

Variation in Children's Experience of Kindergarten and the Common Core

by Kyle Show, PhD

Historically, kindergarten marked children's first entry into formal, primarily public education in the United States. However, increasingly children are coming to kindergarten having spent some time in structured, center-based care. For example, 63.8% of children born in 2001 were enrolled in a center-based program the year prior to kindergarten entry (Flanagan & McPhee 2009). Kindergarten might not mark children's entry into formal, structured classrooms, but it continues to be the first year for which children's experiences are governed by policies set within the public K–12 education system.¹ As a result, kindergarten provides a bridge within early childhood, linking a time during which children spend their years in a wide range of settings prior to kindergarten, and primary education, where children spend their days in a more structured setting learning with their agetates from a common teacher, teaching to a shared set of expectations and standards (at least within classrooms, districts, and typically, states). It also marks the "line in the sand" between early learning standards (for children 5 and younger) that address all domains to primary and secondary education (K–12) standards, which focus on academic content.

Although the early childhood period spans birth through age 8, this continuum of learning has a clear demarcation when children enter kindergarten. Due to differences in auspice, standards, and teacher qualifications, the role of kindergarten in a birth to third grade continuum of learning is the topic of much discussion (e.g., Kauerz 2005; Russell 2011). As Vecchiotti (2003, 6) noted:

Kindergarten suffers from the middle child syndrome, caught between early education and public education, because it shares features with both educational levels... Although the kindergarten classroom is affiliated with the public education system at the elementary school level, the diversity in the provision and structure of kindergarten resembles the diverse programs of the early education and care system for preschoolers and infants/toddlers.

NAEYC, Kindergarten, and Common Core State Standards²

The Common Core begins with kindergarten, and provides standards for each grade level of elementary and secondary education. NAEYC believes that learning standards, along with program quality standards and teacher standards that are developmentally appropriate and build in a forward progression and address all areas of children's development and learning, are important components of early childhood education.

Standards should never be used to deny entry to kindergarten, to retain a child in a grade, or to hinder access to early intervention or other support services. (See Joint Statement, as well as position statements on Kindergarten entry, Early learning standards, Professional preparation standards.)

RESEARCH

POLICY

PRACTICE

With the implementation of the Common Core, kindergarten will mark the first year in children's lives when expectations for children's development and learning (in English language arts and mathematics) will be common across most of the country.³ Put another way, the output of the education system in kindergarten (the Common Core State Standards) will be the same, despite structural differences in how kindergarten is provided and despite differences in selection of curricula, formative assessments, and professional development from state to state, district to district, perhaps even school to school. (In addition to the structural differences discussed in this paper, kindergarten classrooms will implement a number of curricula and utilize a number of assessment tools and strategies to meet this set of expectations, which we discuss in a separate paper.)

This paper focuses on the structural elements of the kindergarten experience of American children and the new context of the Common Core standards. There are several compelling reasons for this. First, as noted above, for the first time, children across the country (meaning across differing states) will be taught with the same learning outcomes identified. However, we know that children's experience of kindergarten, especially when they enter and how long their school day is, varies across states, and even within states. Likewise, the preparation of teachers in kindergarten classrooms, including their credentialing, varies across states. While a common set of high yet achievable goals, with appropriate supports to teachers and schools, can contribute to closing known achievement gaps at the start of school, differences in children's access to and experiences of kindergarten may tend to widen, rather than reduce, these gaps. This paper will consider how differences in the opportunity to learn through publicly funded kindergarten may affect the potential for children to reach a common set of standards across these differences. Specifically, this paper focuses on structural variations in the provision of kindergarten, including length of school day and age of entry, as well as variation in the preparation of kindergarten teachers.

A Note on Data Sources

As Guernsey and Holt (2012) recently noted, data on kindergarten are surprisingly difficult to obtain. States report data on kindergarten programs and enrollments in ways that are not always comparable between states. The data cited in this paper are drawn primarily from the US Department of Education. Data on policies and enrollment are drawn from the Condition of Education 2012 (Aud et. al 2012). These data themselves are drawn from a number of other sources, principally the US Census Bureau's Current Population Survey. However, data are reported by age, with a break in what data are reported occurring between ages 5 (participation in kindergarten or earlier programs) and 6 and later (enrollment in school). So it is not possible from these sources to accurately count all of the 6-year-olds, for example, who may be enrolled in a kindergarten program. Likewise, in these data it is not possible to distinguish first-time enrollments from repeat enrollments, which account for about 5% of kindergarten enrollments each year (Zill, Loomis, & West 1998; Hong & Raudenbush 2006; Malone et. al 2006). Additional data about kindergartners and kindergarten programs are drawn from the three cohorts included in the Early Childhood Longitudinal Study (ECLS)—the kindergarten class of 1998–99 (ECLS-K:98), the kindergarten class of 2010–2011 (ECLS-K:2010), and the birth cohort of children born in 2001 (ECLS-B).



STRUCTURAL VARIATIONS IN KINDERGARTEN

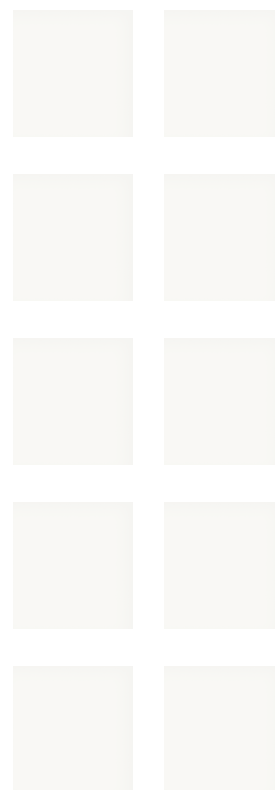
While kindergarten may mark the initial year children enter school, it remains unique even within the K–12 system. Unlike grades 1–12, where most children are exposed to the same basic structure of education (especially length of school day), there are significant variations in how kindergarten is provided (i.e., length of day) and the age at which children may enter (i.e., age of entry). This section discusses both of these elements of variation across states' kindergarten programs.

