

# Emergent Literacy

## for Children With Disabilities

Occupational therapists and occupational therapy assistants working in classrooms and early intervention settings are frequently involved in children's literacy programs. Practitioners often work with children who have a range of challenges that interfere with literacy learning, such as fine motor problems that affect writing or the ability to manipulate a book. The integration of occupational therapy services into the classroom and other natural environments has created an increased number of opportunities for practitioners to interact with educators around children's literacy needs. Practitioners and educators offer different backgrounds related to literacy; each has his or her particular expertise and, in best practice, can collaborate to promote positive student outcomes, family capacity for caregiving, and child development and growth. Knowledge of literacy development can give occupational therapy practitioners a sense of educational practices, allowing them to better assist educators, and ultimately resulting in the development of appropriate activities, materials, and adaptations.<sup>1</sup> This article focuses on the process of emergent literacy, and the ways in which occupational therapy can support children's learning.

### WHAT IS EMERGENT LITERACY?

The term *emergent literacy* describes the process of exploratory reading and writing experiences of children *before* they learn to formally read and write.<sup>2</sup> Emergent literacy is *not* about learning phonics, spelling words, or demonstrating comprehension—these are all conventional literacy skills. Instead, emergent literacy refers to the foundational experiences that prepare

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*Literacy learning begins long before children are able to formally read and write.*

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children for such conventional instruction once they enter elementary school. Emergent literacy starts at an early age, as infants, toddlers, and young children actively engage in a range of experiences with oral and written language. Embedded in rich social interactions, most young children see print, experiment with print, and watch others use print. They are exposed to a wide range of books and writing tools and are encouraged to explore them. Characteristic of other emerging skills, children's early understandings and attempts are random, inconsistent, and fluctuate from day to day. Most adults have high expectations of children and without question facilitate ongoing literacy experiences. Emergent literacy is not readiness-based; instead, it is based on the belief that all children are ready for literacy from a very early age.

### PRINCIPLES OF EMERGENT LITERACY

Teale and Sulzby outlined four principles that apply to the earliest stages of literacy learning.<sup>2</sup> These key principles are described below, followed by implications for children with disabilities, including those with significant disabilities (adapted from Koppenhaver et al.<sup>3</sup>), and suggestions for occupational therapy interventions.

#### 1. Literacy Learning Begins At or Even Before Birth

Most children are exposed to literacy before they even know what to do with

it. Many parents create environments filled with books, crayons, print-rich toys, and even print-rich clothes and room decorations. Children cannot help but not see print all around them (e.g., labels, signs, recipe books, mail, posters). They also see others using print (e.g., parents writing a shopping list, reading the newspaper). Adults read to children, often over and over; some parents even read to their children in utero. These rich experiences are ongoing and numerous; in fact, some children have more than 1,000 hours of these early print-based interactions by the time they begin school.<sup>4</sup> Through this emergent lens, it is clear that children are born "ready" for literacy.<sup>2</sup>

#### Children With Disabilities

Although most typically developing children are immersed in rich emergent literacy experiences, the experiences of children with disabilities may be fewer and qualitatively different.<sup>3,5</sup> The early years for children with disabilities may be filled with doctor's appointments, therapies, day care issues, and the challenges that families face when coping with a disability, leaving less opportunity for literacy and increasing stress on the family.

Many of these challenges are beyond children's control. For example, children who use wheelchairs and/or other positioning equipment may not be able to easily see print in the environment or may not be able to watch adults

