



WORKFORCE KNOWLEDGE, COMPETENCIES, AND EDUCATIONAL PRACTICES

The Institute of Medicine (IOM) and National Research Council's (NRC) 2015 report, *Transforming the Workforce for Children Birth to Eight*, offers recommendations for building a high quality early childhood workforce that has the knowledge, competencies, preparation, and supports to promote children's development and learning in the early years. This brief summarizes critical workforce knowledge and competencies to effective education practices in early childhood settings.

RECOMMENDED KNOWLEDGE AND COMPETENCIES FOR EARLY CHILDHOOD EDUCATORS

The report organized the discussion of knowledge and competencies into two distinct groups. The first is foundational knowledge, essential to work with young children, and the second is specialized knowledge and competencies needed to provide young children with high quality learning experiences. Both the foundational and specialized knowledge and competencies are drawn from existing research on child development as well as national and state expectations for teachers of young children.

Foundational knowledge and competencies

There are three broad areas of knowledge that all adults working with young children need. The first of these is a strong knowledge of child development in all domains. Next is the importance of consistent nurturing relationships to support learning. Finally,

there are the biological and environmental factors that influence children's development. This knowledge is the basis of four core competencies. These competencies include engaging effectively in quality interactions that are developmentally appropriate, to promoting positive social development and address behavioral challenges, to recognizing the need for specialized services for some children, and making informed decisions about the use of technology in children's learning.

Specialized knowledge and competencies

The report highlighted the specialized knowledge and competencies that teachers need to provide children with high quality learning experiences. Areas of specialized knowledge include the science of child development and specific content areas, and how they interact. Teachers also need to know about learning trajectories, or content-specific learning paths, including those related to developing goals, tracking their progression, and providing

instructional strategies. Knowing the science of development means understanding the biological and environmental influences on children's learning, including the importance of positive relationships and the negative consequences of adversity and stress. Finally, teachers of young children should know how to use data from ongoing assessment of children and the importance of using assessment measures that are developmentally, linguistically, and culturally appropriate.

These areas of specialized knowledge contribute to teachers' competencies in several ways. First, they form the basis for practices that help children learn. Teachers also develop competence in working with diverse populations of children, including those who are dual language learners and those with special needs by developing respectful reciprocal relationships with families, as well as other professionals who may be called upon to address children's needs. Finally, teachers should focus on improving their practice by taking care of themselves and seeking out professional learning resources.

PROFESSIONAL STANDARDS AND CORE COMPETENCIES

Professional standards expressed by several states and national professional organizations informed the report's recommended knowledge and competencies. While these national organizations speak for differing segments of the early childhood

years (for example, children birth to eight, ages three to five, prekindergarten to grade twelve) their standards provide some areas of overlap, as well as some differences. For the most part, the report's recommendations reflect commonalities across these organizations. There are areas where the current standards do not yet reflect the latest science and expectations for aligning early childhood (birth to five) education and K-12 education.

Comparison of national standards and state competencies

Four national organizations have written standards for professionals working in early education:

1. National Association for the Education of Young Children (NAEYC)
2. National Board for Teaching Standards (NBPTS)
3. Interstate Teacher Assessment and Support Consortium (InTASC) of the Council of Chief State School Officers (CCSSO),
4. Division for Early Childhood (DEC) of the Council for Exceptional Children.

The report notes ten areas of commonality across these sets of standards—even though they are written for teachers of children of different ages across the birth to third grade continuum. As the report notes, this continuum is often broken down into early childhood (birth to five) and elementary education (kindergarten to third grade or later). Breaking down standards across different ages implies that the early childhood field's expectations for teachers in each of these spans differ. However, professional standards are often more similar than they seem. For example, the report recognizes the assumption that elementary education is pushing down academic standards and neglecting other domains of child development. While this may be the case in practice, the report notes that the standards for professionals working with children anywhere along the birth to eight continuum calls for teachers to understand all domains of child development and for professionals to work with children in developmentally appropriate ways. Likewise, some believe that early childhood education is less focused on children's learning in content areas, yet the relevant standards for teachers working with children ages birth to five include the

Content knowledge in most existing statements of core competencies—whether at the state or national level—lack specificity (e.g., major concepts and themes in a content area are rarely included), or differentiation (e.g., embedding math and science under “cognitive development”), or both. Most existing core competencies for educators of young children are lacking in the area of describing developmentally appropriate practice for teaching specific content areas.

(IOM & NRC, 2015)

expectation that teachers understand how children develop and how to support children's learning in content areas.

Many states have developed competencies for early educators. In general, these reflect national standards. States tend to differ in how they organize or represent specific content knowledge. One notable exception is three states that have developed competencies for infant and toddler caregivers. For this group, competencies focus on being effective in family-centered practices, including joint decision-making, understanding the families' values, and communicating with them about children's development.