State policies around provision of kindergarten

According to the National Center for Education Statistics (Aud et. al 2012), as of 2010 a total of 43 states require districts to offer kindergarten. Unlike all other years in K–12 education, kindergarten is the only year where there is variation in the length of school day. Children in other elementary grades (grades 1 and higher) generally attend school for the same number of hours per day. Generally speaking, kindergarten is either provided as a full school day (typically about 6 hours) or as a half-day program (generally 2–3 hours),⁴ with children attending kindergarten either in the morning or afternoon. Of the 43 states offering kindergarten, 11 are required to offer full-day services (although two states allow parents to opt for half-day programs). Within states that do not require that kindergarten be provided, all districts have the option of providing half- or full-day programs (Bush 2011). However, the mandated availability of kindergarten is not to be confused with kindergarten enrollment. For example, across all states, only 16 require attendance in kindergarten programs. Clearly, more programs are provided, and more children are enrolled, than is mandated by state policies.

Enrollment in kindergarten

Describing the actual enrollment of children in kindergarten is surprisingly difficult (Guernsey & Holt 2012). The most authoritative data come from the Current Population Survey, and are reported in the *Condition of Education 2012* (Aud et. al 2012). However, these data report on enrollment for children under the age of 6 in “preprimary” programs that include kindergarten, and enrollments for children over the age of 6 are not provided by grade level. As noted below, kindergartners, as a group, have tended to be older, and therefore increasingly likely to include 6-year-olds as first-time entrants (which cannot be identified in these data). Using these official data, in 2010, 94.5% of 5- to 6-year-olds were enrolled in school in 2010, a trend that has been relatively stable since at least the early 1970s. These data do not specify the grade level for these children, or the length of day. That information is provided for 5-year-olds, however. In 2010, 86.3% of 5-year-olds were enrolled in some form of educational program, including 55.4% of 5-year-olds enrolled in full-day kindergarten and 17.5% enrolled in half-day kindergarten (Aud et. al 2012).⁵ In all, these data suggest that nearly all children ages 5 to 6 have enrolled in school, and the





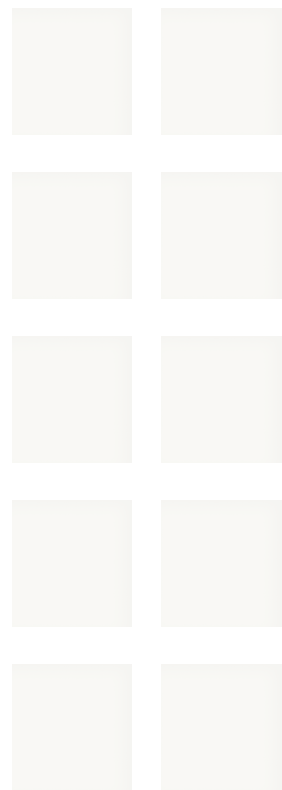
majority of 5-year-olds enrolled in kindergarten are enrolled in full-day programs.

Other data derived from the Early Childhood Longitudinal Studies (ECLS)⁶ provide a similar, but more nuanced view of kindergarten programs and children who enroll in them.⁷ In the 1998–99 school year, 61% of all US schools that provided a kindergarten program offered at least one full-day kindergarten class and 47% offered at least one half-day class (some schools offered both; Walston & West 2004). Publicly provided kindergarten accounts for the vast majority of enrollments (about 90% reported among first-time enrollments in fall of 1998, fall of 2006 or fall 2007, and fall 2010). Among children entering kindergarten for the first time in fall 1998, 56% attended a full-day program, although the percentage of children enrolled in full-day programs was higher in private schools than public schools (67% versus 54%) (Walston & West 2004). When children born in the United States in 2001 entered kindergarten for the first time in fall of 2006 or fall 2007, 74.8% were enrolled in full-day programs (Flanagan & McPhee 2009).

The data above suggest a dramatic increase in the availability of (and enrollment into) full-day kindergarten programs (nearly 20 percentage points). However, nearly one-quarter of children continue to be enrolled in half-day programs. As states and local educational systems continue to grapple with funding challenges, the continued or increased availability of kindergarten cannot be assured. Yet, even in the absence of the research discussed below about the impact of half- versus full-day kindergarten participation, the difference in hours of kindergarten is apparent. Compared with children in full-day programs, these children spend about half as many hours in kindergarten.

Half- and Full-day Kindergarten Programs

A number of authors have noted that the primary difference between half- and full-day programs is simply the number of hours children are exposed to a structured school program (e.g., Ackerman et al. 2005; Walston & West 2004). But there may also be important differences in how the extra time in full-day kindergarten is used. Data from the ECLS-B:98 suggest that teachers in full-day kindergarten classes organize instruction in much the same way as teachers in half-day classes, so children in full-day programs benefit from “more” time, not “different” activities allowed by the longer day.⁸ Walston and West reported that compared to half-day kindergarten classes, full-day kindergarten classes spent, on average, more time each day on teacher-directed whole class, small group, and individual activities and they spend more time on child-selected activities. When looked at proportionate to time spent in the classroom, the percentage of time spent in different types of activities, and focused on specific content or other learning objectives is similar between half- and full-day programs (Walston & West 2004). At best this means less total time for children in half-day programs spent in all activities, but others (e.g., Elicker & Mathur 1997) have noted that compared with children in half day programs, children in full-day programs experienced less large-group, teacher-directed activities and more time in child-directed and play activities. As Rathbun (2010) concluded,





