Embedded–Explicit Emergent Literacy Intervention II:
Goal Selection and Implementation in the Early Childhood Classroom

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Part I in this series provided background information framing the embedded–explicit model of emergent literacy intervention (see Justice & Kaderavek, 2004). Research has shown the prevention of reading disability to be much more effective than delivering interventions after reading disabilities have manifested (e.g., Juel, 1988). Consequently, intensive emergent literacy prevention procedures are increasingly advocated as best practice for general early childhood classrooms (Fuchs & Fuchs, 1998; Vellutino et al., 1996), and speech-language pathologists (SLPs) are key members of interdisciplinary early childhood teams in providing preventive measures to help children succeed early in literacy. The embedded–explicit model was designed to assist SLPs as they become more involved in preschool and kindergarten classroom literacy programs. It emphasizes the unique contributions of both embedded and explicit experiences and instructional paradigms to children’s development of literacy skills. The present article provides specific guidance concerning implementation of the embedded–explicit model, with a particular emphasis on the explicit component.

As noted in Part I, for some young children, literacy learning via embedded opportunities may not be sufficient for achieving important literacy precursors. Research suggests that the most powerful predictors of later reading success are letter–name knowledge and phonological awareness (e.g., Bond & Dykstra, 1997; Ehri & Wilce, 1980, 1985; Liberman, Shankweiler, Fischer, & Carter, 1974; Perfetti, Beck, Bell, & Hughes, 1987), and that intense explicit instruction in these areas reduces the likelihood of later reading difficulty (e.g., Bus & Van Ijzendoorn, 1999; Cunningham, 1990; Fielding-Barnsley, 1997; Hecht & Close, 2002; Phillips, Norris, & Mason, 1996). These findings, although generally focused on elementary-grade achievements (e.g., National Reading Panel, 2000), have had an influence on the design and focus of early childhood programs. Accordingly, federal early childhood programs, such as Head Start, are increasingly emphasizing the use of measurable and discrete literacy-learning goals in early childhood classrooms (Head Start Bureau, 2000).

The SLP has a unique and central role in this move toward more explicit interventions for young children. SLPs are able to assess discrete elements of language development...
and analyze relationships between separate domains and overall language performance. These SLP skills also are critical for monitoring children’s emergent literacy development. For example, explicit intervention approaches are designed to target individual literacy components, such as phonological and print awareness. The overriding goal of phonological and print interventions, however, is not for children to perfect phonological and print skills as discrete tasks, but to integrate domain-specific analytic abilities into children’s experiences with written text. SLPs are well qualified to monitor children’s metalinguistic knowledge of individual code-based skills and to monitor the transfer of phonological and print skill competencies into meaningful literate language comprehension and use (Kamhi, Allen, & Catts, 2001).

The rapidly growing body of research, large-scale public policy initiatives (e.g., No Child Left Behind Act, 2001), and urgency with which school systems are endorsing explicit literacy interventions creates a challenging atmosphere for SLP involvement. Barriers include challenges associated with classroom-based interventions in general, such as limited time available for planning and lack of training in collaborative models (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Russell & Kaderavek, 1993), as well as a specific concern by some individuals that early literacy intervention is outside of the scope of the SLP (Goldberg, 2003). The goal of this article is to diminish these barriers by outlining an approach that encompasses both embedded and explicit literacy-learning opportunities to assist SLPs in implementing early literacy intervention programs.

This article focuses primarily on the explicit component of the embedded–explicit model of emergent literacy intervention because the explicit orientation to early literacy development (in contrast to embedded or whole-language orientations) is a relatively new focus in local and federal early childhood initiatives and therefore may be less familiar to clinicians. This article is divided into three sections: The first section describes fundamental principles of explicit literacy instruction for young children, the second section outlines the literacy domains that are included within explicit literacy instruction and provides examples of suggested activities focusing on emergent literacy skills, and the third section provides an example of how early childhood classrooms can be organized to implement the model. The third section also includes sample lesson plans.

**FUNDAMENTAL PRINCIPLES OF THE EMBEDDED–EXPLICIT MODEL OF INTERVENTION**

The embedded–explicit model of emergent literacy intervention was developed to reflect the most strongly supported convergent research-based evidence. In this article, we use the term “best practice” to reference this accumulating body of current literacy research and the transference of a research corpus to contemporary models of clinical practice. In the explicit component of the embedded–explicit model, three best practice parameters are derived from the contemporary literacy research base: a response-to-treatment model, collaboration, and supportive techniques. These principles are elaborated in the following sections.

**Principle 1: Response-to-Treatment Model**

Recent years have seen a paradigm shift in determining who is to be included in explicit emergent (and later conventional) literacy interventions. This paradigm shift emphasizes the universal application of primary prevention practices—that is, involvement of all young children in comprehensive interventions designed to reduce the incidence and prevalence of later reading failure. The response-to-treatment model has been proposed as a more appropriate determinant for identifying children for literacy interventions, which identifies children for increasingly intensive interventions on the basis of how they respond to primary preventions (Fletcher et al., 1994; Fuchs, 2003; Speece & Case, 2001; Stanovich & Siegel, 1994; Vaughn, Linan-Thompson, & Hickman, 2003). Historically, children have been identified for literacy interventions using within-child formulas, such as the IQ-achievement discrepancy or the presence of specific risk factors. In contrast, the response-to-treatment model does not require assumptions about causative factors for literacy difficulty; instead, it focuses on the extent to which children are able to succeed within effective interventions. The embedded–explicit model—and particularly, implementation of the explicit component—makes use of this conceptual shift in delivering interventions to children experiencing learning challenges. In delivering the explicit component, children who do not respond to first-tier learning opportunities are provided a second tier of intervention. Response-to-treatment intervention models are organized to provide increasingly intensive tiers of interventions to children.

**Multitiered intervention.** Although nearly all children in the preschool or kindergarten classroom will benefit from explicit literacy-learning opportunities (Chard & Dickson, 1999), the intensity of the exposure should be differentiated to afford some children more intensive learning opportunities. Explicit literacy instruction can be organized using a multitiered framework, in which whole-class instruction is universally provided to all children in the classroom (Tier 1) and small-group or one-on-one instruction is provided as a second tier of intervention to children requiring additional learning opportunities (Tier 2).

