginia law requiring full-day kindergarten was passed in the early 1990s, and full-day kindergarten was implemented throughout the state by the mid-1990s.

The West Virginia Education Association (WVEA) was actively involved in the passage of full-day kindergarten legislation because it made sense from educational and economic perspectives.

At the time full-day kindergarten legislation was passed, a number of districts in the state—especially in the western part—faced declining enrollment. Schools were closing and teachers were being transferred or fired. Additionally, as a rural state, West Virginia could not afford to have multiple bus schedules to accommodate kindergartners.

Full-day kindergarten provided a way of more effectively meeting the needs of students while at the same time saving teachers’ jobs and saving districts’ money. Because enrollments were declining in a large portion of the state, the need for additional classroom space was an issue only for districts in the eastern panhandle—where population was growing at the time and continues to grow.

“Full-day kindergarten made sense for West Virginia—from an educational and an economic perspective.”
—Perry Bryant, former lobbyist with the West Virginia Education Association
The WVEA teamed up with county superintendents to support passage of full-day kindergarten legislation. The group worked with the education committees of the West Virginia House and Senate, and gained the support of influential legislators. At the time, there was not significant opposition to the bill.

The passage and subsequent implementation of full-day kindergarten in West Virginia was not without challenges, however. Some schools in the eastern panhandle struggled to find classroom space and some parents voiced concern about how longer days—in some cases, coupled with long bus rides—would affect their children.

“Looking back, one of the things we would have done differently,” notes Bryant, “is involve more parents as supporters.”

Full-day kindergarten has provided a number of benefits to parents, however. As Cathy Jones, who coordinates early education program at the West Virginia Department of Education, notes, “West Virginia has a lot of working parents. Public full-day kindergarten programs ensure working parents that their children are well educated and well cared for. All parents receive those benefits.”

Currently, the WVEA is working in partnership with early education groups in the state to support the passage of a comprehensive public prekindergarten program. “The work we did on full-day kindergarten really helped set the stage for the work we are doing now,” explains Bryant.

### A snapshot of full-day kindergarten in West Virginia:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Meets NEA Policy Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Full-Day Attendance</td>
<td>YES—Kindergarten is “full day/every day” and tied to the regular school calendar. Kindergarten is universal (available in all schools) and mandatory.</td>
</tr>
<tr>
<td>Teacher Certification</td>
<td>YES—Kindergarten teachers must be appropriately certified. The state requires a kindergarten certificate.</td>
</tr>
<tr>
<td>Class Size</td>
<td>NO—Classes are capped at 20 students.</td>
</tr>
<tr>
<td>Alignment</td>
<td>YES—Content standards are required for each grade. Alignment is built into content standards that are followed in each grade.</td>
</tr>
<tr>
<td>Professional Development</td>
<td>YES—The state provides ongoing professional development for teachers and principals.</td>
</tr>
<tr>
<td>Funding</td>
<td>YES—Full-day kindergarten is fully funded by the state.</td>
</tr>
<tr>
<td>Parent Involvement</td>
<td>SOMEWHAT—Parents are required to register children and participate in pre-screening programs.</td>
</tr>
<tr>
<td>Curriculum</td>
<td>YES—The state of West Virginia has a mandated state-wide curriculum for each grade, including kindergarten.</td>
</tr>
<tr>
<td>Assessment</td>
<td>NO—Informal assessments are mandated by the state, but no formal assessments are required in kindergarten.</td>
</tr>
<tr>
<td>Teacher Assistants</td>
<td>YES—The law stipulates that if there are 11 or more students, teachers must have an aide in the classroom.</td>
</tr>
<tr>
<td>Flexibility in Age Requirements</td>
<td>NO—The kindergarten age requirement is uniform throughout the state.</td>
</tr>
</tbody>
</table>
New Mexico—A Lesson in Patience, Persistence, Compromise and Focus

The state of New Mexico began implementing a state-wide full-day kindergarten program in the 2000-2001 school year. Now, kindergartners attend school full day in every school in the state. Though New Mexico eventually ended up phasing in full-day kindergarten, proponents of full-day kindergarten did not initially envision a phase-in period. An important part of New Mexico's story is how the phase-in solution was eventually reached and the benefits it offered.

The push for full-day kindergarten in New Mexico began in the early 1990s. Mike Gladden, a school superintendent concerned about the academic preparedness of the young children in his school system, worked with his state senator, Pete Campos, to pass a memorial to study the feasibility of offering full-day kindergarten throughout the state of New Mexico. In summer 1993 the state's Public Education Department teamed up with the New Mexico legislature’s Education Study Committee to form a full-day kindergarten task force.

