Moving Forward With Kindergarten Readiness Assessment Efforts

A Position Paper of the Early Childhood Education State Collaborative on Assessment and Student Standards

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Council of Chief State School Officers
One Massachusetts Avenue, NW, Suite 700
Washington, DC 20001-1431
Phone (202) 336-7000
Fax (202) 408-8072
www.ccsso.org

Introduction

Since the National Education Goals Panel developed its framework for defining "school ready" in 1990, interest in information on the status of children at the start of formal schooling has intensified.[1] Policymakers and educators have become increasingly committed to the proposition that young children start school "ready to learn." Increased public and private investment in early childhood initiatives has led to increased interest in evidence about young children's knowledge and skills. Expanded awareness of the achievement gap has encouraged efforts to acquire an early picture of children's skills so that problems can be identified and addressed as soon as possible.[2] Consequently, young children are being assessed in multiple domains and settings, including at the beginning of kindergarten, as never before.[3] In fact, according to recent reports, the number of states with laws mandating kindergarten assessments is at least 25, an increase of 72 percent over the last five years.[4,5]

As more states have become engaged in kindergarten assessment efforts,[6] early childhood educators and assessment experts have recommended developing such efforts within a coordinated assessment system that provides data about children's progress over time, (pre-k through grade 12), and is designed to address both educational policy and practice questions. [7] Experts also concur that establishing such a coordinated system is challenging; [8] that few if any current kindergarten assessment initiatives are integrated within such a system; and that some current uses of data from early childhood assessments are misguided.[9]

In addition to these concerns, it is important to acknowledge important differences in the types of assessment information stakeholders are seeking. For example:

- Parents and teachers in early childhood and kindergarten classrooms want to know about the strengths and needs of children in order to provide effective supports and learning opportunities.
- Early childhood managers and school administrators want to know the status of children's early learning and development in order to plan program services and determine whether these services are effective.
- State policymakers want to document population trends, track children's progress over time, and determine if public early childhood expenditures are making a difference.

These varied assessment questions and purposes underscore the challenge of designing kindergarten readiness assessment efforts carefully and systematically.

Our Position

Based on our review of current efforts, the Early Childhood Education State Assessment Collaborative's position on assessment of children at the start of formal schooling, typically kindergarten, is the following:

Early child assessments conducted prior to, at the start of, and during kindergarten can be useful for a number of purposes *if done well*. Kindergarten readiness assessments should be used to directly support children's development and academic achievement to improve educational outcomes. To do so, kindergarten readiness assessment efforts should adhere to the following principles:

- **Use multiple tools for multiple purposes.**
- **Address multiple developmental domains and diverse cultural contexts.**
- **Align with early learning guidelines and common core standards.**
- **Collect information from multiple sources.**
- **Implement in a systems-based approach.**
- **Avoid inappropriate use of assessment information, specifically including high-stakes decisions, labeling children, restricting kindergarten entry, and predicting children's future academic and life success.**

The rest of this paper will discuss the rationale of our position and important cautions for parents, teachers, administrators, and policymakers to consider when planning kindergarten assessment initiatives.

Use Multiple Tools if There Are Multiple Purposes

Policymakers and program administrators need to be clear about the purpose or purposes for which they are developing kindergarten assessments and select the tools most appropriate for those purposes, as delineated in Table 1 (page 8). The various rationales for assessment require different instruments, procedures, and standards. If there is more than one assessment purpose, then resources must be provided to support use of more than one tool. In the alternative, leaders must carefully investigate to determine if data from a single assessment can be reliably and validly analyzed and reported to accommodate several purposes (e.g., investigating whether data from a norm-referenced assessment can be used to inform instruction of individual children, as well as aggregated to provide feedback on the performance of groups of children in relation to learning standards or benchmark indicators). It is important, however, to understand that a single assessment instrument cannot, and should not, be used to meet all of the child, instructional, policy, programmatic, and accountability purposes a state or program may have.