The response-to-treatment model frequently relies on curriculum-based assessment or other alternative procedures, such as dynamic assessment, to identify children whose level and/or rate of literacy learning is below that of their peers who are receiving the same learning opportunities (Fuchs & Fuchs, 1998). Quickly administered curriculum-based literacy probes are regularly administered to assess children’s ongoing progress within the first tier of intervention. Informal probes, such as that provided in Figure 1, can be used to probe children’s response-to-treatment in the first tier of intervention. Using this probe,
teachers or SLPs observe children within large-group activities to identify those children who are and are not responding to specific activities; those children receiving the lowest scores are identified as nonresponders. For instance, in Figure 1, children receiving scores of 1 or 2 on achievement would be candidates for a second tier of explicit instruction, with goals tied to areas of distinct need (phonological, alphabet/print, or narrative). This instrument includes a focus on engagement to identify those children who are not engaging in literacy activities, so that supports to facilitate engagement in whole-class and small-group instruction can be provided to those who are disinclined to participate in literacy activities.

As a supplement to informal probes, literacy indicators used to document growth are increasingly being generated by individual states for identifying children who require additional tiers of preventive interventions. Currently, 34 states have existing or drafted pre-kindergarten standards. Pre-kindergarten standards for most states consist of between 10 and 40 skill-based indicators within the domains of literacy, language, and mathematics (Neuman, Roskos, Vukelich, & Clements, 2003). Assessment protocols, recommendations for frequency of assessment, and strategies for identifying nonresponders are being generated to coincide with state-developed indicators and accordingly vary from state to state. For example, Virginia uses PALS, the Phonological Awareness Literacy Screening–PreK tool (Invernizzi, Sullivan, & Meier, 2000). Typically, nonresponders (or treatment resisters) are operationalized as those children scoring in the bottom quartile of a class on targeted probes of early literacy (Torgeson, 2000).

In the explicit component of the embedded–explicit model, the first intervention tier consists of high-quality explicit whole-class instructional opportunities, as well as high-quality provision of regular embedded learning opportunities for all children in the classroom. The first tier of explicit intervention is provided by the classroom teacher, with varying levels of SLP involvement. Many children are likely to develop appropriate early literacy skills given these first-tier opportunities; nevertheless, a portion of children will fail to progress. For these youngsters, the embedded–explicit model advocates that the SLP provide additional small-group interventions using the response-to-treatment paradigm. This more intensive intervention is the second tier in the multitiered model.

The use of small groups at the second tier makes it possible for the SLP to individualize emergent literacy intervention, as the children who are nonresponsive to classroom-based embedded and explicit learning opportunities are likely to be a heterogeneous group. The second-tier group may include children with language impairment (LI) and other developmental disabilities, children from impoverished backgrounds, children learning English as a second language, and children with no obvious reasons for literacy difficulties (for a discussion of risk factors, see Justice, Invernizzi, & Meier, 2002). Children with LI are likely to

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**Table: Student Observation Worksheet**

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<thead>
<tr>
<th>Level of Engagement</th>
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<tr>
<td>1 = not engaged</td>
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<tr>
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Figure 1. Sample worksheet for identifying nonresponders.

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be well represented among those requiring a second tier of intervention (Rvachew, Ohberg, Grabeug, & Heyding, 2003). These children will present with unique strengths and needs in the area of literacy; for instance, many of those with expressive phonology impairments will require explicit experiences that target the strengthening of underlying phonological representations (Harbers, 2003). However, it is unlikely that this second tier will be delivered only to children with LI, and the role of the SLP in providing preventive interventions to a more general group of at-risk children has been recognized (American Speech-Language-Hearing Association, 2001).

Exceptions to second-tier explicit intervention. Children with LI are likely to comprise a significant portion of those children who are candidates for a second tier of explicit intervention. Implementation of a multitier literacy intervention in kindergarten classrooms throughout West Virginia showed that 54 of 187 children (28.9%) who qualified for a second tier of intervention were receiving services for speech/language impairment (Justice & Schuele, 2003). There are, nevertheless, two subgroups of children among those with LI who may not benefit from the increasing levels of explicit instruction advocated as part of the multitiered intervention model. As is well known, children exhibiting primary and secondary LI comprise a notably heterogeneous group (Catts, Fey, Tomblin, & Zhang, 2002). One way to differentiate among children with LI is whether the LI is specific (SLI: nonverbal abilities within normal limits) or nonspecific (NLI: nonverbal abilities below normal limits). A second way to differentiate among children with LI is by considering the domain(s) of language affected (i.e., form, content, or use). These considerations have implications for identifying children with LI who should receive a second tier of explicit literacy intervention. Children with NLI exhibiting significant levels of cognitive impairment and children whose impairment reflects problems of social engagement or language use may not benefit from explicit approaches (Kaderavek & Rabidoux, in press).

In considering the former group, children’s cognitive development must permit their recognition and use of visual symbolic forms that comprise the written language code. Examples of children’s symbolic understanding include recognition of environmental print and occasional attention to the individual units of print and language, such as recognizing some letters in their name or showing emerging awareness of sounds in language. To benefit from explicit literacy instruction, the child’s cognitive development must be such that engaging him or her with symbolic code-based tasks should “make sense” in the child’s world. If the required tasks cannot be integrated into a larger meaningful literacy task, even with intense adult scaffolding, it is unlikely that the child will benefit from participating in explicit literacy code-based intervention. For children with significant intellectual impairments who are not yet ready for explicit literacy experiences, embedded approaches should be emphasized to encourage children’s intentional and meaningful exploration of print (Katims, 1991). Nevertheless, it should be noted that many children who historically were thought to be incapable of learning to read, such as children with Down syndrome, have demonstrated the ability to become readers (Buckley, Bird, & Bryne, 1996; O’Connor, Notari-Syverson, & Vadasy, 1996). Consequently, impaired cognitive ability in and of itself does not preclude literacy instruction or participation in explicit interventions. However, modifications of the explicit literacy instructional program may be necessary. For example, the child may need a protracted focus on lower level literacy skills (e.g., reading environmental print) before advancing to higher level skills, such as identifying beginning sounds in words (O’Connor et al., 1996). Likewise, children with Down syndrome appear to benefit from a sight-word reading approach rather than a phonologic decoding strategy, which may preclude the need for an early explicit emphasis on phonological awareness (Cossu, Rossini, & Marshall, 1993).

