

## Early Education

# FULL-DAY KINDERGARTEN

*expanding learning opportunities*

*As districts across the country focus on closing the achievement gap between different socioeconomic and ethnic groups, research is pointing to early childhood as a potent time for preventing the gap before it gets established. Many states are responding by spending more than ever before on preschool. In addition, at least 10 states and a number of local districts on their own have begun expanding the kindergarten program from half to full day as a key strategy for leveling the academic field. Studies indicate that full-day kindergarten can lead to improved academic achievement and may help close the achievement gap. By reducing the need for future retention and remediation, this investment can also lower subsequent schooling costs.*

This brief looks at the research on full-day kindergarten and reports how states and districts are implementing this strategy. It also identifies some of the concerns they must address in doing so. Finally, it offers policy considerations.

## What the Research Says

Research comparing half-day and full-day kindergarten<sup>1</sup> shows that children benefit from a developmentally appropriate, full-day program, most notably in terms of early academic achievement — a foundation for school and life success. Full-day kindergarten can afford children the academic learning time needed to prepare for mastery of primary-grade reading and math skills. In doing so, such programs help circumvent subsequent needs for remediation or grade retention.

In this brief we focus specifically on findings from seven recent studies — one each from 1988 and 1991, the rest post-1995 — identified in a research review as meeting a set of design and methodological criteria (see p. 2). Earlier research, over several decades, tends to corroborate these studies' findings that full-day programs consistently seem more effective than half-day kindergarten, especially for disadvantaged students.<sup>2</sup>

In particular, the weight of evidence shows that full-day kindergarten benefits children in these ways:

**Contributes to increased school readiness.**<sup>3</sup> Students in full-day kindergarten tend to be better prepared for

primary-grade learning than those in half-day programs. They do better with the transition to first grade, show significant gains in school socialization (i.e., they understand appropriate behavior), and are equipped with stronger learning skills.

**Leads to higher academic achievement.**<sup>4</sup> Achievement findings for full-day kindergarten students show a trend toward higher achievement. Achievement differences appear to persist over time and when other factors such as student demographics and classroom factors are taken into account. Findings include higher achievement on standardized tests as well as in classroom grades.

**Improves student attendance.**<sup>5</sup> Two of the longitudinal studies show better attendance in kindergarten and through the primary grades, which translates to more learning time.

**Supports literacy and language development.**<sup>6</sup> Recent studies underscore previous findings that full-day kindergarten students show faster gains on literacy and language measures when compared to half-day kindergarten students, a finding of particular importance for the growing numbers of English language learners. Moreover, such gains may last over time. One study, for example, showed higher reading achievement persisting through third grade and in some cases through seventh grade,<sup>7</sup> a benefit that bolsters students' overall school performance.

**Benefits children socially and emotionally.**<sup>8</sup> Full-day kindergarten gives children more time in a structured

setting, which may enhance their social, emotional, and behavioral development. One study found that full-day students received significantly higher conduct marks (e.g., obeys playground rules, shows self-confidence, puts forth best effort, works well with others), though a self-concept scale the researchers administered showed mixed results over time.<sup>9</sup> In other studies, parents and/or teachers cited improved school socialization skills<sup>10</sup> and less stress and frustration for the children.<sup>11</sup>

*Decreases costs by reducing retention and remediation rates.* Full-day kindergarten may help students remain on grade as they move ahead in school.<sup>12</sup> This result can offset the cost of extending the kindergarten day and even lead to long-term savings for schools and

districts. One study, which found full-day students to be more than twice as likely to remain on grade through third grade, showed that this academic benefit helped to offset 19 percent of the first year's cost of extending the kindergarten day.<sup>13</sup>

## State and Local Implementation of Full-Day Kindergarten

Recognizing the rich potential of high-quality full-day kindergarten, 50 states now allow an extended program, and a number of large, urban districts, including Philadelphia and Minneapolis, have implemented this reform. Yet only 10 states<sup>14</sup> send the message that early learning is a priority by providing schools with funding for an extended day — the most recent being Arizona, whose governor successfully promoted such legislation in 2004. In nonfunding states, the only districts able to make the switch to full-day kindergarten are those that can generate local funds to cover any additional costs associated with their full-day program. Such costs can include additional staff. For example, a school that has had two kindergarten teachers, each teaching one morning and one afternoon session, must now hire two additional teachers as the four half-day sessions are expanded into four full-day classes. If all of its classrooms are already in use, the school will also need to add two more classrooms. A longer day can generate greater materials costs, too. Thus, half-day programs remain the norm, with many schools offering morning and afternoon sessions taught by the same teacher in the same classroom.