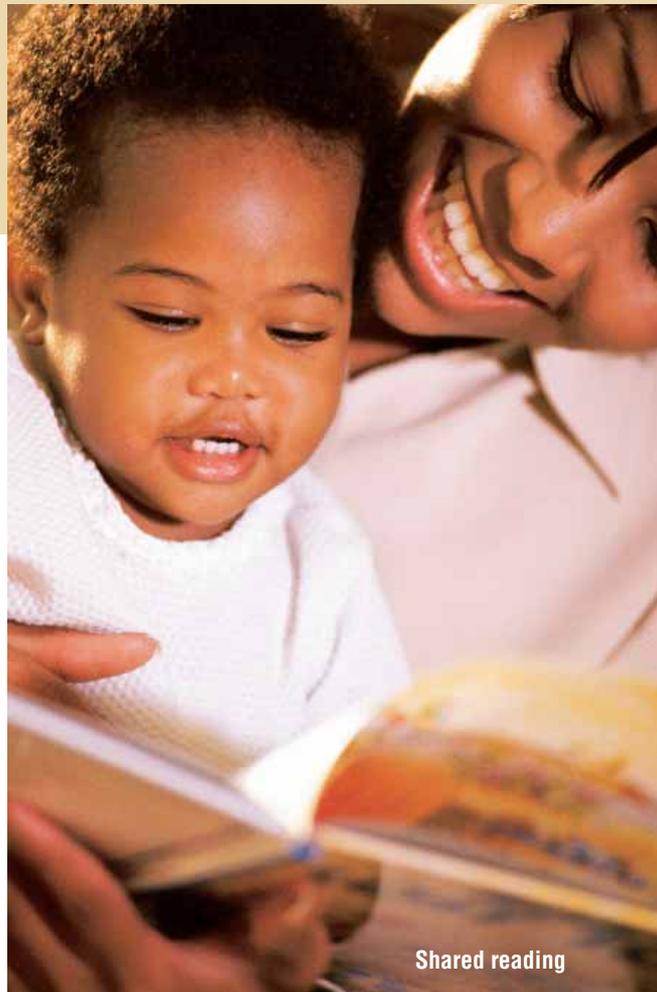
reading and writing. Physical and sensory difficulties may decrease children's opportunities to easily manipulate and interact with books, crayons, and print materials. Children with tactile defensiveness may not want to hold a crayon to scribble. Children who are blind may not be able to touch braille in their environment. Children with attention problems may not sit in an adult's lap long enough to look at a book. There is great need for simply getting literacy into children's environments in such a way that it can be frequently and easily encountered. Children's literacy experiences may also be restricted by low expectations and erroneous beliefs about development. Many

well-intentioned adults may believe that children with disabilities, especially those with significant disabilities, are not yet "ready" for literacy opportunities and as such these opportunities are withheld.<sup>6</sup>

Regardless of the degree of disability, any number of these barriers may reduce the time spent on emergent literacy activities. Because of limited emergent literacy experiences, children with disabilities face the risk of not developing conventional literacy skills.<sup>3</sup> However, current research has found that children with disabilities *can* make progress when given rich emergent literacy activities, interactions and the appropriate adaptations to access literacy materials independently.<sup>5,7,8</sup>

### **Implications for Occupational Therapy**

Reflect on your beliefs about literacy development. Start incorporating literacy into occupational therapy interven-



## **2. Reading, Writing, Speaking, and Listening Abilities Develop Simultaneously**

Development in each of these areas can affect development in all of the others. Their interconnectedness can be demonstrated in the most common of emergent literacy experiences, such as reading bedtime stories to young children. This shared experience imparts a wealth of knowledge to children, such as the purpose of books and what it means to be a reader, as well as provides a time to bond with a trusted caregiver. Children use what they have seen about the print in books to construct their own books through experimenting with writing. Shared

reading is rarely a quiet time; instead it is an enjoyable, interactive activity that facilitates children's speech and cognition. Children are encouraged to label pictures, comment, and ask questions. Adults respond to children with explanations of words and important concepts from the book. Thus, shared reading affects children's abilities to write, speak, listen, and develop important receptive language concepts. Children's overall success in learning is dependent on their ability to actively engage in each of the areas described above.

### **Children With Disabilities**

Equal access to opportunities for reading, writing, speaking, and listening may be challenging for students with disabilities. Greater emphasis may be placed on reading in comparison to writing, or vice versa. Children who have difficulty speaking or who are

tion plans for all children now—don't wait.

■ **Collaborate with parents and educators** to identify needs and possible solutions for getting literacy into children's lives.

■ **Consider children's sensorimotor and visual motor needs** to choose the most appropriate presentation and position of print or braille. Help parents select appropriate books and other literacy materials that meet children's needs.

