Kindergarten Entry Assessments: Practices and Policies

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In the following report, Hanover Research reviews literature regarding early childhood school readiness and assessment practices. In addition, we profile exemplary states that are developing comprehensive kindergarten entry assessment systems.

HANOVER RESEARCH

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INTRODUCTION

In 2011, the initial round of the Race to the Top – Early Learning Challenge (RTT-ELC) grant program cast a spotlight on early childhood assessment. Indeed, a primary focus of the Early Learning Challenge program is to support states' development and use of high-quality assessments at kindergarten entry.[1] Prior to 2011, many states had no systematic method for collecting extensive data on kindergarteners. However, kindergarten entry assessments (KEAs) are now increasingly common.[2]

Simply put, KEAs are evaluations "conducted within the first few months of kindergarten to collect data on children."[3] While KEAs may be used to collect demographic data and determine children's living conditions, they often serve to assess children's developmental skills. In other words, KEAs are used to determine early childhood school readiness. Statewide early assessment systems vary greatly in terms of the instruments used and the types of learning that are assessed.[4] As such, this report is intended to assist educators in defining school readiness and developing an effective early childhood assessment system.

This report is divided into the following two sections:

- **Section I** reviews literature pertaining to early childhood school readiness and assessment. In this section, we examine definitions of school readiness, identify best practices in assessment, and discuss off-the-shelf KEAs.
- **Section II** profiles three RTT-ELC grant recipients and examines their activities in developing statewide early childhood assessment systems. The three states profiled are Washington, Maryland, and North Carolina.

In addition to the above two sections, the Appendix provides samples of school readiness definitions and indicators for Virginia, Kentucky, Washington, and Maryland.

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[1] "Race to the Top – Early Learning Challenge: Executive Summary." U.S. Department of Education, August 2013, pp. 11-15. http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/2013-executive-summary.doc
[2] Maxwell, K., C. Scott-Little, J. Pruette, and K. Taylor. "Kindergarten Entry Assessment: Smart Start Conference." North Carolina Department of Public Instruction, May 2013, p. 5. http://rtt-elc-k3assessment.ncdpi.wikispaces.net/file/view/KEA+Smart+Start+Presentation+May+13+final.pdf
[3] Ibid., p. 4.
[4] Ibid., p. 5.

KEY FINDINGS

- **Early childhood school readiness encompasses the socio-emotional, physical, and cognitive skills that enable a child to succeed in an early learning environment.** While the exact developmental areas and indicators vary across states and organizations, general consensus now holds that readiness should be evaluated according to five domains:
    - Physical and motor development
    - Social and emotional development
    - Language and communicative development
    - Approaches to learning
    - Cognitive development or general knowledge

- **At a minimum, early childhood assessments should evaluate children using behavioral indicators across the above five domains of development.** While past assessments concentrated on literacy and math, evaluations must also include social, emotional, and physical factors in order to be meaningful. Some assessments also include factors related to self-expression, such as arts and creativity.

- **The primary purpose of early childhood assessment should be formative assessment and instructional improvement.** However, kindergarten entry assessments may also be used for other reasons, such as screening and accountability. Establishing a comprehensive school readiness system can also improve public awareness about the skills necessary for success in early learning.

- **Kindergarten entry assessments should be part of a comprehensive system that includes supporting infrastructure.** Effective early childhood assessment systems involve regular professional development, opportunities for collaboration between kindergarten teachers and early childcare providers, family engagement, and actionable data reporting. For instance, Washington's assessment system emphasizes family connection and early learning collaboration.

- **Because it is crucial that assessments align with state learning standards, exemplary states develop original assessment instruments that fit their unique priorities.** One emerging trend is to use an off-the-shelf device, such as Teaching Strategies GOLD or Work Sampling System, and to customize the assessment to align with standards and meet the needs of stakeholders.

- **Kindergarten entry assessments should gather input from multiple sources, including teachers and families, because children's behavior is likely to vary across settings**. Furthermore, assessments should generate a holistic child profile that includes family conditions and environmental factors, in addition to skills and abilities.

- **Decision-makers should take a proactive approach to developing a community-specific definition of school readiness.** Experts suggest different communities and stakeholder groups have different priorities regarding school readiness. As such, education providers should engage communities, possibly through discussion forums, to reach a common understanding.

SECTION I: LITERATURE REVIEW

This section reviews the research literature on early childhood school readiness and assessment. First, it discusses definitions of school readiness, including various dimensions of childhood development. Next, it identifies best practices in early childhood assessment and examines trends in state-sponsored kindergarten entry assessments.

DEFINING SCHOOL READINESS

Broadly defined, school readiness means that a child is prepared to enter and benefit from a social, educational environment. **A child's level of school readiness thus encompasses a wide range of developmental skills and competencies, and is heavily influenced by home and preschool experiences**.[5] When considering school readiness, experts emphasize that schools must ultimately be prepared to meet the needs of all children. Education providers should be committed to offering developmentally appropriate programs and engaging parents, rather than simply labeling a child "ready" or "not ready."[6] In fact, some states define school readiness to reflect this multitude of factors. For instance, Virginia's definition of school readiness includes "the capabilities of children, their families, schools, and communities that will best promote student success in kindergarten and beyond."[7]

Because of variations in young children's cognitive abilities and home environments, it is not reasonable to expect all students to be adequately prepared to learn early reading, writing, and mathematics skills by the time they enter kindergarten.[8] As such, it remains a school's responsibility to "educate all children who are old enough to legally attend school, regardless of their skills."[9] Indeed, school readiness should not be confused with eligibility to begin school. All states have established an age requirement that determines when children are legally eligible to enter kindergarten, which is typically five years of age by a certain date cut-off.[10] While some experts highly value the fairness of these policies, which call for equal treatment of all children, research demonstrates that age is not the best way to gauge whether a child is truly ready for a school environment.[11] Some states take this distinction into consideration in their policies. For instance, Wisconsin's definition of school

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[5] "School Readiness—Preparing Children for Kindergarten and Beyond: Information for Parents." National Association of School Psychologists, 2004, p. 1. http://www.nasponline.org/resources/handouts/schoolreadiness.pdf

[6] Kagan, S. L. Co-director, National Center for Children and Families, Columbia University. Telephone interview, September 18, 2013.

[7] "Virginia's Definition of School Readiness." Virginia Board of Education, p. 1. http://www.doe.virginia.gov/instruction/early_childhood/school_readiness/va_school_readiness_definition.pdf

[8] "School Readiness—Preparing Children," Op. cit., p. 1.

[9] Maxwell, K. L. and R. M. Clifford. "School Readiness Assessment." *Young Children,* January 2004, p. 1. http://journal.naeyc.org/btj/200401/Maxwell.pdf

[10] "Defining School Readiness." Texas Early Learning Council, Sept. 2011, p. 5. http://earlylearningtexas.org/media/10138/trends%20in%20school%20readiness%20final%2011-1.pdf

[11] [1] "School Readiness—Preparing Children," Op. cit., p. 1.
  [2] "Kindergarten Readiness: Is Your Child Ready for School?" Baby Center, March 2012. http://www.babycenter.com/0_kindergarten-readiness-is-your-child-ready-for-school_67232.bc

readiness "recognizes a child's eligibility for kindergarten based on age, while also stressing a set of 'conditions' that will allow a child to be successful."[12]

Age eligibility aside, however, researchers note that "a common definition of school readiness remains elusive."[13] In general, definitions of school readiness include sets of skills that are perceived as being instrumental to children's success in the early learning environment.[14] However, the exact developmental areas and indicators vary across states and organizations.

For instance, one simple definition states that a child's abilities to "think logically, speak clearly, and interact well with other children and adults are all critically important to success in school."[15] However, general consensus holds that school readiness is more complex and refers to **the physical, emotional, behavioral, and cognitive skills "needed to learn, work, and function successfully in school."**[16] Indeed, in a synthesis of input from over 200 scholars, the National Education Goals Panel (NEGP) determined that school readiness should consider a child's progress in five key areas:

- Physical and motor development
- Social and emotional development
- Language and communicative development
- Approaches to learning
- Cognitive development or general knowledge[17]

In efforts to standardize measures of progress in these five domains, organizations have created straightforward indicators of children's actions that signify they are "ready" for school. For instance, the National Association of School Psychologists (NASP) has determined that children equipped for early success typically demonstrate the ability to follow simple rules, dress independently, and recite the alphabet, among other abilities (Figure 1.1).[18] Behavioral indicators like these have become the foundation for definitions of school readiness, and therefore early learning standards and early childhood assessment.

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[12] "Defining School Readiness," Op. cit., p. 5.
[13] Maxwell and Clifford, Op. cit., p. 8.
[14] "Defining School Readiness," Op. cit., p. 5.
[15] "Kindergarten Readiness: Is Your Child Ready for School?" Op. cit.
[16] [1] "School Readiness—Preparing Children," Op. cit., p. 1.
  [2] "Kindergarten Readiness: Is Your Child Ready for School?" Op. cit.
[17] [1] Kagan, S. L. "Children's Readiness for School: Issues in Assessment." *International Journal of Early Childhood,* 35:1/2, 2003, p. 116.
  [2] Shepard, L., S. L. Kagan, and E. Wurtz. "Principles and Recommendations for Early Childhood Assessments." National Education Goals Panel, February 1998, p. 6. http://govinfo.library.unt.edu/negp/reports/prinrec.pdf
[18] "School Readiness—Preparing Children," Op. cit., p. 2.

