

Some Assembly Required Piecing Together the Preparation Preschool Teachers Need

A detailed look at the essentials for great preschool teacher prep programs

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.

Programs that take on the responsibility to train aspiring preschool teachers for this challenge must instruct teachers in a wide array of skills and knowledge, *and* must ensure that they have adequate practice working with young children.

This brief summarizes the research on a selection of skills and knowledge which preschool teachers must master to be effective, but are unlikely to master without targeted training.

The focus areas 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 and help to build vocabulary and content knowledge, which boost children’s reading comprehension in later years, but less information exists on what teachers should learn about how to teach these subjects. Other essential skills that are more commonly explored in research include engaging families, supporting diverse learners, and maintaining classroom safety.

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

What is language development and why is it important?

Developing 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. Children need language skills to communicate with others and make friends, to understand and control their feelings, to explore new science or math concepts, to enjoy listening to a storybook. A

child with limited language skills will never be able to fully understand and engage with the world. While parents and families are the front lines for providing their children with rich language opportunities from an early age, the support they can offer their children differs, meaning that 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 less economically fortunate, the child may have heard 30 million fewer utterances and be falling far behind.¹ Moreover, the gap is not just in number of words: research finds the equivalent of a six-month disparity in both vocabulary and measures of language processing efficiency based on a child's socioeconomic status.² The gap in oral language plays out along racial lines as well as socioeconomic ones.³

Especially for young children who are already behind in oral language, preschool teachers can play a critical role in developing children's language skills, with implications for years to come. Building strong language skills at a young age sets children up for later literacy achievement, while children who lag behind in language and other areas are more likely to face "future academic and social difficulties."⁴

It is imperative that preschool teachers have the skills to develop children's ability to communicate. Building children's language skills requires more than a friendly demeanor and an interest in engaging with children — although these too are critical.⁵ In fact, there are specific actions and approaches to verbal interaction that teachers can take to aid in children's language development.⁶

For example, 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.⁷ Teachers need to discuss the meaning of words during read-alouds and help children organize these words conceptually.⁸ 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.⁹ Most preschool teachers do not naturally engage in these practices.¹⁰ However, multiple studies have found that intensive and focused training can help teachers make big strides.¹¹

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),¹² 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).¹³ Teacher training in these areas can translate into substantial gains for children in areas including alphabet knowledge, vocabulary, and language skills.¹⁴

While reading instruction may not begin in earnest until a child enters kindergarten, preschool sets the stage. During this time, teachers should build up children's emergent literacy skills — a process that works in tandem with developing children's oral language ability.

This 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.¹⁵ However, not all approaches to teaching emergent literacy are equally effective, and the quality of preschool curricula varies, meaning that teachers cannot rely on their curriculum to fully guide their instruction.¹⁶ Given

some of the limitations in curriculum quality, it is that much more imperative that preschool teachers have ample training in how to develop their preschoolers' emergent literacy skills.

What are read-alouds and why are they important?

Reading to a child is powerful because it builds an emotional bond, teaches new words and ideas, and introduces information about the wider world. Realizing the full potential of a carefully planned and thoughtfully delivered read-aloud takes training and practice.¹⁷

In one study, preschool children whose teachers were trained in how to conduct read-alouds with “print-focused conversations” (e.g., discussing features of words, names of letters, and other concepts of print) contributed to a boost in early literacy skills that lasted into first grade.¹⁸ Another found that when preschool teachers used read-alouds to introduce the meanings of words related to science and social studies concepts, children showed substantial improvement in measures of vocabulary.¹⁹ Notably, both of these studies compared outcomes for teachers trained to use a specific read-aloud skill or technique, as compared to a control group that conducted read-alouds but lacked training; these findings strongly suggest that providing teachers with specialized training in conducting read-alouds will yield ample benefits.

What happens when preschool teachers are not trained in how to use the power of a read-aloud? A preschool expert shared an experience of visiting a preschool classroom and watching the teacher read a book, pick up another book and read it straight through, and then pick up a third and read that — all without pausing to ask the children questions, point out pictures, or otherwise engage them in the story. When the expert asked the teacher why she approached reading in this way, the teacher responded, “I’ve heard that you should read to children as much as possible — and so I make sure to read as many books as we can.”

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.²⁰ 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 emergent literacy and future reading achievement.²¹

Preschool-age children benefit from instruction across many math skills. Teachers should build children’s number sense and understanding of the spatial position of numerals on a number line²² as well as patterns, measurement, and geometric concepts.²³ For example, teachers can ask children to group or compare shapes along different criteria such as size, color, number of sides, or other categories the children can think of. Children can learn to measure objects using formal instruments like rulers and informal instruments like the length of their arms.²⁴

Although little research examines the effects of teacher training in emergent math instruction, numerous studies have found benefits from teachers’ use of structured math curricula in which they have been trained.²⁵ The Institute of Education Sciences (IES) endorses instructional strategies that follow a developmentally appropriate trajectory, help children build a math vocabulary that they may use during conversation, and allow children to apply math skills in other subjects and routines throughout the school day.²⁶

What should teachers do to create an inviting classroom environment?

