

Some Assembly Required Piecing Together the Preparation Preschool Teachers Need



A Resource for **Teachers** and
Preschool Providers



The essentials for preschool teacher prep

Preschool teachers have one of the toughest jobs around. Every day, they manage a high-energy environment designed to prepare young learners to succeed in kindergarten and beyond. They introduce 3- and 4-year-olds to reading, math, science, and school routines — all while keeping their classrooms safe, fun, and under control.

Being able to meet these demands takes practice and lots of training. This research overview summarizes the high-value skills and knowledge that preschool teachers need. However, NCTQ's analysis of a sample of 100 preschool teacher prep programs finds that too often the programs responsible for training preschool teachers spend little time on these areas. Fortunately, it's never too late for teachers to polish up their skills.

The focus areas of this study include: developing children's language ability, building a foundation for reading through emergent literacy skills and read-alouds, introducing emergent math, creating an inviting classroom environment, and honing skills through student teaching. Many experts agree that science and social studies instruction are also important, but less information exists on what teachers should learn about how to teach these subjects. Other essential skills that are not analyzed here include engaging families, maintaining classroom safety, and supporting diverse learners.

For teachers who did not receive the targeted training they need, the resources listed at the end of this brief can help teachers ensure that their preschool children get the most out of every day.

Developing children's language ability and building a foundation for reading

What is language development and why is it important?

Developing children's language skills is important in and of itself, but it is also the key that opens the door to so many areas of learning for children. Many children entering preschool are hindered by a language deficit: By the age of four, an economically advantaged child may have heard as many as 45 million utterances and be well along the path to literacy, and to academic and social success. If economically disadvantaged, the child may have heard 30 million fewer utterances and be falling far behind.¹ The gap in oral language plays out along racial lines as well as socioeconomic ones, and puts children at risk for "future academic and social difficulties."²

Especially for young children who are already behind, preschool teachers can play a critical role in language development. It is imperative that preschool teachers have the skills to develop children's ability to communicate.³ Unfortunately, most preschool teachers do not know how to engage in these practices without some additional instruction.⁴ However, intensive and focused training can help teachers make big strides.⁵

What is emergent literacy and why is it important?

Emergent literacy encompasses a range of skills that are essential to reading, but may not come naturally to all children. These skills include phonological awareness (the ability to detect or manipulate the sounds in words, such as syllables and rhymes),⁶ phonemic awareness (a subset of phonological awareness relating to the sounds of letters), learning the alphabet, and concepts of print (such as title, author, text direction, and turning pages in a book).⁷ Teacher training in these areas can translate into substantial gains for children in alphabet knowledge, vocabulary, and language skills.⁸

The early introduction of language and literacy can make a lasting difference for children. Unsurprisingly, children with low language and literacy skills in preschool demonstrate lower reading skills in kindergarten.⁹ However, not all approaches to teaching emergent literacy are equally effective, and the quality of preschool curricula varies, making it that much more important that preschool teachers have ample training in how to develop their preschoolers' emergent literacy skills.¹⁰

What are read-alouds and why are they important?

Reading to a child is a powerful experience that builds an emotional bond, teaches new words and ideas, and introduces information about the wider world. Using read-alouds effectively can boost literacy skills for years to come, and can improve children's vocabulary and other language skills.¹¹

What is emergent mathematics and why is it important?

Young children can do much more mathematically than count to three and identify basic shapes. Introducing children to more complex mathematical concepts from an early age may increase their math ability in later years.¹² In fact, some research suggests that the relationship between children's early math skills and future math achievement is twice as strong as the relationship between children's emergent literacy and future reading achievement.¹³

Teachers should build children's number sense and understanding of numerals' spatial position on a number line,¹⁴ as well as patterns, measurement, and geometric concepts.¹⁵ Teachers should also teach children to measure objects using formal instruments like rulers and informal instruments like the length of their arms.¹⁶

What should teachers do to create an inviting classroom environment?