■ **Create a print- or braille-rich environment.** Place print or braille in places where it is visible and reachable by children (e.g., on walls at wheelchair height, on toy boxes and bins, in cubbies). Use packing tape to affix a changing assortment of print materials (e.g., maps, menus, comics, diagrams, recipes) to laptrays.

■ **Use toys that have print or braille.** Braille can be added to toys using a braille labeler ([www.independentlivingaids.com](http://www.independentlivingaids.com)).

nonverbal will have difficulty engaging in verbal discussions about books and writing. The use of other methods of communication, such as augmentative and alternative communication (AAC) devices, may be a helpful solution. However, the use of AAC devices is frequently not considered due to unfounded beliefs that children need to demonstrate prerequisite skills or specific cognitive ability before being introduced to them. Current literature suggests that professionals need to get appropriate communication devices into the hands of children earlier, rather than later.<sup>9</sup> Professionals need to work hard to create opportunities and provide support that give children access to each area of literacy development.

### Implications for Occupational Therapy

Use a range of therapy activities that support reading, writing, speaking, and listening. Create supports that allow students to access these areas in multiple environments.

■ **Reading:** Read motivating books with students while using therapy equipment (e.g., sitting on therapy balls or t-stools). Use bookstands to stabilize the book so appropriate physical support can be provided to the child as needed. Focus on the interaction. Do not worry about reading the whole book; instead, follow the child's lead and talk about the things that capture his or her interest. Talk to parents about pointing out and reading print in the environment, such as signs when traveling in a car, cereal boxes in the grocery store, and so forth.

■ **Writing:** Write short books *with* children. Choose ideas based on the child's interests (i.e. favorite people, places, foods, animals, therapy activities). Take pictures of children involved in therapy activities and use them to write a book. Text can be elaborate or short one-word books that describe the activity (e.g., verb books: jump, swing, run, roll; or adjective books: fun, scary, fast, slow). It's not just about the mechanics of handwriting; instead, it is about helping children learn to express their ideas



"Helping" with the bills

in writing. Design art activities with adaptations for students to paint and draw; include ways for children to add letters (e.g., enlarged letter stamps).

■ **Speaking:** During gross activities, sing or chant songs, rhymes, and tongue twisters (e.g., singing the ABC song while jumping on a trampoline). For children who are nonverbal, work with team members to determine an appropriate AAC device. The device could be electronic or something as simple as communication symbols presented on a board, or an eye gaze frame.

■ **Listening:** Design sensory activities that help children focus and attend. Collaborate with parents and educators to develop a sensory diet embedded into daily routines. Set up a sensory schedule so that input can be offered right *before* literacy activities. Such input may allow children to better interact with the activities.

### 3. The Forms of Print Are Just as Important as the Functions of Print

Not only do most children learn how to *form* print, they also learn that print has a *function*—it conveys a message. Print serves a variety of functions, such as sharing information (making

a shopping list), giving instructions (reading signs) and fostering relationships (writing e-mails and letters). Early on, adults teach children about these functions without much deliberate thought. They help children write for lots of different reasons. They give them freedom to experiment with writing. Children's early motor skills are awkward and unrefined; however, their development is facilitated by the meanings that adults ascribe to the unrecognizable scribble. For example, while sitting next to a parent making a grocery list, the child makes a random mark. The parent may attribute meaning to the child's attempt, praising him or her for the addition to the grocery list. Taking the list to the grocery store and using it teaches the child that his or her attempt conveys an idea and that something important happens as a result of writing.

Writing development is dependent upon children having meaningful

opportunities to learn what print is used for, as well as opportunities to gain the motor skills to freely produce print.

### Children With Disabilities

Occupational therapy practitioners are frequently involved with the development of children's handwriting and closely understand the difficulties that children have with letter formation. Occupational therapy for handwriting traditionally focuses on developing children's letter formation skills and spacing. However, writing development may be slowed when therapy focuses exclusively on developing motor skills with less attention on the reason for writing. Without understanding the functions of print, forming print may have little value to children. In fact it has been suggested that having a well-grounded understanding of the functions of print may enhance the ability of children with disabilities to form print.<sup>10</sup>

### Implications for Occupational Therapy

■ **Be thoughtful** about the focus on *form* and *function* of print during writing activities. Design writing activities that highlight the *functions* of print.