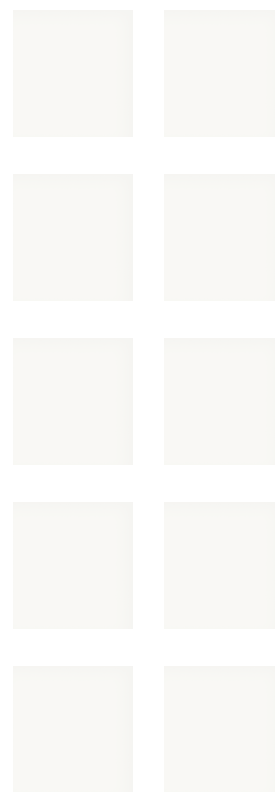
the important consideration when comparing half and full day kindergarten is how the extra time spent in the classroom is used to support children's learning.

Effects of half-day versus full-day kindergarten attendance

A number of authors have noted that the primary difference between half- and full-day programs is simply the number of hours children are exposed to a structured school program (e.g., Walston & West 2004; Ackerman, Barnett, & Robin 2005). But there might also be important differences in how the extra time in full-day kindergarten is used. Data from the ECLS-B:98 suggest that teachers in full-day kindergarten classes organize instruction in much the same way as teachers in half-day classes, so children in full-day programs benefit from "more" time, not "different" activities allowed by the longer day. When looked at proportionate to time spent in the classroom, the percentage of time spent in different types of activities and focused on specific content or other learning objectives is similar between half- and full-day programs (Walston & West 2004). At best, this means less total time for children in half-day programs spent in all activities. However, others (e.g., Elicker & Mathur 1997) have noted that compared with children in half-day programs, children in full-day programs experienced less large group, teacher-directed activities and more time in child-directed and play activities. Likewise, Walston and West (2004) reported that compared to half-day kindergarten classes, full-day kindergarten classes spent, on average, more time each day on teacher-directed whole class, small group, and individual activities and they spend more time on child-selected activities. As Rathbun (2010) concluded, the important consideration when comparing half- and full-day kindergarten is how the extra time spent in the classroom is used to support children's learning.

The extra time provided by full-day kindergarten seems to result in better learning outcomes for children, primarily reported using achievement test scores. Collectively the research appears to indicate that attending full-day kindergarten has a positive association with academic achievement during kindergarten compared to half-day kindergarten (e.g., Walston & West 2004; Lee et. al 2006; Votruba-Drzal, Li-Grining, & Maldonado-Carreña 2008; Cooper et. al 2010). In a meta-analysis of studies comparing half-day to full-day kindergarten, Cooper et al (2010) estimate that the extra time spent in kindergarten accounts for about 25% of the difference between children in cognitive measures. The research on full-day kindergarten versus half-day kindergarten on nonacademic skills is much more limited. Zvoch and colleagues' (2008) indicate that full-day kindergarten results in better attendance, less grade retention, greater social adjustment than half-day kindergarten.

There is some evidence that full-day kindergarten has the greatest benefit for children who are from high-risk groups or are English language learners (e.g., Dhuey 2011; Hall-Kenyon, Bringham, & Korth 2009). These children show the greatest gains when compared to their peers in half-day kindergarten. However, the apparent advantage appears to fade over time (e.g., Lee et. al 2006; Wolgemuth et. al 2006; DeCicca 2007; Votruba-Drzal, Li-Grining,





& Maldonado-Carrena 2008), although as Cooper et al (2010) conclude, identifying why the effects fade requires extensive additional study.

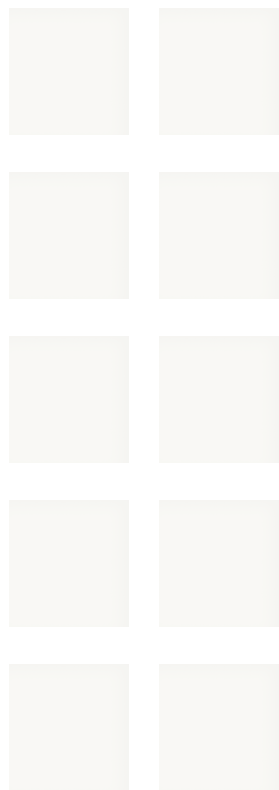
These data suggest a clear benefit to children's learning, especially academic content in early elementary school, in full-day kindergarten programs compared with half-day programs. However, the apparent "fade-out" of this advantage is not well understood, nor are the effects on important areas of child development other than academic achievement well researched. Because the Common Core has a focus on English language arts and mathematics, states implementing the Core may recognize benefits of full-day programs and push for greater availability. However, states may also recognize the benefits of more time focused on academic content, and push for greater amounts of instructional time in these areas even within half-day programs at the expense of time spent on activities and instruction that address the broader developmental and learning needs of children.

AGE OF ENTRY INTO KINDERGARTEN

Just as states vary in their policies mandating the availability of kindergarten (and its length), they also vary in their policies around compulsory age of attendance and age of eligibility for kindergarten. The result is that there is great variation in the age of which children enter kindergarten, either through differences in mandated availability and compulsory enrollment policies, or through parental choice of when to enroll their children in kindergarten. The question, "At what age should children enter kindergarten?" is a source of continued debate in the research and policy world, and one with important implications for children, families, and kindergarten teachers (Stipek 2002). What is apparent, however, is that children are older when entering kindergarten now, and in each subsequent grade, than they have been historically (Colasanti 2007). Variouslly called "the graying of kindergarten" (Bracey 1989) or "the lengthening of childhood" (Deming & Dynarski 2008), variation in the age of entry results in a wide range of ages at which children will encounter the Common Core in kindergarten. This section summarizes the variation in age of entry and what research suggests about the implications for children who enter school at younger or older ages.

