

# Preschool *Policy Matters*

Issue 5 / March 2004

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## Child Outcome Standards in Pre-K Programs: What Are Standards; What Is Needed To Make Them Work?

by Elena Bodrova, Deborah Leong and Rima Shore

*The standards movement that has altered K-12 education across the nation is now being extended to early education. In addition to program standards that describe the characteristics of classrooms and curricula, most states have developed (or are in the process of developing) child outcome standards that define expectations for preschoolers' development and learning.<sup>1</sup>*

*In the early childhood field, there has been a reluctance to use the word "standards." Child outcome standards geared to young children are often given different names, such as building blocks, essential learning, desired results, learning and developmental guidelines, or learning goals. All of these describe the same thing—the kinds of development and learning that should be taking place.*

Prekindergarten standards should take into account today's best understanding of how young children develop and learn.

### Policy Recommendations:

- Because standards reflect the values of the people who set them, collaboration with families and communities is a key to the successful design and implementation of preschool standards.
- Standards documents should distinguish clearly between program standards and child outcome standards.
- Outcome standards need to be written in ways that take into account the unique ways that young children develop and learn, considering all aspects of school readiness identified by the National Education Goal Panel.
- Standards that address physical health, social-emotional development, and approaches to learning need to have as much emphasis and specificity as those that address cognitive and language development.
- Standards should allow for a coherent educational experience. Preschool standards should allow continuity with kindergarten standards, but not at the expense of attention to physical and social-emotional development.
- Standards should be written in ways that allow for appropriate, effective assessment. Assessment policies and practices should go beyond accountability to foster program improvement.

## What Are Standards?

In the realm of early education, it is important to distinguish among different kinds of standards.

**Program Standards** describe the resources, activities, and instruction programs offer to help children learn. Program standards incorporate both:

- **Classroom Standards** that identify classroom characteristics such as the maximum number of children in a classroom; the allowable ratio of adults to children; and the materials and supports available to children and families.
- **Teaching and Curriculum Standards** that are sometimes described as opportunities to learn (e.g., “children are exposed to various types of age-appropriate literature” or “educational experiences will

ensure that children print or copy their first name”) or activities (e.g., “children listen to traditional tales”).

While program standards may influence what teachers do, they are generally intended to guide administrators.

### Child Outcome Standards

describe the knowledge and skills children should acquire by the end of the year. Comprehensive child outcome standards encompass:

- **Content Standards** that define the range of knowledge and skills that children should master. They can also extend beyond knowledge and skills, describing the kinds of habits, attitudes, and dispositions students are expected to develop as a result of classroom experiences.

For example, content standards can address self-efficacy or empathy.

- **Performance Standards** that describe how it can be demonstrated that children have met the content standards.

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*Readers may want to consult the joint position statement on early learning standards issued in 2002 by the National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE).*

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### This Policy Brief:

- Provides an overview of how the standards movement is being extended to preschool programs;
- Describes child outcomes standards in relation to other types of standards and quality indicators;
- Offers an overview of the conditions needed for standards to work; and
- Describes the special considerations that must be taken into account if child outcome standards are to have a positive impact on preschool children and programs.

## Focusing on Results

A quarter century ago, only a handful of states invested in early education. Today, four out of five states run preschool programs, and several are moving toward public provision of programs for all 4-year-olds whose parents want to enroll them.

Preschool for all is a powerful vision that can create fundamental change in American education. Like the movement that resulted in public kindergarten for 5-year-olds, preschool for all requires broad public support. Recent history suggests that such support can be won. The case for public investment in early education has been strengthened by evidence that preschool programs can boost school readiness in the short run and, in the long run, improve graduation rates, increase adult earnings, and lower crime rates.<sup>2</sup>

But there is a catch. These benefits accrue only from high-quality programs. Continued support for public investment in early education hinges on educators' ability to demonstrate results. As the president of the High/Scope Educational Research Foundation, Lawrence J. Schweinhart, has written, preschool for all “constitute[s] an extraordinary vision. Without a focus on high standards of quality, however, this vision is but an empty promise.”<sup>3</sup> Today, there is growing consensus on the part of educators and public policy makers that program standards should include child outcomes – what children should know and be able to do after participating in preschool programs.