The second group of children with LI who may not benefit from explicit literacy intervention are those with significant disorders of language use (rather than form or content). Children in this group may range from those who are diagnosed with autism to those who rarely initiate communication or those whose communication acts are topically unrelated. The need for high-level written language code use in this group of children is overshadowed by an immediate need to increase the frequency and relatedness of child-initiated communication acts. Emphasis on clinician-directed tasks may be counterproductive (Fey, 1986). Rather, literacy interventions for children with a pragmatic or language-use deficit should emphasize the functional and intentional use of oral and written language, consistent with the embedded paradigm. Literacy interventions for these children are most effective if they center around shared book reading, during which time the SLP or teacher facilitates the child’s focus of attention, child-initiated communication acts, and balanced turn-taking (Kaderavek & Rabidoux, in press).

**Principle 2: Collaboration for Literacy Intervention**

The embedded–explicit model promotes a shared responsibility for early literacy intervention between the classroom teacher and the SLP. The division of duties can take a variety of forms depending on the amount of planning time available, teacher preferences, and expertise of the participants (Cook & Friend, 1995). Typically, the classroom teacher has primary responsibility for the embedded learning opportunities and the whole-class explicit lessons (first tier) intervention. The SLP may be involved with this first tier of intervention by alternating the lead teacher role or by regular team teaching during both embedded and explicit whole-class teaching. The involvement of the SLP at the classroom level facilitates communication about the literacy program and the children’s progress, minimizes stigmatization for students with special needs, improves program intensity, and facilitates continuity between the first and second intervention tiers. The shared responsibility of intervention at the first-tier level is consistent with the implementation of a co-teaching model (Cook & Friend, 1995) and facilitates
service provision in the least restrictive environment as mandated by the Individuals with Disabilities Act (IDEA) of 1990 and the amendments to IDEA of 1997.

Although implementation of collaborative interventions can be challenging (Murawski & Swanson, 2001), these interventions are viewed as essential to the embedded–explicit model. An important challenge for professionals is finding the time needed for planning collaborative interventions. This challenge can be overcome through administrative support, professional development in collaboration, and systematic ongoing communication among collaborators (Cook & Friend, 1995). An additional challenge concerns the identification of roles and responsibilities of the collaborating professionals. A recent survey of teachers found that general educators were perceived as doing more than special educators in the co-teaching environment (Austin, 2001). One barrier potentially limiting SLP co-teaching in the preschool classroom has been the scarcity of early literacy intervention models developed specifically to include the SLP. The embedded–explicit model was developed to fulfill this need. SLP involvement at the first tier of intervention facilitates a seamless entry to the second tier of intervention for children who fail to respond to the whole-class lessons and reduces the likelihood of two different curricula being implemented (i.e., a classroom curriculum that is conceptually different from the second-tier intervention). The second tier of intervention, which is SLP administered in the embedded–explicit model, focuses on the same explicit literacy skills as those that are addressed in the classroom, but increases intensity and duration of instruction as children participate within both contexts.

**Principle 3: Supportive Techniques**

In implementing explicit literacy interventions at the first and second tier, skills are facilitated by educators and SLPs using four techniques supported in the language and literacy literature. These techniques include the use of (a) intermediate targets, (b) context manipulation, (c) dynamic assessment, and (d) cycled targets.

**Intermediate targets.** An emphasis on selecting intermediate targets is borrowed from Fey, Long, and Finestack’s (2003) presentation of grammar facilitation guidelines for implementing language interventions for young children. Intermediate targets are those that are achievable by a child with intensive adult supports: They are beyond the independent level of performance, but below frustration levels. The embedded–explicit model emphasizes the need to expose children to a threshold level of focused explicit literacy instruction in the classroom-based first tier that will, in many cases, trigger a child’s ability to develop age-appropriate emergent literacy skills. Gillon’s (2003) phonological awareness research has suggested that intermediate targets in phonological awareness are particularly appropriate for the second tier of explicit support. It is postulated that exposure to more difficult phonological tasks with adult support facilitates systemic changes in phonological awareness. The literacy activities that are presented as targets in the embedded–explicit approach should be intentionally challenging but supported by SLPs in an environment of intense adult scaffolding along with strong positive emotional and contextual support.

**Context manipulation.** Explicit literacy interventions should feature ongoing manipulation of social, physical, and linguistic contexts to create frequent opportunities for children’s use of targeted forms (Fey et al., 2003). These manipulations of context should emphasize the use of a variety of textual and discourse genres that ensure that targeted features are salient for the children (Fey et al., 2003). Children’s exposure to the foundational skills within phonological, print, alphabetic, and literate language domains should move the child frequently between the written text (i.e., storybook) and active participation in activities designed to highlight literacy skills. As an example, following a Halloween-themed book reading, the children can be asked to stir up a “witches’ brew,” adding objects that start with the “magic sound” or finding and adding “magic letters” (Gillon, 2003).

**Dynamic assessment.** Dynamic assessment is an alternative evaluative protocol that can be used within the embedded–explicit model to inform literacy goals for individual children. Dynamic assessment describes an approach in which the SLP monitors a child’s ability to learn a specific set of behaviors within the context of scaffolding, in contrast to a static view that considers only the child’s current level of skill in a particular domain (Laing & Kamhi, 2003). Dynamic assessment is particularly appropriate for culturally or linguistically different children (Lidz & Peña, 1996; Ukrainetz, Harpell, Walsh, & Coyle, 2000) and is useful for a broad range of individuals, including children who are at risk due to social or economic factors (Feuerstein, Rand, & Hoffman, 1979). During dynamic assessment, the SLP or teacher actively engages the child in a learning situation, encourages meta-awareness of the processes being manipulated, analyzes how the child approaches the task, notes the level of prompting required, and documents the modifiability of the child’s knowledge level (Paul, 2001). For example, children can be engaged in a phonological awareness task and their responsiveness can be rated on a Likert-type scale ranging from 1 to 5, with 1 = high distractibility/difficulty performing the task, 2 = prompting needed more than 50% of the time, 3 = prompting needed less than 50% of the time, 4 = prompting/assistance needed only at the beginning of the task, and 5 = no prompts needed (Gutiérrez-Clellen & Peña, 2002). Consistently low ratings are used to identify children requiring more intensive and individualized intervention to maintain or achieve a developmental level that is equivalent to that of their peer group. This dynamic protocol can be used across the full range of emergent literacy targets discussed elsewhere in this manuscript.