State policies about age on entry to kindergarten

States establish policies about the compulsory age of attendance in school, as well as age of eligibility to enroll in kindergarten and requirements to enroll in kindergarten. As of 2010, of 43 states mandating the availability of kindergarten, 16 also required that children attend kindergarten. Of these 16, nine mandated that children be enrolled at age 5. A total of six states have policies that allow parents to delay enrollment of otherwise





age-eligible children; all six have compulsory enrollment at age 5.

Regardless of the compulsory age of attendance, states with kindergarten programs also mandate age-eligibility for enrollment into kindergarten programs (see Colasanti 2007, for a state-by-state listing as of 2005). Age eligibility is typically determined relative to a child's fifth birthday. Children turning 5 before their state's cut-off date are eligible to enroll. As Colasanti (2007) notes, these cut-off dates have trended increasingly earlier in the year, resulting in eligible children being older at the time of enrollment.

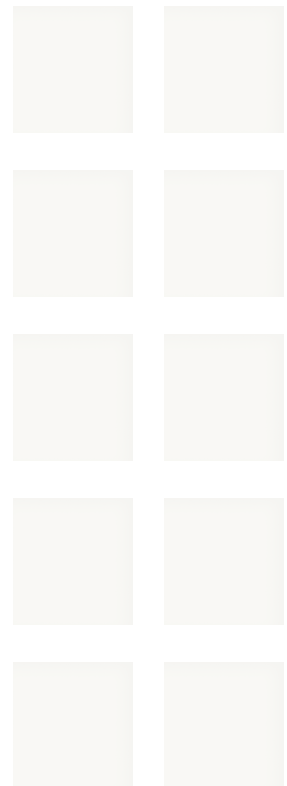
Taken together, these variations in state policies results in a very diverse education landscape for children ages 5 to 6. State variation in the compulsory age of attendance, requirements that children enroll in kindergarten and the ages at which they become eligible (and the possibility of delaying entry in many states of local school systems) means that within and between states, children's age of entry into kindergarten can be expected to vary dramatically.⁹ As noted above, describing the range of children's ages when enrolling in kindergarten is challenging, but the Early Childhood Longitudinal Study groups can provide some indication at the national level.

Among children entering kindergarten for the first time in fall 1998, 88% were 5 to 6 years old, with 4% reported to be older and 9% reported to be younger (West, Denton, & Germino-Hausken 2000). Most (81%) of the children born in 2001 were between the ages of 5 and 6, while 16.4% were older (Flanagan & McPhee 2009).¹⁰ In the fall of 2010, 89% of first-time kindergartners were between the ages of 5 to 6, with 4% older than 6 and 7% younger than 5 (Mulligan, Hastedt, & McCarroll 2012). These national averages, however, while illustrating the range of ages present in kindergarten classrooms nationally, do not reflect state-by-state variations in age of eligibility and other policies that may lead different states' kindergartners to tend to be younger or older.

Effects of older and younger age at enrollment

The arguments made about the assumed advantages of starting kindergarten older, rather than younger, are well known in the field (e.g., Stipek 2002; Deming & Dynarski 2008). These arguments have contributed to states' changes in their age-of-entry policies (described above) and also contribute to parents' choice to delay kindergarten entry for their otherwise eligible children (a practice called *redshirting*). But to what extent does starting kindergarten later actually lead to positive outcomes for children?

There is evidence that starting kindergarten older, rather than younger, does lead to higher scores on achievement tests (e.g., Datar 2006; Malone et. al 2006; NICHD Early Childhood Research Network 2007; Deming & Dynarski 2008; Elder & Lubotsky 2009; Robertson 2011). These papers all find small, sometimes statistically significant differences in children's cognitive skills and abilities during the very early years of school, but by third grade most differences have disappeared. While very few studies have examined differences in areas other





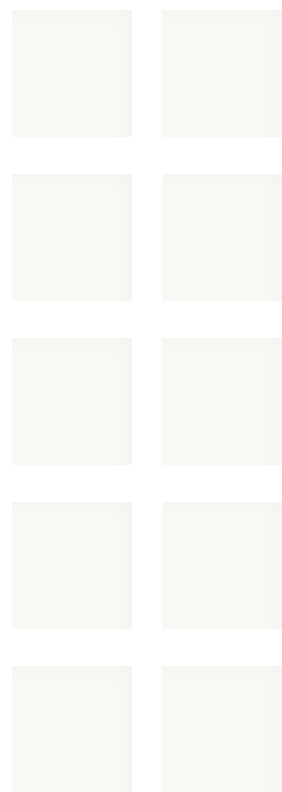
than achievement during the school years, those that have (e.g., NICHD Early Childhood Research Network 2007) report no significant relationships between these outcomes and child age of entry. Others (e.g., Lincove & Painter 2006; Deming & Dynarski 2008; Dobkin & Ferreira 2010) have found only minor or no significant impact of differences in age of entry to kindergarten on adolescent and adulthood social and economic outcomes.

The consistency of findings of early differences, despite the related finding that these effects tend to fade over time, is compelling. However, despite this consistency, the research remains muddled. For example, the practice of delaying kindergarten entry is more prevalent among some groups of children, especially boys (Graue & DiPerna 2000), confounding the effects of the age of enrollment with factors that may shape a decision to delay entry. Very few studies have been able to examine closer variations in age of entry (e.g., children just before or just after the age cut-off) to disentangle when and how the advantage fades (e.g., Morrison, Griffith, & Alberts 1997). Some children who enter school older (i.e., they were redshirted) may have instead enrolled in a high-quality prekindergarten program and benefitted from it, while others may have delayed entry out of concerns that they were not adequately prepared for school, yet did not enter a prekindergarten program. Given that most children experience some form of center-based programming before kindergarten entry, the age of entry into kindergarten has profound effects on programs provided to children prior to school entry. Finally, enrollment policies, regardless of the ages specified, generally result in up to one year of variation in age. When these policies allow for delayed entry, that variation can stretch to nearly twice that range, to say nothing of the potential for children who are repeating kindergarten (and so would typically be one year older than their traditional first-time entry peers). This potential diversity in ages likely has significant implications when establishing learning standards for children in kindergarten, as discussed more fully below.