Furthermore, there is a considerable risk of negative unintended consequences when a measure designed for one purpose is used for other purposes. The consensus against this practice is strong.[10] Unfortunately, many early childhood assessment tools currently used in statewide initiatives were not originally designed for large-scale administration, nor were they designed for purposes such as determining program effectiveness. For example, several of the tools in current use were designed as screening instruments to determine children's medical or developmental risks for the purpose of ensuring delivery of appropriate services. Other assessments were designed to advance knowledge of child development, or to provide teachers with information to guide instruction at the classroom level. Instruments designed for the aforementioned purposes, however, have since been used to generate information for accountability and evaluation purposes, without determining the validity and reliability of the instrument for these purposes.[11] It is vital that decision makers take measurement issues into consideration, such as the reliability and validity of a tool in relation to specific purposes, forms of reporting and uses of assessment data.

Focus on Several Developmental Domains and Diverse Cultural Contexts

Despite abundant complexities, the consensus of child development experts and early childhood practitioners is that school readiness is a compilation of numerous skills and capacities that vary within a population of children.[12] The National Education Goals Panel stated that school readiness encompasses a range of child development domains, including (a) physical well-being and motor development, (b) social–emotional development, (c) approaches toward learning, (d) language and emergent literacy, and (e) cognitive skills, including mathematics.[13] Moreover, children's progress in these developmental domains is both independent and highly interrelated.[14] Unfortunately, most kindergarten assessment tools focus almost exclusively on language, literacy, and mathematics. Yet, as noted, there is substantial agreement about the importance of social-emotional development of young children before, during, and after the transition to formal schooling,[15] and this domain is predictive of academic progress in other domains.[16]

Moreover, children's linguistic and cultural differences, as well as differences in children with special learning needs and abilities, must be considered in kindergarten assessments.[17] Unfortunately, there are few assessment tools that capture contextual aspects of children's early learning and development, including their cultural background, linguistic diversity, and special needs.[18] In sum, it is important that kindergarten assessment go beyond just measuring cognitive and literacy skills; focus on a broad range of child developmental domains; and recognize children's language, culture, and special learning needs.

Align With Early Learning Guidelines and Common Core State Standards

Many states have developed comprehensive early learning standards to define children's developmental progress and expectations for knowledge and skills from birth through the start of kindergarten.[19] Most recently, the Common Core State Standards Initiative put forth a common set of standards, subsequently adopted by 43 states, that define skills and knowledge for kindergarten–grade 12 students in the subject areas of English language arts and mathematics.[20] As noted, although most state early learning guidelines address a wide range of developmental domains and subject areas, many kindergarten assessment

initiatives do not capture comprehensive information on children's progress and status. Kindergarten assessments should be as rich and multifaceted as state early learning guidelines and should also be aligned with common core state standards for kindergarten students. In addition, it is important for states to develop comprehensive kindergarten standards to supplement the common core kindergarten standards, including academic subjects beyond English language arts and mathematics, and the other important developmental domains.

Collect Information From Multiple Sources

Children are natural learners and begin learning the day they are born. During the first eight years of life, significant and rapid transformations in child development and learning occur. This is also a time when significant variation in the rate and pace of progress in different domains is the rule, not the exception.[21] In particular, the five- to seven-year age range marks a unique developmental transition, during which children will experience a dramatic change in their cognition and social relations.[22] Of equal importance is the fact that the pace at which children learn—and their levels of knowledge, skills, and development at school entry—depend greatly on the range of learning opportunities and developmental supports they engage in as infants, toddlers, and preschoolers.[23] These opportunities include family and community-based contexts, as well as varied types of early care and education programs. Accordingly, designing an assessment process for young children should entail collecting information over time to document developmental changes, and include information on the varied pathways of learning opportunities and supports that children experience from birth through the beginning of formal education.[24]

When assessing children at school entry, it is also important to recognize that states have different kindergarten entry ages, and that the compulsory age requirements for school attendance are not consistent across states.[25] As a result, children start the kindergarten year at different ages, and with different levels of knowledge and skills, even when they are developing quite typically. [26] Moreover, children who are seen as "school ready" in one community may not be similarly viewed elsewhere.[27] Thus, when conceptualizing an approach to assessment of school readiness, the issue is not simply whether a child is ready for school, but also depends on the expectations of kindergarten and primary grade teachers, as well as the capacity of schools to meet the varied needs of all children.