## Extending Outcome Standards to the Preschool Years

Outcome standards are a relatively recent phenomenon in American education. For most of our nation's history, parents and school boards lacked the systematic assessment information needed to gauge children's progress and the effectiveness of schools. There was little agreement on what children should know and be able to do. In recent decades, accountability took on new meaning. State agencies and professional organizations have engaged in major efforts to define, with some precision, the knowledge and skills that students are expected to master at each grade level and in each subject area. Curricula and assessments have been aligned with these standards. And in many cases, schools and principals have been rated on the basis of their ability to meet the standards.

Researchers say that the effort has begun to pay off. Today, efforts are underway to extend that success to preschool programs.<sup>4</sup> The idea is to use standards to improve the odds that preschool programs will boost school readiness and lay a solid foundation for later achievement.

The idea remains controversial, however. After all, from the standpoint of development, 3- and 4-year-olds are different from older children. Preschoolers are actively engaged in making sense of their worlds, but they have not yet developed the strategies for processing information, remembering, and solving problems that most older children take for granted. For example, according to the

National Research Council, 3- and 4-year-olds are just beginning to understand the need to use strategic effort in order to learn.<sup>5</sup>

All children learn in the context of important relationships, but in the preschool years children's learning is especially influenced by the social interactions they experience, whether at home or in other settings. Scientists say that young children's capacities are decisively influenced by their environments and the people who care for them. "Children's curiosity and persistence are supported by adults who direct their attention, structure their experiences, support their learning attempts, and regulate the complexity and difficulty levels of information for them."<sup>6</sup>

How can standards take into account these and other findings about the development and learning of young children? How is it possible to define reasonable developmental milestones, assess them appropriately, and use the information to improve planning, classroom pedagogy, and program evaluation?

## The Impact of K-12 Standards

*Standards-based reform is a comprehensive approach that has influenced many areas of education.<sup>7</sup> According to data collected by the Education Commission of States, "states that have focused on aligning various components of their education system with standards have shown improvement in student achievement and school quality."<sup>8</sup>*

*Similar findings were reported in the newly released longitudinal study of at-risk children in Title 1 schools. The study found that, "students' initial reading scores tended to be higher in classrooms where teachers reported they were aware of, and implementing, policies of standards-based reform."<sup>9</sup>*

*Given these findings, educators and parents may expect an emphasis on early learning standards to produce similar improvements in the quality of early childhood programs. However, an analysis of existing pre-K standards documents<sup>10</sup> and a review of the standards movement in general indicate that the impact of standards depends upon a range of conditions, including the policy and implementation issues addressed in these pages.*



## Nine Keys to Effective Prekindergarten Standards

Many of the conditions needed for successful standards-based reform apply to all grade levels, including prekindergarten. This section describes nine keys to effective standards. For each, it addresses the particular considerations or conditions that must be addressed to make child outcome standards appropriate and effective in the preschool years.

### 1 Standards should represent values that make sense to children's families and communities.

Standards identify the knowledge and skills that teachers should spend the most time on. They define not only shared expectations, but also shared notions about what matters for children.<sup>6</sup> In this way, standards represent the values of the people who set them.<sup>3</sup>

**For preschoolers...** When young children are involved, families and communities tend to be especially concerned about the values that underlie outcome standards. After all, it is during the early years that children begin to develop empathy and understand basic moral precepts. It is during the preschool years that children form the secure relationships with adults that allow them to venture off and explore; begin to interact cooperatively with peers; and slowly increase their capacity for self-regulation. Early childhood programs therefore track children's progress across the developmental spectrum, including the very important social and emotional domains. Expectations of children tend to reflect deeply held assumptions and values. It is therefore especially important to engage families and communities in discussions that help to shape preschool standards.

### What Young Children Know & Can Do

"Armed with new methodologies, psychologists began to accumulate a substantial body of ideas about the remarkable abilities that young children possess that stands in stark contrast to the older emphases on what they lacked. It is now known that very young children are competent, active agents of their own conceptual development..."