Figure 1.1: NASP's Characteristics of School Readiness

- Follow structured daily routines.
- Work independently with supervision.
- Get along with and cooperate with other children.
- Write their own name or to acquire the skill with instruction.
- Recite the alphabet (or quickly learn with instruction).
- Identify sound units in words and to recognize rhyme.

- Dress independently.
- Listen and pay attention to what someone else is saying.
- Play with other children.
- Work with puzzles, scissors, coloring, paints, etc.
- Count or acquire the skill with instruction.
- Identify both shapes and colors.
- Follow simple rules.

Source: National Association of School Psychologists[19]

While these indicators provide a more nuanced approach to readiness than age alone, educators and policymakers should avoid applying too rigid a definition of readiness, which may inadvertently neglect variation in children's access to developmental opportunities.[20] Section II of this report profiles definitions of school readiness and related initiatives in Washington, Maryland, and North Carolina. In addition, the Appendix presents definitions and indicators of school readiness from Virginia and Kentucky (Figures A.1 to A.3) to further indicate the range of state policies in this area.

Finally, **experts recommend that decision-makers take a highly proactive approach in developing a community-specific definition of school readiness.** Because parents, preschool teachers, and kindergarten teachers likely have different views of school readiness, communities should strive toward a common understanding. Holding discussion forums where all parties meet to discuss and reach a consensus on school readiness can help ensure that the definition used addresses the needs of all stakeholders.[21] This practice can also increase public awareness about the skills necessary to succeed in kindergarten and assist parents in effectively preparing their children for a formal early learning environment.[22]

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[19] Table items taken verbatim from: Ibid.

[20] "Where We Stand on School Readiness." National Association for the Education of Young Children, p. 1. http://www.naeyc.org/files/naeyc/file/positions/Readiness.pdf

[21] Maxwell and Clifford, Op. cit., p. 9.

[22] "Defining School Readiness," Op. cit., p. 5.

BEST PRACTICES IN EARLY CHILDHOOD ASSESSMENT

Early assessment can lead to better outcomes for children by informing instructional practices and program development. To positively influence children's well-being, research indicates that assessments must be "well-designed, implemented effectively, developed in the context of systematic planning, and are interpreted and used appropriately."[23]

PURPOSE

Any assessment must have a clearly defined purpose in order to be effective. While the goals of an early childhood assessment will vary depending on the context, they may include high-stakes accountability, instructional improvement, identification of children in need of additional services, and trend evaluation. While administering high-stakes assessments to young children is generally discouraged, the latter three reasons are considered necessary for developing a high-quality educational program. Researchers also caution that assessments have indeed been used for reasons other than their intended purpose. For instance, using early childhood tests to assess school readiness has "resulted in children being kept out of school unnecessarily."[24]

Currently, practitioners use assessments for a host of reasons, but **the primary purpose of every KEA should be formative assessment and instructional improvement**.[25] Using one assessment device for multiple purposes may be problematic as each goal often requires different methodologies and instruments.[26] However, researchers acknowledge that states and other providers face great pressure to use the same assessment instrument for multiple purposes. To minimize negative effects, decision-makers should fully commit to instructional improvement, and address secondary objectives thereafter.[27] To this end, assessments should comprise a comprehensive evaluation of children's development, including physical, cognitive, and social competencies.

CONTENT

First and foremost, assessments should determine what children know and can do. **Children's abilities should be evaluated based on the five dimensions of school readiness** outlined above and presented again in Figure 1.2 on the following page. Assessments that determine development in these domains typically involve observations of how well a child can perform a related task. Researchers note that "any assessment that reduces readiness to fewer than these five dimensions is inadequate."[28] Some reports suggest assessments should even be expanded beyond these traditional considerations to include domains such as "art, music, creativity, and interpersonal skills."[29]

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[23] Snow, C. E., and S. B. Van Hemel. "Early Childhood Assessment: Why, What, and How." The National Academies Press, 2008, p. 12. http://www.nap.edu/openbook.php?record_id=12446&page=R1
[24] Kagan, "Children's Readiness for School," Op. cit., p. 117.
[25] Kagan, Telephone interview, Op. cit.
[26] Kagan, "Children's Readiness for School," Op. cit., p. 117.
[27] Kagan, Telephone interview, Op. cit.
[28] Kagan, "Children's Readiness for School," Op. cit., p. 118.
[29] Snow and Van Hemel, Op. cit., p. 5.

Figure 1.2: Indicators of What Children Know and Can Do

DIMENSION	SAMPLE INDICATORS (HOW WELL CHILDREN...)
Physical and motor development	▪ Walk balance beams ▪ Cut ▪ Do puzzles
Social and emotional development	▪ Accept responsibility for their actions ▪ Take turns ▪ Form and maintain relationships
Language and communicative development	▪ Use and comprehend language ▪ Initiate and sustain discussions ▪ Understand and discuss pictures
Approaches to learning	▪ Demonstrate motivation and curiosity ▪ Persist at tasks ▪ Use materials in innovative ways
Cognitive development or general knowledge	▪ Match shapes and sort colors ▪ Ascribe value to numbers ▪ Demonstrate awareness of cause and effect

Source: Kagan, S. L.[30]

One crucial process in implementing meaningful entry assessments is **aligning the assessment device with the state's learning standards.** The Council of Chief State School Officers (CCSSO) describes alignment of early learning standards and Common Core State Standards as a key principle of kindergarten readiness assessment.[31] To this end, researchers have developed set methodologies for conducting alignment analyses. These analyses can assess the degree of alignment between a given off-the-shelf assessment and a state's early learning standards, and design an approach for creating a truly cohesive assessment system.[32]

Another factor to consider when evaluating kindergarten entry assessments is the degree of burden it places on education practitioners. Critics contend that the exacting data collection and entry processes necessary in some off-the-shelf assessments may create undue time constraints for teachers, resulting in negative consequences for students.[33] In fact, experts suggest that assessment creators have not sufficiently emphasized item analysis, a process that ensures each question or indicator measures a different behavior. For instance, assessments may evaluate a student's pincer grip by asking them to button a shirt *and* use a scissors, when one or the other would be sufficient.[34] This may help to explain why several states have tailored off-the-shelf assessments by retaining key indicators and eliminating others.

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[30] Table items adapted from: Kagan, Op. cit., p. 118.

[31] "Moving Forward with Kindergarten Readiness Assessment Efforts." Council of Chief State School Officers, June 2011, p. 3. http://www.ccsso.org/Documents/CCSSO_K-Assessment_Final_7-12-11.pdf

[32] Kagan, Telephone interview, Op. cit.

[33] "Do Not Go for the GOLD (Teaching Strategies GOLD) for Early Childhood Classrooms." Peg with Pen, September 2, 2013. http://www.pegwithpen.com/2013/09/do-not-go-for-gold-teaching-strategies.html

[34] Kagan, Telephone interview, Op. cit.

In addition to measuring children's skills, assessments should evaluate the broader environment of children's upbringing. This includes family conditions and access to support services, as high-quality home and preschool environments are associated with greater school readiness. In fact, research suggests high-quality learning environments in children's early years have long-lasting effects that persist well into elementary grades.[35] These types of data are typically collected for the purpose of trend assessment and are reported as aggregated percentages, rather than by individual child. Environmental indicators should address children's health conditions, family income, access to childcare, and any other factors that may affect their physical, social, and cognitive development.[36]

Given that assessments evaluate a wide range of content, **researchers emphasize the importance of using multiple sources of information.** While educational assessments typically focus on testing students themselves, early childhood assessments should also draw from teacher and family observations because children's skills can vary across settings. For instance, teachers' observations may be useful for evaluating children's social skills and problem behaviors, while families' observations can provide information regarding health and learning approaches.[37]

SYSTEM

To be effective, early childhood assessments should be integrated into a larger system that offers "a strong infrastructure to support children's care and education."[38] Such infrastructure is key to ensuring that assessments can efficiently assist in the process of instructional improvement. The system should include:

- **Standards:** A comprehensive, well-articulated set of standards for both program quality and children's learning.

- **Assessments:** Multiple approaches to documenting program quality, as well as children's learning and development. Assessments should be aligned to standards.

- **Reporting:** An integrated database of assessment instruments and results that also provides information on how scores relate to standards and produces reports for various stakeholder groups.

- **Professional development:** Ongoing opportunities for policy makers, program directors, administrators, and practitioners to further their understanding of standards and learn to use assessment results for their own purposes.

- **Opportunity to learn:** Procedures to assess children's environments and whether they offer safety, enjoyment, and high-quality support for development and learning.

- **Inclusion:** Procedures for ensuring that all children served by the program will be assessed fairly, regardless of their language, culture, or disabilities.

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[35] Winter, S. M. and M. F. Kelley. "Forty Years of School Readiness Research: What Have We Learned?" *Childhood Education,* 84:5, 2008, p. 263.
[36] Kagan, "Children's Readiness for School," Op. cit., pp. 118-119.
[37] Maxwell and Clifford, Op. cit., p. 7.
[38] Snow and Van Hemel, Op. cit., p. 8.