In sum, the years surrounding the transition of children into kindergarten are a time of developmental change, varied pathways of early learning programs and family contexts, varied expectations of public school practitioners, and diverse school entry policies. For all of these reasons, it is unreasonable to expect that an assessment effort limited to gathering data at a single point in time—or relying on a single source of information—will provide an accurate, useful picture of a child's knowledge and skills. Instead, a comprehensive kindergarten assessment should include information from previous early childhood placements, families, and community informants. [28] In addition, it is important to document adult expectations both within and external to the kindergarten classroom, and the contextual supports available to students in the early school years.[29] Early childhood programs, schools, communities, and families can then draw on this portfolio of data and perspectives to intentionally support children's natural eagerness to learn.

Implement a Systems-Based Approach

In order to effectively aid teachers in their instruction, monitor student progress, communicate the learning needs of children in a state or community, and guide program planning, kindergarten assessments must be implemented within a comprehensive system of supports for teachers, families, and programs.

Conducting kindergarten assessments goes beyond defining a set of outcomes and selecting an assessment tool. It also is important to consider how assessments are put into practice.[30] Assessing young children—for any purpose—is labor-intensive and expensive, and requires the establishment of ongoing supports for all involved parties. Specific efforts are needed to ensure that assessment data are collected by trained and valid assessors, tested for reliability, gathered from children comfortable with the assessment situation, and carefully analyzed and interpreted. The Committee on Developmental Outcomes and Assessments for Young Children dedicated a chapter to fully exploring the implementation challenges that could undermine the utility and validity of the assessment data.[31] Key strategies to support high quality assessments include:

- Communicate the purpose of the assessment to administrators, teachers, and parents.
- Let stakeholders know how they will be informed of assessment results and resulting actions.
- Provide ongoing training to the assessors.
- Examine children's and parents' reaction and comfort level to the assessment situation.
- Consider adaptation issues for non–English speaking families and children with special needs.
- Provide ongoing help to teachers, early childhood programs, and schools on how to interpret and use assessment data.
- Support initial assessment development and ongoing costs of psychometric testing, materials, training, inter-rater reliability, data entry, analysis, and reporting.

In addition, kindergarten assessments, as with all early childhood assessments, should be integrated into an early learning system (early childhood through third grade) that supports high quality, engaging learning opportunities, strong efforts to engage families, and ongoing professional development opportunities for educators.[32] Key features of this support system are as follows:[33]

- Standards laying out explicit goals for children's development and learning, birth through age eight.
- Multiple child assessments for multiple purposes across the educational continuum.
- Complementary assessment of the quality of learning environments, staff/child interactions, and teaching strategies.

- Data system to track children's progress and levels of accomplishment in relation to standards, along with information on their participation in early child, kindergarten, and primary grade programming.
- Family engagement efforts, including ongoing communication of the results of child and program assessment efforts.
- Joint professional development of early childhood and early elementary school teachers and program managers.
- Responsiveness to diverse cultural and developmental variations.
- Adequate resources of time, money, and personnel.
- Ongoing use of assessment data to guide continuous improvement efforts at the school, community, school district, and state levels.

Avoid Inappropriate Use of Assessment Information

While child assessments conducted prior to, at the start of, and during kindergarten can be useful for a number of purposes, we believe strongly that particular care should be taken to avoid the inappropriate use of assessment information. In particular, we believe that large-scale state- or community-level kindergarten assessments are not appropriate for these purposes:

- **High-stakes decisions about program or teacher quality, effectiveness, or accountability (of either the kindergarten or previous preschool experiences)**
  This includes the judging of program quality and program effectiveness (of either the kindergarten or previous preschool experiences), evaluating teacher effectiveness, and funding decisions. There are many factors other than kindergarten assessment data at a single point of time that need to be considered before making any high-stakes decisions. Such assessments are not reliable or valid for measuring the education experiences and learning opportunities prior to school, the quality of the educational practices at the previous or current program, or children's relative rates of learning.[34]

- **Labeling children as ready to attend school or not**
  Children start the kindergarten year at different ages and with different levels of knowledge and skills—even when they are developing quite typically.[35] Therefore, it is important, when it comes to using kindergarten assessment tools, that children are not categorized or tracked into groups as being "ready" or "not ready" for school.

- **Restricting kindergarten entry or tracking young children into two-year programs prior to first grade**
  Using assessments to postpone or deny kindergarten entry into school or to track them into extra-year classes prior to first grade labels children as failures at the outset of their formal educational experience. Such practices do not provide any academic benefit to the child and likely cause harm to their social-emotional development.[36]

- **Predicting future academic achievement and life success**
  Children develop at different rates, have different life experiences, and have different opportunities to participate in high quality early learning experiences. A kindergarten assessment, particularly a single test at one moment in time, is not a valid predictor of a child's potential.