"Young children are actively engaged in making sense of their worlds. In some particular domains, such as biological and physical causality, number, and language, they have strong predispositions to learn rapidly and readily. These predispositions support and may even make possible early learning and pave the way for competence in early schooling."

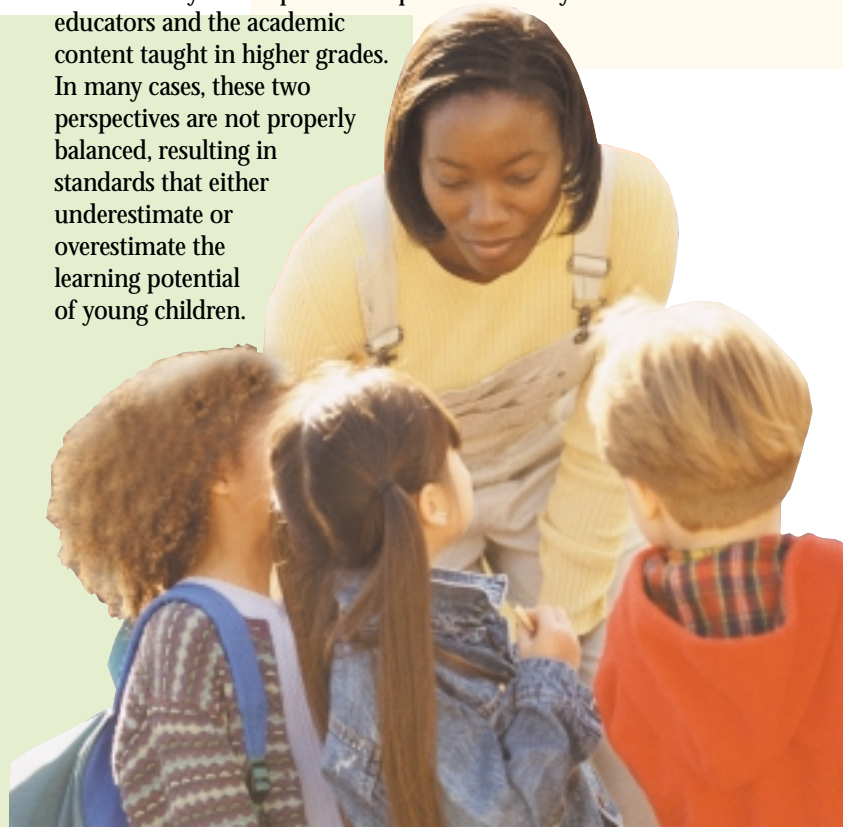
National Research Council, *How People Learn: Brain, Mind, Experience, and School*, 1999.

### 2 Standards should be evidence-based.

Standards are sets of detailed explanations and illustrations of what children should know and be able to do in a particular area, by a specific time in a child's education. Standards need to be evidence-based. That is, they need to be based on the best evidence of what young children can learn.<sup>11</sup> In addition, they should be based on research showing that particular outcome standards, implemented as part of the curriculum and ongoing teaching and assessment, can contribute to positive outcomes for the children for whom they are intended.

**For preschoolers...** Research has shown that young children are more capable than was once thought.<sup>12</sup> Psychologists and cognitive scientists have shown that preschoolers are active learners who are predisposed to certain kinds of knowledge. But in many areas there is not enough evidence to identify reasonable expectations for young children. Research is particularly thin in relation to standards for children with disabilities and other special needs.

In the absence of such research, existing sets of pre-K standards rely on the practical experience of early childhood educators and the academic content taught in higher grades. In many cases, these two perspectives are not properly balanced, resulting in standards that either underestimate or overestimate the learning potential of young children.



## How Many Standards?

*One of the criticisms of K-12 standards has been the sheer number of standards and benchmarks. According to a conservative estimate, it takes an average of five hours to cover one content benchmark. Addressing all standards and benchmarks identified by states and districts would require K-12 systems to become K-22 systems!<sup>17</sup>*

*Early childhood educators and policy makers should identify a reasonable set of expectations and outcomes that are meaningful and represent the critical learning necessary for later development.*

### 3 Standards should be comprehensive.

Standards should cover the full range of knowledge, skills, habits, attitudes, and dispositions that children need to master. They should encompass all of the major branches of knowledge that contribute to children's capacity to reason, create, communicate, solve problems, and maintain their health.<sup>13</sup> Comprehensive standards include content standards (defining the range of knowledge and skills that children should master) and performance standards (defining how it can be demonstrated that children have met the standards).