- **Resources:** Assurance that the financial resources needed to ensure the development and implementation of the system will be available.

- **Monitoring and evaluation:** Continuous monitoring of the system itself to ensure that it is operating effectively and that all elements are working together to serve the interests of the children.[39]

All components should form a coherent system in which curriculum, instruction, and assessment are all aligned with early learning and development standards. The notion that assessment instruments are one piece of a larger, comprehensive system is consistent with emerging practices among RTT-ELC winners. For instance, as described in Section II, Washington's kindergarten entry assessment represents a single component of a broader infrastructure, which also includes formalized opportunities for parental engagement and collaboration among education practitioners.

KINDERGARTEN ENTRY ASSESSMENT PRACTICES

Determining the most effective assessment instrument can be a challenge for administrators and other decision-makers. A wide range of off-the-shelf assessment devices exist, and many of them emphasize different aspects of learning and development.[40] As such, researchers recommend the following set of guiding questions for selecting a kindergarten entry assessment:

- **What is your definition of school readiness?** Will the five domains of development suit your needs? Do you already collect information in certain areas, or will you need new assessment tools?

- **What is your purpose or purposes?** If the purpose of the assessment is to improve learning, does the content of the assessment match the curriculum content?

- **What are the characteristics of the children to be assessed?** Characteristics may include children's age, English proficiency, race/ethnicity, and disabilities. The assessments tools selected should be designed to be used with children similar to the ones you will assess.

- **What are the technical properties of the assessment?** Is there evidence of adequate validity and reliability? Different purposes require different standards of technical properties.[41]

Given that states have different priorities for early childhood education, they naturally select different methods for developing and implementing entry assessments. Some states do not conduct kindergarten entry assessments at all, other states use off-the-shelf instruments, and others have developed comprehensive assessment systems from scratch.

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[39] Bulleted items adapted from: Ibid., pp. 8-9.

[40] Niemeyer, J. and C. Scott-Little. "Assessing Kindergarten Children: A Compendium of Assessment Instruments." SERVE Center, University of North Carolina at Greensboro, 2002, p. 2. http://www.serve.org/uploads/publications/assesskindergarteninstruments.pdf

[41] Bulleted items adapted from: Maxwell and Clifford, Op. cit., p. 6.

A review of 2011 RTT-ELC applications provides insight into states' kindergarten entry assessment practices. As presented in Figure 1.3, of the 37 states that submitted applications, 13 states indicated they did not use kindergarten assessments and one was not specific about its methods. Of the remaining 23 states, nine were using state-developed assessments, four were using a version of Work Sampling System, three were using Teaching Strategies GOLD, two were using other multi-domain systems, and five were using systems that only assessed language and literacy.

Figure 1.3: KEA Types among RTT-ELC Applications

KEA TYPE	STATE	
State-Developed	▪ California ▪ Connecticut ▪ Hawai'i ▪ Kansas ▪ Missouri	▪ North Carolina ▪ Pennsylvania ▪ Puerto Rico ▪ Vermont
Work Sampling System	▪ Maryland ▪ Michigan	▪ Minnesota ▪ New Jersey
Teaching Strategies GOLD	▪ Colorado ▪ Delaware	▪ Washington
Other Multi-Domain Assessment	▪ Arkansas	▪ Florida
Simplified Language and Literacy Assessment	▪ Iowa ▪ Mississippi ▪ New Mexico	▪ Ohio ▪ Oklahoma
No Assessment or Non-Specific Assessment	▪ Arizona ▪ District of Columbia ▪ Georgia ▪ Illinois ▪ Kentucky ▪ Maine ▪ Massachusetts	▪ Nebraska ▪ Nevada ▪ New York ▪ Oregon ▪ Rhode Island ▪ West Virginia ▪ Wisconsin

Source: Early Learning Challenge Collaborative[42]

However, kindergarten entry assessments are becoming increasingly common. National attention to early childhood learning and assessment has spurred many states to improve their system or implement a new system. Of the 37 RTT-ELC applicants, 35 proposed using the funds to develop or improve a KEA system.[43] A recent report from May 2013 indicates that 43 states currently use a kindergarten entry assessment or have plans to develop one.[44]

One trend observed among RTT-ELC winners **is adopting a proprietary assessment device as a starting point and then customizing the system to suit the state's priorities.** As Figure 1.3 indicates, Work Sampling System and Teaching Strategies GOLD are the most common off-the-shelf KEAs. Maryland, Ohio, and Minnesota plan to use adapted versions of Work

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[42] Wat, A., C. Bruner, A. Hanus, and C. Scott-Little. "Review of State KEA Plans Proposed for the Early Learning Challenge." Early Learning Challenge Collaborative, November 1, 2012, p. 3. Retrieved from: http://www.elccollaborative.org/assessment/77-kindergarten-entry-assessment.html
[43] Ibid.
[44] Maxwell, et al., Op. cit., p. 5.

Sampling System, while Washington and Delaware plan to use adapted versions of Teaching Strategies GOLD.[45] States taking this approach pick and choose certain assessment items to use as part of their systems, and discard or de-emphasize remaining items. The retained items are a result of alignment analyses, which identify the assessment indicators most pertinent to state learning standards. Figures A.4 and A.6 in the Appendix present the structures of Teaching Strategies GOLD and Work Sampling System, respectively.

Another trend observed is collaboration among states. Indeed, one of the Early Learning Challenge Collaborative's top ten recommendations to RTT-ELC winners is to "collaborate with other states in KEA development."[46] A prime example is the collaboration between Maryland and Ohio, discussed in Section II, which experts have referred to as the "most sophisticated work in the country."[47] Maryland and Ohio are working together to create a comprehensive early childhood assessment that they will eventually make available for purchase to other states.

Another incentive for collaboration may be the U.S. Department of Education's Grants for Enhanced Assessment Instruments, which are awarded to improve the quality of state assessments, measure academic achievement, and chart student progress over time.[48] In 2013, Maryland, North Carolina, and Texas were all awarded grants of approximately $5 million to support the development and implementation of kindergarten entry assessments. Maryland and North Carolina have opted to form state consortia to bolster these efforts.[49]

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[45] Bornfreund, L. "Race to the Top – Early Learning Challenge Winners." New America Foundation, March 13, 2012, pp. 17-19. http://earlyed.newamerica.net/sites/newamerica.net/files/articles/Race%20to%20the%20Top%20Series_0.pdf

[46] "Top Ten Recommendations for State Leaders Implementing Kindergarten Entry Assessments." Early Learning Challenge Collaborative, p. 4. Retrieved from: http://www.elccollaborative.org/assessment/77-kindergarten-entry-assessment.html

[47] Kagan, Telephone interview, Op. cit.

[48] "Grants for Enhanced Assessment Instruments." U.S. Department of Education. http://www2.ed.gov/programs/eag/index.html

[49] "EAG Awards Made Through a 2013 Competition." U.S. Department of Education. http://www2.ed.gov/programs/eag/awards13.html

SECTION II: STATE PROFILES

This section profiles three states that are using RTT-ELC grant funding to enhance their early childhood assessment systems: Washington, Maryland, and North Carolina. Each of these states is approaching assessment differently. Washington will use an adapted version of Teaching Strategies GOLD, Maryland will use an adapted version of Work Sampling System, and North Carolina will create an original device.

WASHINGTON

Washington's current early childhood assessment system began in 2008 when the Department of Early Learning contracted with an independent organization to evaluate the viability of a statewide system. The resultant study concluded that a "statewide kindergarten assessment process could complement and strengthen what local schools are already doing."[51] Researchers recommended a planning strategy for Washington that included a planning stage (2009-2010), pilot stage (2010-2011), and a voluntary use stage (2011-2013), after which all districts would be required to use the assessment statewide.[52]

Washington advanced its push toward a statewide kindergarten assessment when it won a Race to the Top – Early Learning Challenge grant in 2011.[53] Its application outlined goals and an implementation strategy for the **Washington Kindergarten Inventory of Developing Skills (WaKIDS)** system, which at that time was already in the pilot stage. The ultimate goal of the project was to "[s]cale a high-quality kindergarten assessment that informs early elementary teachers, early learning programs, parents, and policy-makers."[54] As indicated in Figure 2.1, Washington established ambitious performance targets for the program, including assessing all kindergarteners and training all teachers by the end of the grant in 2015.

Figure 2.1: Washington RTT-ELC Performance Targets for KEA

- 100% of all children
- 100% of kindergarten teacher trained
- 75% of these children are "ready" in 3 out of 4 domains
- 90% of trained teachers find the training helpful for instruction
- 95% of families participate
- 70% of early learning professionals participate

Source: U.S. Department of Education[50]

Washington's assessment scheme coincides with 2011 legislation that authorizes state funding to ensure all children have access to all-day kindergarten programs by the 2017-

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[50] "Project Plan Report: 2012 - WA - Department of Early Learning: PR Award #: S412A120035." U.S. Department of Education, February 5, 2013, p. 8. http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/state-scope-of-work/wasow.pdf

[51] Golan, S., D. Petersen, and D. Spiker. "Kindergarten Assessment Process Planning Report." SRI International, December 8, 2008, p. 30. http://www.k12.wa.us/WaKIDS/pubdocs/KindergartenAssessment_SRIreport.pdf

[52] Ibid., p. 29.