Conclusions

The need for information about the status of children's development and learning at the start of formal schooling is clear. However, while there is a growing volume of large-scale kindergarten readiness assessment efforts in states and local communities, few resources have been invested in developing assessment tools that address the full range of domains of early learning and child development, and the multiple purposes of such assessments. At present, two multi-state consortia have received $350 million to develop a new generation of enhanced assessment tools for students in grades 3-12. Yet we know that waiting until the end of third grade to acquire a systematic picture of how well children are learning is a mistake. We must use early childhood assessments to drive efforts to provide enriched, engaging, and intensive learning opportunities to every child, and prevent or minimize achievement disparities right from the start. Accordingly, it is vital that a commensurate level of resources be invested in developing improved assessment tools for young children. With proper resources and informed leadership, states can implement kindergarten readiness assessments as a key resource in a nationwide effort to support healthy development, early learning, and school success for all young children.

Table 1. Appropriate Purposes of Kindergarten Assessments, Measurement Types, and Goals

Assessment Purpose	Measurement Types	Goals
➢ To identify groups of students who may have developmental or health needs	➢ **Screening**	➢ Collect information with large number of students ➢ Identify need for additional diagnostics
➢ To identify children in need of specialized services or interventions	➢ **Diagnostic**	➢ Determine developmental or medical needs ➢ Determine specific intervention needs ➢ Establish student eligibility for services
➢ To track students across programs, schools, districts, and states for comparisons and social benchmarking	➢ **Norm-referenced**	➢ Provide point-in-time snapshot of a student's knowledge compared with other students ➢ Compare students from different programs, schools, and communities against a norm ➢ Provide student-level performance in comparison with a population norm or other students of the same age/situation
➢ To determine whether students meet specified academic standards or defined performance levels	➢ **Criterion-referenced**	➢ Provide a point-in-time snapshot of a student's knowledge compared with defined standards or specified criteria ➢ Track student's progress against specified standards over time
➢ To guide program-, classroom-, or student-level instruction	➢ **Formative**	➢ Document individual student learning and knowledge, probing student understanding and competencies ➢ Identify student strengths and weaknesses ➢ Monitor individual student learning progress over time
➢ To evaluate programs	➢ **Summative** ➢ **Norm-referenced** ➢ **Criterion-referenced** ➢ **Descriptive**	➢ Collect information on a sample of students ➢ Determine and explain the impact of a program or service on defined outcomes ➢ Address questions about programmatic investments ➢ Get information about structural and process characteristics of children, families, teachers, programs, and other learning environment variables

Glossary of Terms[37]

Assessment: A systematic procedure for obtaining information from observation, interviews, portfolios, projects, tests, and other sources that can be used to make judgments about characteristics of children or programs.

Criterion-referenced assessments: An assessment instrument in which the test-taker's performance (i.e., score) is interpreted by comparing it with a pre-specified standard or specific content or skills.

Diagnostic: A tool to provide information on a child's development or health status.

Formative assessments: Observational assessments that usually occur during instruction to provide information about the student's performance on a learning task and that identify portions of that task that the student may or may not be able to do.

High-stakes testing: Assessments whose results lead to decisions about children, teachers, schools, or programs.

Norm-referenced assessments: A standardized testing instrument, the test-taker's performance on which is interpreted in relation to the performance of a group of peers who have previously taken the same test. The group of peers is known as the "norming" group.

Screening: A brief instrument that measures those who may need further, more in-depth assessment tools to verify developmental or health risks.

Summative: An instrument that documents how much learning has occurred at a point of time.

Notes

[1] Shepard, L., Kagan, S.L., & Wurtz, C. (1998). *Principles and recommendations for early childhood assessments*. Goal 1 Early Childhood Assessments Resource Group. Washington, DC: National Education Goals Panel.

[2] On the National Assessment of Educational Progress (NAEP), more white fourth graders than black fourth graders in 2005 scored at or above the Proficient reading level on the National Assessment of Educational Progress (NAEP) (National Center for Education Statistics, 2009). NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/; Lee, V.E., & Burkam, D.T. (2002). Inequality at the starting gate: Social background differences in achievement as children begin school. Washington, DC: Economic Policy Institute.