The task force conducted a literature review and surveyed parents, teachers and school administrators about their attitudes toward the expansion of full-day kindergarten. A majority of parents and teachers supported full-day kindergarten, and all of the administrators surveyed with full-day programs in place favored the full-day approach. The task force then drafted a report, making the case for full-day kindergarten. The report included cost calculations for implementing full-day kindergarten and referenced an Albuquerque school evaluation that favorably compared full-day classes to half-day classes.

“Our central message was always an educational message: full-day kindergarten provides long-term educational benefits. An investment in full-day kindergarten is an investment in the educational future of our children.”

—Charles Bowyer, Government Relations, Professional Issues and Research, National Education Association-New Mexico

Key Steps in the New Mexico Full-Day Kindergarten Advocacy Process

With abundant experience at confronting the political and budgetary realities that state policymakers face, full-day kindergarten supporters effectively:

- Defined a problem (inadequate student achievement)
- Offered a policy solution (full-day kindergarten)
- Built political pressure and momentum (through media coverage and endorsements and the support of influential individuals and constituencies)
- Provided policymakers with funding solutions and implementation strategies (recalculating projected costs, identifying funding sources)
- Monitored and influenced implementation after passage of the legislation (attending to the selection of schools; offering teacher training opportunities)

—Source: Anthony Raden, Achieving Full-Day Kindergarten in New Mexico: A Case Study
Based on this report, supporters introduced a bill in the 1994 legislative session to begin implementing full-day kindergarten in selected districts. Though the bill appeared to have popular support, it ultimately failed in committee. In his case study of full-day kindergarten in New Mexico, Anthony Raden notes that the bill was likely defeated for two reasons: there were concerns about funding equity in districts with low property values, and some conservative parents were opposed to the bill on the grounds that it constituted state intervention in family life.

For several years, the drive to pass a full-day kindergarten bill gave way to other education priorities. Gary Johnson, a conservative businessman, was elected governor in 1994 on an education platform that included an emphasis on local control. Though he initially professed support for full-day kindergarten, his first legislative package did not include funds for the program, and public education supporters found themselves battling the governor on other fronts, including the voucher issue.

The full-day kindergarten issue continued to resurface, though. In 1998 another full-day kindergarten bill was introduced. But after the New Mexico Public Education Department increased the estimated amount of funds required to implement the program to approximately $103 million—with $38 million for teacher salaries, $65 million for additional classroom space and $500,000 for transportation—again the bill failed in committee. In response, supporters of full-day kindergarten proposed a three-year phase-in period, and managed to pass a prekindergarten package that included funds for full-day kindergarten in 1999. In a larger battle with the legislature over vouchers, the governor then vetoed the package, along with a number of other education provisions.

A key turning point for full-day kindergarten in New Mexico was the founding of Think New Mexico (TNM), a bipartisan research and advocacy organization created by Fred Nathan, an attorney and former special counsel in the New Mexico attorney general’s office. As special counsel, Nathan worked with the New Mexico legislature for seven years. When he left the attorney general’s office to found Think New Mexico, he intended to focus on important yet seemingly intractable issues facing New Mexico. He built a high-profile bipartisan board of directors, and with a few small grants from New Mexico foundations, set about working on TNM’s first issue: full-day kindergarten.

Interviews with Anthony Raden, Nathan and TNM board members point to several reasons why they selected full-day kindergarten as their first issue:

- The board members agreed that New Mexico needed to do much more on the early education front.
- Full-day kindergarten was a manageable piece of the larger pre-K issue.
- It was a “potentially winnable issue.” As Nathan put it, “I thought that it would be a long shot, but achievable.”

TNM’s strategy was simple, yet effective. Though the concept of full-day kindergarten had been gathering support in New Mexico for a number of years, advocates had not managed to successfully implement a full-day kindergarten program. The TNM board and staff knew that...
they would need to win over the governor, which would require the support of the business community, and they would need to convince legislators that New Mexico could afford full-day kindergarten. With these two factors in mind, they began their campaign.

• First, they issued a report, making the case for full-day kindergarten—framing it as an essential and affordable program—and held a press conference to announce the findings in the report. As the legislative session drew near, they issued a second report, outlining how the state could pay for full-day kindergarten by cutting some costly, and arguably unnecessary, programs.

