

Targets, Techniques, and Treatment Contexts in Emergent Literacy Intervention

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ABSTRACT

This article provides an overview of three important considerations when delivering evidence-based emergent literacy interventions: (1) treatment targets, (2) treatment techniques, and (3) treatment contexts. Treatment targets refer to the specific aspects of emergent literacy that clinicians address within their interventions and are organized into two broad areas: code-related skills and meaning-related skills. Specific targets within each skill area are identified. Treatment techniques refer to the specific clinical approaches used to address these targets. Using the scaffolding metaphor, we differentiate between use of high-support and low-support techniques for moving children along a continuum from dependence to independence. Treatment contexts refer to the location in which intervention is provided; prevalent contexts for provision of emergent literacy intervention include classroom-based, pull-out, and home-based (parent-implemented) interventions.

KEYWORDS: Emergent literacy development, emergent literacy intervention, phonological awareness, alphabet knowledge, print awareness

Learning Outcomes: As a result of this activity, the reader will be able to (1) identify high-priority targets of emergent literacy intervention for young at-risk children, (2) discuss the concept of scaffolding as it applies to emergent literacy intervention, and (3) list prevalent intervention contexts used in emergent literacy intervention.

Including an explicit focus on the facilitation of emergent literacy skills within the context of early childhood language intervention is currently regarded as “best practice” for

speech-language pathologists (SLPs).¹ This broadening of clinical targets from the traditional linguistic domains comprising content, form, and use is a timely one, given consistent

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Emergent and Early Literacy Intervention: Etiological Perspectives; Guest Editor, Laura Justice, Ph.D.

Semin Speech Lang 2007;28:14-24. Copyright © 2007 by Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001, USA. Tel: +1(212) 584-4662.

DOI 10.1055/s-2007-967926. ISSN 0734-0478.

evidence showing that reading disability is a common consequence of early childhood language impairment.^{2,3} Evidence from studies of the impacts of different approaches to emergent literacy intervention for at-risk learners,^{4,5} including a small corpus of studies involving children with language impairment,⁶ suggests that children's early achievements in literacy can be effectively accelerated, which, presumably, will mitigate their later risks for reading difficulties. Drawing from this literature base, the present article provides guidance concerning target selection, therapeutic techniques, and treatment contexts for SLPs who desire to include a more explicit focus on emergent literacy within their clinical interventions.

TARGET SELECTION

As is the case in other areas of clinical practice (e.g., treatment of expressive phonology disorders⁷), the selection of treatment targets may be more important than the actual techniques used to bring about change. With the term treatment targets, we refer to the actual skills, behaviors, and processes that the clinician wishes to change through intervention. By contrast, treatment techniques are the approaches and strategies the clinician uses to bring about change in the targets. In traditional language intervention for young children, treatment targets typically fall into three linguistic domains—form (grammar, phonology), content (semantics), and use (pragmatics)—and a series of short- and long-term objectives specifying a continuum of treatment targets is specified. The same approach is used when addressing emergent literacy development within early interventions, albeit for different foci.

Literacy is a multidimensional construct comprising two interrelated domains of development: reading and writing, the former describing reception of written language and the latter describing production of written language. When fully developed in an individual, reading involves skilled processing in both *decoding* (i.e., word recognition) and *reading comprehension*⁸; writing involves processes similar to those in skilled reading but requires

additional competences in fine-motor skill. Important research of the last two decades shows that children who are yet to read and write in a formal sense (i.e., who are “prereaders” and “prewriters”) display numerous skills that predate these formal competences.⁹ Of particular relevance to early interventionists are findings showing that differences among children in these emergent literacy competences represent real and meaningful differences that can predict the likelihood that a child will or will not achieve skilled reading and writing in the elementary grades.¹⁰

Target selection in emergent literacy interventions is informed substantially by longitudinal descriptive studies linking specific emergent literacy skills to later developments in reading and writing, including studies that estimate the risk of developing a school-age reading disability based on prereading and prewriting abilities. These studies show that school-age decoding and reading comprehension skills are differentially predicted by children's emergent literacy abilities, with code-related skills predictive of decoding abilities and meaning-related skills predictive of reading comprehension abilities.⁹ In the next sections, we provide a brief definition of these two interrelated domains of emergent literacy skill (see Fig. 1), namely code-related and meaning-related skills, as well as specific indices of achievement in each domain typically seen in the preschool years.