**For preschoolers...** To be comprehensive, outcome standards must take into account the five domains of school readiness identified by the National Education Goals Panel.<sup>14,1</sup>

- Physical well-being and motor development
- Social and emotional development
- Approaches toward learning
- Language development
- Cognitive and general knowledge

Young children's learning is heavily dependent on the development of language, thinking, and cognitive and socio-emotional skills that are taken for granted in higher grades where the primary emphasis is placed on content. In early childhood, the development of these foundational skills (skills that lay the foundation for later learning) is just as important as mastery of content matter. For example, there is a growing body of evidence indicating that cognitive and emotional self-regulation play a key role in influencing rates of learning and school readiness.<sup>15,16</sup> For preschoolers, standards that address foundational skills should therefore be articulated with as much specificity as the content standards.

### 4 Standards should be specific, yet still allow flexibility as teachers implement them.

If a standard covers a broad area of learning or development it must be broken down into more narrow benchmarks. However, the benchmarks should not be too specific to allow for teachers' flexibility in implementing different curricula or using different instructional strategies. For example, a benchmark that says: "retells from memory a familiar book about farm animals" appears overly specific.

**For preschoolers...** In some areas, the lack of specificity that can weaken standards for older students can also undermine preschool standards. There is a particularly strong need for specificity as standards and benchmarks are written for preschool language and literacy development.<sup>18</sup> As one recent study observed, "age appropriate and well-written clear benchmarks have a crucial role in bringing effective literacy practices to preschool programs."<sup>19</sup> Preschool outcomes need to be stated in terms of skills, rather than activities.

In other areas of early learning, the requirement of specificity can be problematic because many of young children's competencies are developing in concert. It is often difficult to isolate learning outcomes in a single area. It is often better to describe a learning outcome in a way that is specific to a particular domain of development, even if that means repeating the standard (perhaps with different emphasis) as it relates to another domain. This will help teachers to better focus on the outcome of a child's learning in choosing appropriate assessments, materials and activities. For example, while being able to participate in dramatic play is a learning outcome that combines a young child's achievements in the areas of socio-emotional, cognitive, and language development, supporting each of these areas presents teachers with different demands in terms of assessing child performance or planning instructional interventions.

## What Are Benchmarks?

*Standards are often broken down into more specific benchmarks that can be demonstrated and measured. An example: "Develops personal and social competence" is a standard whose aim is clarified by the benchmark, "Listens to others and participates in group efforts."*

## Nine Keys to Effective Prekindergarten Standards *(continued)*

### 5 Standards should allow for a coherent educational experience.

When there are too many outcome standards, education becomes fragmented as teachers jump from one area to the next, never spending enough time to offer the range of experiences young children need to really learn. Those who set outcome standards for preschoolers should strive to avoid this problem.

Coherence also means that standards for one grade or level should align with the next. Standards should create a continuum that flows from prekindergarten through high school graduation or beyond. In K-12, content-specific skills and knowledge can generally be presented sequentially. As children progress through school, expectations build on the outcome standards set for the previous grade.

**For preschoolers...** Today, the need for the continuity from prekindergarten education through higher education (often referred to as P-16 education) appears to be widely accepted among educators.<sup>7</sup> At the same time, it is clear that “very few of the content area standards apply meaningfully to very young children,”<sup>9</sup> and continuity should not occur at the expense of making preschool standards inappropriate. Placing preschool standards on a continuum of learning outcomes is a challenging endeavor for a number of reasons.

Early childhood development does not always follow a linear path. It is not always straightforward to work backwards from a higher grade. One cannot simply take an outcome expected by the end of third grade and stipulate that one-fourth of this standard must be reached by the end of the prekindergarten year. In this respect, preschool outcomes differ from most academic standards set for older students.