IMPACT OF VARIATIONS IN KINDERGARTEN EXPERIENCE WITHIN THE COMMON CORE

As described above, differences between states and school districts in the provision of kindergarten of different durations (half or full-day) and age of enrollment create a range of possible experiences for young children in kindergarten. These variations can dramatically alter the opportunities for young children to meet expectations identified by the Common Core (as well as state standards that may exist in addition to the Core).

The difference between half-day and full-day kindergarten programs may have profound effects on children's kindergarten experience. States with half-day programs have less than half the instructional time than do states with full-day programs. Implementing a common set of curriculum standards regardless of the duration of kindergarten increases the likelihood that





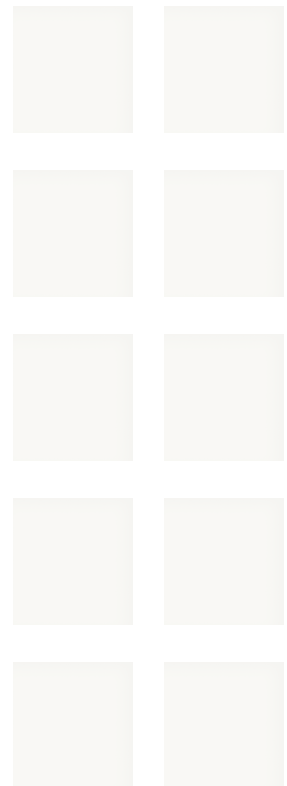
those areas included in the core (language arts and mathematics) will be more densely concentrated in half-day programs than in full-day programs, potentially decreasing time to address children’s needs in other developmental areas. Of course, a difference in the number of hours children spend in kindergarten alone cannot compensate for differences that may exist in the nature of their experience and the preparation and effectiveness of their teachers (Patall et al.2010).

It is also possible that instruction to meet the Common Core that is not possible within a half-day kindergarten program may be “pushed” to either before- or after-school programs (where they exist) or prekindergarten programs. Before- and after-school programs may not be appropriately staffed or prepared to implement strategies to support the kindergarten standards. Prekindergarten programs are guided by early learning standards (where applicable) that might not align with the Common Core. In either case, programs that “wrap around” the kindergarten experience might not be available to all children, creating the potential for opening gaps in readiness and early achievement. Of course, beyond these practical considerations is the ethical consideration of what the purpose of these programs is, and to what extent should that purpose be affected by policies and practices not directly applicable to them? To the extent possible, programs must be made available to children to ensure they have appropriate opportunities to meet the expectations of the Common Core and other kindergarten standards within the state.

Variations in the age of entry also exist between states, and in some states where parents can opt to delay entry for up to one year, such variation may exist within classrooms. Age heterogeneity in kindergarten classrooms is expected, when standards are established within each state, they are (possibly) accounted for as expectations for 5-year-olds and those for 6-year-olds may be expected to vary. Adoption of the Common Core, however, means that the expectations for kindergarten children (at least in English language arts and mathematics) will be common across classrooms, irrespective of state or local variations in age of entry policies. With various consortia efforts under way among states, including those aimed at developing assessments aligned with the Common Core, there is great potential for a “one-size-fits-all” approach to take hold in the development of materials to support the Core (including assessments and curricula). It is not clear how much flexibility will exist in these materials to allow them to be effectively used across classrooms with large variation in the ages of children.

TEACHER PREPARATION AND ASSIGNMENT IN KINDERGARTEN

One commonality within the tremendous diversity in the structure of kindergarten across the country and the children that enroll, and variation in quality of programs, is the presence of a teacher responsible for the kindergarten classroom. However, there are dramatic differences in how teachers in kindergarten





are prepared and whether they receive certification in early childhood or elementary education. As Fromberg (2006) has argued, the complexity and diversity of the kindergarten experience underscores the importance of preparation and of teachers. Especially during the transition into and through the early years of school, the dramatic variation in children's experience and development requires a sophisticated understanding of child development. In 2010 the National Council for Accreditation of Teacher Education (NCATE 2010) called for a dramatic increase in the amount of developmental science content included in teacher training programs. A similar concern is voiced by Lutton (2012) in laying out standards for the preparation of early childhood educators. By increasing teachers' understanding of child development and developmental processes, preparation programs can provide teachers with deeper understanding of how to adopt methods to ensure their children meet standards. NAEYC's Professional Preparation standards (Lutton 2012) are intended for teachers working with children from birth through age 8. However, not all teachers who are assigned to teach kindergarten are prepared in an early childhood education preparation program. Just as individual teachers' preparation may vary, states offer a range of credentials that highlight the levels at which teachers are (presumably) prepared to effectively teach. In a review of state credentials for elementary school teachers, Bornfreund (2011) notes that while some states offer licenses that span more or fewer grades (e.g., K–6 versus pre-K–3), there are incentives for teachers to pursue licenses that provide more options for their ultimate placement, so credentials that cover a broader range tend to be preferred by teachers. In addition, Bornfreund (2011) notes that in general, states that license teachers specifically in the early education span tend to use that license for early childhood specialists, who are less likely than other teachers to be assigned to kindergarten classrooms. The methods necessary to effectively teach young children vary from those that are used in teaching older children, even within the elementary years. Teachers certified to teach across the elementary school grades may have limited experience with younger children, possibly undermining their effectiveness.