[3] Skills related to reading are the most common area assessed. Stedron, J. & Berger, A. (2010). *NCSL Technical report: State approaches to school readiness assessment*. Denver, CO: National Conference of State Legislators.

[4] Council of Chief State School Officers. (2010). S*tate early childhood standards and assessments: Five years of development*. Report of 2008 Survey by the Early Childhood State Collaborative on Assessment and Student Standards. Washington, DC: Author.

[5] Council of Chief State School Officers, (2010); Daily, S., Burkhauser, M., & Halle, T. (2010). A review of school readiness practices in the states: early learning guidelines and assessments. *Child Trends*: *Early Childhood Highlights*, 1(2); Golan, S., Petersen, D., & Spiker, D. (2008). *Kindergarten Assessment Process Planning Report*. Lacey, Washington: Washington State Department of Early Learning; Stedron & Berger, 2010.

[6] State kindergarten assessments currently in use, most of them concerned with capturing "school readiness," include a wide range of commercial, modified commercial, and state-developed instruments using various methods. In addition, some states mandate assessment at kindergarten entry, but allow a choice of several instruments, including locally developed protocols. Some instruments require multiple teacher observations, and others require direct child assessments outside the classroom setting. Valid information about the development and reliability of these kindergarten assessment tools are rarely offered.

[7] National Early Childhood Accountability Task Force. (2007). *Taking stock: Assessing and Improving Early Childhood Learning and Program Quality*. Philadelphia: Author.

[8] For more information see: National Early Childhood Accountability Task Force, (2007); Bruner, C. (2004*). Building an early learning system: The ABCs of planning and governance structures*. State Early Childhood Policy Technical Assistance Network Resource Brief and the Build Initiative. Des Moines, IA.

[9] Kagan, S.L., Moore, E. & Bredekamp, S. (Eds.). (1995). *Reconsidering children's early development and learning: Toward common views and vocabulary*. Report of the National Education Goals Panel, Goal 1 Technical Planning Group. Washington, DC: Government Printing Office; Meisels, S. J. (1999). Assessing readiness. In R. C. Pianta & M. M. Cox (Eds.), *The Transition to Kindergarten* (pp. 39–66). Baltimore, MD: Paul H. Brookes.; National Research Council. (2008). *Early Childhood Assessment: Why, What, and How*. Committee on Developmental Outcomes and Assessments for Young Children, C.E. Snow & S.B. Van Hemel, Editors. Board on Children, Youth, and Families, Board on Testing and Assessment, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press; Shepard, Kagan, & Wurtz, (1998).

[10] Ackerman, D.J. & Barnett, W.S. (2005). *Prepared for kindergarten: What does "readiness" mean?* New Burnswick, NJ: National Institute for Early Education Research; Shepard, Kagan, & Wurtz, (1998); Meisels, S.J. (2007). Accountability in Early Childhood: No Easy Answers. In R.C. Pianta, M.J. Cox, K.L. Snow (Eds.), *School Readiness & the Transition to Kindergarten in the Era of Accountability* (p. 31-48). Baltimore, Maryland: Paul H. Brookes Publishing Co.; National Research Council (2008).

[11] For a rich discussion about important measurement considerations that policymakers should be aware of when using student achievement data to evaluate teachers, including issues of reliability, validity, and scaling, see Steele, J.L., Hamilton, L .S., & Stecher, B.M. (2010). *Incorporating Student Performance Measures into Teacher Evaluation Systems*. Santa Monica, CA: RAND Corporation. http://www.rand.org/pubs/technical_reports/TR917.html. The authors discuss the need for multiple measures beyond a single standardized test score, in order to evaluate teaching performance. The authors state that systems that attempt to incorporate student achievement gains into teacher evaluations face two important challenges: generating valid estimates of teachers' contributions to student learning and including teachers who do not teach subjects or grades that are tested annually. Because kindergarten

is highly variable within and across states, this issue is particularly relevant to the topic of use of kindergarten readiness assessments.

[12] Snow, K.L. (2007). Integrative views of the domains of child function: Unifying school readiness. In R.C. Pianta, M.J. Cox, & K.L. Snow (Eds.), *School Readiness & the Transition to Kindergarten in the Era of Accountability* (p. 197-216). Baltimore, Maryland: Paul H. Brookes Publishing Co.; National Research Council, (2008).