[53] "RTT – ELC Phase 1." U.S. Department of Education. http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/awards-phase-1.html

[54] "Project Plan Report: 2012 - WA - Department of Early Learning," Op. cit., p. 8.

2018 school year.[55] In a related bill, lawmakers required all state-funded kindergarten programs to use WaKIDS.[56] About 22,000 of Washington's 80,000 kindergarteners participated in WaKIDS in the 2012-2013 school year, and this portion will continue to increase as the state improves funding for full-day kindergarten programs.[57]

The WaKIDS process assesses children's strengths, welcomes students and their families to kindergarten, and examines factors that enable children to be successful in school.[58] The WaKIDS system comprises three components:

- Whole-child assessment
- Family connection
- Early learning collaboration[59]

The **whole-child assessment component is an adaptation of Teaching Strategies GOLD** and informs teachers about socio-emotional, physical, cognitive, language, literacy, and mathematics development.[60] After piloting Teaching Strategies GOLD, Work Sampling System, and Developing Skills Checklist, Washington decided GOLD offered the greatest potential for building a "Pre-K [through] third grade continuum of data" and the best framework for providing joint professional development.[61] The WaKIDS tailored version assesses children on six of GOLD's 10 development domains, and uses 19 of GOLD's 38 learning objectives. WaKIDS assesses the following six domains:

- Social-emotional
- Physical
- Language
- Literacy
- Cognitive
- Mathematics[62]

Washington opted not to assess children in Science and Technology, the Arts, Social Studies, or English Language Acquisition. Figure A.4 in the Appendix presents a complete version of GOLD's 38 learning objectives and indicates which objectives Washington retained. The decision to eliminate certain domains and objectives appears to be the result of an

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[55] "RCW 28A.150.315: Voluntary all-day kindergarten programs — Funding — Identification of skills, knowledge, and characteristics — Assessments." Washington State Legislature.
http://apps.leg.wa.gov/rcw/default.aspx?cite=28A.150.315

[56] "RCW 28A.655.080: Washington kindergarten inventory of developing skills — Implementation and administration — Work group — Reports — Grants — Waivers." Washington State Legislature.
http://apps.leg.wa.gov/rcw/default.aspx?cite=28A.655.080

[57] "What is WaKIDS?" State of Washington Office of Superintendent of Public Instruction.
http://www.k12.wa.us/WaKIDS/pubdocs/WhatIsWaKIDS.pdf

[58] Ibid.

[59] Bulleted items taken verbatim from: WaKIDS." State of Washington Office of Superintendent of Public Instruction. State of Washington Office of Superintendent of Public Instruction.

[60] Ibid.

[61] Joseph, G. E., et al. "WaKIDS Pilot: Second Report." University of Washington Childcare Quality and Early Learning Center for Research and Training, June 2011, p. ix.
http://www.k12.wa.us/WaKIDS/pubdocs/WaKIDSUWReport2011.pdf

[62] Bulleted items taken verbatim from: Joseph, G. E. and D. McCutchen. "Inter-rater Reliability and Concurrent Validity Study of the Washington Kindergarten Inventory of Developing Skills (WaKIDS)." University of Washington, June 2013, p. 4. http://www.k12.wa.us/WaKIDS/pubdocs/WaKIDS_Report072613.pdf

alignment analysis that compared Washington's early learning standards to GOLD's objectives and indicators.[63]

Teachers are required to administer the whole-child assessment during the first few weeks of the school year and report results by October 31. However, schools can choose to administer GOLD up to three times per year. The WaKIDS guiding documents indicate that "[b]ecause GOLD is an observational assessment, teachers can assess more than one student and objective at one time."[64] Furthermore, educators are encouraged to progress with instruction while the assessment period is in session. Teachers should not be concerned about students gaining skills before or after their assessment because GOLD is intended to simply provide a snapshot of student performance. In fact, Washington educators use Teaching Strategies GOLD for interim and formative assessment, but use separate instruments for screening and summative assessment.[65]

The **family connection component** of WaKIDS "provides an opportunity for families to meet individually with their child's kindergarten teacher at the beginning of the school year."[66] In July 2013, Washington lawmakers authorized schools to set aside three full days at the beginning of the school year for family connection.[67] Teachers and families meet for 20 to 40 minutes to become familiar with each other and address any concerns going into the school year. The family connection is designed to welcome families to school, smooth entry into kindergarten, establish a relationship between families and teachers, and create a safe environment for families to share sensitive information about their children.[68] Educators are encouraged to use a guide booklet, Introducing Me!, in which students fill out information about themselves and their families. Figure A.5 in the Appendix presents questions that appear on "Introducing Me!" WaKIDS does not require teachers to officially report anything regarding family connection, but collects feedback annually through a survey.[69]

The **early learning collaboration component** is intended to "increase communication and build connections between kindergarten teachers and early learning providers."[70] This component is still being developed, but Washington is determined to build a "seamless P-3

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[63] "Alignment of Teaching Strategies GOLD Objectives for Development and Learning: Birth through Kindergarten with Washington State Early Learning and Development Guidelines." Teaching Strategies, LLC, 2012, pp. 1-85.
http://www.k12.wa.us/WaKIDS/pubdocs/AlignmentTSGoldwithWaEarlyLrngDevGuidelines.pdf

[64] "Principal Series: 3: Whole-Child Assessment." State of Washington Office of Superintendent of Public Instruction. State of Washington Office of Superintendent of Public Instruction, August 13, 2013, p. 1.
http://www.k12.wa.us/WaKIDS/pubdocs/3_WholeChildAssessment.pdf

[65] Ibid.

[66] "WaKIDS: Family Connection." State of Washington Office of Superintendent of Public Instruction.
http://www.k12.wa.us/WaKIDS/Family/default.aspx

[67] "Second Substitute House Bill 1723." Washington State Legislature, 63rd Legislature, 2013 Regular Session, April 25, 2013, pp. 1-14. http://apps.leg.wa.gov/documents/billdocs/2013-14/Pdf/Bills/House%20Passed%20Legislature/1723-S2.PL.pdf

[68] Principal Series: 2: Family Connection." State of Washington Office of Superintendent of Public Instruction, August 13, 2013, p. 1. http://www.k12.wa.us/WaKIDS/pubdocs/2_FamilyConnection.pdf

[69] Ibid., p. 2.

[70] "WaKIDS - Early Learning Collaboration Framework." State of Washington Office of Superintendent of Public Instruction, p. 1.
http://www.k12.wa.us/WaKIDS/Collaboration/pubdocs/WaKIDS_Early_Learning_Collaboration_Framework.pdf

system" in which early education providers and K-12 providers inform and influence each other. The goals of the structured collaboration are to:

- Build and strengthen relationships between early learning providers and kindergarten teachers;

- Develop a shared understanding and common expectations for kindergarten readiness;

- Share emerging best practices within and across regions;

- Share and better familiarize districts and the early learning community with Teaching Strategies GOLD, the data being collected, and the reports that can be generated;

- Analyze regional WaKIDS data to inform practice and improve future school readiness; and

- Coordinate with districts and elementary schools to engage kindergarten teachers, elementary principals and administrators in the Educational Service Districts/Coalition events.[71]

The collaboration is organized according to Washington's nine Educational Service Districts, which comprise geographical clusters of school districts. Neighboring districts form Early Learning Regional Coalitions, which hold meetings, promote awareness of early learning, and communicate implementation processes.[72] The collaboration component is led by a steering committee that works with WaKIDS data and develops collaboration action plans.[73]

MARYLAND

The Maryland Model for School Readiness (MMSR) is the state's current "assessment and instructional system designed to provide parents, teachers, and early childhood providers with a common understanding of what children know and are able to do upon entering school."[74] MMSR was first conceived in 1995 and initially piloted in 1997. The system has gained significance through the years, particularly in 2000 when Maryland's Department of Budget and Management began using information collected by MMSR for budgeting decisions. At that time, Maryland lawmakers demonstrated a renewed commitment to school readiness and made the goal of increasing the percentage of children "fully ready" for kindergarten from 49 percent in 2000 to 75 percent in 2008.[75]

The MMSR framework defines school readiness, learning standards, and assessment methods, all of which are closely related.[76] Maryland's definition of school readiness explains that children must be adequately developed across several dimensions so that they are capable of benefitting from school:

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[71] Bulleted items taken verbatim from: Ibid., p. 1.

[72] Ibid., pp. 4-5

[73] Ibid., p. 2.

[74] "Maryland Model for School Readiness." Maryland Department of Education.
http://marylandpublicschools.org/MSDE/divisions/child_care/early_learning/MMSR.htm

[75] "A Look at Maryland's Early Childhood Data System." National Conference of State Legislators, 2010, p. 3.
http://www.ncsl.org/documents/educ/MDReport.pdf

[76] "Maryland Model for School Readiness (MMSR): Framework and Standards for Prekindergarten." Maryland State Department of Education, 2009, p. 6.
http://mdk12.org/instruction/ensure/MMSR/MMSRpkFrameworkAndStandards.pdf

MMSR defines school readiness as the state of early development that enables an individual child to engage in and benefit from early learning experiences. As a result of family nurturing and interactions with others, a young child in this stage has reached certain levels of **social and emotional development, cognition and general knowledge, language development, and physical well-being and motor development.** School readiness acknowledges individual approaches toward learning as well as the unique experiences and backgrounds of each child.[77]

The developmental factors described in Maryland's school readiness definition are consistent with best practice literature in that they include social, cognitive, and physical dimensions. Furthermore, the definition of readiness aligns with Maryland's early childhood learning standards and assessment instruments, both of which include social, cognitive, and physical elements.