Maintaining a positive, developmentally appropriate preschool classroom environment is no easy feat — and yet it is critically important. As evident from the reported behavioral problems of children in kindergarten and entering Head Start, as well as the high suspension and expulsion rate for preschool children, teaching appropriate behavior poses a challenge for many preschool teachers.¹⁷ Teachers need substantive training and practice with effective classroom management strategies that can build social-emotional skills and prevent or resolve many behavioral problems.¹⁸

Of course, classroom management is about more than discipline: it is about establishing an environment that actively supports learning.¹⁹ Teachers' emotional support for their students is associated with better social competence and lower rates of behavior problems.²⁰

What are the hallmarks of an effective student teaching experience for a preschool teacher?

The importance of student teaching is undisputed.²¹ Student teaching offers the potential for teacher candidates to build skills related to instruction, classroom management, family engagement, and more. A bad experience can instead instill counterproductive techniques, or even worse, quash the candidate's excitement about teaching.

Teacher candidates gain the most from their student teaching experiences when those experiences require frequent observations by a university supervisor who can give them ongoing feedback about their strengths and areas for growth.²² Great placements should also pair teacher candidates with a cooperating teacher who is both a good mentor and an effective teacher from whom the candidate can learn, last long enough for the student teacher to gain a wealth of firsthand classroom experience,²³ and give the candidate an opportunity to practice with the age group she plans to teach.²⁴



Great resources for teachers and preschool providers

Preschool teachers who never received training in key areas don't have to go back to school to learn what they missed — a number of resources are available to fill the gaps.

Online training on developing children's language

The **Cox Campus** and **Read Right from the Start**, developed by the Atlanta Speech School and the James M. Cox Foundation, offer teachers a completely free online training. The creators of this training believe deeply in the importance of “building the reading brain” in children, and have designed the training to give every teacher the tools to do so.

The training includes instruction and videos set in real classrooms so you can watch teachers use these strategies with preschool children. The courses, which are broken into small segments to make it easy to self-pace, address topics ranging from reading stories aloud to building children's vocabulary to holding meaningful conversations. The online program includes materials for preschool teachers *and* teachers of infants and toddlers so teachers can tailor the training to the age range of the children in their classrooms.

The Cox Campus also offers an ever-expanding library of online resources including observation instruments, guides for conducting read-alouds of dozens of picture books, and teaching activities and assessments.

As an added benefit, Georgia's teachers can count this training toward their continuing education credits.

Learn more about and sign up for the Cox Campus [here](#).

Observation instruments with a focus on language development

Teachers know that one of the best ways to hone their craft is to have someone observe and provide an honest evaluation of their strengths and weaknesses. The following observation instruments are designed with clear and precise language and targeted categories to make it easy to give a teacher feedback on improving in a specific areas.

Preschool Snapshot Implementation & Observation Checklists

Developed and sold by Core Knowledge, this resource includes a dozen observation instruments focused on different aspects of preschool instruction.

Because the checklists offer clear and detailed criteria (see the example indicators below), a fellow teacher, supervisor, or classroom assistant can watch a teacher in action and let her know what teaching skills she's already mastered and where she can use some more practice.

The *Language Support Practices* checklist focuses heavily on oral language, but other checklists (e.g., *Meal Time*, *Circle Time*, and *Read-Alouds*) evaluate how teachers build children’s language during all parts of the school day.

Example indicators:

- **Language Support Practices:** *Language Modeling* – Teaching team addresses children’s language errors by systematically and matter-of-factly repeating the child’s utterance, substituting the correct language model
- **Language Support Practices:** *Teaching Team explicitly INTRODUCES NEW VOCABULARY by* – Relating the new vocabulary to child’s past experiences or current knowledge
- **Language Support Practices:** *Teaching team FOSTERS CONVERSATION by* – Using questions/comments to extend a topic to 4 or more “turns”
- **Language Support Practices:** *Teaching team EXPANDS ON CHILDREN’S UTTERANCES by* – Repeating the child’s utterance with additional information.

Learn more about *Preschool Snapshots* [here](#).

CLASS

The CLASS instrument, developed at the Curry School of Education at the University of Virginia, is a widely used tool for evaluating preschool classrooms. It focuses heavily on the relationship between children and teachers and how their interactions can create a high-quality and inviting classroom. Much of the tool focuses on how teachers build children’s oral language.

Example indicators:

- **Regard for Student Perspectives:** *Student Expression* – There are many opportunities for student talk and expression.
- **Quality of Feedback:** *Feedback Loops* – There are frequent feedback loops – back-and-forth exchanges — between the teacher and students.
- **Language Modeling:** *Repetition and Extension* – The teacher often repeats or extends the students’ responses.
- **Language Modeling:** *Self- and Parallel-Talk* – The teacher consistently maps his or her own actions and the students’ actions through language and description.