• They worked hard to get free positive media coverage—writing op-eds, meeting with writers and editors at the state’s major papers, and giving radio and TV interviews.

• They identified and worked with popular legislators on both sides of the aisle to cosponsor the legislation.

• Using the connections of a powerful board, they gained the support of New Mexico’s political and business leaders—including the governor’s wife, Dee Johnson, and the Association of Commerce and Industry, New Mexico’s most powerful business organization. This set the stage for the governor to eventually sign the legislation into law.

• Finally, TNM members “staffed the legislature” by acting as legislators’ aides before the vote. In a state where legislators receive very little compensation and little to no staff support, this kind of attention made a huge difference.

Raden notes in his case study that “teachers unions” were reluctant to support the passage of full-day kindergarten. Not so, says Charles Bowyer, National Education Association-New Mexico’s government relations, research and professional issues coordinator.

“We were always supportive of full-day kindergarten, but we wanted to make sure that there was enough funding for the program,” explains Bowyer. “We were concerned about how the passage of full-day kindergarten would impact other programs, vis-à-vis funding. At the time, we were working on other legislation….We wanted to make sure that this reform was not at the expense of other reforms.”

When asked what NEA-NM would have done differently, Bowyer notes that they would have started by supporting a phase-in process for implementing full-day kindergarten. “It took us (the coalition supporting full-day kindergarten) a long time to reach that compromise. If we had begun with a phase-in approach, we could have saved a lot of time and frustration—it was just too expensive otherwise,” explains Bowyer.

**Staffing the Legislature**

Every morning during the session, Nathan checked in personally with the legislative sponsors (Taylor, Wilson and Smith). If they needed anything—a typed speech, talking points, photocopies—he and his staff took care of it. Nathan and his allies spoke to every legislator in the House and Senate, shaping arguments to appeal to the person’s ideological leanings and legislative priorities.

“We tried to make a marketing package that was attractive to everyone to counter all objections out there,” Senator Smith said. To Republicans, in particular, they tended to emphasize that the reform could be done in a fiscally prudent manner and would bring a high return on investment. To all politicians, they claimed that full-day kindergarten would boost student achievement—an affordable and popular reform that made enormous sense educationally and politically.

—Source: Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*
Ultimately, the phase-in compromise was appealing to a wide range of people. It was much more palatable to legislators, and it enabled NEA-NM to simultaneously work for salary increases for teachers and support full-day kindergarten.

### The Right Solution at the Right Time

Andy Lenderman, a journalist who covered the education beat for *The Albuquerque Tribune*, points to several conditions and factors that made the timing ideal for passage of full-day kindergarten legislation. First, parents in the state, “tired of being dead last in every single education category,” were anxious for educational change and improved student outcomes. Second, with a booming economy, the state was “flush,” with a significant budgetary surplus from which new programs could be funded. Finally, legislators (who were up for re-election) and the governor (who endured criticism for vetoing the previous year’s budget and various education initiatives) had pledged to take action to revitalize the state’s educational system. Political and economic forces, therefore, converged to allow full-day kindergarten, an idea drifting on the political landscape for years, to emerge as a feasible and popular reform strategy on the state’s legislative agenda.

—Source: Anthony Raden, *Achieving Full-Day Kindergarten in New Mexico: A Case Study*

### A snapshot of full-day kindergarten in New Mexico:

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory Full-Day Attendance</strong></td>
<td>NO—Full-day kindergarten is universal (available in all schools), but not mandatory. More than 98 percent of parents choose to send their children to full-day kindergarten.</td>
</tr>
<tr>
<td><strong>Teacher Certification</strong></td>
<td>YES—Kindergarten teachers must be appropriately certified.</td>
</tr>
<tr>
<td><strong>Class Size</strong></td>
<td>YES—The ratio between teacher and students is 1 to 15. Classes with 15 to 20 students must be provided with a teacher’s assistant.</td>
</tr>
<tr>
<td><strong>Alignment</strong></td>
<td>Not specified in the statute (according to the ECS Kindergarten Database).</td>
</tr>
<tr>
<td><strong>Professional Development</strong></td>
<td>YES—The state provides ongoing professional development for teachers and principals.</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>YES—Full-day kindergarten was phased in across the state from 2000–2001 to 2004–2005. It is now fully funded by the state as part of the state’s regular education funding formula.</td>
</tr>
<tr>
<td><strong>Parent Involvement</strong></td>
<td>Not specified in the statute (according to the ECS Kindergarten Database).</td>
</tr>
<tr>
<td><strong>Curriculum</strong></td>
<td>NO—There is no mandated state curriculum. However, the statute specifies that programs must contain an early literacy program tied to reading research, and that they must be child-centered and developmentally appropriate.</td>
</tr>
<tr>
<td><strong>Assessments</strong></td>
<td>YES—Schools are required to conduct a variety of assessments, including reading and literacy assessments.</td>
</tr>
<tr>
<td><strong>Teacher Assistants</strong></td>
<td>YES—The law stipulates that if there are 15 to 20 students, teachers must have an assistant in the classroom.</td>
</tr>
<tr>
<td><strong>Flexibility in Age Requirements</strong></td>
<td>NO—The age requirement (5) is mandatory throughout the state. All students must attend at least half-day kindergarten if they turn 5 by September 1.</td>
</tr>
</tbody>
</table>
NEA Resources