CODE-RELATED SKILLS

The ability to decode unknown words typically is learned within the context of formal reading instruction provided in the early elementary grades, corresponding to kindergarten through second grade. Instruction that teaches children about the systematic correspondences between the orthography of written language and the phonology of spoken language is termed phonics. Although some children arrive to formal reading instruction with some understanding of these correspondences, most of this knowledge develops through systematic and explicit instruction. Children who arrive to formal reading instruction with explicit awareness of orthography and phonology make better

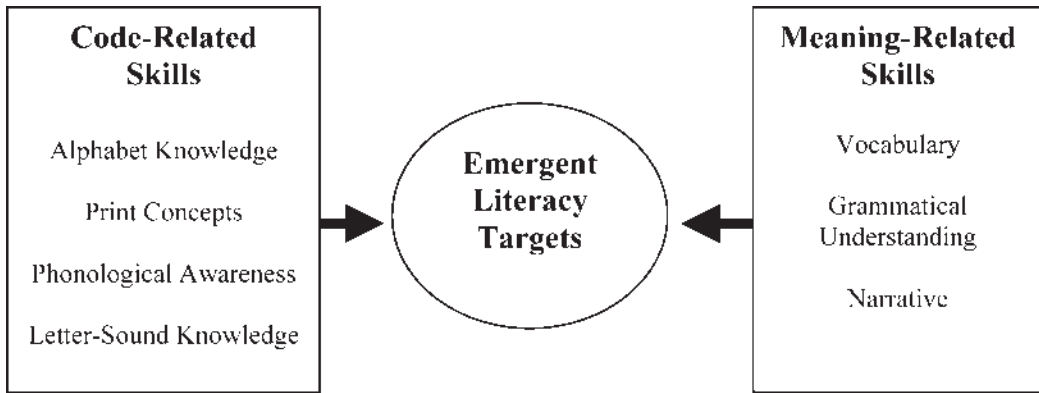


Figure 1 Targets in emergent literacy intervention.

progress in reading instruction than children with little or no explicit awareness.¹¹ In addition, children who show significant deficits in these areas of awareness are at an elevated risk for reading and writing disability.¹²

The reasons why these early differences elevate a child’s risk for literacy problems are complex. For some children, these deficits may signal a developmental difficulty in literacy learning that will continue to exert negative effects over time, as appears to be the case for children with specific language impairment.³ Alternatively, it also appears to be the case that some schools have inadequate resources to eliminate mild disparities in achievement among achieving and nonachieving learners in the early grades, particularly when these disparities are addressed within the general education curriculum rather than specialized and more intensive interventions.¹³ Regardless of the reason, it is evident from the research that systematic and explicit enhancements to children’s code-related skills within the pre-school years can improve children’s transition to beginning reading instruction and, ultimately, reduce children’s risks for later reading and writing disabilities. Specifically, skills in four code-related areas are most consistently linked to later reading and writing success: alphabet knowledge, print concepts, phonological awareness, and letter-sound knowledge.¹⁴ Examples of tools researchers and practitioners may use to assess children’s skills in these different areas are included in Table 1.

Alphabet Knowledge

Alphabet knowledge refers to children’s knowledge of the individual alphabet letters in uppercase and/or lowercase formats. Alphabet knowledge is typically examined through receptive tasks in which children are asked to point to individual letters as they are named or in expressive tasks in which children name the individual letters as an examiner points to them.

Print Concepts

Print concepts refer to children’s knowledge of the rules governing the forms and functions of print across various written genre. They include, for instance, children’s knowledge of print directionality, the names of different print units (e.g., letter, word, question mark), and the

Table 1 Examples of Tools for Assessing Code-Related Emergent Literacy Skills

Skill Area	Assessment Tool
Alphabet knowledge	Phonological Awareness Literacy Screening; Pre-Kindergarten Alphabet Knowledge Subtest ³⁸
Print concepts	Preschool Word and Print Awareness, Print Concepts Subtest ³⁹
Phonological awareness	Get It, Got It, Go! Alliteration and Rhyming Tasks ⁴⁰
Letter-sound knowledge	Phonological Awareness Literacy Screening; Pre-Kindergarten Letter-Sound Subtest ³⁸

systematic ways these units are combined to create written discourse. This term is also often used in reference to children’s knowledge of book conventions, such as the front versus back of a book and the location of the title and author on the cover.