CONCLUSION

Implementation of the Common Core State Standards in English language arts and mathematics starting in kindergarten underscores the state-by-state variation in how kindergarten is provided, when children enroll, and who provides their classroom instruction. While a common set of achievable, challenging standards is an important component of education, expecting a common set of standards to be reached in the absence of common delivery systems is potentially challenging, and may have unintended, negative effects (e.g., Meisels 1992). This paper highlights three specific areas in which kindergarten differs from state to state—provision of kindergarten and its duration, age of entry, and teacher preparation. Each of these areas represent variations in children's access to kindergarten programming to meet the Common Core standards. Each also underscores the need for greater attention to be paid to the

critical year in children's learning and education within the larger birth to work or college continuum (see also Bryant & Clifford 1992), and the need to consider how quality can be assured in kindergarten classrooms so that they provide the best possible frame through which standards (Common Core and otherwise) may be met.

Considerations for Policymakers

Given the variations in kindergarten, and that nearly every state has adopted the Common Core standards, states and school districts should leverage this change in public policies to create better quality and more equitable kindergarten experiences for all children:

- Children's mastery of literacy and mathematics is connected to their social and emotional development (executive functioning) and physical development. States should adopt standards for the additional domains not covered by the Common Core, but critical to academic and developmental success: social, emotional and physical development; approaches to learning. Standards should not be developed through a back-mapping of standards for the higher grades; instead, they should reflect a forward progression of child development and learning. The 2008 National Research Council Report on child assessment stated "A parallel effort to raise the attention of practitioners in the K through 12 arena to the importance of social/emotional development and approaches to learning not only would improve the learning environment for element children, it would create a better environment to address alignment issues."
- Standards and assessments intended to align to learning standards should never be used to deny entry to kindergarten retain a child in kindergarten.
- When assessments are directed to a narrow set of skills, the very competencies that make academic success possible may be ignored. Federal, state and local assessment policies should focus on the use of assessments across all domains and throughout the year for the purpose of improving instruction and teacher professional development, and not for high-stakes accountability for children, teachers, programs or schools.
- All children should have access to high quality kindergarten experiences, including the equitable dosage of support and teaching that addresses all domains of development and learning and access to special education and other supportive services as needed for their optimal success throughout the kindergarten year.
- States should also provide for credentialing that recognizes teachers' need for specialized preparation for working young children ages birth through eight years old. Teachers of kindergarten age children should have preparation in teaching programs that meet the NAEYC Professional Preparation standards, a performance-based set of standards for teaching children from birth through age 8. With the variability of children's age and development upon entry to kindergarten, it is important that kindergarten teachers have the specialized knowledge of teaching and developmentally appropriate teaching practices.
- District and school administrators — are decision makers that can support or hinder effective instruction and services for young children. State entities that develop and implement credentials for school administrators who oversee or make decisions about curriculum, assessment and professional development should include a requirement for knowledge of child development and learning.
- States and districts should design, implement and utilize assessments of young children in ways that promote better instructional practice and services. States and districts should heed the cautions of the National Academies of Sciences reports on the unique issues of assessing young children, the state of assessments, and the unintended consequences of inappropriate uses of assessment information for children, teachers, and schools.

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References

- Ackerman, D.J., W.S. Barnett, & K.B. Robin. 2005. *Making the Most of Kindergarten: Present Trends and Future Issues in the Provision of Full-Day Programs*. Report of the National Institute for Early Education Research. New Brunswick, NJ: NIEER.
- Aud, S., W. Hussar, F. Johnson, G. Kena, E. Roth, E. Manning, X. Wang, and J. Zhang. 2012. *The Condition of Education 2012* (NCES 2012-045). US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- Bornfreund, L. 2011. *Getting in Sync: Revamping Licensure and Preparation for Teachers in Pre-K, Kindergarten and the Early Grades*. Report of the New America Foundation. Washington, DC: New America Foundation.
- Bracey, G.W. 1989. "Age and Achievement." *Phi Delta Kappan* 70, 732.
- Bryant, D.M., & R.M. Clifford. 1992. "150 Years of Kindergarten: How Far Have We Come?" *Early Childhood Research Quarterly* 7 (2): 147-54.
- Bush, M. 2011. "State Characteristics: Kindergarten." Education Commission of the States. *ECS State Notes*. www.ecs.org/clearinghouse/90/71/9071.pdf.
- Colasanti, M. 2007. *Kindergarten Entrance Ages: A 30-Year Trend Analysis*. Education Commission of the States. *ECS State Notes*. http://inpathways.net/kindergarten_trend_analyses.pdf.
- Copple, C., & S. Bredekamp, eds. 2009. *Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8* (3rd ed.). Washington, DC: NAEYC.
- Cooper, H., A.B. Allen, E.A. Patall, & A.L. Dent. 2010. "Effects of Full-Day Kindergarten on Academic Achievement and Social Development." *Review of Educational Research* 80 (1): 34-70.
- Datar, A. 2006. "Does Delaying Kindergarten Entrance Give Children a Head Start?" *Economics of Education Review* 25 (1): 43-62.
- DeCicca, P. 2007. "Does Full-Day Kindergarten Matter? Evidence from the First Two Years of Schooling." *Economics of Education Review* 26 (1): 67-82.
- Deming, D., & S. Dynarski. 2008. "The Lengthening of Childhood." *Journal of Economic Perspectives* 22 (3): 71-92.
- Dhuey, E. 2011. "Who Benefits from Kindergarten? Evidence from the Introduction of State Subsidization." *Educational Evaluation and Policy Analysis* 33 (1): 3-22.
- Dobkin, C., & F. Ferreira. 2010. "Do School Entry Laws Affect Educational Attainment and Labor Market Outcomes?" *Economics of Education Review* 29 (1): 40-54.
- Elder, T.E., & D.H. Lubotsky. 2009. "Kindergarten Entrance Age and Children's Achievement: Impacts of State Policies, Family Background, and Peers." *Journal of Human Resources* 44 (3): 641-83.
- Elicker, J., & S. Mathur. 1997. "What Do They Do All Day? Comprehensive Evaluation of a Full-Day Kindergarten." *Early Childhood Research Quarterly* 12 (4): 459-80.
- Flanagan, K.D., & C. McPhee. 2009. *The Children Born in 2001 at Kindergarten Entry: First Findings from the Kindergarten Data Collections of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)* (NCES 2010-005). US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- Fromberg, D.P. 2006. "Kindergarten Education and Early Childhood Teacher Education in the United States: Status at the Start of the 21st Century." *Journal of Early Childhood Teacher Education* 27 (1): 65-85.

