ENCYCLOPEDIA
on Early Childhood
Development

**SCHOOL READINESS**

# School Transition and School Readiness: An Outcome of Early Childhood Development

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July 2017, Éd. rév.

## Introduction

Children's transition to kindergarten and their skills at school entry forecast long-term school success.[1,2] In the United States, the primary objective of Goals 2000 set by the National Education Goals Panel was "to ensure that all children enter school ready to learn".[3] Nearly two decades later, the U.S. early childhood education system has undergone substantial growth in investment, enrollment, and workforce development[4,5] in an effort to foster readiness. Most recently, the 2015 Every Student Succeeds Act reemphasized the importance of readiness by requiring states to document ways in which pre-kindergarten programs cultivate early skills. Countries around the globe are investing to improve and expand early childhood education, as evidenced by the 16% increase in world-wide pre-kindergarten enrollment between 1990 and 2014.[6]

## Subject

There is no single indicator of kindergarten readiness.[7,8] Readiness involves a range of skills and developmental domains. Presently, the U.S. Department of Education defines the "essential

domains for readiness" as language and literacy development, cognition and general knowledge (e.g., early mathematics, early science), approaches to learning, physical well-being and motor development, and social-emotional development.[9]

Research suggests that children's school outcomes, especially achievement, remain remarkably stable after the first years of school.[10,11] Further, there is evidence that interventions are more likely to be successful in the early school years.[12] As a result, researchers, policy-makers, educators and parents grapple with what it means for children to be "ready" for school.

This brief report summarizes evidence on school transition and readiness with the goal of describing stakeholders' definitions of readiness, characteristics of child readiness, and readiness as an outcome of early childhood experiences.

**Practical Context**

Children and their families experience discontinuity as they make the transition into kindergarten. This shift is notable despite the fact that nearly 80% of American children receive care on a regular basis from a non-parental caregiver prior to this transition.[13] Within the U.S., the shift toward academic priorities and the heightened rigor present challenges to children as they begin kindergarten. Emphasis on accountability has forced a "push down curriculum" in which children are expected to perform at higher academic levels at earlier ages. Many kindergarten classrooms now have increased teacher-directed math and literacy instruction, and less time engaging in free play or center-based activities.[14]

The transition to kindergarten has become an increasingly visible issue as federal and state governments consider the merits of federally-funded preschool programs. A national survey of kindergarten teachers examined teachers' judgments about school transition and found that almost half of children entering school experienced some difficulty with the transition to kindergarten. Kindergarten teachers cited trouble following directions as the most prevalent problem.[15] Efforts to improve kindergarten transition need to leverage home, school, neighborhood and community resources to prepare children for school.[16] Some promising efforts include expanding access to high quality preschool programming,[17] increasing preschool-to-kindergarten transition activities,[18] and establishing stronger connections between home and school environments.[19]

Further, children entering kindergarten differ from those of a generation ago; they are increasingly diverse with regard to racial, ethnic, economic and language backgrounds.[20] For example, in U.S. Head Start preschools, 29% of children and families are African American, 38% identify as Latino, and 29% speak a language other than English at home.[21] Promising approaches to support transition to kindergarten need to identify and leverage the full variation of family strengths.

## Research Context

Three main bodies of literature inform discussions about school readiness. The first body is based on large-scale surveys that examine the views of stakeholders (e.g., kindergarten teachers, parents) on their perception of school readiness. The second body of research examines definitions of school readiness by considering the relative importance of cognitive, social, and self-regulatory skills, as well as chronological age. The third body of work examines school readiness and child outcomes in the early years of school as a function of classroom and family experiences.

## Key Research Questions

Key research questions include: How do teachers and parents define readiness? What are the cognitive, social, self-regulatory and chronological markers of school readiness? What are the child-care and home contexts associated with school readiness?