Phonological Awareness

Phonological awareness describes children’s sublexical awareness of (or sensitivity to) the phonological segments of spoken language, including words, syllables, rimes, and phonemes. Awareness at the word and syllable level is considered syllabic, or shallow, awareness, whereas awareness at the rime and phonemic level is considered subsyllabic, or deep, awareness.¹⁵ Phonological awareness tasks may include blending (e.g., blending the onset and rime of the word “splat”), segmenting (segmenting the onset from the rime of the word “splat”), or manipulating (moving the onset to behind the rime for the word “splat”).

Letter-Sound Knowledge

Letter-sound knowledge describes the child’s knowledge of the systematic linkages between specific letters and sounds. It includes not only simple letter-sound correspondence (e.g., the letter S makes the /s/ sound), but also knowledge of the sounds for digraphs (SH) and the variations in sound correspondences for some letters (e.g., C makes the /k/ sound and the /s/ sound).

MEANING-RELATED SKILLS

Reading involves both comprehension and decoding. Typically, reading development is divided into two general stages: *learning to read* and *reading to learn*. The learning to read stage, corresponding to kindergarten to roughly the end of second or beginning of third grade, is when children build and consolidate their decoding skills. Often, emergent literacy interventions focus on facilitating children’s transition to decoding instruction and focus primarily on building code-related competences. Although it is true that having well-developed decoding skills promotes children’s seamless transition to

reading to learn (which typically occurs at the end of third grade or start of fourth grade), it is also necessary that children have well-developed language abilities that will enable them to read for meaning and to learn to comprehend strategically and efficiently. Inadequate attention to building the base for reading comprehension in the emergent literacy and learning to read stages can result in challenges to children in the later elementary grades when they are expected to be able to read to learn. For some children, their difficulties in reading to learn are so extraordinary that they are identified as having “late-emerging” reading disabilities.¹⁶ These children progress well through decoding instruction in the early elementary grades, but they are unable to shift to reading for meaning.

Taking the long view toward ensuring children’s success in their future reading achievements, emergent literacy interventions must promote skills that facilitate later decoding success as well as those that facilitate later success in reading comprehension. Accordingly, emergent literacy interventions should include explicit attention to meaning-related skills that are most consistently linked to later reading comprehension, namely vocabulary, grammatical understanding, and narrative.¹⁷ Examples of tools researchers and clinicians might use to assess these skills in young children appear in Table 2.

Vocabulary

Vocabulary refers to the store of words children understand (receptive vocabulary) and/or use (expressive vocabulary). One’s vocabulary size is closely linked to the ease with which one can learn new words (word learning) as well as the

Table 2 Examples of Tools for Assessing Meaning-Related Emergent Literacy Skills

Skill Area	Assessment Tool
Vocabulary	Peabody Picture Vocabulary Test-III ⁴¹
Grammatical understanding	Test of Language Development ⁴²
Narrative	Analysis of Narrative Structure ⁴³

adequacy of one's mental lexicon for storing and organizing words (word retrieval). Of particular import to emergent literacy intervention is facilitating children's knowledge of "Tier Two" words¹⁸; compared with basic-level words (e.g., boy, noise, big), Tier Two words (e.g., toddler, clamor, gigantic) add precision to one's store of words for expression and comprehension.

Grammatical Understanding

Grammatical understanding refers to a child's internalized knowledge of the system of rules governing the syntax and morphology of his or her native language. For preschool children, grammatical understanding includes comprehension of complex sentence structures (e.g., embedded relative clauses, temporal conjunctions, negative sentences) as well as comprehension of such phrasal structures as past tense verbs, elaborated noun phrases, and prepositional phrases. It also includes comprehending grammatical morphemes such as plural and possessive forms.

Narrative

Narrative refers to children's understanding and production of discourse-level language abilities that present fictional or personal accounts. It includes comprehension and expression of narrative macrostructure (the global organization of narrative to include temporal and causal associations among events and characters) as well as microstructure (the internal grammatical and lexical structures, such as use of complex syntax).

THERAPEUTIC TECHNIQUES

The term scaffolding describes the way in which professionals may introduce and facilitate a child's learning of both code-related and meaning-related skills. It has proved an effective means of gradually moving skill acquisition from an external "introduction" phase to an internalized "mastery" phase. Scaffolding is differentiated from alternative techniques by its process-oriented nature.