**Cycled targets.** The selection of goals targeted for explicit literacy instruction should reflect use of a cyclic or horizontal rather than vertical strategy. In a vertical strategy, one goal is targeted until a predetermined criterion level of performance is achieved, followed by a second goal, and so forth (Bernstein & Tiegerman-Farber, 2002). Conversely, in a cyclic or horizontal approach, a number of
different goals are worked on within a particular time frame. The cyclic approach acknowledges children’s ability to integrate new skills over time with appropriate environmental opportunities and concedes that the route to competency may not require that every skill be learned to a predetermined criterion before new goal introduction (Bernstein & Tiegerman-Farber, 2002). For example, in a 3-week unit, Week 1 may focus primarily on sound blending (“Guess which word I’m saying.”); identifying and writing each child’s first name; and telling a story with a beginning, middle, and end. Week 2 may concentrate on initial sound recognition of words, singing the alphabet, and describing what a character in a book says (“He said, ‘I don’t want to go!’”). Week 3 may continue to emphasize the alphabet song, but add written letter recognition during the singing (“Hold up the letter ‘L’ when you hear it!”); reintroduce sound blending but with a different sound focus and/or activity; and recycle back to storytelling practice. Specific skills are selected and introduced with a goal of ongoing horizontal exposure rather than mastery of discrete literacy components.

**LITERACY DOMAINS FOR EXPLICIT INTERVENTIONS**

This section outlines specific literacy domains that are targeted in the embedded–explicit model of emergent literacy intervention. Four interrelated domains of achievement are emphasized: (a) phonological awareness, (b) print concepts, (c) alphabet knowledge and writing, and (d) narrative and literate language. The domains were selected because they have been critically linked to later literacy achievements and are particularly amenable to structured clinician-directed activities (see Badian, 1998; Lomax & McGee, 1987; Scarborough, 1998). Also, these areas are particularly vulnerable for children who are experiencing circumstantial and/or language risk factors (e.g., Bishop & Adams, 1990; Boudreau & Hedberg, 1999; Lonigan et al., 1999).

**Phonological Awareness**

Phonological awareness describes children’s sublexical sensitivity to the sound units of oral language, transcending words, syllables, onset and rimes, and phonemes (see Table 1). Sensitivity to these language units follows a developmental course in which children become progressively aware of larger units (words, syllables) followed by sensitivity to smaller units (onsets and rimes, phonemes; Justice & Schuele, 2004; Stanovich, 2000). Phonological awareness in preschool and kindergarten is one of the top predictors of how well children will learn to read (National Reading Panel, 2000). Consequently, phonological awareness tasks are a major focus of explicit instruction in the embedded–explicit model.

To guide the SLP in targeting phonological awareness in explicit instruction, a list of tasks that are often used for examining or enhancing preschool and kindergarten children’s phonological awareness abilities is presented in Table 2. The developmental level (preschool, kindergarten, first grade) of typical independent production has been interpreted from available resources. The most commonly studied paradigm for phonological awareness intervention follows a developmental course; awareness of spoken words and syllables is targeted first, followed by development of rhyming skills, beginning sound awareness, onset-rime level blending, medial and final sound awareness and identification, and finally, phoneme-level blending and segmenting (e.g., Adams, 1998; O’Connor et al., 1996). Some studies have suggested that a developmental course of instruction may not be necessary (e.g., Ukrainetz, Cooney, Dyer, Kysar, & Harris, 2000). Although children’s independent ability to blend and segment at the phoneme level is a later developing skill (i.e., end of kindergarten and first-grade level), preschool children can benefit from exposure to blending and segmenting tasks with strong adult support and scaffolding. The following is a list of target phonological awareness goals with an illustrative therapeutic activity appropriate for preschool and kindergarten children.

- **Children identify word and syllable boundaries.**
  - The adult guides children to identify word and syllable boundaries by clapping or stomping for the “pieces” of sentences and syllables (but-ter-fly), combining pictures (dog + house = doghouse), and deleting words (“Say doghouse without the dog.”).

- **Children produce rhymes in unison with the adult or rhymes independently.**
  - The adult re-reads a familiar rhyming storybook; children are encouraged to recite the story. The adult performs cloze procedures and the child is asked to provide the rhyming word (e.g., “Tim’s ted is in the ____.” Answer: bed).
  - The adult introduces a puppet friend who likes words that rhyme. The puppet says a word (e.g., red) and the children are asked to make rhymes (e.g., bed, head).

- **Children comprehend and produce words in a syllable-by-syllable manner and phoneme-by-phoneme manner.**
  - The adult introduces an “alien puppet” or other novel creature (“troll” or “robot”) that only speaks in a syllable-by-syllable, onset-rime, or phoneme-by-phoneme manner (Lundberg, Frost, & Petersen, 1988). Children take turns guessing what the puppet is saying and are encouraged to say words like the puppet: “The puppet says the word really slowly, you say it fast. He says but…ter…fly. Can you say that fast?” (Notari-Syverson, O’Connor, & Vadasy, 1998).

- **Children identify words sharing the same sound in the initial and/or final position in words.**
  - The adult encourages the children to stand up, move, or clap when they hear a word that starts or ends with a target sound: “Stand up every time you hear a word that starts with a /b/... book... frog... pen... Billy.”
Print Concepts refer to a child’s understanding of the functions and forms of print in everyday life, including conventions associated with books and book reading (e.g., print is different than pictures, print is read from left-to-right and top-to-bottom), and early metalinguistic comprehension of written and oral language units, such as letter, write, read, and word. Print concepts also include a child’s fundamental understanding of how print is used in meaningful text (Adams, 1998; Snow, Burns, & Griffin, 1998).