Even given the expense of expanding the kindergarten day, doing so is a cost-effective option for enhancing early learning<sup>15</sup> — less costly, for example, than setting up a new prekindergarten program. But when funding is an issue, full-day kindergarten can be phased in. Some districts, as well as states such as Arizona and New Mexico, have begun by first targeting schools with the largest proportions of underserved students, planning to phase in access for all students over time.

## Concerns

In considering whether and how to encourage or implement an extended kindergarten day, state policymakers should be aware of some of the common concerns about this reform:

*Demands on children.* Some worry about subjecting young children to an overly demanding curriculum. Others worry that by being in school for more hours, children will lose important time for informal play and exploration.

*Accessibility.* Targeting underserved students can lead to complaints from those not included in the program.

*Cost.* Opponents contend that the potentially greater costs of a longer day could outweigh the benefit.

*Local autonomy.* Pointing to differences in local contexts, demographics, facilities, and parent demand, some argue that kindergarten policies

## PROTOCOL FOR STUDY SELECTION

This brief is based on a review of recent empirical research on the effects of full-day kindergarten. To conduct the review, we cross-referenced diverse sources, including refereed journals, search engines, the ERIC Clearinghouse, and key early education resources. The seven primary studies we identified (see References) are those with research designs that most closely met the following criteria:

### Highly ranked characteristics

- separate experimental and control (or comparison) groups established,
- study cohorts (e.g., individuals, schools, districts) for both the experimental and control/comparison groups selected at random,
- longitudinal design that tracks participants beyond grade 3,
- large sample size,
- use of multiple measures of effect (e.g., academic, behavioral, placement), and
- conducted in the U.S.

### Mid-ranked characteristics

- selection of control cohorts to reflect experimental cohort demographics (e.g., socioeconomic state),
- efforts to control significant differences between the experimental and control/comparison cohorts, and
- longitudinal design that tracks participants beyond grade 1.

Only one study (Elicker & Mather) used an experimental design, with random assignment to full- and half-day programs. Four were quasiexperimental, attempting to match samples on demographic variables. Two were regression studies using large databases and statistical controls. Five were longitudinal. Caution should be used in inferring program impacts from nonexperimental studies. In matching studies, for example, parents have selected full-day kindergarten, so the result may reflect motivational factors that cannot be compensated for in the study. Also, these studies include few measures of program quality, which logically influences outcomes but here remains unclear. Nonetheless, the nonexperimental studies yield a pattern of positive results consistent with the findings of the experimental study.

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should be locally driven. They recommend that local school districts retain the option to adopt a full-day program if circumstances are favorable (e.g., parents support the reform, facilities can be identified).

**Competition for early childhood funding and quality staff.** Full-day kindergarten efforts compete for funds with other initiatives such as preschool and daycare. This competition can result, for example, in loss of preschool staff to higher-paying kindergarten positions.

## Policy Considerations

Research evidence increasingly shows the value of full-day kindergarten as a means of supporting young students with solid academic and social grounding for success in the primary grades and beyond. Policy investments in early childhood initiatives should include an extended kindergarten day as a complementary part of that mix.

This reform may save money long-term by helping reduce the need for extra tutoring or for retaining students. It may also help close the achievement gap between poorer and more affluent children if the extra time is used to help children develop such foundational academic skills as recognizing letters and the sounds they represent.

Effective statewide policies on full-day kindergarten include the following:<sup>16</sup>

**Make access universal, with participation voluntary.** This approach was key in gaining bipartisan support for New Mexico's successful effort to adopt full-day kindergarten legislation in 2000. As noted above, policymakers there and in Arizona approved phased-in plans that give priority to schools with concentrations of students considered at risk of poor school performance, expanding to all schools in three to five years. Both states provide incentive funds for quality programs (beyond those already in place for half-day programs) and leave it up to districts to decide whether to implement a longer day. Districts work to ensure that their kindergarten programs are developmentally appropriate and provide opportunities for children to learn in various settings. Parents who prefer half-day enrollment retain that option.

**Identify potential cost savings.** Savings may include lower transportation bills, as districts no longer require separate busing for kindergarteners. New Mexico, for example, has saved approximately \$5.5 million per year in reduced labor, maintenance, and fuel costs. As teachers are able to spend more time with their students, they are able to detect learning and developmental needs earlier and recommend prevention services. States have projected savings in state childcare subsidies as well,<sup>17</sup> although funds from such subsidies cannot be simply transferred to finance full-day kindergarten because these two types of programs operate in different policy arenas and under separate funding streams.