As its name suggests, effective scaffolding involves a series of phases. In the introductory

phase, an unfamiliar task is presented to the child by a knowledgeable adult or peer. From a Vygotskian perspective, the child's unfamiliarity with the skill should not be considered a hindrance to the teaching at hand. On the contrary, such unfamiliarity is an opportunity placed strategically at the front end of the child's zone of proximal development, helping to ensure that "teaching precedes development"¹⁹. This zone should be thought of as a continuum from dependence to independence, representing skills that are in the process of maturing for the child.²⁰⁻²² Initially, the child requires a large amount of support when completing the task and is wholly dependent on the adult for support. As the child moves along the continuum, she or he displays less reliance on the supporting adult and an increasing amount of independence until mastery is achieved. The metaphor of hiking is instructive: a child may be unable to climb a previously unencountered series of rocks on a trail, but this does not mean that she or he is incapable of continuing on the hike. What is required is the aid of someone who can provide a structure of support—such as an extended hand—and a model for how these supports might be used. With explicit modeling and provision of aid, the child can continue on the hike, while at the same time internalizing the mechanism for success to be applied in future. Of note in the hiking metaphor is the archetypically social nature of the support provided. It is in the context of a life activity, such as hiking or shared storybook reading, that scaffolding takes place and has greatest meaning.

It is useful here to distinguish between *scaffolding* and *shaping*. Although both techniques involve social interaction between a knowledgeable other and the child, it is the difference in the *approach* that is crucial. Shaping involves dividing the desired learning outcome into separate, detached tasks to be taught with a hierarchy of skill acquisition in mind.²³ If children do not achieve mastery of a particular task along the hierarchy, they are deemed by the adult to be unready to continue. Learning thus becomes stagnant and dependent on success at one part of the entire learning outcome before moving forward. Scaffolding, on the other hand, takes a more holistic view when

approaching the learning outcome. The learning outcome to be mastered is presented in a context in which the child and adult can work together to facilitate learning along the length of the continuum. Zone of proximal development theory does not aim for success at discrete and unconnected tasks. Rather, the adult continues to supply guidance and support along the development continuum, allowing the child to acquire gradual task familiarity and, gradually, independent, active ownership of the desired task. Support and learning do not languish; they flow according to the child's requirements.

A seminal component of scaffolding is evaluating how much support to provide a child when a new learning outcome is introduced, and this is particularly important when considering the use of scaffolding in emergent literacy intervention. When providing emergent literacy intervention, each child will approach the unfamiliar task differently, bringing to bear varying levels of prior knowledge and experience. Also, children will move along the continuum at different rates, making it incumbent upon the adult to vary support from high to low as necessary.²⁴⁻²⁶ As children move toward mastery of a skill, support is sensitively withdrawn—graduating from high to low levels of support until the child is able to complete the task on his or her own.^{21,22}

Here, we discuss four scaffolding techniques designed specifically for children who are just beginning to develop their emergent literacy skills in both code-related and meaning-related areas; these are considered “high-support” strategies that are important to early facilitation of these important skills and concepts. We have drawn heavily from the work of O'Connor, Notari-Syverson, and Vadasy²² to build these illustrations and recommend this work to readers for additional applications of these techniques to emergent literacy intervention.

High-Support Techniques

There are four specific techniques that fall under the construct of high support: (a) *modeling the answer*, (b) *eliciting the answer*, (c) *coparticipation*, and (d) *reducing alternatives/giving choices*. The code-related skill of print

concepts has been used to provide a framework for examples under each technique. However, these particular types of scaffolds can be applied to any of the code- and meaning-related skills discussed earlier.

MODELING THE ANSWER

When employing this technique, the adult poses a question and then proceeds to talk aloud about the process of finding the answer and offers the answer explicitly to the child. The adult then asks the same question of the child after modeling is completed. As an example:

Adult: I'm going to look for the title of this book. And I know I'm going to find it on the front.

Here it is! (Points to the title.) Who can tell me where I can find the title of the book?

Note that the adult stated what he or she was looking for, discussed where the title can be found, and then pointed directly at the title before asking the child to find it. In this way, the adult provided high support to a child for whom the concept of title was unfamiliar. The mystery of “title” was unveiled and made plain so that the child may begin to process the meaning of title, how to find it, and how to apply this knowledge to other texts.

ELICITING THE ANSWER

Eliciting the answer is a similar high-support approach to building a child's emergent literacy skills. The adult first provides the answer to a specific question he or she plans to pose and then requests the same answer of the child. For example:

Adult: This is the way I turn the page. Which way do I turn the page?