[13] Kagen, Moore, & Bredekamp, (1995).

[14] Snow, (2007).

[15] For additional information about the importance and benefits of social-emotional development, refer to The Center on the Social and Emotional Foundations for Early Learning at Vanderbilt University http://csefel.vanderbilt.edu; for K–12, refer to the Collaborative for Academic, Social, and Emotional Learning (CASEL) at the University of Illinois at Chicago http://casel.org/.

[16] National Research Council, (2008); Raver, C. (2002). Emotions Matter: Making the case for the role of young children's emotional development for school readiness. *Society for Research in Child Development's Social Policy Report*, *16*(3), 3-19.

[17] Espinosa, L.M. & López, M.L. (2007). *Assessment Considerations for Young English Language Learners Across Different Levels of Accountability.* Prepared for The National Early Childhood Accountability Task Force and First 5 LA.; National Research Council, (2008).

[18] National Research Council, (2008).

[19] Council of Chief State School Officers. (2010); Daily, Burkhauser and Halle, (2010); Howard, E. & Wiley, M. (2007). State Standards and Accountability in Illinois, Michigan, and Wisconsin. *Children and Social Policy, 1*(1). Chicago, Il: Herr Research Center for Children and Social Policy, Erikson Institute. ; Scott-Little, C., Kagan, S.K., & Fellow, V.S. (2006). Conceptualization of readiness and the context of early learning standards: The intersection of policy and research? *Early Childhood Research Quarterly*, 21, 153-173.

[20] National Governors Association Center for Best Practices and the Council of Chief State School Officers. (2010). Common Core State Standards. http://www.corestandards.org.

[21] LaParo, K.M. & Pianta, R.C. (2000). Predicting children's competence in the early school years. A meta-analytic review. *Review of Educational Research, 70*(4), 443-484.; National Research Council, 2008; Shonkoff, J.P. & Phillips, D.A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, D.C.: National Academy of Sciences.

[22] Sameroff, A., & Haith, M. (1996). *The five to seven year shift: The age of reason and responsibility*. Chicago: University of Chicago Press.

[23] National Research Council. (2001). *Eager to Learn: Educating Our Preschoolers*. Committee on Early Childhood Pedagogy. Barbara T. Bowman, M.Suzanne Donovan, and M.Susan Burns, editors. Commission on Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.; Shonkoff & Phillips, (2000).

[24] Sameroff, A. & McDonough, S. C. (1994). Educational Implications of Developmental Transitions: Revisiting the 5- to 7-Year Shift. *Phi Delta Kappan*, *76*(3), 188-93

[25] Although the date varies by state, in most states children are allowed to enter kindergarten if they have turned or will turn five years old by a certain date. Also important to note is that the kind of kindergarten program (full- or part-day) also varies by state. Compulsory education laws also vary. More than half—32 states—require students to begin their education by age six. Some states set their age requirements as low as five and some as high as eight. All children are required to continue their education into their high school years, with 26 states setting the cutoff age at 16. The remaining states require students to stay in school through age 17 or 18. (Kauerz, K. (2005). *Full-day kindergarten: A study of state policies in the United States*. Denver Colorado: Education Commission of the States (ECS). Available: http://www.fcd-us.org/resources/full-day-kindergarten-study-state-policies-united-states; National Conference of State Legislatures. (2006). *Compulsory school age requirements*. http://www.ncsl.org/print/educ/CompulsorySchAgeChart.pdf; Saluja, G., Scott-Little, C., & Clifford, R. M. (2000). Readiness for school: A survey of state policies and definitions. *Early Childhood Research & Practice*, *2*(2). Available at http://ecrp.uiuc.edu/v2n2/saluja.html; National Conference of State Legislatures. (2010). *Compulsory Education: Overview*. http://www.ncsl.org/default.aspx?tabid=12943).

[26] National Research Council, (2001); Shonkoff & Phillips, (2000).