NEA’s Legislative Action Center, www.nea.org/lac.

National Association for the Education of Young Children in collaboration with NEA and other organizations. “Why We Care About the K in K-12.” *Young Children,* NAECY, March 2005. www.journal.naeyc.org/btj/200503/05aftetal.asp.

Kindergarten and Early Education Research


“Expanding kindergarten to full day is wise move.” *AZCentral.com,* February 27, 2005. www.azcentral.com/specials/special42/articles/0227alldayk0227.html.


Additional Organizations/Web Sites

Early Education for All
www.strategiesforchildren.org/eea/eea_home.htm. This Massachusetts campaign is a coalition of leaders from business, early childhood, labor, religion, health care, education and philanthropy, working in partnership with parents, grassroots leaders and state policymakers to make publicly funded, high-quality preschool education and full-day public school kindergarten available to every Massachusetts child. The Web site features full-day kindergarten research as well as draft legislation.

Full-Day Kindergarten: Exploring an Option for Extended Learning


National Association for the Education of Young Children
www.naeyc.org. NAEYC is dedicated to improving the well-being of all young children with a focus on birth to age 8. See the Early Childhood Issues section of their Web site for research and advocacy information.

National Conference of State Legislatures
www.ncsl.org. Maintains detailed information about state legislatures, including when they meet and how they are structured.

National Institute for Early Education Research
www.nieer.org. NIEER supports early childhood education initiatives by providing objective, nonpartisan information based on research. The NIEER Web site contains an Expert Database with profiles and contact information for experts in early childhood education.

Pre-K Now—Resources
www.preknow.org. Pre-K Now is a public education and advocacy organization that advances high-quality, voluntary prekindergarten for all 3- and 4-year-olds. Visit the Resources section of their Web site for more information about the early education climates in different states.
Princeton, N.J.—A 20-year study shows a link between children’s social skills in kindergarten and their well-being in early adulthood, according to the findings published today in the American Journal of Public Health. Children who were more likely to “share” or “be helpful” in kindergarten were also more likely to obtain higher education and hold full-time jobs nearly two decades later, the study found. Students who lacked these “social competence” skills were more likely to face more negative outcomes by the age of 25, including substance abuse problems, challenges finding employment or run-ins with the law.

“This study shows that helping children develop social and emotional skills is one of the most important things we can do to prepare them for a healthy future,” said Kristin Schubert, program director at the Robert Wood Johnson Foundation, which funded the research. “From an early age, these skills can determine whether a child goes to college or prison, and whether they end up employed or addicted.”

How the Study Worked

Researchers from Pennsylvania State and Duke Universities analyzed what happened to nearly 800 kindergarteners from four locations after their teachers measured their social competency skills in 1991. The children were evaluated on a range of social behaviors, such as whether they resolve peer problems, listen to others, share materials, cooperate, and are helpful. Each student then received a composite score representing his or her overall level of positive social skills/behavior, on a scale from 0 (“not at all”) to 4 (“very well”).

The research team monitored these students and the positive and negative milestones each obtained until they turned 25. Using a variety of data sources, including official records; reports from parents; and self-reporting by the participants, researchers recorded whether the students obtained high school diplomas, college degrees, and full-time jobs. They also kept track of whether students developed a criminal record or substance abuse problems, among other negative outcomes.

Key Research Findings

For every one-point increase in a child’s social competence score in kindergarten, he/she was:

- Twice as likely to attain a college degree in early adulthood;
- 54% more likely to earn a high school diploma; and
- 46% more likely to have a full-time job at the age of 25.