This scaffold takes away any ambiguity about page order and is instructive for a child who is just beginning to develop understanding of this particular print concept. By telling (and showing) the correct page order, the adult reinforced the desired print target and then followed up to see if the child could then provide the answer.

COPARTICIPATION

Coparticipation is a type of scaffold in which the adult and child engage in a task simultaneously. For example:

Adult: This word says "Moo." (Points to the word on the page of a book) Point to the word Moo with me this time. Let's do it together.

The goal of this interaction is to have the children identify a word in print, but it is a task that is far too complex for this child at this developmental moment. By employing the use of coparticipation, the adult began the process of introducing word identification with maximum support.

REDUCING ALTERNATIVES/GIVING CHOICES

With this scaffold, the adult provides the child a model of a correct answer in the context of an incorrect answer or choice, thereby providing a contrast for the child. Answering a question of "is it *X* or is it *Y*" requires the child to compare the options and choose one rather than simply repeating what the adult has said. For example:

Adult: Is this the letter *J* (points to the letter *D*) or is this the letter *J* (points to the *J*)?

When using the technique of reducing alternatives/giving choices, it is especially important to correct the child if a wrong answer is given and to repeat the correct answer to provide clarity.

TREATMENT CONTEXTS

As the previous sections discussed, children's emergent literacy skills emerge through their carefully guided interactions with print and sound under the guidance of a more capable peer. For children exhibiting significant delays in emergent literacy development—because of environmental and/or developmental challenges—the use of high-support scaffolds provides an important mechanism for introducing challenging emergent literacy concepts to the child. This scaffolding of development can occur in a range of contexts in which such

interactions are possible. Prevalent approaches include classroom-based, pull-out, and parent-implemented interventions.

Classroom-Based Interventions

Classroom-based emergent literacy interventions are implemented within children's classrooms and capitalize upon the many contexts available within the classroom milieu to promote children's code- and meaning-related skills. In such interventions, a heightened focus on emergent literacy development is strategically embedded within a range of instructional contexts, including large-group teacher-led sessions, small-group lessons, and center time in which children engage in a range of self-directed learning experiences. Within classroom-based interventions, children exhibiting emergent literacy challenges have the opportunity to engage in learning experiences within which peers serve as models, an effective technique for building children's code- and meaning-related skills.^{4,27}

Some classroom contexts that appear particularly useful for embedding emergent literacy intervention include large-group time, the dramatic play center, and the classroom library and writing center. Large-group time provides a daily opportunity for classroom teachers or other professionals, including the SLP, to provide explicit instruction in emergent literacy concepts to all pupils. Inclusion of explicit instruction has consistently been found to be beneficial for improving children's emergent literacy skills in both code- and meaning-related dimensions. For instance, Whitehurst and colleagues implemented a 5-month, large-group time intervention for at-risk preschoolers attending Head Start.²⁸ Three times per week, teachers implemented explicit lessons focused on phonological awareness; this instruction was accompanied by a year-long reading program in which parents read regularly to their children in the home environment. Children who received the classroom-based intervention combined with the home-based reading program made significantly better gains than control children on measures of writing and print concepts.

The classroom dramatic play center has also served as the classroom-based intervention

context for several emergent-literacy intervention studies.^{29,30} In these studies, experimenters manipulated classroom dramatic play settings to provide increased infusion of literacy props, such as writing utensils, signs, posters, and lists. In classrooms featuring these “literacy-enriched” play settings, children made substantial gains on emergent literacy measures of alphabet knowledge and print concepts compared with children in control classrooms featuring more traditional play settings.

The classroom library and writing centers can also serve as an important context for facilitating children’s emergent literacy skills.³¹ In this study, at-risk 3- to 5-year-olds participated in a year-long classroom-based joint writing program that featured small-group instructional lessons featuring writing activities as well as alphabet and phonological awareness games. Compared with children receiving an alternative form of emergent literacy intervention featuring shared storybook reading (accompanied by drama and creative activities), children in the writing program showed substantially greater growth on measures of writing and phonological awareness.

As these and other studies show, implementing emergent literacy intervention within the classroom context is an effective means for facilitating children’s emergent literacy skills. These programs benefit not only children within the classroom who exhibit specific vulnerabilities in emergent literacy development (e.g., children with language impairment, children with intellectual disability) but also a more general at-risk population. In terms of the role of the SLP, the SLP can serve as an important consultant and collaborator in both designing and implementing classroom-based interventions. The SLP can team teach large-group emergent literacy lessons with the classroom teacher and also work individually with pupils to provide differentiated targeting of high-priority targets during center time.