[27] Ackerman & Barnett, (2005).
[28] Golan, Petersen, & Spiker, (2008).
[29] Ackerman & Barnett, 2005; Kagan, S.L. (1999). Cracking the readiness mystique. *Young Children, 54*(5), 2-3.; National Association for the Education of Young Children. (1988). NAEYC position statement on standardized testing of young children 3 through 8 years of age. *Young Children, 43*(3), 42-47.; Schweinhart, L.J. (2010*). Senate Testimony of Lawrence J. Schweinhart on ESEA Reauthorization: Early Childhood Education*, President, Highscope Educational Research Foundation Tuesday, May 25, 2010:http://help.senate.gov/imo/media/doc/Schweinhart.pdf.
[30] Ackerman & Barnett, (2005); Golan, Petersen, & Spiker, (2008); National Early Childhood Accountability Task Force. (2007).
[31] National Research Council, (2008). Chapter 9, p.281-298.
[32]National Research Council, (2008); Golan, Petersen & Spiker, (2008); Bogard, K., & Takanishi, R. (2005). PK-3: An aligned and coordinated approach to education for children 3 to 8 years old. *Social Policy Report*, *19*(3). Society for Research in Child Development.
[33] For further information and discussion about key aspects of assessment system, infrastructures, and examples see: Demma, R. (2010). *Building Ready States: A Governor's Guide to Supporting a Comprehensive, High-Quality Early Childhood State System.* Washington, DC: National Governors Association Center for Best Practices. http://www.nga.org/Files/pdf/1010GOVSGUIDEEARLYCHILD.PDF. National Research Council, (2008), Chapter 9, p.304-328; National Early Childhood Accountability Task Force, (2007). National Association for the Education of Young Children, & National Association of Early Childhood Specialists in State Departments of Education. (2003). *Early childhood curriculum, assessment, and program evaluation: Building an effective, accountable system in programs for children birth through age 8*. http://www.naeyc.org/files/naeyc/file/positions/CAPEexpand.pdf.
[34] Meisels, (2007); National Research Council, (2008).
[35] National Research Council, (2001); Shonkoff & Phillips, (2000).
[36] For a discussion of this caution, see National Association of Early Childhood Specialists in State Department of Education. (2000). *Still unacceptable trends in kindergarten entry and placement: A position statement developed by the National Association of Early Childhood Specialists in State Departments of Education*. Washington DC: NAEYC. http://www.naeyc.org/files/naeyc/file/positions/Psunacc.pdf.
[37] CCSSO (2011). *The Words We Use: A Glossary of Terms for Early Childhood Education and Assessment*. State Collaborative on Early Childhood Education & Assessment; National Research Council. (2008).

The State Collaboratives on Assessment and Student Standards (SCASS): The CCSSO State Collaboratives on Assessment and Student Standards (SCASS) program strives to develop and implement high standards and valid assessment systems that maximize educational achievement for all children. During the past 20 years, the SCASS system has brought state education agency (SEA) career service professionals together to solve complex problems affecting the states. The SCASS programs are formed in response to specific project needs. Some programs focus on specific content areas like science, mathematics, social studies, or health. Others focus on policy, psychometric problems, or technology. Membership in the SCASS system represents an investment that sees its value leveraged and returned many times over through advocacy, program involvement, and professional development.

About the Early Childhood Education State Collaborative on Assessment and Student Standards: The Early Childhood Education Assessment (ECEA) Collaborative works to enhance young children's learning and school success from birth through third grade. ECEA focuses on helping states design and implement standards for children's learning and development through early childhood program quality, child and program assessments, data systems, and accountability initiatives for early education, kindergarten, and primary grade programs.

The ECEA collaborative supports successful child and teacher development and learning through a state-based system approach that is comprehensive, integrated, and aligned to early childhood needs. ECEA believes that state-based systems should be composed of early learning standards, child assessments, and program evaluation; connected to early childhood curricula, instruction and professional development; and committed to tracking progress for children, programs, and the system.

Members of the ECEA are Connecticut, Iowa, Louisiana, Maryland, Massachusetts, Michigan, Nebraska, Ohio, and Wyoming. Thomas Schultz is the ECEA collaborative advisor and project director for Early Childhood Initiatives at CCSSO in Washington, DC.

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THE COUNCIL OF CHIEF STATE SCHOOL OFFICERS

The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public.

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Christopher Koch (Illinois), President
Gene Wilhoit, Executive Director
Tom Schultz, Project Director, Early Childhood Initiatives

Council of Chief State School Officers
One Massachusetts Avenue, NW, Suite 700
Washington, DC 20001-1431
Phone (202) 336-7000
Fax (202) 408-8072
www.ccsso.org