MMSR learning standards are "broad, measurable statement[s] of what students should know and be able to do" and are aligned to the commercially available Work Sampling System (WSS).[78] The standards are organized slightly differently than WSS, but include similar content. Figure 2.2 presents Maryland's interpretation of the MMSR standards' basic alignment with WSS.

Figure 2.2: MMSR – WSS Alignment

MMSR STANDARDS	WORK SAMPLING SYSTEM DIMENSIONS
Personal and Social Development	Personal and Social Development
Language and Literacy Development	Language and Literacy Development
Cognition and General Knowledge ▪ Mathematics	Mathematical Thinking
▪ Science	Scientific Thinking
▪ Social Studies	Social Studies
▪ The Arts	The Arts
Physical Development and Health ▪ Physical Education ▪ Health Education	Physical Development and Health

Source: Maryland State Department of Education[79]

Each standard contains components, indicators, and learning objectives that describe student behavior. MMSR standards are intended to be used throughout the school year to guide instruction and formative assessment. Figure A.6 in the Appendix presents the structure of the MMSR standards, including its components and indicators.

In addition, MMSR defines "exemplars" for each indicator, which are descriptions of skills and behaviors that teachers can look for when evaluating each standard. For each indicator,

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[77] Ibid., p. 8.
[78] Ibid., p. 9.
[79] Table items taken verbatim from: Ibid., p. 13.

the MMSR provides three exemplars that denote a student's skill level as "proficient," "in process," or "needs development." The exemplars inform summative, portfolio-based assessments that are administered by teachers in the fall and spring of each year. The spring exemplars are notably more advanced than the fall exemplars, as students are expected to progress throughout the school year.[80]

Maryland aligns its early education standards to the complete version of the Work Sampling System, but only selected 30 key performance indicators from a total of 66 to include on the official state report.[81] The Maryland Department of Education collects summative assessment data based on these 30 WWS indicators during the first quarter of fall. After collecting reports from all kindergarten teachers, the Department:

- Merges enrollment and demographic data with assessment information
- Creates data file on all students
- Analyzes data according to MMSR K Assessment construct
- Verifies data and conducts reliability analyses
- Issues annual report and disseminates this report to districts, policymakers, and the early childhood community[82]

The 2011-2012 MMSR annual report, the most recent report published, shows that Maryland has increased the portion of children "fully ready" for school considerably over the previous decade. In 2001, the year after Maryland renewed its commitment to prepare all young children for school and thus the baseline year for future data analysis, 49 percent of kindergarteners were deemed "fully ready," 44 percent were deemed "approaching," and 7 percent were deemed "developing." In 2011, 83 percent were "fully ready," 15 percent were "approaching," and 3 percent were "developing."[83]

To expand upon this success, **Maryland pledged to revamp its early childhood education system, once again using Race to the Top – Early Learning Challenge grant funding.** In fact, Maryland scored 19.6 points out of a possible 20 points on the KEA portion of its 2011 RTT-ELC application, which was the highest total achieved among applicants.[84] Maryland has teamed with the Ohio Department of Education, also a winner of RTT-ELC grant funding, to create the **Early Childhood Comprehensive Assessment System (EC CAS)**, an extensive device for evaluating childhood readiness. The two states began developing the system in 2011, are piloting the system in 2013, and will use the system statewide by fall 2014.

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[80] "Assessment Guidelines: MMSR Exemplars." Maryland Department of Education.
http://www.mdk12.org/instruction/ensure/MMSR/MMSR_FP.html

[81] "Maryland Model for School Readiness 2011-2012." Maryland State Department of Education, 2012, p. 4.
http://www.marylandpublicschools.org/NR/rdonlyres/BCFF0F0E-33E5-48DA-8F11-
28CF333816C2/31940/2011_12_statereport_web_.pdf

[82] Bulleted items adapted from: "Maryland Model for School Readiness (MMSR): Kindergarten Assessment."
Maryland Department of Education, August 2009, p. 7.
http://marylandpublicschools.org/NR/rdonlyres/264017F7-E1A1-469B-8C9D-
F824AAF21159/31749/MMSR_ppttext1.pdf

[83] "Maryland Model for School Readiness 2011-2012," Op. cit., p. 1.

[84] Bornfreund, Op. cit., p. 17.

Maryland and Ohio plan to make the system available to other state for purchase once it is completed.[85]

The stated goals of the EC CAS are to generate reliable information "on all domains of school readiness from [the] ages to 36 to 72 months" and to produce reports that are "useful to families, early childhood educators, and policy makers for supporting the development and progress of children."[86] The Kindergarten Entry Assessment will be the cornerstone of the new system, but it will also include formative assessments, screening devices, professional development, and technology infrastructure, as presented in Figure 2.3.[87]

Figure 2.3: Maryland and Ohio's Early Childhood Comprehensive Assessment System
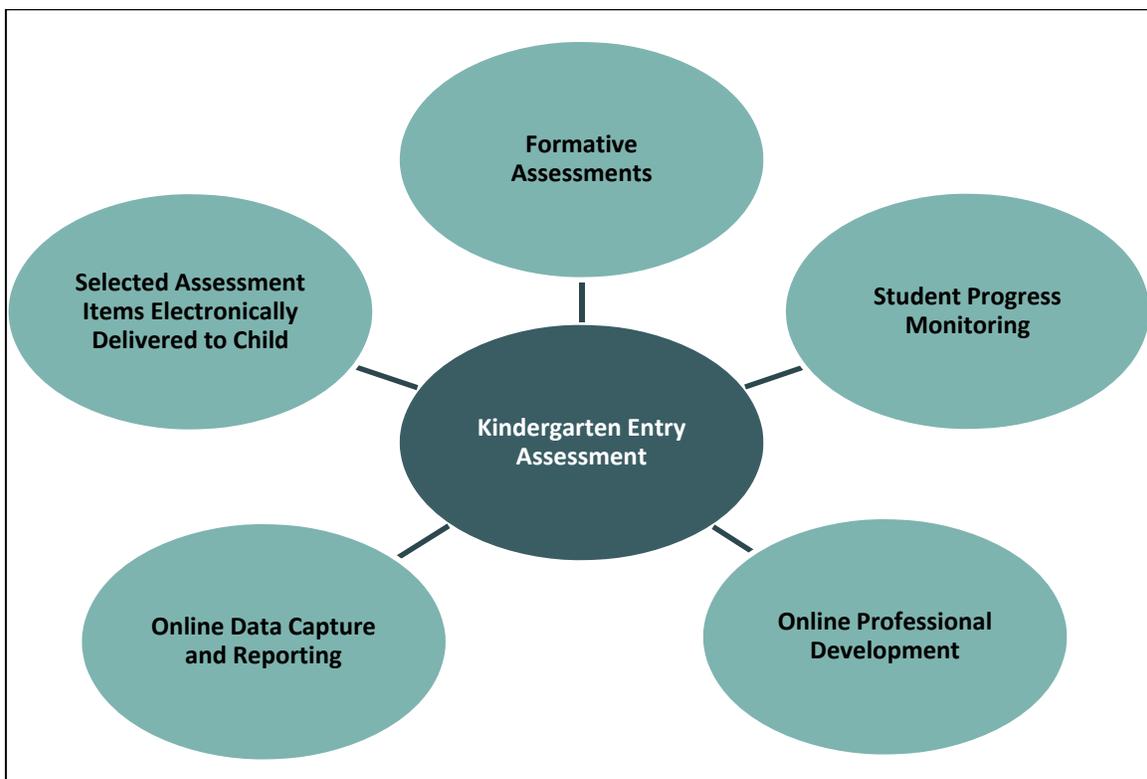
Source: Maryland and Ohio Departments of Education[88]

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[85] Ibid., p. 18.