Many concepts that are fundamental to children’s developing understanding of the function of print are best taught in conjunction with the embedded literacy experiences in the literacy-rich preschool classroom. Specifically, children should develop an increasing print awareness by conceptualizing that (a) books are language “written down,” (b) writing and reading are a way to preserve and communicate meaning, (c) books and writing reflect real-life experiences, and (d) writing and reading take different forms depending on the nature of the task (e.g., grocery lists, TV listings, letter writing). The language experience approach (LEA) is an embedded technique that can be used to enhance print concepts (Lee & Allen, 1963). The LEA demonstrates to children that written language helps plan for, solve problems in, and summarize real-life events. For example, in one classroom, an escaped gerbil became a literacy-learning opportunity. The children (a) made “Lost Gerbil” signs to post in the school building using emergent writing forms (Ferreiro & Teberosky, 1982), (b) dictated a class story about how the gerbil was located and “captured,” (c) illustrated the story with digital photographs and emergent writing, and (d) shared the book with other classrooms and families. In these activities, children’s
real-life experiences were turned into print-teaching activities that were contextual, meaningful, relevant, and engaging. An additional embedded strategy that is helpful for facilitating print concepts is to create a dynamic and changing classroom literacy center that is stocked with reading and writing materials that are connected to overall classroom themes. For example, at different times, the literacy center could be set up as a library (stamps, ink pads, paper, library cards), a post office (letter paper, envelopes, stamps, mailboxes), or a store (Burns, Griffin, & Snow, 1999). Opportunities to engage with realistic reading and writing tools build children’s familiarity with the functions of literacy in daily life and complement daily repeated storybook interactions. The use of “big books” during group story time also is helpful for facilitating print concepts (Holdaway, 1979).

The above embedded techniques will be helpful for teaching many children important print concepts through classroom-based experiences. For some children, however, these experiences may not be adequate, and thus print concepts should be targeted within a second tier. These explicit opportunities should complement the embedded classroom activities and experiences. The following skills and illustrative activities may be useful:

- Children demonstrate book reading conventions.
  - The adult occasionally opens storybooks upside down or with the book spine on the right, acting “surprised and confused” when the book opens the wrong way. The child is encouraged to demonstrate the “right way” to read the book. The adult encourages the child (when appropriate) to hold the book and turn the pages.
- Children recognize metalinguistic concepts referring to acts of writing and reading, as well as understanding words used for oral and written language units (i.e., sound, letter, syllable, word, sentence).
  - The adult uses terms like word, read, title, and sentence when reading to children and intermittently helps children to interact with specific print units (e.g., “Show me the word/title on this page.”)
- Children connect information from text to real-life experiences.
  - The adult points to words in the book and says: “Here it says ‘Eddie went into the woods.’ Has anything like that ever happened to you?” By linking text to children’s life, the adult encourages children to make personal connections to storybook themes (Anderson-Yockel & Haynes, 1994).
- Children recognize local environmental print.
  - The adult takes photographs of neighborhood environmental print (e.g., road and building signs). Classroom books are made from the photographs (e.g., illustrating a field trip); children are asked to emergently read the story about their school trip (Sulzby, 1985).

<table>
<thead>
<tr>
<th>Skill area and examples of phonological awareness tasks</th>
<th>Developmental expectations for mastery (&gt;75% accuracy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word and syllable awareness</td>
<td>Early to late preschool (Moats, 2000)</td>
</tr>
<tr>
<td>1. Blend syllables into words (sun + shine = sunshine).</td>
<td>Early to late preschool (Fernandez-Fein &amp; Baker, 1997; Lonigan et al., 1998)</td>
</tr>
<tr>
<td>2. Segment sentences into words and multisyllable words into syllables.</td>
<td>Late preschool or early kindergarten (Bradley &amp; Bryant, 1983; Chaney, 1992; Lonigan et al., 1998)</td>
</tr>
<tr>
<td>Rhyming</td>
<td>Blending: late preschool (Treiman, 1983, 1985)</td>
</tr>
<tr>
<td>1. Say rhymes along with the teacher or independently.</td>
<td>Segmenting: kindergarten (Christensen, 1997)</td>
</tr>
<tr>
<td>3. Recognize words that rhyme.</td>
<td>Phoneme blending: kindergarten or first grade</td>
</tr>
<tr>
<td>4. Provide a rhyming word given a target.</td>
<td>(Vandervelden &amp; Siegel, 1995)</td>
</tr>
<tr>
<td>Beginning sound awareness</td>
<td>Phoneme segmenting: kindergarten or first grade</td>
</tr>
<tr>
<td>1. Recognize that two words start with the same sound.</td>
<td>(Christensen, 1997; Nation &amp; Hulme, 1997)</td>
</tr>
<tr>
<td>2. Identify the odd word from a set (“Which word does not belong? Bus, bun, rug?”).</td>
<td></td>
</tr>
<tr>
<td>3. Produce a word beginning with the same sound as a target word.</td>
<td></td>
</tr>
<tr>
<td>Onset/rime blending and segmenting</td>
<td>Blending: late preschool (Treiman, 1983, 1985)</td>
</tr>
<tr>
<td>1. Blend onset and rime into words (s + un =sun).</td>
<td>Segmenting: kindergarten (Christensen, 1997)</td>
</tr>
<tr>
<td>2. Segment words into onset and rime.</td>
<td>Kindergarten (Murray, Smith, &amp; Murray, 2000)</td>
</tr>
<tr>
<td>Phoneme identification</td>
<td>Phoneme blending: kindergarten or first grade</td>
</tr>
<tr>
<td>1. Identify the first sound in a word.</td>
<td>(Vandervelden &amp; Siegel, 1995)</td>
</tr>
<tr>
<td>2. Identify words starting with a particular sound (“Do you hear ‘h’ in rat or hat?”)</td>
<td></td>
</tr>
<tr>
<td>Phoneme blending and segmenting</td>
<td>Phoneme segmenting: kindergarten or first grade</td>
</tr>
<tr>
<td>1. Blend three to five phonemes into words (/m/ /a/ /p/ = mop).</td>
<td>(Christensen, 1997; Nation &amp; Hulme, 1997)</td>
</tr>
<tr>
<td>2. Segment a sound from a target word (“Say mitt without the /m/.”).</td>
<td></td>
</tr>
<tr>
<td>3. Segment one-syllable words into three to four phonemes.</td>
<td></td>
</tr>
<tr>
<td>4. Identify the number of phonemes contained in a target word.</td>
<td></td>
</tr>
</tbody>
</table>
• Children recognize individual aspects of words and/or recognize a few sight words.
  – The adult encourages children to sort word cards into categories of “long words” and “short words,” such as motorcycle versus mow (Rozin, Bressman, & Taft, 1974).