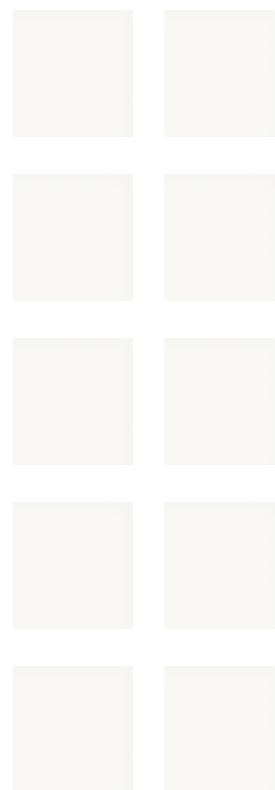
- Graue, M.E., & J. DiPerna. 2000. "Redshirting and Early Retention: Who Gets the "Gift of Time" and What Are Its Outcomes?" *American Educational Research Journal* 37 (2): 509–34.
- Guernsey, L., & A. Holt. 2012. *Counting Kids and Tracking Funds in Pre-K and Kindergarten: Falling Short at the Local Level*. Issue brief of the New America Foundation. Washington, DC: New America Foundation.
- Hall-Kenyon, K.M., G.E. Bringham, & B.B. Korth. 2009. "How Do Linguistically Diverse Students Fare in Full- and Half-Day Kindergarten? Examining Academic Achievement, Instructional Quality, and Attendance." *Early Education and Development* 20 (1): 25–52.
- Hong, G., & S. Raudenbush. 2006. "Evaluating Kindergarten Retention Policy: A Case Study of Causal Inference for Multilevel Observational Data." *Journal of the American Statistical Association* 101 (475): 901–10.
- Kauerz, K. 2005. "State Kindergarten Policies: Straddling Early Learning and Early Elementary School." *Beyond the Journal: Young Children on the Web* (March). <http://journal.naeyc.org/btj/200503/01Kauerz.pdf>.
- Lincove, J.A., & G. Painter. 2006. "Does the Age that Children Start Kindergarten Matter? Evidence of Long-Term Educational and Social Outcomes." *Educational Evaluation and Policy Analysis* 28 (2): 153–79.
- Lee, V.E., D.T. Burkam, D.D. Ready, J. Honigman, S.J. Meisels. 2006. "Full-Day versus Half-Day Kindergarten: In Which Program Do Children Learn More?" *American Journal of Education* 112 (2): 163–208.
- Lutton, A., ed. 2012. *Advancing the Early Childhood Profession: NAEYC Standards and Guidelines for Professional Development*. Washington, DC: NAEYC.
- Malone, L., J. West, K.D. Flanagan, & J. Park. 2006. *The Early Reading and Mathematics Achievement of Children Who Repeated Kindergarten or Who Began School a Year Late* (NCES 2006064). US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- Meisels, S. J. 1992. "Doing harm by doing good: Iatrogenic Effects of Early Childhood Enrollment and Promotion Policies." *Early Childhood Research Quarterly* 7 (2): 155–174.
- Morrison, F.J., E.M. Griffith, & D.M. Alberts. 1997. "Nature/Nurture in the Classroom: Entrance Age, School Readiness, and Learning in Children." *Developmental Psychology* 33 (2): 254–62.
- Mulligan, G.M., S. Hastedt, & J.C. McCarroll. 2012. *First-Time Kindergartners in 2010-11: First Findings from the Kindergarten Rounds of the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011)* (NCES 2012-049). US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- NCATE (National Council for Accreditation of Teacher Education). 2010. *The Road Less Traveled: How the Developmental Sciences Can Prepare Educators to Improve Student Achievement: Policy Recommendations*. Washington, DC: Author.
- NICHD (National Institute of Child Health and Human Development) Early Child Care Research Network. 2007. "Age of Entry to Kindergarten and Children's Academic and Socioemotional Development." *Early Education & Development* 18 (2): 337–68.
- Pataff, E.A., H. Cooper, & A.B. Allen. 2010. "Extending the School Day or School Year: A Systematic Review of Research (1985–2009)." *Review of Educational Research* 80 (3): 401–36.