[86] "Scope of Work: 2012 - Maryland – SEA: PR Award #: S412A120016." U.S. Department of Education, January 28, 2013, p. 11. http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/state-scope-of-work/mdsow.pdf

[87] "The Early Childhood Comprehensive Assessment System (EC-CAS): A Partnership to Promote School Readiness by the Maryland and Ohio Departments of Education." Maryland and Ohio Departments of Education, pp. 1-2. http://www.earlychildhoodohio.org/files/elcg/Early_Childhood_Comprehensive_Assessment_System.pdf

[88] Grafwallner, R., et al. "Early Childhood Comprehensive Assessment System (EC CAS)." Maryland and Ohio Departments of Education, June 21, 2013, p. 4. Retrieved from: https://ccsso.confex.com/ccsso/2013/webprogram/Session3480.html

The Kindergarten Entry Assessment appears to stem from Work Sampling System indicators in that it evaluates student progress on the same seven dimensions of readiness. However, the KEA has been expanded beyond observational checklists to include direct assessment and technology-supported performance tasks.[89] The KEA will be administered during a six- to eight-week window during the fall semester of kindergarten and each of the seven domains takes approximately 15 minutes to administer.[90] KEA will be used to "inform stakeholders, guide decision making about professional development needs, and help teachers meet each student's individual needs."[91]

Formative assessments will also evaluate children across the seven dimensions of readiness, but will be based on "research-supported learning paths" that define knowledge and skills appropriate for children at six-month age intervals.[92] Educators will be required to administer formative assessments during the fall and spring of every school year when children are between the ages of 36 to 72 months and have the option to use the instruments continuously throughout their curriculum.[93] Figure 2.4 provides an overview of the assessment process in the EC CAS. Unlike KEA data, which serves largely to inform stakeholders on statewide progress, these formative assessment data equip caregivers and teachers to track student progress, plan intervention strategies, and design lesson plans in real time.[94]

Figure 2.4: EC CAS KEA Design

READINESS DOMAIN	AGE (MONTHS)						
	36	42	48	54	60	66	72
SOCIAL FOUNDATIONS	Formative assessment: development represents a continuum of changing behaviors					Summative assessment: KEA "snapshot" of readiness	Formative assessment
LANGUAGE AND LITERACY							
MATHEMATICS							
PHYSICAL WELL-BEING AND MOTOR DEVELOPMENT							
SCIENCE							
SOCIAL STUDIES							
THE ARTS							

Sources: Maryland and Ohio Departments of Education[95]

All assessments will be fully aligned with several sets of standards to ensure EC CAS is relevant for all students at the local, regional, and national levels. EC CAS is aligned with:

- Common Core State Standards

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[89] Siddens, S. and T. Otto. "Early Childhood Comprehensive Assessment System: Partnership Between Maryland and Ohio." Maryland and Ohio Departments of Education, p. 13. http://ohioedconference.files.wordpress.com/2012/11/earlychildhoodcomprehensiveassessmentsystem_siddens.pdf

[90] Ibid., p. 20

[91] "The Early Childhood Comprehensive Assessment System (EC-CAS): A Partnership to Promote School Readiness by the Maryland and Ohio Departments of Education," Op. cit., p. 2.

[92] Ibid.

[93] Siddens and Otto, Op. cit., p. 20.

[94] "The Early Childhood Comprehensive Assessment System (EC-CAS)," Op. cit., p. 2.

[95] Table items adapted from: Grafwallner, R., et al., Op. cit., p. 17.

- Birth to Kindergarten Entry Standards in Maryland and Ohio
- Head Start Early Learning Framework
- Early Child Outcomes required for Individuals with Disabilities Education Act (IDEA) reporting
- Standards for English language learners
  - World-Class Instructional Design and Assessment (WIDA)
  - Council of Chief State School Officers (CCSSO)[96]

Furthermore, the assessments are integrated with early educator professional development efforts. Professional development addresses all three stages of the assessments: pre-administration, administration, and post-administration. Addressing all stages ensures that educators understand how to "administer assessments to various populations, interpret assessment scores, communicate results to families, and use data to make instructional decisions and individualize instruction."[97] Training relies heavily on technology and includes web-based learning modules and resources, online coaching and technical assistance, and virtual simulators.[98]

Clearly, **technology plays a crucial role in the implementation of EC CAS.** The centerpiece of Maryland and Ohio's technology approach is the Online Reporting System (ORS), the user's online interface accessible by computer or tablet. The ORS is where teachers "real-world observations or scores from any performance item."[99] Educators also use the ORS to determine students' KEA completion status, download supporting resources, access contextualized professional development, and upload artifacts to students' longitudinal profiles.[100]

NORTH CAROLINA

North Carolina currently administers a state-developed kindergarten entry assessment that evaluates children's ability in literacy and mathematics. The device is also used as a formative assessment tool, and is administered periodically through first and second grade as well. Currently, North Carolina is in the process of using RTT-ELC grant funding to revamp and expand this system.[101] In addition to RTT-ELC funding, North Carolina's efforts were recently bolstered by a $6.1 million Enhanced Assessment Instrument grant from the U.S. Department of Education.[102]

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[96] Bulleted items adapted from the following two sources: [1] Ibid., p. 8.
[2] Siddens and Otto, Op. cit., p. 18.
[97] "The Early Childhood Comprehensive Assessment System (EC-CAS)," Op. cit., p. 2.
[98] Grafwallner, R., et al., Op. cit., p. 28.
[99] Ibid., p. 31.
[100] Ibid.
[101] Bornfreund, Op. cit., pp. 19-20.
[102] "N.C. Awarded $6.1 Million for Kindergarten Entry Assessments." *News & Record,* September 12, 2013.
   http://www.news-record.com/news/local_news/article_5d95a8d8-1bd6-11e3-9ffc-001a4bcf6878.html

To refine the state's assessment tool so that it can help reduce the readiness gap at kindergarten entry and by the end of third grade,[103] North Carolina Department of Public Instruction (NC DPI) will join a consortium of eight other states and three research partners, SRI International, the BUILD Initiative, and Child Trends, to create a new K-3 assessment system. The consortium states seek to develop a more integrated system to support KEA, noting "that a KEA as part of a K-3 formative assessment will provide more meaningful and useful information for teachers than a stand-alone KEA."[104]

As such, **the primary purpose of the K-3 Assessment will be to provide formative feedback and inform instruction throughout the school year.** A secondary purpose will be to provide a snapshot of children's performance at kindergarten entry. As mandated by North Carolina's state legislature, the initial administration of the assessment will screen all students in early language, literacy, and math within the first 30 days of kindergarten.[105] Within the first 60 days of enrollment, the process will generate a "Child Profile" that will serve as the baseline for the broader K-3 Assessment.[106] The system will not be used for accountability or high-stakes purposes, such as program or teacher evaluations.

North Carolina's K-3 Assessment will measure **five domains of development, including physical health and development; emotional and social development; approaches to play and learning; language and literacy; and general cognition.**[107] The K-3 Assessment will align to North Carolina's Early Learning and Development Standards, Common Core State Standards, and North Carolina Essential Standards.[108]

NC DPI and its three research partners will lead the development process, but consortium states will provide support by participating in calls and meetings, sharing state-developed materials, reviewing assessment-related documents, engaging stakeholders, and piloting or field-testing assessment and technology instruments. The project is organized around seven key activity areas, each of which is led by a NC DPI or one of the research partners:

- Overall project management
- Across- and within-state stakeholder engagement
- Validation of assessment content
- Enhancement of professional development materials

[103] Bornfreund, Op. cit., p. 20.

[104] "Abstract – Enhanced Assessment for the Consortium (EAC) Project Submitted by North Carolina's Department of Public Instruction (CFDA 84.368A)." U.S. Department of Education. http://www2.ed.gov/programs/eag/awards13.html

[105] "K-3 Assessment Overview." North Carolina Department of Public Instruction. http://rtt-elc-k3assessment.ncdpi.wikispaces.net/file/view/K-3%20Assessment%20One-pager.docx/417949684/K-3%20Assessment%20One-pager.docx

[106] "K-3 Assessment Wiki: Frequently Asked Questions." North Carolina's Department of Public Instruction. http://rtt-elc-k3assessment.ncdpi.wikispaces.net/FAQ

[107] "Project Plan Report: 2012 - NC - Early Childhood Advisory Council: PR Award #: S412A120027." U.S. Department of Education, February 5, 2013, pp. 13-14. http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/state-scope-of-work/ncsow.pdf

[108] "K-3 Assessment." Office of Early Learning, North Carolina Department of Public Instruction. http://www.ncpublicschools.org/earlylearning/k-3assessment/

- Pilot and field testing
- Psychometric analyses and performance levels
- Technology[109]

Decision-makers have established a clear timeline for implementation and defined the responsibilities of various stakeholder groups. The stakeholder responsibilities are outlined in Figure 2.5. The system is scheduled to be fully developed by August 2014 and fully implemented by December 2015. Moreover, NC DPI has assigned and disclosed clear responsibilities to itself, school districts, schools, and teachers.[110]

Figure 2.5: Stakeholder Responsibilities

STAKEHOLDER	RESPONSIBILITY
State	- Develop a K-3 Assessment that includes a kindergarten entry assessment process that generates a Child Profile - Conduct pilot testing for validity, reliability, and usability testing for appropriate and effective implementation - Provide professional development to regions to support scaling-up and implementation - Provide coaching and technical assistance to regions to support sustainability
Local education agencies	- Establish a District Implementation Team to manage the K-3 Assessment scale-up and implementation - Develop a continuous improvement process that includes the use of data to inform ongoing professional development to ensure sustainability
Schools	- Identify individual(s) to lead the K-3 Assessment implementation effort in the school - Provide time for teachers and staff to participate in professional development on the assessment - Use assessment data to inform continuous improvement planning and to provide ongoing support for sustainability
Teachers	- Implement the K-3 Assessment following the administration guidelines - Use assessment data to guide instruction - Engage in a process of continuous improvement to transform instruction based on assessment data

Source: North Carolina Department of Public Instruction[111]

North Carolina's Office of Early Learning will seek stakeholder input throughout the development of the new system. It plans to engage teachers, administrators, families, and community members via mailing lists and the K-3 Assessment Wiki. The listserv allows educators and families to stay updated with the latest news and initiatives, learn about professional development opportunities, and discover new and pertinent resources. The K-3 Assessment Wiki is a website devoted entirely to the new assessment system and includes general information, presentations, resources, and contact information.[112]

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[109] Bulleted items taken verbatim from: "Abstract," Op. cit.
[110] "K-3 Assessment Overview," Op. cit.
[111] Table items adapted from: Ibid.
[112] "K-3 Assessment Wiki." North Carolina Department of Public Instruction. http://rtt-elc-k3assessment.ncdpi.wikispaces.net/

APPENDIX

Figure A.1 presents Virginia's definition of school readiness, which encompasses children, families, schools, and communities. Figure A.2 presents Virginia's indicators for school readiness on each component.