**Alphabet Knowledge and Writing**

Of the readiness skills that are traditionally assessed in young children, letter–name identification or alphabet knowledge is one of the strongest predictors of later reading success (Snow et al., 1998). In beginning reading programs, children are typically taught letter recognition either by (a) introducing the letter names in alphabetical order (e.g., A = /eɪ/, B = /biː/) or (b) teaching children to respond to each letter with the sound the letter makes in print (e.g., N = /n/). Adams (1998) built a strong case for teaching letter names before asking children to make the letter–sound connections. Letter names are stable and are often supported by traditional family exposure to literacy. Conversely, letter–sound relationships vary in that a letter can correspond to more than one sound. Thus, the letter name functions as a mnemonic device and visual link underlying later developing letter–sound relationships.

There are challenges in learning letter identities. Letters have no iconic meaning (e.g., the letter z does not look like a zebra) and contain only minimal visual features, which makes them highly confusable. Consequently, Adams (1998) suggested that teaching children to say letter names using well-known methods of rhythmic letter recitation or singing the alphabet song and then connecting this knowledge to uppercase letter–name recognition is the most valid approach for preschool children. Letter recitation or the alphabet song is usually learned well before age 4 and often before age 3 in children who are developing typically (Adams, 1998). After children can readily recognize individual letters, explicit teaching of letter–sound correspondence and visual recognition of whole words using specific letters as phonetic cues is a logical next step. However, children do not need to have fully developed letter–name competency before they can benefit from exposure to other alphabetic tasks. Alphabetic tasks should include identifying the letters in familiar words (e.g., their name), recognizing the initial letters of words in familiar books or environmental print, or appreciating that words are made up of individual letters.

Alphabet books can be an important vehicle to promoting alphabet knowledge. However, a primary focus on alphabet books during the preschool years with little exposure to other book genres can lead to lowered interest and motivation to read (Baker & Scher, 2002). The SLP’s challenge is thus to include alphabetic principles in explicit intervention plans but to maintain children’s enthusiasm for, interest in, and motivation for reading. Use of alphabet books needs to be balanced by exposing children to the full range of book genres, including traditional narrative storybooks (Sulzby & Kaderavek, 1996).

One way to make alphabetic principles concrete and enjoyable for children is through writing. Writing is an emergent literacy skill that is connected to children’s developing understanding of the alphabetic principle (Welsch, Sullivan, & Justice, 2003). Children are frequently exposed to writing, copying, and tracing tasks concurrently with learning letter names. These tasks are discrete in that learning one (e.g., tracing letters) does not necessarily carry over to the other (e.g., independent writing of letters). Because independent writing (rather than copying or tracing) is reported to be particularly facilitating for increasing children’s internalization of letter shapes, it is recommended that copying, tracing, and independent letter writing be targeted in the preschool program (Adams, 1998). However, letter writing should not be the only writing skill that is facilitated within the early childhood classroom. Emergent writing spans a developmental sequence that includes picture drawing, scribbling, production of random letter-like strings, as well as production of conventional letter form use (Ferreiro & Teberosky, 1982; Welsch et al., 2003). It is important for children to be supported in their attempts to use writing as a real-life activity. Thus, children should be encouraged to use a variety of emergent writing forms (i.e., scribbling or pictures) at a level that is matched to their interest and developmental level in order to increase engagement in a range of literate tasks. For example, children’s use of picture drawing or scribbling can be reinforced as they “write a letter to grandma.” Further, children can be asked to emergently read their non-conventional writing forms (Sulzby, 1985, 1990; Sulzby, Teale, & Kamberelis, 1989). These emergent writing skills should be included regularly within the embedded opportunities that are provided in the classroom.

For children requiring additional explicit learning opportunities, within the classroom-based first tier or the small-group second tier, the following examples are provided.

• Children learn to sing the alphabet song.
  – The adult sings the song in entirety at least once during each intervention session; the emphasis is on developing children’s independent production of letter names. It may be useful to teach the song in “chunks” (first, A,B,C,D,E,F,G; then H,I,J,K, L,M,N,O,P; then Q,R,S,T,U,V; finally X,Y,Z).

• Children recognize letters in their name.
  – The adult provides varied opportunities for the children to recognize their name in the classroom environment (e.g., labeling coat hook, cup, chair), as well as during shared book readings (“That’s my letter.”).

• Children recognize the first letter in environmental print (e.g., M = “McDonalds”).
  – The adult gives the children an index card with an uppercase letter. On a school tour or field trip, children find examples of “their letter” in environmental print.

• Children independently sort uppercase letters and recognize some uppercase letters.
  – The adult engages children with sorting tasks to learn the visual representation of letter forms.
Children are provided with sets of manipulable letters with duplicates; sorted objects should be varied using letter tiles, magnetic letters, lettered blocks, and so forth. Letter size and font can also be varied.

- The adult labels toy trucks, cars, or other pull toys with letters. The children are encouraged to “drive” their toy to the “garage” (box, mat, or card) with the matching letter (Gillon, 2003).
- Children independently write their name.
- The adult provides multiple opportunities for children to produce their name, not only by tracing and copying, but also by forming their names with letter tiles and matching tiles to their written name, magnetic letters, and letter cutouts.

**Narrative and Literate Language**

The relationship between oral language and emergent literacy is well documented, and the dynamic relationship between oral and written language development is fundamental to the literacy-learning process (Catts & Kamhi, 1999). It is this underlying connection that provides the impetus for including explicit language targets within the embedded–explicit model of literacy intervention. Teachers and SLPs facilitate many oral language skills as children explore, discuss, interactively read, emergently write, and remember the literacy events that are provided daily in the classroom. The teacher–child language interactions that occur during classroom literacy events and the adult–child relationships that are forged during communication exchanges may be the single most powerful influence predicting children’s success in the classroom (Pianta & Walsh, 1996). However, the embedded–explicit model also focuses on a discrete set of oral language skills. The oral language skills included for consideration for explicit intervention have been selected because the skills are fundamental in helping children (a) comprehend narrative story structure and aspects of decontextualization that are essential to narrative construction; (b) analyze and interpret text by using conjunctions to understand cause-and-effect relationships; and (c) produce low-frequency syntactic/semantic structures that are related to academic literacy demands, including noun and verb phrase elaboration and use of mental/linguistic words (Greenhalgh & Strong, 2001; van Oers, 1998; Watson, 2001). These skills are collectively described here as narrative and literate language.