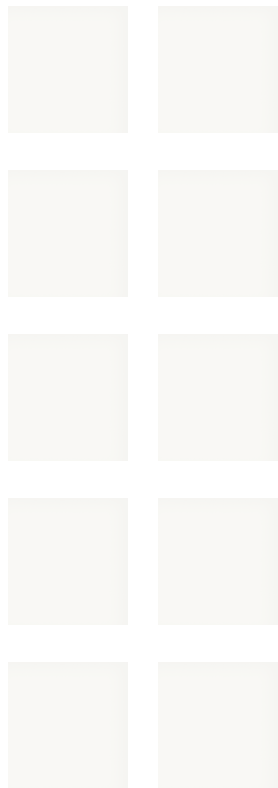
- Pianta, R.C., M.J. Cox, & K.L. Snow, eds. 2007. *School Readiness and the Transition to Kindergarten in the Era of Accountability*. Baltimore: Brookes.
- Rathbun, A. 2010. *Making the Most of Extra Time: Relationships between Full-day Kindergarten Instructional Environments and Reading Achievement*. Research brief of the American Institutes for Research. www.air.org/files/AIRBriefkindergarten_reading.pdf.
- Robertson, E. 2011. "The Effects of Quarter of Birth on Academic Outcomes at the Elementary School Level." *Economics of Education Review* 30 (2): 300-11.
- Russell, J. 2011. "From Child's Garden to Academic Press: The Role of Shifting Institutional Logics in Redefining Kindergarten Education." *American Education Research Journal* 48 (2): 236-67.
- Sachs, J., & C. Weiland. 2010. "Boston's Rapid Expansion of Public School-Based Preschool: Promoting Quality, Lessons Learned." *Young Children* 65 (5): 74-77.
- Stipek, D. 2002. "At What Age Should Children Enter Kindergarten? A Question for Policy Makers and Parents." *Social Policy Report* 16 (2): 3-17.
- Vecchiotti, S. 2003. "Kindergarten: An Overlooked Educational Policy Priority." *Social Policy Report* 17 (2): 3-19.
- Votruba-Drzal, E., C.P. Li-Grining, & C. Maldonado-Carreno. 2008. "A Developmental Perspective on Full-versus Part-Day Kindergarten and Children's Academic Trajectories through Fifth Grade." *Child Development* 79 (4): 957-78.
- Walston, J., and J. West. 2004. *Full-Day and Half-Day Kindergarten in the United States: Findings from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99* (NCES 2004-078). US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- West, J., K. Denton, & E. Germino-Hausken. 2000. *America's Kindergartners* (NCES 2000-070). US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- Wolgemuth, J.R., R.B. Cobb, M.A. Winokur, N. Leech, & D. Ellerby. 2006. "Comparing Longitudinal Academic Achievement of Full-Day and Half-Day Kindergarten Students." *Journal of Educational Research* 99 (5): 260-69.
- Zill, N., L.S. Loomis, & J. West. 1998. "The Elementary School Performance and Adjustment of Children Who Enter Kindergarten Late or Repeat Kindergarten: Findings from National Surveys." NCES 98-097. US Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubsearch>.
- Zvoch, K., R.E. Reynolds, & R.P. Parker. 2008. "Full-Day Kindergarten and Student Literacy Growth: Does a Lengthened School Day Make a Difference?" *Early Childhood Research Quarterly* 23 (1): 94-107.



(ENDNOTES)

- 1 With the growth of publicly funded prekindergarten programs, there is increasing incorporation of preK programs in what have previously been K–12 systems (in effect, they become preK–12 systems). However, kindergarten remains the most common entry point into publicly funded education for children.
- 2 Summary of the Joint Statement of the National Association for the Education of Young Children and the National Association of Early Childhood Specialists in State Departments of Education on the Common Core Standards Initiative Related to Kindergarten through Third Grade, released April 15, 2010. Complete statement is available at www.naeyc.org/files/naeyc/file/policy/NAEYC-NAECS-SDE-Core-Standards-Statement.pdf.
- 3 Of course, children enrolled in Head Start may be considered to be receiving programs governed by a common set of standards articulated by the Head Start program, but these provide commonality for among this subset of children, not all children in the K-12 system.
- 4 Note that schools use various terms to describe kindergarten programs that do not meet for the same number of hours as other grades. The term “half-day” is generally used to refer to these programs, but in some localities, such a program may be longer or shorter than half of the typical school day for other students.
- 5 Note that Aud et. al (2012) use the term “part-day” to differentiate these programs from full-day. The term “half-day” is used in the text for consistency purposes. In addition, Aud et. al (2012) report that 6.8% of 5-year-olds were enrolled in a full-day prekindergarten (nursery) program and 6.7% were reported in a part-day prekindergarten (nursery) program.
- 6 The ECLS is a collection of three studies—the first-time entering kindergarten class of 1998–99 (ECLS-K:98), the first-time entering kindergarten class of 2010–2011 (ECLS-K:2010), and the birth cohort of children born in 2001 (ECLS-B) who entered kindergarten for the first time in fall 2006 or fall 2007.
- 7 The most recently launched study started collecting data on first-time kindergarten entrants in fall 2010 (the ECLS-B:2010), and data are only beginning to be released. As a result, data from the older cohort (the ECLS-B:98), which studied first-time entrants during fall 1998, are reported with similar data likely to be reported for the 2010 entrants.
- 8 Importantly, data from the ECLS-K:98 pre-date increased use of standards and accountability implemented through the No Child Left Behind Act (NCLB). Data from the ECLS-K:2010 were collected following passage of NCLB, and analysis of instructional practices in half- and full-day kindergarten classrooms should be conducted to determine how increasing accountability may influence practice in half- and full-day programs.
- 9 Even within a single classroom within a state, age eligibility rules generally result in possible age range that differ by up to 12 months (when children with birthdays just before and just later than the cut-off are enrolled in the same year).
- 10 Child age in the ECLS-B study was determined by the age of the child at the time of the kindergarten-year child assessment. Because the assessment window stretched from a few months after the start of the kindergarten year through the middle of the kindergarten year, the ages of children when enrolling in kindergarten were actually younger, so this estimate is likely too high (given the data on children’s birthdates provided in the ECLS-K:98 and ECLS-K:2010 reports).





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