**Use pilot programs.** Successful pilot programs can address concerns about unique policy contexts or demographics. Legislative sponsors in Arizona were able to point to student improvement on standard-

## WHAT'S DIFFERENT IN THE FULL-DAY CLASSROOM?

Characteristics of effective kindergarten programs are the same, whether the schedule is half or full day. They include, for example,<sup>18</sup> integration of new learning with past experiences through project and group work; an unhurried setting; informal interactions with other children and adults; emphasis on language development and appropriate emergent literacy experiences; close ties and information sharing between parents and teacher; an emphasis on reading to children at home and at school; a balance between large-group and individual activities; student assessment through such means as teacher observation and portfolios of student work; and development of children's social skills, including conflict resolution strategies.

The studies featured in this brief describe ways that full-day programs can enhance such features. Elicker and Mathur, for example, found that although large-group activities consumed the most time under both schedules, the full-day programs had substantial increases in time devoted to teacher-directed individual work, cooperative group work, and child-initiated activities such as free play indoors and outdoors and time in learning centers.

Hough and Bryde found no difference between the curriculum in full- and half-day programs, but instructional approaches differed. For example, full-day programs had more small-group and individual activities as teachers felt less pressured to save time by conveying information to the entire group at once. Denton, West, and Walston, who found greater reading achievement gains among full-day kindergarteners, found that children in full-day programs were more likely to spend time every day working on phonics, discussing new vocabulary, reading books chosen by the children, and practicing such skills as letter recognition, letter-sound match, vocabulary, making predictions based on text, rhyming words, and alphabetizing.

Evansville-Vanderburgh researchers summed up the effect by saying that a full-day schedule gives teachers more time for elaboration as each skill develops and more flexibility to move a child toward more formal instruction as he or she masters a skill.

ized tests in the Chino Valley School District after it implemented a full-day kindergarten. In New Mexico, sponsors bolstered their case with a report on the effectiveness of full-day kindergarten at Lowell Elementary School in Albuquerque. As full-day programs are implemented on a smaller scale, school staff can monitor their quality. Pilot programs allow for testing of evaluation methods, helping the state to encourage effective data collection over time.

**Develop a comprehensive strategic plan for early care and education, birth to age 8.** Instead of addressing infant and toddler care, universal preschool, kindergarten, and primary grade supports as separate initiatives, policymakers should address them as parts of the same whole. Create a governance structure, identify gaps in service, analyze costs, and develop stable funding over time for the entire early childhood continuum. Focus on coordinating resources and developing partnerships to provide young children the support they need to be successful.

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- <sup>5</sup> Weiss & Offenberg (2002); Hough & Bryde (1996).
- <sup>6</sup> Denton, West, & Walston (2003); Weiss & Offenberg (2002); Elicker & Mathur (1997); Hough & Bryde (1996); Walston, West, & Rathbun (2002).
- <sup>7</sup> Evansville-Vanderburgh School Corporation (1988).
- <sup>8</sup> Elicker & Mathur (1997).
- <sup>9</sup> Evansville-Vanderburgh School Corporation (1988).
- <sup>10</sup> Hough & Bryde (1996).
- <sup>11</sup> Elicker & Mathur (1997).
- <sup>12</sup> Weiss & Offenberg (2002); Sheehan, Cryan, Wiechel, & Bandy (1991).
- <sup>13</sup> Weiss & Offenberg (2002).
- <sup>14</sup> Hawaii and Rhode Island state funding formulas do not allow for this kind of comparison.
- <sup>15</sup> Raden (2002).
- <sup>16</sup> Information and analysis provided in Raden (2002) was used to develop this section.
- <sup>17</sup> Raden (2002).
- <sup>18</sup> ERIC (2002).
- <sup>1</sup> Half-day programs run about three hours on average, while full-day programs last from five to six hours.
- <sup>2</sup> Karweit as cited in Finn (n.d.).
- <sup>3</sup> Elicker & Mathur (1997); Sheehan, Cryan, Wiechel, & Bandy (1991); Evansville-Vanderburgh School Corporation (1988).
- <sup>4</sup> Denton, West, & Walston (2003); Weiss & Offenberg (2002); Elicker & Mathur

## Endnotes

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