The quality of children’s narratives has been correlated with later reading success (Roth & Speckman, 1986). Typically developing children are able to produce stories with basic narrative structure between 5 and 7 years of age (McCabe & Bliss, 2003). During the preschool years, children learn that in many stories, there is an introduction, a story climax or “high point,” and a conclusion or resolution of the action (see Table 1; McCabe & Rollins, 1994). Understanding this fundamental story schema aids children’s comprehension and recall of stories and helps them form novel stories (Pakulski & Kaderavek, 2003). Decontextualization during narrative production refers to children’s awareness that the speaker (or the writer) has the responsibility of supplying all of the information needed for listener comprehension. To meet the needs of decontextualized language within their spoken narratives.

Another important factor in narrative construction centers on the cause-and-effect relationships that are fundamental to narrative structure. Coordinating and subordinating conjunctions (e.g., because, if, therefore, so, since, unless) are often used to signal these relationships within the text (McCormick, 1995). Although some conjunctions (therefore, since) may not emerge until elementary school age, other conjunctions (because, so, after) are frequently produced by children by age 4 (Paul, 2001). The SLP can help children understand concepts related to the “why” of the narrative sequence of events and the implications of characters’ actions. Ability to understand these concepts depends on many higher level cognitive skills, such as predicting, inferring, sequencing, and drawing conclusions (McCormick, 1995).

The general order of teaching cause-and-effect problem solving is to start with concepts that the child already knows or has experienced (e.g., “What happens when we leave the water running in the sink?”) or concepts that can be experientially tested in the classroom (e.g., floating versus sinking). The SLP then moves to more decontextualized discussions of cause-and-effect, using movies, TV shows, and texts to explore these concepts. Storyboards, pictures with connecting arrows, and some computer software programs can be used as scaffolds. Cause-and-effect discussions can lead to discussions of logical and illogical sequences of events (“First I put on all my clothes, and then I took a bath—wow, that’s a silly story, isn’t it?”). Explicit attention to cause-and-effect relationships within storybook readings provides a contextualized opportunity to engage children in cause-and-effect problem solving (“Why do you think he wanted to leave?”). Cause-and-effect relationships are also strengthened when children follow written/illustrated instructions. The step-by-step process of completing actions from directions links the literacy task to cause-and-effect relationships and event sequencing (McCormick, 1995). Following directions also provides opportunities to facilitate the use of temporal conjunctions (e.g., when, while, after, before), which are forms that are often used in texts to provide background for narrative events (Greenhalgh & Strong, 2001; Pellegrini, 1985).

An important element of narrative that is receiving increased attention is the child’s use of literate language, which has been linked to later reading development. Literate language features provide the means for rendering meaning linguistically within narrative; these features include elaborated noun phrases, adverbs, and the use of mental and linguistic verbs (Greenhalgh & Strong, 2001; Pellegrini, 1985). Elaborated noun phrases and adverbs increase the explicitness of character and object descriptions used in books and clarify subtle differences in
meaning (“The worried boy carelessly left his bike out in the pouring rain”). Mental and linguistic verbs (e.g., thought, knew, remembered, decided, imagined, forgot, asked, told, explained, called, yelled) allow children to comprehend and use language describing the actions and thoughts of characters in text. Children’s use of these literate language forms enables them to clearly describe the story action and to produce an oral story form with written-language-like characteristics. Literate language features are readily evident in the spoken narratives of preschool children, and their use gradually increases as children enter the elementary grades (Current & Justice, 2004). School-age children with LI use fewer literate language features relative to other children in their spoken narratives, suggesting the importance of early exposure to these skills (Greenhalgh & Strong, 2001).

There are many embedded approaches that can be used to facilitate early use of literate language and the production of well-formed narratives. For instance, a facilitative strategy for improving children’s use of descriptive terms is to have children describe an item from a group of similar items (e.g., one leaf from a pile of many leaves). The use of finely tuned descriptive words is pragmatically required to differentiate the specific item in question. Adverbs can be taught in embedded interactions by having children vary their own actions. Children can be engaged in an activity where they “walk quickly” versus “walk slowly.” Use and understanding of mental and linguistic verbs can be facilitated during embedded instructional opportunities; words such as “told” and “thought” can be prompted while the children are involved in role play, puppetry, or other types of story reenactment (e.g., felt boards). Modeling, requests for imitation, and language expansion/extension techniques, such as recast sentences, are other primary approaches that support children’s development of these forms during embedded activities (Fey, 1986; Paul, 2001).

Explicit learning opportunities also may be useful for developing literate language and narrative skills in children who are vulnerable for difficulties in these areas. Children may not demonstrate independent use of these forms, but their development can be enhanced through supportive, scaffolded interactions.

- Children produce an oral story with a beginning (initiating event), high point, and conclusion.
  - The adult involves children in repeated readings of narrative storybooks. Familiar stories are reenacted with story props, puppets, or felt-board cutouts. Children practice telling stories using visual prompts (sequenced pictures, simple line drawing, photographs).
- Children demonstrate comprehension of cause-and-effect by using some conjunctions when describing action in a familiar storybook or a real-life event.
  - The adult prompts children to discuss a personal event by describing “why” something happened. Children are encouraged to ask questions about other’s stories (Notari-Syverson et al., 1998). The adult asks questions eliciting cause-and-effect answers (“Why did that happen?”).
- Children use mental and linguistic words when describing a character’s thoughts or actions or describing a real-life event.
  - The adult encourages children to describe the action of others by using mental and linguistic verbs (“What did your mother say?” “What do you think about having cupcakes for snack today?”). The SLP demonstrates noun phrase elaboration and adverbial use when retelling a familiar storybook or describing a real-life event.
  - The adult presents a felt-board story reenactment but varies the story during each retelling. For example, in one version of the story, the birthday girl is wearing a red hat and puts all of her presents in her toy box. In another version, the birthday girl is wearing a blue hat and is very tired and leaves her birthday toys scattered around the room. In the retelling, the descriptive words are stressed, including noun phrase and adverb use (e.g., “The tired girl in the blue hat slowly leaves the room with her toys scattered around the room.”).