Preschool offers most children their first introduction to a formal school environment. During this time, children will learn how to behave appropriately in a school setting, interact with teachers and peers, and regulate their own actions and emotions. Maintaining a positive, developmentally appropriate 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 expulsion rate for preschool children, teaching appropriate behavior poses a challenge for many preschool teachers.²⁷

Effective classroom management can prevent or resolve many behavioral problems. Successful interventions include pre-correction of problem behaviors (e.g., reminding a child about a rule before she breaks it), maintaining student engagement, reinforcing positive behavior (e.g., offering praise), correcting behavior errors (e.g., reminding a child about expectations after a rule is broken), and building positive relationships.²⁸ Many of the classroom management strategies appropriate to elementary-age students (e.g., establishing rules and behavioral norms, keeping children engaged, teaching appropriate behaviors, and managing consequences) likely also apply to preschool age children, although this age group is often not the focus of classroom management research.²⁹ The National Association for the Education of Young Children (NAEYC) expects teacher preparation programs to offer training in the use of developmentally effective approaches to supporting social interaction and responding to “challenging behaviors.”³⁰

Of course, classroom management is about more than discipline: it is about establishing an environment that actively supports learning. For example, research has found that 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.³¹ Another study found that 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.³² This research is not conclusive, however; IES notes that more evidence is needed about the most effective ways to teach young children to maintain attention and self-regulate. Additionally, while some studies have found that structured play is an effective learning tool, teacher candidates need to learn how to manage play to promote both fun and learning.³³

Preschool classrooms often require a degree of emotional support and sensitivity — perhaps more so than later grades. Teachers’ emotional support for their students is associated with better social competence and lower rates of behavior problems.³⁴ The research on how best to train preschool teachers in these skills is limited, however.

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

The importance of student teaching in teacher training is undisputed. New teachers often cite student teaching as the most valuable part of their preparation experience³⁵ and researchers have identified field experience as one of “three aspects of teacher preparation that are likely to have the strongest effects” (the others being content knowledge and the quality of teacher candidates).³⁶ 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.

Because of its potential as a make-or-break experience, it is essential for the student teaching placement to provide the right support and to last long enough for the student teacher to gain a wealth of classroom experience.³⁷ 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.³⁸ 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.

Little research considers the alignment between the grade level for the student teaching experience and the grade level the teacher candidate intends to teach. With good reason, however, NAEYC standards expect training programs to provide prospective preschool teachers with the opportunity to work with children in the preschool age range.³⁹ Indeed, if the principal benefit of student teaching is the opportunity to practice specific skills, future preschool teachers cannot be expected to learn essential strategies in, for example, a third grade classroom.⁴⁰

Endnotes

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- 3 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.
- 4 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>.
Another study finds a direct relationship between language ability in pre-k and third grade reading ability. Coll, C. G. (2005). Pathways to reading: The role of oral language in the transition to reading. *Developmental Psychology*, 41(2), 428-442. For evidence on academic and social difficulties, see Diamond, K. E., Justice, L. M., Siegler, R. S., & Snyder, P. A. (2013). Synthesis of IES Research on Early Intervention and Early Childhood Education. (NCSER 2013-3001). Washington, DC: National Center for Special Education Research, Institute of Education Sciences, U.S. Department of Education.
- 5 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 responsiveness 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).”
- 6 As an example, Neuman et al. described many of the myths about childhood vocabulary instruction – such as the idea that children are “sponges” who will naturally soak up new words – and explained some of the deliberate and intentional steps necessary to teach vocabulary effectively. Neuman, S. B., & Wright, T. S. (2014). The magic of words: Teaching vocabulary in the early childhood classroom. *American Educator*, 38(2), 4-13.
- 7 Diamond et al. (2013).
- 8 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.

- 9 All of these teacher actions in preschool were positively associated with students' reading comprehension or vocabulary in fourth grade. 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), 870-886.
- 10 Diamond et al. (2013).
- 11 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 responsiveness 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 responsiveness 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.
- 12 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.
- 13 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.
- 14 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.
- 15 Diamond et al. (2013).
- 16 Diamond et al. (2013).
- 17 A type of read-aloud known as “shared reading” incorporates structured activities, such as pointing to illustrations, discussing the sequence of events, or asking children to connect the text to their own lives. Studies have found mixed but predominantly positive effects on children's comprehension and language development, but no discernible effects on alphabetic knowledge or reading achievement (U.S. Department of Education, Institute of Education Sciences,

- What Works Clearinghouse. (2015). *Early childhood education intervention report: Shared book reading*. Retrieved from https://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_sharedbook_041415.pdf). In “dialogic reading,” the child takes on the role of storyteller as the adult asks questions (e.g., the adult may ask the child recall questions after finishing a book or open-ended questions about events depicted in the illustrations). This practice has been found to improve children’s oral language ability, but not their phonological processing skills (U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2010). *Early childhood education intervention report: Dialogic reading*. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_dialogic_reading_042710.pdf).
- 18 Diamond et al. (2013); Piasta et al. (2012).
- 19 Diamond et al. (2013).
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- 21 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).
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- 23 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.
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- 26 Frye et al. (2013).
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- 30 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>.
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- 39 NAEYC's standard on field experience states that teacher candidates should observe and practice with at least two of three different age groups (birth to age three, ages three to five, and ages five to eight) and in at least two different settings (early school grades, child care centers and homes, and Head Start programs). National Association for the Education of Young Children (2010).
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