Continuity from preschool to elementary school standards is especially challenging because existing outcome standards for the kindergarten year tend to be problematic. Kindergarten outcomes generally have been set using the “working backwards” approach. They are typically included as a part of a larger grade band, such as K-2 or K-4, and they are stated in terms of what should be accomplished by the end of the highest grade. For example, by the end of

kindergarten, children may be expected to know the first 30 of the 100 most common vocabulary words that should be mastered by the end of second grade. This seems reasonable, but few of the 30 words are likely to appear in the books children encounter in kindergarten (although they become more common as children move through elementary school). Basing preschool standards on a faulty kindergarten standard would be detrimental.

Because kindergarten outcomes tend to be modeled on second- or fourth-grade standards, they often ignore the developmental needs of 5-year-olds. For example, the domains of oral language development and socio-emotional development are often given inadequate attention. When kindergarten standards do not focus sufficiently on foundational skills, aligning expectations with kindergarten outcomes can have an adverse impact on preschool child outcomes.



## 6 *Standards should make sense to teachers and help them with their day-to-day work.*

Since the goal is to affect what children learn, standards only work if the skills and concepts children are expected to master are the same skills and concepts they are taught in the classroom and the same skills and concepts that are measured by assessments. Teachers must be able to orient the educational experiences they offer to the skills and content specified in the child outcome standards. For this to happen, the content of the standards must be developmentally appropriate, and standards should be specific enough to allow teachers to know what is expected of their students.

Teachers should be able to align curriculum and classroom assessments with the standards. This alignment is crucial to the effectiveness of standards. As analysts have observed, standards-based reform can be expected to produce a positive impact on student learning only when an instructional system is "...driven by content standards, which are translated into assessments, curriculum materials, and professional development, which are all, in turn, tightly aligned to the content standards."<sup>20</sup>

**For preschoolers...** As noted earlier, young children learn in the context of interactions with important adults and peers. Their development and learning hinge on their individual developmental pathways and the experiences they have in their homes, communities, and classrooms. For this reason, there is great variation in how and when different children master the same knowledge and skills.

Early childhood teachers therefore need more flexibility than K-12 teachers in how they implement child outcome standards, and this flexibility must be built into the standards. Preschool child outcome standards must be used with reflection, not followed blindly.<sup>21</sup>

Standards documents should emphasize that teachers should accommodate children's learning strengths, needs, and interests wherever they are on the developmental continuum, rather than trying to speed up or slow down their learning. A standards document can make this point, for example, by providing several levels of performance for a particular standard.

Moreover, preschool standards should accommodate not only specific concepts and skills, but also the foundational skills (such as listening or paying attention) that develop as children move through early childhood.



## Nine Keys to Effective Prekindergarten Standards *(continued)*

### **7** *Standards must be written in a way that makes it possible to assess whether they are being met in a classroom.*

For standards to strengthen instruction and boost achievement they must be amenable to assessment. Schools and programs must be able to document both program standards (the resources, activities, and instruction programs provide to help children learn) and child outcome standards (the knowledge, skills, and dispositions children demonstrate). All assessments need to be fair and technically sound. Assessment policies related to children with special needs or English language learners should be clearly set out.

**For preschoolers...** Assessment presents one of the toughest challenges for states as they introduce preschool outcome standards. Educators and parents have many concerns about the appropriateness of standardized readiness tests for preschoolers. They also worry about the potential misuse of assessments to label young children or delay kindergarten entry.<sup>13</sup>

Using outcome standards for accountability purposes is an important part of standards-based reform,<sup>22</sup> but using them to evaluate early childhood programs presents serious problems. Many early childhood assessment experts agree that most standardized instruments cannot yield valid and reliable data on young children's learning outcomes and at the same time be cost-effective enough to be used on a large scale to compare different programs.<sup>22,23</sup>

In some areas, such as fine motor skills or literacy skills, the connection between the standard and assessment is relatively clear. The challenge is to select the best method for measuring children's knowledge of print or their mastery of hand-eye coordination. In other areas, such as social and emotional development, standards are often written in a more general way, and this makes it harder to assess children's progress in meeting the standards. In this case, accompanying documents are needed that specify performance standards, which describe the level at which children should be able to perform and ways to assess their progress.