Opportunities for standards to better reflect science

The science of child development is continuing to expand and core competencies for early educators can improve to reflect current knowledge. Reconciling differences across standards and competencies to reflect the latest science is one step noted in the report. But there are others areas that can also be informed by emerging research.

Teaching subject matter content. Most standards or competency statements do not provide details about how to teach subject-matter content. Most rely on developmentally appropriate practices however these practices are not often specified.

Addressing stress and adversity. Research has underscored the dramatic effects of early childhood stress and adversity, yet many standards do not provide competencies for working effectively with children with such experiences.

Fostering socioemotional development and general learning competencies. National and state standards and competencies tend not to specify what educators should know about children's socioemotional and general learning skills development or about specific educational practices to support them.

Working with dual language learners. Many statements address the need to respect cultural and linguistic diversity, but do not discuss the knowledge and skills educators need in order to effectively work with dual language learning children and their families.

Integrating technology in curricula. Competencies about technology for early educators need to reflect how teachers use technology for professional communication, to share information and assessment, and what teachers should know about using technology to teach young children.

SUMMARY OF EDUCATIONAL PRACTICES

The report provides an overview of broad principles for effective teaching, as well as specific research-based recommended practices to support language and literacy, mathematics, science, and socioemotional development. It summarizes cross-cutting principles that apply across domains of child learning and development, as well as approaches that are more appropriate for working with infants and toddlers.

Cross-cutting principles for educational practice

The report presents broad principles for educational practice that apply across areas of learning and development, seen below.

Managing the learning environment. Teachers can control the context within which children learn by shaping the physical environment, selecting the materials available, designing the schedule and routines employed, planning the overall classroom climate, setting expectations for behavior, and employing effective instructional strategies.

Teaching content through learning trajectories. Teachers need three categories of knowledge to effectively teach subject matter content—general pedagogical knowledge, content knowledge, and pedagogical content knowledge. General pedagogical knowledge is the broad understanding of teaching practices, which needs to be coupled with content knowledge and pedagogical content knowledge (that combines the knowledge of how to teach to specific students, specific content, and specific contexts.)

Using tiered intervention approaches. Sometimes referred to as response to intervention (RTI), these approaches use ongoing formative assessments to determine when children have mastered specific skills and which skills are still developing and might benefit from additional support.

Using a mix of instructional methods. The report supports the use of multiple strategies, concluding “effective approaches combine multiple, complimentary instructional strategies, ranging from initial child-centered exploration and invention, to guided lessons on optimal strategies and generalization, to practice for fluency.”

Using interdisciplinary approaches to instruction wisely. Little research exists to inform how best to achieve integrated curricula and there is little evidence that this strategy is superior to content-focused curricula. In addition, integrated curricula appear to be challenging to implement and often connect only superficially across domains. Instead, the report concludes the preference for interdisciplinary approaches that more deeply connect domains but retain their core structure.

General practices for working with infants and toddlers

The report notes that working with infants and toddlers carries additional considerations.

Working in small groups. Small groups allow for a high level of intimacy between teacher and children that allow teachers to understand and meet each child’s unique needs.

Providing young children with primary caregivers and continuity of care. Children learn and develop best in environments where they are secure. Secure attachments are critical to optimal development and learning. Having one primary caregiver and continuity over time allows children to form an attachment to their primary caregivers.

Offering instructional practices. The report describes the “central and consistent feature” of instruction for infants and toddlers as “...the young child’s shared activity with an adult who thoughtfully capitalizes on his or her interests to provoke cognitive growth.”

Creating a quality environment, safety, and health. A safe environment for infants and toddlers should also allow for exploration and interaction with peers, caregivers, and families.

Educators in child care settings should understand the language and culture of the children they serve to facilitate relationships with the families and create a community between settings.

Understanding cultural and familial continuity.

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CONCLUSION

The Institute of Medicine (IOM) and National Research Council’s (NRC) report *Transforming the Workforce for Children Birth to Eight* lays out expectations for what teachers of young children should know and be able to do to effectively support all children’s learning and development. These expectations are based upon a wealth of research on the science of child development and learning. This brief presents the research base in chapter 7 of the report. This brief provides only a summary of chapter 7. Readers are encouraged to continue learning from this chapter in full.

REFERENCE

Institute of Medicine (IOM) and National Research Council (NRC). 2015. *Transforming the workforce for children birth through age 8: A unifying foundation*. Washington, DC: The National Academies Press. <http://www.nationalacademies.org/hmd/Reports/2015/Birth-To-Eight.aspx>.

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