#### ■ Allow children to freely “scribble.”

**Do not** focus on having children correctly spell words—this is a conventional literacy skill. Instead, emergent writers need opportunities to build a solid foundation about the very basics of writing, why we write, what writers do, etc. In the future, this base will help children learn to spell words that are readable.

■ **Ascribe meaning to children's writing attempts**, many of which may be random and unrecognizable. Ascribing meaning helps children make sense out of what they have done and its importance.

■ **Plan writing activities that have a clear purpose**. Make sure something happens as a result of the writing (e.g., a note to parent, cards for special events, a “sign in” sheet for various therapy activities, or a book for a special person).

■ **Write the context of the activity on the child's work**. This will allow others to understand the unrecognizable attempt so they can talk to the child and attribute meaning to the writing.

■ **Follow the child's lead** during activities and focus on having fun. Be sensitive to his or her interests and needs.

#### 4. Literacy Learning Occurs When Children Are Actively Engaged

A key component to children's active engagement rests on their ability to physically interact with print materials. Young children without disabilities learn by actively “doing,” and without question are given free rein to experiment with books, crayons, and other literacy materials. In the beginning, children do not have a clear sense of what to do with these items, and their physical abilities to manipulate them are limited and random (e.g., holding books upside down, scribbling with a crayon). Their exploration of materials is encouraged, and over time they become more refined. Children learn about writing by *writing*. Children learn about books by using books.

#### Children With Disabilities

One of the key problems for children with disabilities is that they cannot always freely and easily access print materials, such as books and writing tools.<sup>3</sup> This challenge is evident for a range of children, from those who have fine motor difficulties to those who are

## Technology Supports for Childhood Literacy

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**T**echnology supports for childhood literacy may include tools to supplement or augment other strategies but not to replace other educational methods or direct interaction with educators or family members.<sup>1</sup> These supports may reinforce literacy behaviors such as looking and recognizing, exploring pictures and text, and building curiosity and imagination.<sup>2</sup> Assistive technology tools may also provide methods to circumvent difficulties in motor, cognitive, sensory, or communication to provide opportunities for young children to access and engage in learning experiences that develop literacy.<sup>3</sup> When considering technology or assistive technology supports for childhood literacy, the team may want to consider the needs of the child, tasks to be augmented, environmental attributes, family training needs, and continuum of technology options.<sup>4</sup> Technology is increasingly available in home, day care, and school environments; children often have an innate interest in technology, thus these tools can become powerful literacy supports for young children.<sup>5</sup>

The following are selected resources for technology supports for childhood literacy.

#### Technology Adaptations To Support Literacy

**www.Lburkhart.com** Provides handouts and instructions for adapting and enhancing play and literacy through computer use.

**http://letsplay.buffalo.edu/** Contains materials and examples of adapting play for young children, including resources for assistive technology and literacy.

**http://atto.buffalo.edu/** Provides resources, tutorials, and resources on the continuum of assistive technology resources that may support literacy development in children with disabilities.

**http://www.bcps.k12.md.us/boardmaker/adapted\_library.asp** Supports literacy for children who use picture communication symbols by providing the symbols to match those books in the library. Boardmaker Version 5.0.10 must be loaded onto the local computer to print the symbols.

#### Electronic or E-Texts

**http://www.lil-fingers.com/** This storybook site has books that are simple, animated, and read aloud as well as related games and off-the-computer activities.

**http://www.magickeys.com/books/** Contains books that are free to view online, and those available for purchase. The view online books may contain animation, speech, clickable hot spots, or cursor rollover hot spots that build cause and effect.

**www.mightybook.com** Has speaking books that relate to art and music, story songs, knock-knock jokes, classic songs, and stories written by children for children. Most of the books allow words to be highlighted as they are read aloud.

**www.storyplace.org** Has an extensive preschool electronic text library that is organized by theme. Online stories may also have associated online activities, take-home activities, parent activities, and suggested readings.

**www.starfall.com** Interactive, animated learning activities that are read aloud. The reading categories begin at the alphabet level, and progress to holiday-based themes for learning to read, and phonics-based independent readings.