Learn more about the CLASS [here](#).

Every Child Ready: Quality Indicators Rubric

This instrument, developed by the AppleTree Institute for Education Innovation, a research and development non-profit associated with AppleTree Early Learning Public Charter Schools based in Washington, DC, bears similarity to the CLASS but has been adapted to meet the needs of this charter school district. It has a heavy focus on language, hits key areas of classroom management, and addresses many other areas of instruction.

Example indicators:

- **Providing effective feedback:** *Repetition & extension* – The teacher repeats, recasts, and extends student speech using more advanced vocabulary and/or complex structures

- **Language Instruction (comprehension/vocabulary):** *Explanations and demonstrations* – The teacher systematically and accurately explains, defines or demonstrates new words and ideas using words, pictures, objects and gestures, and scaffolds support based on children’s ability
- **Support for conceptual understanding:** *Self- and parallel-talk* – The teacher consistently uses self- and parallel-talk to narrate children’s learning experiences

Learn more about the Appletree Institute [here](#).

Guide for teaching math to young children

The research-based guide, *Teaching Math to Young Children*, developed by the Institute of Education Sciences, offers recommendations for how and what to teach young children about math. The free resource is full of activities to use with young children, examples of how to teach math skills, and tips on how to know when children are ready to learn something more advanced — or what to do when they struggle.

Find the Practice Guide [here](#).

Endnotes

- 1 Hart, B., & Risley, T. R. (2003). The early catastrophe. *American Educator*, 27(4), 6-9.
- 2 Farkas and Beron (2004) found that across the span of 36 months to 13 years of age, white students had significantly higher oral vocabulary scores than African American students. Farkas, G., & Beron, K. (2004). The detailed age trajectory of oral vocabulary knowledge: Differences by class and race. *Social Science Research*, 33(3), 464-497. A research synthesis prepared by the National Early Literacy Panel discusses a modest correlation that grows stronger when “oral language” is defined as more complex than vocabulary size. However, some researchers argue that this study understates the importance of oral language. Neuman, S.B. (2010). Sparks fade, knowledge stays: The national early literacy panel’s report lacks staying power. *American Educator*, 34(3), 14-17. Dickinson, D. K., Golinkoff, R. M., & Hirsh-Pasek, K. (2010). Speaking out for language: Why language is central to reading development. *Educational Researcher*, 39(4), 305-310. Dickinson, D., Golinkoff, R., Hirsh-Pasek, K., Neuman, S., & Burchinal, P. (2009). The language of emergent literacy: A response to the National Institute for Literacy report on early literacy. Retrieved from <http://nieer.org/pdf/CommentaryOnNELPreport.pdf>.
- 3 With regard to young children, “oral language” is a broad term that encompasses many specific skills. For instance:
 - The IES defines oral language as “children’s understanding and use of language to communicate ideas.” Diamond et al. (2013).
 - Piasta et al. (2012) place oral language development in two categories: “communication facilitation” (providing children with opportunities to speak and engage in turn-taking conversations) and “language-developing” (increasing the complexity of children’s language through techniques such as recasting). Piasta, S. B., Justice, L. M., Cabell, S. Q., Wiggins, A. K., Turnbull, K. P., & Curenton, S. M. (2012). Impact of professional development on preschool teachers’ conversational responsivity and children’s linguistic productivity and complexity. *Early Childhood Research Quarterly*, 27(3), 387-400.
 - Coll (2005) defines the components of oral language as “various skill sets including vocabulary (receptive and expressive), syntactic and semantic knowledge, and narrative discourse processes (memory, comprehension, and storytelling).”