Because the assessment of young children presents so many challenges, experts advise that standardized tests be used sparingly for accountability purposes. States or districts may want to test a randomly identified number of children attending a specific program, rather than testing every child. Moreover, they advise against looking at assessment solely as an accountability or program evaluation tool. This narrow view overlooks the benefits children derive when assessments help programs and teachers strengthen children's classroom experiences.

### **8** *Standard documents should distinguish clearly between program standards and outcome standards.*

Those who establish standards need to differentiate between standards that specify "inputs" (such as the number of hours children spend in an educational program, the qualifications of the teachers, or the materials and resources provided) and standards that indicate "outputs" (what children know and can do as a result of participation).

**For preschoolers...** This distinction is particularly important. While preschool program standards have existed for many years, the use of child outcome standards is relatively new. Because both are important, states need to draft separate documents for program standards and child outcome standards. As things stand, some states have mixed both types of standards in the same document, causing considerable confusion for the public and those who implement the standards — whether policymakers, program directors, teachers, or evaluators.

### **9** *Child outcome standards should be designed in ways that offer benefits beyond strengthening accountability.*

Researchers have noted that child outcome standards "have potential benefits beyond addressing pressures for increased accountability."<sup>1</sup> For example, they can support curriculum development and focus attention on important aspects of children's growth and development.

**For preschoolers...** Reaching consensus on outcomes standards can help states, communities, and programs to enhance public understanding of early development and learning; strengthen curriculum development and professional development; inform primary grade curriculum development; and improve transition to kindergarten.



## Summary

Creating preschool outcome standards poses many of the same challenges faced by policymakers and educators as they set standards for K-12 and beyond. At the same time, preschool standards present special considerations related to both the nature of early development and learning and the characteristics of early childhood programs. Absent attention to these considerations, educators may fail to extend to young children all of the benefits that standards-based education has to offer. Indeed, applying standards without regard to the unique challenges of early childhood education may have adverse effects on children in the long run. If policymakers and early childhood educators take an approach that reflects today's best understandings of early childhood development and high-quality early education, everyone stands to gain.

## Policy Recommendations

- Because standards reflect the values of the people who set them, collaboration with families and communities is a key to the successful design and implementation of preschool standards.
- Standards documents should distinguish clearly between program standards and child outcome standards.
- Outcome standards need to be written in ways that take into account the unique ways that young children develop and learn, considering all aspects of school readiness identified by the National Education Goal Panel.
- Standards that address physical health, social-emotional development, and approaches to learning need to have as much emphasis and specificity as those that address cognitive and language development.
- Standards should allow for a coherent educational experience. Preschool standards should allow continuity with kindergarten standards, but not at the expense of attention to physical and social-emotional development.
- Standards should be written in ways that allow for appropriate, effective assessment. Assessment policies and practices should go beyond accountability to foster program improvement.