Figure A.1: Virginia's Definition of School Readiness

AREA	DESCRIPTION OF READINESS
Ready Children	A ready child is prepared socially, personally, physical, and intellectually within the developmental domains addressed in Virginia's six Foundation Blocks for Early Learning: literacy, mathematics, science, history and social science, physical and motor development, and personal and social development. Children develop holistically; growth and development in one area depends upon development in other areas.
Ready Families	A ready family has adults who understand they are the most important people in the child's life and take responsibility for the child's school readiness through direct, frequent, and positive involvement and interest in the child. Adults recognize their role as the child's first and most important teacher, providing steady and supportive relationships, ensuring safe and consistent environments, promoting good health, and fostering curiosity, excitement about learning, determination, and self-control.
Ready Schools	A ready school accepts all children and provides a seamless transition to a high-quality learning environment by engaging the whole community. A ready school welcomes all children with opportunities to enhance and build confidence in their skills, knowledge, and abilities. Children in ready schools are led by skilled teachers, who recognize, reinforce, and extend children's strengths and who are sensitive to cultural values and individual differences.
Ready Communities	A ready community plays a crucial part in supporting families in their role as primary stewards of children's readiness. Ready communities, including businesses, faith-based organizations, early childhood service providers, community groups, and local governments, work together to support children's school and long term success by providing families affordable access to information, services, high-quality child care, and early learning opportunities.

Source: Virginia Department of Education[113]

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[113] "Virginia's Definition of School Readiness," Op. cit., p. 1.

Figure A.2: Virginia's Indicators for School Readiness

COMPONENT	INDICATOR
Ready Children…	
Communicate effectively with adults and children by:	Labeling objects and feelings;
	Providing sample descriptions for events;
	Effectively conveying information, desires, and needs; and
	Using simple language and grammar to solve problems and to negotiate social interactions with adults and peers.
Display emerging literacy skills by:	Showing interest in and interacting with books as they are read by adults;
	Answering questions;
	Learning to use new words and tell stories;
	Recognizing and producing speech sounds, such as rhymes, beginning sounds, and letter sounds;
	Identifying the letters of the alphabet;
	Learning about print concepts from books, signs, and household objects; and
	Engaging in drawing and pretend writing and writing their name, letters, and other printed symbols.
Show an interest and skill in mathematics by:	Counting and using numbers to describe and compare;
	Recognizing and sorting simple shapes and describing their position;
	Identifying simple patterns;
	Making comparisons based on length, weight, time, temperature, and size; and
	Using objects in play, experimenting with materials, building blocks, and puzzles.
Build early science skills by:	Exploring and showing curiosity;
	Asking and answering questions about nature, why things happen, and how things work;
	Identifying patterns and changes in daily life; and
	Making observations based on the five senses.
Learn about history and social studies by:	Interacting with their family, peers, religious, and social communities;
	Recognizing ways in which people are alike and different; and
	Recognizing the relationships between people, places, and times.
Enhance physical and motor development by:	Learning to control their bodies;
	Strengthening their muscles;
	Practicing different movements;
	Participating in regular physical activity; and
	Practicing healthy living and appropriate daily care routines.
Exhibit personal and social skills and a sense of self-worth by:	Feeling secure and valued in theirs relationships;
	Expressing their emotions and taking pride in their accomplishments;
	Recognizing the consequences of their actions;
	Showing self-control; and
	Cooperating with others, using nonphysical ways to resolve conflicts.

COMPONENT	INDICATOR
Ready Families…	
Interact with their children, helping them to develop listening and communication skills and to express their feelings, needs, and wants. Adults:	Read to and speak with children regularly and respectfully;
	Appreciate the child's view of the child;
	Encourage exploration of the world in which they live;
	Are trustworthy and dependable; and
	Engage with children with joy, warmth, and comfort.
Encourage and act as the bridge to positive social relationships. Adults:	Help children learn to cooperate with others;
	Help children follow simple directions and complete basic tasks;
	Foster friendships with other children;
	Teach children routines and how to respond to rules and structure;
	Help children learn how to handle disappointments; and
	Expose children to and help them describe different people, places, and things.
Ensure their children are healthy by:	Completing all appropriate eye, ear, dental, and other medical screenings as well as immunizations.
Ready Schools…	
Smooth the transition between home and school by:	Communicating kindergarten standards and other school information to families through activities such as home visits, telephone calls, questionnaires, and kindergarten visitation days; and
	Forming effective relationships with parents and early childhood programs to share children's pre-kindergarten experiences and to assess their development.
Support instruction and staff development by:	Employing highly qualified teachers;
	Maintaining appropriate class sizes;
	Encouraging professional development; and
	Using best practices in the classroom.
Support teachers in:	Assessing the individual needs of children, designing instruction based on those needs, and regularly monitoring students' progress.
Partner with communities by participating in activities such as:	Recreational and enrichment programs;
	Family literacy activities;
	Before and after school care;
	Open houses; and
	Communication with other early childhood education programs in the community.
Provide resources and services to address the diverse and individual needs of students including:	Educational services;
	Health and mental health services; and
	Social services
Emphasize the importance of early childhood education by:	Regularly reviewing the quality, appropriateness, and alignment of the curriculum across all grades and phases of development; and
	Regularly focusing on and supporting the quality of teachers' interactions with children at all grade levels.

COMPONENT	INDICATOR
Ready Communities…	
Promote collaboration to reach the most vulnerable children and families through diverse channels of communication by:	Supporting effective, innovative strategies; and
	Building a sustainable, comprehensive system that maximizes resources.
Ensure all children have access to high-quality early care and education programs.	N/A
Provide accessible and affordable family services related to physical health, mental health, and lifelong learning, such as:	Literacy, English language learning, parenting skills, and adult education;
	Home visitation programs;
	Basic health care and nutrition services, including prenatal care;
	Mental health counseling;
	Early identification and treatment for children with disabilities and other special needs;
	Drug and alcohol counseling;
	Family court services; and
	Child abuse prevention.
Promote public assets such as:	Parks, libraries, recreational facilities, civic and cultural venues, and other opportunities to provide a better quality of life for families, encourage early learning opportunities, and foster community participation.
Regularly assess and use the following in program planning and resource allocation:	Children, families, schools, and community resources with regard to their role in school readiness.

Source: Virginia Department of Education[114]

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[114] Ibid., pp. 1-3.

Figure A.3 presents Kentucky's definition of school readiness and indicators for three development areas. This definition and associated indicators were recommended by the Kentucky Governor's Task Force on Early Childhood Development and Education.

Figure A.3: Kentucky Definition and Indicators of School Readiness

COMPONENT	INDICATOR (MY CHILD…)
School readiness means each child enters school ready to benefit from early learning experiences that best promote the child's success. The Task Force recognized five developmental areas for school readiness: ■ *Approaches to learning;* ■ *Health and physical well-being;* ■ *Language and communication development;* ■ *Social and emotional development; and* ■ *Cognitive and general knowledge.*	
Health and Physical Well-Being	Eats a balanced diet
	Gets plenty of rest
	Receives regular medical and dental care
	Has had all necessary immunizations
	Can run, jump, climb, and does other activities that develop large muscles
	Uses pencils, scissors, etc., and does other activities that develop small muscles
Emotional and Social Preparation	Follows simple rules and routines
	Is able to express his or her own needs and wants
	Is curious and motivated to learn
	Is learning to explore and try new things
	Has opportunities to be with other children and to play/share with others
	Is able to be away from parents/family without being upset
	Is able to work well alone
	Has the ability to focus and listen
Language, Math, and General Knowledge	Uses 5-6 word sentences
	Sings simple songs
	Recognizes and says simple rhymes
	Is learning to write her name and address
	Is learning to count and play counting games
	Is learning to identify and name shapes and colors
	Has opportunities to listen to and make music and to dance
	Knows the difference between print and pictures
	Listens to stories read to them
	Has opportunities to notice similarities and differences
	Understands simple concepts of time (e.g., today, yesterday, tomorrow)
	Is learning to sort and classify objects

Source: Kentucky Department of Education[115]

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[115] "School Readiness Definition." Kentucky Department of Education.
http://education.ky.gov/educational/pre/pages/school-readiness-definition.aspx

Figure A.4 presents a complete list of Teaching Strategies GOLD's 10 development domains and 38 underlying learning objectives. Domains and objectives with an asterisk represent items that Washington has included in its state-sponsored kindergarten entry assessment, WaKIDS.