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## FOR MORE INFORMATION

### Online Core Course: **Service Delivery in School-Based Practice: Occupational Therapy Domain and Process**

By Y. Swinth, 2008. Bethesda, MD: American Occupational Therapy Association. (\$225 for members, \$320 for nonmembers. To order, call toll free 877-404-AOTA or shop online at <http://store.aota.org/view/?SKU=OLSBC>. Order #OLSBC; Promo Code MI)

### Online Elective Session: **Occupational Therapy for Infants and Toddlers With Disabilities Under IDEA 2004, Part C**

By M. Muhlenhaupt, 2009. Bethesda, MD: American Occupational Therapy Association. (\$29.95 for members, \$41 for nonmembers. To order, call toll free 877-404-AOTA or shop online at <http://store.aota.org/view/?SKU=OLSB2A>. Order #OLSB2A; Promo Code MI)

### Online Elective Session:

#### **Handwriting, Keyboarding, and Literacy: What is the Role of Occupational Therapy**

By Y. Swinth & D. Handley-More, 2008. Bethesda, MD: American Occupational Therapy Association. (\$22.50 for members, \$32 for nonmembers. To order, call toll free 877-404-AOTA or shop online at <http://store.aota.org/view/?SKU=OLSB8>. Order #OLSB8; Promo Code MI)

#### **The New IDEA: An Occupational Therapy Toolkit, 2008 Edition** (CD-ROM)

By L. Jackson, 2008. Bethesda, MD: AOTA Press. (\$49 for members, \$69 for nonmembers. To order, call toll free 877-404-AOTA or shop online at <http://store.aota.org/view/?SKU=4810A>. Order #4810A; Promo Code MI)

completely unable to hold a book or a pencil. As a result, children with motor challenges may find literacy activities laborious and frustrating. If children are spending too much energy on the motor component of the activity, they may have little energy left to focus on the literacy component. Children with sensorimotor challenges need innovative ways to easily explore print or braille materials.

### **Implications for Occupational Therapy**

Find ways for children to easily access and explore reading and writing.

■ **Use simple book adaptations** to make it easier for children to turn pages. Use page separators, such as small pieces of sponge glued onto pages or adhesive-backed felt furniture bumpers. Make books with thicker pages. Take old board books and cover the pages with a child's favorite story. Add interest with colors, smells, photographs, and tactile. Be sure to add print or braille.

■ **Use computer books.** While there are countless options available for purchase, computer books can be made using a range of software, including PowerPoint. There are also a number of free or inexpensive Web sites with books. Here are some favorites: [www.accessiblebooks.com](http://www.accessiblebooks.com), [www.tarheelreader.org](http://www.tarheelreader.org), and [www.tumblebooks.com](http://www.tumblebooks.com).

■ **Use a range of adapted writing tools,** from specialized grips to pencils that do not require hand use. The Center for Literacy & Disability Studies in North Carolina ([www.med.unc.edu/ahs/clds](http://www.med.unc.edu/ahs/clds))

has developed a variety of "alternative pencils"<sup>11</sup> for students who have difficulty using their hands or are completely unable to use them.

■ **Help the family engage with the local library** to learn about electronic books options, as well as story hours.

### **SUMMARY**

Emergent literacy is a holistic view of literacy development that encompasses reading, writing, speaking, and listening. Literacy learning is based on the power of immersion in literacy rich environments, social interactions that convey the "why" and the "how" of reading and writing, and opportunities for children to explore materials and refine their evolving knowledge of print. For most children *without* disabilities, this development seems to happen naturally without much effort. In contrast, children with disabilities face a myriad of barriers that limit all of these essential opportunities.

"The potential to achieve some level of literacy is present in every child, and the development of that potential depends almost entirely on the opportunities provided within the child's supportive environment" (p. 42).<sup>3</sup> With increased knowledge of literacy development, specifically emergent literacy principles and practices, occupational therapy practitioners can work with parents, educators, and other caregivers to create these high quality, meaningful opportunities that lay the foundation for achieving real and lasting literacy. ■

## CONNECTIONS

Discuss this and other articles on the OT Practice Magazine public forum at <http://www.OTConnections.org>.

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