To develop children’s skills, teachers should engage children in frequent conversations with multiple back-and-forth exchanges. They should verbally describe their actions and the actions of the children in their class. Teachers should ask questions that inspire children to provide longer and more detailed responses (Diamond et al. (2013)). Teachers need to discuss the meaning of words during read-alouds and help children organize these words conceptually (Diamond et al. (2013); Beck, I. L., & McKeown, M. G. (2007). Increasing young low-income children’s oral vocabulary repertoires through rich and focused instruction. *The Elementary School Journal*, 107(3), 251-271; Institute of Medicine & National Research Council. (2015). *Transforming the workforce for children birth through age 8: A unifying foundation*. Washington, DC: The National Academies Press; M. Adams, personal communication, January 2016). They should encourage conversation, extend talk (e.g., by asking for more information), use relatively sophisticated vocabulary, and correct children when their speech is inaccurate (Dickinson, D. K., & Porche, M. V. (2011). Relation between language experiences in preschool classrooms and children’s kindergarten and fourth-grade language and reading abilities. *Child Development*, 82(3), 870-88).
- 4 Diamond et al. (2013).
- 5 For example:
 - One rigorous study found that when teachers underwent intensive professional development on a range of practices including language enrichment and scaffolding language, use of book readings to enhance language skills, and several other techniques directly related to language, their students showed gains in language comprehension and vocabulary. Landry, S. H., Swank, P. R., Smith, K. E., Assel, M. A., & Gunnewig, S. B. (2006). Enhancing early

literacy skills for preschool children bringing a professional development model to scale. *Journal of Learning Disabilities*, 39(4), 306-324.

- Gerde et al. (2009) found that teachers with more extensive training/educational background in early childhood were more likely to employ instructional approaches that lead to vocabulary gains. Gerde, H. K., & Powell, D. R. (2009). Teacher education, book-reading practice, and children's language growth across one year of Head Start. *Early Education and Development*, 20(2), 211-237.
 - Another study found that teachers rarely used conversational responsivity and language developing strategies, although teachers' use of the former — and their students' language ability — improved when they trained in these areas. Piasta, S. B., Justice, L. M., Cabell, S. Q., Wiggins, A. K., Turnbull, K. P., & Cumenton, S. M. (2012). Impact of professional development on preschool teachers' conversational responsivity and children's linguistic productivity and complexity. *Early Childhood Research Quarterly*, 27(3), 387-400.
 - Neuman and Wright (2010) found that current preschool teachers showed no improvement after taking professional development coursework in early language and literacy development; however, they showed sustained improvement in teaching practices when completing this coursework in conjunction with weekly on-site coaching. Neuman S. B., & Wright, T. S. (2010). Promoting language and literacy development for early childhood educators: A mixed-methods study of coursework and coaching. *The Elementary School Journal*, 111(1), 63-86.
- 6 U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2012). *Early childhood education interventions for children with disabilities intervention report: Phonological awareness training*. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_pat_060512.pdf.
 - 7 Diamond et al. (2013). An additional study defines print knowledge as “young children’s emerging knowledge of the specific forms and functions of written language. This includes understanding letters, rules governing print organization (e.g., left-to-right directionality of print in English orthography), and concept of word (i.e., words as being meaningful, discrete units that map to spoken words).” Piasta, S. B., Justice, L. M., McGinty, A. S., & Kaderavek, J. N. (2012). Increasing young children’s contact with print during shared reading: Longitudinal effects on literacy achievement. *Child Development*, 83(3), 810-820.
 - 8 Landry et al. (2006). Note that these studies focus specifically on children with learning disabilities. U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2012). *Early childhood education interventions for children with disabilities intervention report: Phonological awareness training*. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_pat_060512.pdf.
 - 9 Diamond et al. (2013).
 - 10 Diamond et al. (2013).
 - 11 Diamond et al. (2013); Piasta et al. (2012).
 - 12 Watts et al. (2014) found that math achievement and gains between preschool and first grade were highly predictive of math achievement up to age 15, although the strength of the relationship faded over time. Watts, T. W., Duncan, G. J., Siegler, R. S., & Davis-Kean, P. E. (2014). What’s past is prologue: Relations between early mathematics knowledge and high school achievement. *Educational Researcher*, 43(7), 352-360.
 - 13 Diamond et al. (2013); Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., ... & Japel, C. (2007). School readiness and later achievement. *Developmental Psychology*, 43(6), 1428-1446. Other research found that children’s math ability in preschool predicted their math ability at age 15, even after controlling for early reading ability and family characteristics. Watts et al. (2014).
 - 14 Diamond et al. (2013).
 - 15 Frye, D., Baroody, A. J., Burchinal, M., Carver, S. M., Jordan, N. C., & McDowell, J. (2013). *Teaching math to young children: A practice guide* (NCEE 2014-4005). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/pdf/practice_guides/early_math_pg_111313.pdf.