## Endnotes:

- <sup>1</sup> Scott-Little, C., Kagan, S.L., & Frelow, V.S. (2003, Fall). Creating the conditions for success with early learning standards: Results from a national study of state-level standards for children's learning prior to kindergarten. *Early Childhood Research & Practice*, 5,(2). Retrieved from <http://ecrp.uiuc.edu/v5n2/little.html>.
- <sup>2</sup> Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools," *Journal of the American Medical Association* 285:2339-2346.
- <sup>3</sup> Schweinhart, L.J. (2002). Making Validated Educational Models Central in Preschool Standards. *Working Paper written for the National Institute for Early Education Research*. Retrieved from <http://nieer.org/docs/index.php?DocID=15>.
- <sup>4</sup> Scott-Little, C., Kagan, S.L., & Frelow, V.S. (2003). *Standards for preschool children's learning and development: Who has standards, how were they developed, and how are they used?* Greensboro, NC: SERVE.
- <sup>5</sup> Bransford, J.D., Brown, A.L., & Cocking, R.R., Eds. (1999). *How people learn: Brain, mind experience, and school*. Washington, DC: National Academy Press.
- <sup>6</sup> Shonkoff, J., & Phillips, D. (2000). From neurons to neighborhoods: *The science of early childhood development*. Washington, DC: National Academy Press.
- <sup>7</sup> Marzano, R.J., & Kendal, J.S. (1997). *The fall and rise of standards-based education: A National Association of School Boards of Education (NASBE) issues in brief*. Aurora, CO: Mid-continent Research for Education and Learning.
- <sup>8</sup> Education Commission of the States. (2000). Setting the standard: Will higher expectations improve student achievement? *The Progress of Education Reform*, 1(5). Denver, CO: Education Commission of the States.
- <sup>9</sup> U. S. Department of Education. (2001). *The Longitudinal Evaluation of School Change and Performance (LESCP) in Title I schools*. Washington, DC: U. S. Department of Education.
- <sup>10</sup> Kendal, J.S. (2003). Standards and early learning. *Educational Leadership*, 60 (7), 64-68.
- <sup>11</sup> Neuman, S.B., Roskos, K., Vukelich, C., & Clements, D. (2003). *The state of state prekindergarten standards in 2003*. Ann Arbor, MI: Center for Improving Early Reading Achievement (CIERA).
- <sup>12</sup> Bowman, B.T., Donovan, M.S., & Burns, M.S., (Eds.) (2000). *Eager to learn: Educating our preschoolers*. Washington, DC: National Academy Press.
- <sup>13</sup> Carnegie Task Force on Learning in the Primary Grades. (1996). *Years of promise: A comprehensive learning strategy for America's children*. New York: Carnegie Corporation of New York.
- <sup>14</sup> Kagan, S.L., Moore, E., & Bredekamp, S. (1995). *Reconsidering children's early development and learning: Toward common views and vocabulary*. Washington, DC: National Education Goals Panel.
- <sup>15</sup> Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57 (2), 111-127.
- <sup>16</sup> Thompson, R.A., & Happold, C.A. (2002). *The roots of school readiness in social and emotional development*. Washington DC: The Ewing Marion Kauffman Foundation. Retrieved from [http://www.kauffman.org/pdf/eex\\_brochure.pdf](http://www.kauffman.org/pdf/eex_brochure.pdf).
- <sup>17</sup> Marzano, R.J., Kendal, J.S., & Cicchinelli, L. (1998). *What Americans believe students should know: A survey of U.S. adults*. Aurora, CO: Mid-continent Research for Education and Learning.
- <sup>18</sup> Snow, C.E., Burns, M.S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- <sup>19</sup> Burns, M.S., Midgett, K., Leong, D., & Bodrova, E. (2003). *Prekindergarten benchmarks for language and literacy: Progress made and challenges to be met*. Retrieved from <http://nieer.org/docs/index.php?DocID=61>.
- <sup>20</sup> Chatterji, M. (2002). Models and methods for examining standards-based reforms and accountability initiatives: Have the tools of inquiry answered pressing questions on improving schools? *Review of Educational Research*, 72(3), 345-386.
- <sup>21</sup> Porter, A.C. (2002). Measuring the content of instruction: Uses in research and practice. *Educational Researcher*, 31 (7), 3-14.
- <sup>22</sup> Shepard, L., Kagan, S.L., & Wurtz, E. (Eds.) (1998). *Principles and Recommendations for early childhood assessments*. Washington, DC: National Education Goals Panel.
- <sup>23</sup> Jones, J. (2003). *Early literacy assessment systems: Essential elements*. Princeton, NJ: Educational Testing Service.



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*Child Outcome Standards in Pre-K Programs: What Are Standards; What Is Needed To Make Them Work?* is issue 5 in a series of briefs, *Preschool Policy Matters*, developed by The National Institute for Early Education Research. It may be reprinted with permission, provided there are no changes in the content.

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This document was prepared with the support of The Pew Charitable Trusts. The Trusts’ *Starting Early, Starting Strong* initiative seeks to advance high-quality prekindergarten for all the nation’s three- and four-year-olds through objective, policy-focused research, state public education campaigns and national outreach. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of The Pew Charitable Trusts.



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