Pull-Out Interventions

Some children may require more intensive and systematic attention to developing emergent literacy skills than it is possible to provide in the classroom setting. Such pull-out interven-

tions, typically provided in small groupings of three to six pupils, are best viewed as a *complement* to emergent literacy interventions provided within the classroom environment rather than as a substitute. An increasing body of literature within the field of reading disabilities argues the importance of viewing literacy interventions from a multitiered approach, in which interventions are layered upon pupils based upon their needs.³² Thus, pull-out interventions are provided to children whose progress within classroom-based interventions is significantly slower than that seen in their peers; researchers describe these children as “nonresponders” or “treatment resisters” because their need for more intensive pull-out interventions is based on their lack of response to classroom-level interventions.³³ Organizing intervention within a multitiered framework requires that classroom-based interventions be implemented first, with pull-out supplemental interventions implemented in response as a means to provide additional supports to nonresponding children.

Pull-out interventions have at least two important benefits to children who are failing to respond to classroom-based interventions: (1) repetition of concepts and (2) increased scaffolding. First, considerable evidence suggests that children who exhibit difficulties in emergent literacy development benefit from increased repetition of (and therefore opportunities to learn) important concepts. By way of example, studies of vocabulary acquisition consistently show that words are more likely to be learned as the number of exposure to the words increases.³⁴ Pull-out interventions can provide children with repeated opportunities to experience important concepts, which may be exactly what these children need to accelerate their learning. Second, evidence also suggests that scaffolding is an important mechanism for emergent literacy development.²³ Scaffolding can take many forms, from the opportunity to observe peer models to explicit modeling of targets by an adult. With the smaller groupings provided in pull-out interventions, children are offered greater opportunities to observe their peers closely and to receive scaffolded instruction from adults that is sensitively aligned to their current developmental needs.

Evidence shows the effectiveness of small-group pull-out instruction for providing emergent literacy intervention. Justice and Ezell,⁴ for instance, reported significant gains in five areas of emergent literacy skill for 18 high-risk preschoolers who received twice-weekly small-group instruction from an SLP and reading specialist working collaboratively. In a separate study, Justice et al⁶ showed significant improvements in at-risk preschoolers' code-related emergent literacy skills while participating in a pull-out, small-group book reading program that featured systematic embedding of print-related instruction. Studies of kindergarten pupils have shown similar benefits for the use of supplemental pull-out interventions for boosting the early reading skills of struggling readers.¹³

Home-Based Interventions

The involvement of parents as intervention agents in delivering language-focused interventions to young children with speech and language disorders has a long history, and studies have shown that parents can be trained to provide effective interventions within the home environment and that these interventions can result in significant improvements in children's skills.³⁵ Similar findings have emerged in the area of emergent literacy intervention, particularly with respect to working with parents to improve the frequency and the quality of shared storybook reading within the home environment. For instance, in a seminal study, Whitehurst and his colleagues³⁶ trained parents to read to their toddlers using a particular style they called "dialogic reading." This style is designed to recruit children's verbal participation in storybook reading to make them more active conversational partners; its benefits for children's early grammatical and vocabulary achievements is well established. More recent studies focused on training parents to modify their book-reading styles to include a more deliberate focus on print have shown this to have a positive effect on children's code-related skills, particularly alphabet knowledge and print concepts.⁴

Of particular importance to SLPs and other professionals who work with parents to promote literacy-related instruction in the

home environment is to ensure that the necessary support parents need for providing *quality instruction* is given. This is particularly true when professionals work with parents with limited literacy or whose cultural beliefs about literacy differ from the mainstream. Likewise, parents whose children have significant disabilities may require considerable and ongoing supports to develop strategies for engaging their children in literacy experiences, as shown by research conducted by Saint-Laurent and colleagues.³⁷ These researchers worked with 10 parents of children with significant disabilities to promote their delivery of emergent-literacy intervention within their homes; parent training included a 3-hour workshop and weekly home visits for an 8-month period. The program focused on increasing the frequency and quality of home-based shared reading and other literacy activities. Despite the length of this program, children whose parents implemented this program showed little improvement in emergent literacy relative to a control group of pupils. These sobering findings suggest that home-based, parent-implemented literacy interventions may require considerable involvement of the collaborating professionals and perhaps are best implemented in conjunction with classroom-based and pull-out interventions as discussed in the previous sections.

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