- 16 Frye et al. (2013).
- 17 As summarized in Diamond et al. (2013), Gilliam and Golan (2006) report that preschool children are suspended at a higher rate than either elementary or secondary students. Gilliam, W. S., & Golan, S. (2006). Preschool and child care expulsion and suspension: Rates and predictors in one state. *Infants & Young Children, 19*(3), 228-245. Denton, Germino-Hausken, and West (2000) report ECLS-K data that 10 percent of children enter kindergarten exhibiting persistent behavior problems. Denton, K., Germino-Hausken, E., & West, J. (2000). *America's Kindergartners* (NCES 2000-707). Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubs2000/2000070.pdf>. Kupersmidt, Bryant, and Willoughby (2000) report that 10-23 percent of children in Head Start exhibit such problems. Kupersmidt, J.B., Bryant, D., & Willoughby, M.T. (2000). Prevalence of aggressive behaviors among preschoolers in Head Start and community child care programs. *Behavioral Disorders, 26*(26), 46-52.
- 18 Diamond et al. (2013). Epstein, M., Atkins, M., Cullinan, D., Kutash, K., and Weaver, R. (2008). *Reducing behavior problems in the elementary school classroom: A practice guide* (NCEE 2008-012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/behavior_pg_092308.pdf. National Association for the Education of Young Children. (2010). 2010 NAEYC standards for initial & advanced early childhood professional preparation programs. Retrieved from <http://www.naeyc.org/files/ecada/file/2010%20NAEYC%20Initial%20&%20Advanced%20Standards.pdf>.
- 19 Training teachers to establish clear rules and routines, reward positive behavior, and redirect negative behavior may lead to improvements in children's self-regulation as well as gains in vocabulary, letter-naming, and math skills. (Raver, C. C., Jones, S. M., Li-Grining, C., Zhai, F., Bub, K., & Pressler, E. (2011). CSRPs impact on low-income preschoolers' preacademic skills: self-regulation as a mediating mechanism. *Child Development, 82*(1), 362-378). Training kindergarten teachers in the *Tools of the Mind* curriculum, which emphasizes executive functioning and the role of play in learning, helped improve children's reasoning and control of attention, as well as reading, vocabulary, and math skills (Blair, C., & Raver, C. C. (2014). Closing the achievement gap through modification of neurocognitive and neuroendocrine function: Results from a cluster randomized controlled trial of an innovative approach to the education of children in kindergarten. *PLoS One, 9*(11), e112393).
- 20 Mashburn et al. (2008).
- 21 Levine, A. (2006). Educating school teachers. Washington, DC: The Education Schools Project. Committee on the Study of Teacher Preparation Programs in the United States, & National Research Council. (2010). *Preparing teachers: Building evidence for sound policy*. National Academies Press.
- 22 Boyd, D. J., Grossman, P. L., Lankford, H., Loeb, S., & Wyckoff, J. (2009). Teacher preparation and student achievement. *Educational Evaluation and Policy Analysis, 31*(4), 416-440; Rose, D. J., & Church, J. R. (1998). Learning to teach: The acquisition and maintenance of teaching skills. *Journal of Behavioral Education, 8*(1), 5-35.
- 23 The State Teacher Policy Yearbook recommends that student teaching last at least 10 weeks. Several weeks should be spent fulfilling full-time teaching responsibilities. Jacobs, S., Doherty, K., Joseph, N., Lakis, K., Staresina, S., & Wasbotten, C. (2015). *2015 State teacher policy yearbook: National summary*. Washington, DC: National Council on Teacher Quality. Retrieved from http://www.nctq.org/dmsView/2015_State_Teacher_Policy_Yearbook_National_Summary_NCTQ_Report/
- 24 Diamond et al. (2013).



National Council on Teacher Quality

1120 G Street, NW, Suite 800
Washington, D.C. 20005
Tel: 202 393-0020 Fax: 202 393-0095
Web: www.nctq.org

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The National Council on Teacher Quality advocates for reforms in a broad range of teacher policies at the federal, state and local levels in order to increase the number of effective teachers.

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