For every one-point decrease in a child’s social competence score in kindergarten, he/she had:

- 64% higher chance of having spent time in juvenile detention;
- 67% higher chance of having been arrested by early adulthood;
- 52% higher rate of recent binge drinking and 82% higher rate of recent marijuana usage; and
- 82% higher chance of being in or on a waiting list for public housing.

Implications for Action

This latest study comes on the heels of a growing body of findings that prove early learning and development have a significant impact on a child’s overall prosperity and health throughout their life. Not only does this new research emphasize the value of early learning, it shows the particular importance of focusing those early learning efforts on the development of social and emotional skills.

“The good news is that social and emotional skills can improve,” said Damon Jones, PhD, a senior research associate at Pennsylvania State and one of the authors of this study. “This research by itself doesn’t prove that higher social competence can lead to better outcomes later on. But when combined with other research, it is clear that helping children develop these skills increases their chances of success in school, work, and life.”

Across the country, dozens of school-based programs proven to boost kids’ social and emotional development before and after kindergarten can serve as models for others. In addition to making the case for expanding these programs, this new research lends weight to the idea that screening social skills should be more widespread. Using a simple, easy-to-use assessment like the one used in this study, schools could determine which students need additional assistance and intervene accordingly to eliminate future problems before they start.

Additionally, while this study did not analyze the economic benefits of social and emotional skill development, the researchers believe that effective, evidence-based programs to improve skills could provide significant cost-savings over time. The money saved from reduced incarceration costs, drug treatment programs and government assistance coupled with the increased revenues from higher employment rates makes it especially cost-effective to expand programs that boost social and emotional learning, starting in a child’s earliest years.

“As a society, we have tools to give every child a strong foundation for healthy social and emotional development,” said Robert H. Dugger, managing partner for Hanover Provident Capital and co-founder of ReadyNation, which works to improve business competitiveness by helping children get a good start in life. “More than anything else, this research tells us that we have an enormous incentive to put those tools to widespread use and to give children the support they need as early as possible.”

New Research: Children With Strong Social Skills in Kindergarten More Likely to Thrive as Adults

July 16, 2015
Full-Day Kindergarten:
A Review of the Evidence and Benefit-Cost Analysis

The Washington State legislature directed the Washington State Institute for Public Policy (WSIPP) to develop “a repository of research and evaluations of the cost-benefits of various K–12 educational programs and services.”

In this report, we analyze a K–12 policy question: do the long-term benefits of full-day kindergarten (in comparison with half-day) outweigh the costs?

We researched this question by reviewing all credible evaluation studies from the United States and elsewhere. We systematically analyzed the studies to estimate whether full-day kindergarten has a cause-and-effect relationship with student outcomes. We then calculated whether the long-term monetary benefits of full-day kindergarten exceed the operating and capital costs.

In this report, we describe our research approach and highlight our findings on full-day kindergarten. An appendix provides technical details.

Summary

WSIPP updated its 2007 analysis of the research evidence regarding full-day kindergarten.

Over half of Washington’s public school kindergarteners attend full-day programs, and the state is expanding funding for this option. In this report, we analyze average impacts on student outcomes from full-day kindergarten across the United States and elsewhere. We also examine whether benefits are likely to exceed costs.

To investigate, we conducted a systematic review of research by collecting all studies we could find on the topic. We screened for scientific rigor and only analyzed studies with strong research methods.

We identified ten credible evaluations of full-day kindergarten’s cause-and-effect relationship with student test score outcomes. The studies estimate the relative impact of full-day in comparison with half-day programs.

Improvement in standardized test scores was the only outcome measured in the studies that we reviewed. Other outcomes of interest such as social and emotional learning and high school graduation have not been examined consistently in the research literature.

Our bottom-line findings. Full-day kindergarten leads to higher standardized test scores than half-day programs, but this effect appears to fade out within a few years.

More information about how to sustain the early gains from investments in full-day kindergarten is needed as Washington State continues to expand this option for public school students.


1 Engrossed Substitute Senate Bill 6386, Chapter 372, Laws of 2006.
Exhibit 1
Meta-Analytic Findings for Full-Day Kindergarten (versus Half-Day)

95% confidence intervals are shown for each effect size.
For further information, contact:
Noa Kay at 360.586.2794, noa.kay@wsipp.wa.gov

Washington State Institute for Public Policy
The Washington State Legislature created the Washington State Institute for Public Policy in 1983. A Board of Directors—representing the legislature, the governor, and public universities—governs WSIPP and guides the development of all activities. WSIPP’s mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.