Figure A.4: Teaching Strategies GOLD and WaKIDS

OBJECTIVES
*Social-Emotional**
1. **Regulates own emotions and behaviors***
a. Manages feelings
b. Follows limits and expectations*
c. Takes care of own needs appropriately*
2. **Establishes and sustains positive relationships***
a. Forms relationships with adults
b. Responds to emotional cues
c. Interacts with peers*
d. Makes friends*
3. **Participates cooperatively and constructively in group situations**
a. Balances needs and rights of self and others
b. Solves social problems
*Physical**
4. **Demonstrates traveling skills***
5. **Demonstrates balancing skills***
6. **Demonstrates gross-motor manipulative skills***
7. **Demonstrates fine-motor strength and coordination***
a. Uses fingers and hands*
b. Uses writing and drawing tools*
*Language**
8. **Listens to and understands increasingly complex language**
a. Comprehends language
b. Follows directions
9. **Uses language to express thoughts and needs***
a. Uses an expanding expressive vocabulary*
b. Speaks clearly*
c. Uses conventional grammar*
d. Tells about another time or place*
10. **Uses appropriate conversational and other communication skills***
a. Engages in conversations*
b. Uses social rules of language*
*Cognitive**
11. **Demonstrates positive approaches to learning***
a. Attends and engages
b. Persists
c. Solves problems*
d. Shows curiosity and motivation*
e. Shows flexibility and inventiveness in thinking*

OBJECTIVES
12. Remembers and connects experiences*
a. Recognizes and recalls*
b. Makes connections
13. Uses classification skills*
14. Uses symbols and images to represent something not present
a. Thinks symbolically
b. Engages in sociodramatic play
*Literacy**
15. Demonstrates phonological awareness*
a. Notices and discriminates rhyme*
b. Notices and discriminates alliteration*
c. Notices and discriminates smaller and smaller units of sound*
16. Demonstrates knowledge of the alphabet*
a. Identifies and names letters*
b. Uses letter–sound knowledge*
17. Demonstrates knowledge of print and its uses*
a. Uses and appreciates books
b. Uses print concepts*
18. Comprehends and responds to books and other texts*
a. Interacts during read-alouds and book conversations*
b. Uses emergent reading skills*
c. Retells stories*
19. Demonstrates emergent writing skills*
a. Writes name*
b. Writes to convey meaning*
*Mathematics**
20. Uses number concepts and operations*
a. Counts*
b. Quantifies*
c. Connects numerals with their quantities*
21. Explores and describes spatial relationships and shapes*
a. Understands spatial relationships
b. Understands shapes*
22. Compares and measures*
23. Demonstrates knowledge of patterns
Science and Technology
24. Uses scientific inquiry skills
25. Demonstrates knowledge of the characteristics of living things
26. Demonstrates knowledge of the physical properties of objects and materials
27. Demonstrates knowledge of Earth's environment
28. Uses tools and other technology to perform tasks
Social Studies
29. Demonstrates knowledge about self
30. Shows basic understanding of people and how they live
31. Explores change related to familiar people or places
32. Demonstrates simple geographic knowledge

OBJECTIVES
The Arts
33. Explores the visual arts
34. Explores musical concepts and expression
35. Explores dance and movement concepts
36. Explores drama through actions and language
English Language Acquisition
37. Demonstrates progress in listening to and understanding English
38. Demonstrates progress in speaking English

Source: Teaching Strategies, LLC[116]

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[116] [1] "Teaching Strategies GOLD: Touring Guide." Teaching Strategies, Inc., pp. 4-5.
   [2] "Alignment of Teaching Strategies GOLD Objectives for Development and Learning," Op. cit., pp. 1-85.

Figure A.5: WaKIDS Family Connection Guide

Welcome to Kindergarten!

- My name is:
- I like to be called:
- My favorite thing to celebrate is:
- Special people in my life are:
- People in my family are:
- I live with:
- The best way to reach my family is:
- The best time to reach my family is:

About My Family...

- We speak the following languages in my family:
- Some things I'd like you to know about my family:
- I live with _____ other children. Their names and ages are:
- Comments:

About...

- My favorite food is:
- My favorite book is:
- My favorite toy is:
- My favorite thing to play is:
- Other favorites:
- I am good at so many things, like:
- Before kindergarten, during the day I usually spent time doing:
  - ✓ Things I like to do:
  - ✓ Listen to stories
  - ✓ Draw and color
  - ✓ Play with other children
  - ✓ Play quiet games
  - ✓ Play physical games
  - ✓ Play outside
  - ✓ Play with things I can stack
  - ✓ Sing songs
  - ✓ Play make believe and use my imagination
- Things I do not like to do:
- When I feel tired, I might:
- When I feel angry, I might:
- When I feel sad, I might:
- When I feel excited, I might:
- When I feel hungry, I might:
- When I feel frustrated, I might:
- Here are other things that I want you to know about me:

Source: Washington Department of Early Learning[117]

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[117] "Introducing Me!" Washington Department of Early Learning, May 2013, pp. 1-6.
http://www.k12.wa.us/WaKIDS/pubdocs/IntroducingMe.pdf

Figure A.6 presents a complete list of Work Sampling System's 66 indicators on its kindergarten checklist. Indicators with an asterisk represent items that Maryland included on its state-sponsored kindergarten entry assessment, MMSR. Please note that Work Sampling System has been revised and the most recent edition does not precisely align with the older version that Maryland uses.

Figure A.6: Work Sampling System and MMSR

COMPONENT	INDICATOR
*Social and Personal**	
Self-Concept*	Demonstrates self confidence
	Shows initiative and self-direction*
Self-Control*	Follows classroom rules and routines*
	Uses classroom materials purposefully and respectfully*
	Manages transitions and adapts to changes in routine
Approaches to Learning	Shows eagerness and curiosity as a learner
	Sustains attention to a task, persisting even after encountering difficulty
	Approaches tasks with flexibility and inventiveness
Interaction with Others*	Interacts easily with one or more children*
	Interacts easily with familiar adults
	Shows empathy and caring for others
	Seeks adult help and begins to use simple strategies to resolve conflicts
*Language and Literacy**	
Listening*	Gains meaning by listening*
	Follows directions that involve a series of actions
	Demonstrates beginning phonemic awareness*
Speaking*	Speaks clearly and conveys ideas effectively*
	Uses expanded vocabulary and language for a variety
Reading*	Shows interest in and knowledge about books and reading
	Shows some understanding of concepts about print*
	Knows letters, sounds, and how they form words
	Comprehends and responds to fiction and non-fiction text*
Writing*	Represents stories through pictures, dictation, and play
	Uses letter-like shapes, symbols, letters, and words to convey meaning*
	Understands purposes for writing
*Mathematical Thinking**	
Mathematical Processes*	Begins to use and explain strategies to solve mathematical problems*
	Uses words and representations to describe mathematical ideas
Numbers and Operations*	Shows understanding of number and quantity*
	Begins to understand relationships between quantities
Patterns, Relationships, and Functions*	Sorts objects into subgroups, classifying and comparing
	Recognizes duplicates and extends patterns*
Geometry and Spatial	Recognizes and describes some attributes of shapes*

COMPONENT	INDICATOR
Relations*	Shows understanding of and uses direction, location, and position words
Measurement	Orders, compares and describes objects by size, length, and weight
	Explores common instruments for measuring during work and play
	Estimates and measures using non-standard and standard units
	Shows awareness of time concepts
Statistics	Begins to collect data and make records using lists or graphs
*Scientific Thinking**	
Inquiry*	Seeks information through observation, exploration, and investigations*
	Uses simple tools and equipment to extend the senses and gather data*
	Forms explanations and communicates scientific information
Physical Science*	Identifies, describes, and compares properties of objects*
Life Science*	Observes and describes characteristics, basic needs, etc. of living things*
Earth Science	Explores and identifies properties of rocks, soil, water and air
	Begins to observe and describe simple seasonal and weather changes
*Social Studies**	
People, Past and Present*	Identifies similarities/differences in people's characteristics, habits, etc.*
	Demonstrates beginning awareness of state and country
	Shows awareness of time and how the past influences people's lives
Human Interdependence*	Begins to understand how people rely on others for goods and services
	Describes some people's jobs and what is required to perform them*
	Begins to be aware of technology and how it affects life*
Citizenship and Government*	Demonstrates awareness of the reasons for rules*
	Shows beginning understanding of what it means to be a leader
People and Where They Live	Shows awareness of relationship between people and where they live
*The Arts**	
Expression and Representation*	Participates in group music experience*
	Participates in creative movement, dance, and drama*
	Uses a variety of art materials to express ideas and emotions.*
Understanding Appreciation*	Respond to artistic creations or events*
*Physical Development and Health**	
Gross Motor Development*	Moves with balance and control*
Fine Motor Development*	Uses strength and control to accomplish tasks
	Uses eye-hand coordination to perform tasks*
	Uses writing and drawing tools with some control
Personal Health and Safety*	Performs self-care tasks competently*
	Shows beginning understanding of and follows health and safety rules*

Source: Maryland State Department of Education[118]

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[118] [1] "Maryland Model for School Readiness 2011-2012," Op. cit., pp. A1-A5.
[2] ""Maryland Model for School Readiness (MMSR): Kindergarten Expanded Exemplars ~ Fall/Entry." Maryland State Department of Education, January 8, 2010, pp. 1-99.
http://mdk12.org/instruction/mmsrexemplars/pdf/ExemplarsKindergarten_Fall.pdf

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