## Research Results

*What is Readiness: Teachers' and Parents' Definitions*

Studies have examined the definition of readiness among different stakeholders in the kindergarten transition process. A national survey of kindergarten teachers showed that teachers identified "ready" children as those who are physically healthy, well-rested and well-fed; able to communicate needs, wants and thoughts verbally; and curious and enthusiastic in approaching new activities. Surprisingly, teachers did not attach particular importance to specific numeracy and literacy skills.[22] Another study found that teachers place greater emphasis on self-regulatory and interpersonal skills rather than academic competence.[23] Parents, in contrast, typically define readiness in terms of academic abilities, such as the ability to count, name objects, or identify letters.[24]

*Readiness as Defined by Cognition, Self-regulation, Social Competence, and Chronological Age*

Early signs of cognitive ability and maturity link to children's performance in school. For this reason, this approach to assessing readiness has been used as an indication that a child is prepared for the school environment.[25] Meta-analytic work shows that preschool and kindergarten cognitive assessments predict, on average, 25% of variance in early elementary school cognitive assessments.[26] Thus, these cognitive indicators are important but other factors account for the majority of variation in early school outcomes.

Accumulated evidence points to the significant role of self-regulation and executive functioning. [27,28] These features have a neurobiological basis and provide the foundation for many of the behaviours and abilities required in kindergarten.[29-31] Ability to attend selectively, show appropriate social responses, and stay engaged in academic tasks are all implicated as factors that contribute to and define school readiness. Relatedly, children's "approaches to learning", which include emotion-regulation, attention, persistence, and attitude, support their ability to take advantage of learning opportunities in the classroom and predict achievement in later elementary grades.[32,33]

Other research links children's social competence to academic performance. For example, children's early social-emotional skills and social adjustment (e.g., relationships with peers, positive emotions, and prosocial behaviours) are associated with academic outcomes and classroom engagement in kindergarten.[34-36] Conversely, problem behaviours, such as aggression or withdrawal, interfere with classroom learning.[37]

Children's age is also a marker of school readiness insofar as it indicates maturity in the cognitive, social and self-regulatory domains. Research on the effect of age is mixed. Some studies suggest that while there is some advantage to being slightly older upon the transition to kindergarten, these effects disappear by third grade.[38,39] Other work finds that an earlier state-wide entry cutoff for kindergarten (resulting in older kindergartners, on average) linked to higher state test scores in 4th and 8th grade.[40]

*What are the antecedents of "readiness"?*

Attributes of children's child-care environment contribute to their transition and adjustment to school. Stimulating and supportive teacher-child interactions in early childhood classrooms can enhance students' social-emotional and academic competence.[41-44] Quality preschool or child-care also predicts ease of kindergarten adjustment,[45] strengthens social and self-regulatory skills[46] and

reduces the likelihood of some negative outcomes, such as grade retention.[47] Higher caregiver training and lower child-staff ratio are associated with cognitive competence prior to school entry. [48] Further, research shows that children who face early adversity, such as growing up in low income or impoverished homes, may have the most to gain from high quality early classroom experiences.[49,50]

Family processes also influence children's competencies as they enter school. Quality of parent-child relationships, specifically parental sensitivity and stimulation, contribute to early school success.[51-55] Parents' behaviours toward their children and the stimulating materials and consistent routines they provide in the home environment are associated with  children's adjustment to the first months and years of school.[56,57] Moreover, parents' involvement in school, such as participating in school activities and attending teacher conferences, forecast early gains in achievement.[58]

**Conclusion**

The evidence suggests that school readiness is an important factor for predicting children's school success and that the characterizations of school readiness are multi-dimensional. Teachers and parents have different definitions of school readiness – teachers emphasize readiness in the social and self-regulatory domains, whereas parents emphasize basic academic skills. Research shows that cognitive skills, social competence, and self-regulatory abilities provide a foundation for academic success and that chronological age, alone, is not an effective indicator of school readiness. Early predictors of school success point to the contribution of sensitive and stimulating family processes, and high quality child-care environments.

**Implications**

Programs designed to prepare children for kindergarten should strive to boost students' self-regulatory, social, and cognitive skills.[59] Parents and early childhood teachers are key contributors to children's readiness.

Awareness of the multi-dimensionality of readiness and the importance of early teacher-child relationships is essential for practitioners. Transition practices are needed to help families and schools develop congruent expectations for the kindergarten year. Given the increased diversity in U.S. schools and the heightened academic rigor of the early years of school, extra resources allocated toward such transition practices may benefit children, especially those at risk for early

school problems.

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