ORGANIZING THE CLASSROOM EXPERIENCE

In implementing the embedded–explicit emergent literacy model, the classroom experience must be deliberately designed to ensure (a) embedded literacy-learning opportunities across the day, (b) regular large-group explicit instruction delivered as a first tier to all children in the classroom, and (c) additional small-group explicit instruction provided to children who do not respond to the first tier of intervention. Learning targets for explicit large- and small-group lessons include phonological awareness, print concepts, alphabet knowledge and writing, and narrative and literate language. Following the response-to-treatment paradigm, additional small-group explicit lessons are provided to children who do not respond to this combination of classroom-embedded and explicit intervention. As discussed in Part I, the SLP role includes indirect and direct service delivery. There are many possible scenarios for configuring the role of the SLP in the embedded–explicit model; Figure 2 provides an illustrative example. Key elements of the approach include:

- The teacher and SLP work together to deliver the embedded learning opportunities that occur throughout the week. As an example, the SLP could take an active role in the classroom with the teacher 1 day per week for a 45-min block. During this period, the SLP and teacher work with children individually and in small groups to read books with children, organize literacy-enriched play settings, and facilitate children’s meaningful interactions with environmental print. The SLP may use this time to work with children on his or her caseload to deliberately integrate language and literacy goals within classroom contexts per children’s individualized education plans. During the rest of the
week, the teacher provides ongoing embedded literacy-learning experiences for all children in the classroom. An alternative approach would be to have the SLP involved in a consultative role at this level, but not be directly involved in teaching during embedded classroom experiences.

- Optimally, the SLP and teacher co-teach a whole-group 25-min explicit literacy lesson twice weekly. This lesson addresses specific targets in phonological awareness, print concepts, alphabet knowledge and writing, and narrative and literate language. If the SLP is not able to co-teach the whole-class explicit lessons at the first tier of intervention, he or she should be directly involved in preparing lesson objectives and monitoring children’s participation and outcomes. An example lesson plan is provided in Table 3.

  - In the example given, the lesson begins with children finding their place in the group by means of a letter-to-letter match. The children are given an opportunity to interact with the adult individually when they hand their card to the teacher. The adult asks them to name their “special letter.” The adult uses a fairly simple technique to monitor the children’s progress in this task. Before the lesson, the letter cards are placed in a plastic sleeve (sold to protect 3 × 5 recipe cards) along with a card with the child’s name (back-to-back). When the cards are collected (as children name their letter), cards are placed in two piles—a pile for the cards of children who completed the letter-naming task easily and a pile for the cards of children who needed a significant level of scaffolding to complete the task. Children experiencing difficulty are closely monitored to determine progress. Letter cards are exchanged (i.e., new letters put in the plastic sleeve) as children develop letter recognition.

  - Literate language features are the focus of the second activity. Following a book reading, the SLP or teacher specifically focuses on the use of predictive questions to encourage children to use some early conjunctions for causal sequencing, such as because and so.

  - Recognition of syllable boundaries is one of the earlier developing phonological awareness skills. In the third activity, the children take turns clapping out the syllables in words to heighten their syllable awareness. A link between the sound of a word (lots of syllables vs. only a few syllables) and the visual aspect of word length is encouraged when children are asked to look at written word cards and determine if they have a long versus short word.

  - Children are better able to identify the story sequence essential to the narrative plot when the story is acted out (Pakulski & Kaderavek, 2003). Following a book reading, during the final portion of the lesson, the children are lead in a role play of the story and are encouraged to see links between story events. Children not involved in the role play are encouraged to use mental or linguistic verbs to describe the action.

- The SLP delivers 15-min small-group literacy lessons to children an additional 2 days a week in the classroom during center time. This second tier targets...
children who do not respond optimally to the ongoing embedded–explicit whole-class learning opportunities. In these lessons, the SLP repeats many of the concepts that were targeted in the whole-group explicit literacy lessons in order to provide children with more extensive support and repeated learning opportunities. An example lesson is provided in Table 4.

– The small-group lesson begins with a name writing activity. This is a skill that is frequently presented in the embedded classroom experiences (e.g., children sign their artwork) but with less opportunity for individual scaffolding. In the small-group setting, the SLP monitors the level of prompting and assistance needed for success and maintains a record of the children’s development using a dynamic assessment protocol.

– An alphabet activity is presented as a second learning opportunity in the small-group session. At this time, the song is sung more slowly than it is typically presented in the whole-class lesson, and the SLP makes certain that children with less skill are producing some targeted letters (perhaps only the first few letters of the alphabet) and not just singing “with the group.” Letter-to-sound correspondence is encouraged by having the children make connections between the alphabet song and a particular letter.

Table 4. Lesson plan example for explicit small-group (Tier 2) sessions.

<table>
<thead>
<tr>
<th>Activity (duration)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing and letter recognition (5 min)</td>
<td>Students are given sheets of paper (on which their names are written lightly) and a crayon. The instructor asks the students to trace their names on the sheet of paper, providing help as needed. Children are then asked to read their names to the group and to point to and say the first letter in their own names.</td>
</tr>
<tr>
<td>Alphabet knowledge (5 min)</td>
<td>Students are each provided with a laminated copy of the alphabet with corresponding pictures (i.e., above the letter B is a picture of a bear). Students are led through the alphabet song two times and are helped to point to letters as they are sung. Children are then individually called on to show a letter in their name.</td>
</tr>
<tr>
<td>Rhyme (5 min)</td>
<td>Each student picks a picture card out of a hat and is asked to tell if the card selected rhymes with “hat.” Picture cards that rhyme with hat are placed in a “yes” pile; picture cards that do not rhyme are placed in a “no” pile. The cards in each pile are reviewed at the end (e.g., “Do these rhyme with hat: car, toast, man... No!!!”).</td>
</tr>
</tbody>
</table>
Initial letter recognition is emphasized by having children find the first letter in their name.

– Rhyming skill is the last activity included in the illustrative small-group lesson. Children are each given a small set of cards and are asked to individually determine if the word is a rhyming word or not a rhyming word. The SLP prompts and scaffolds the task so that children who have difficulty with rhyming are able to be successful. At the same time, the SLP maintains a record of the level of scaffolding needed (using a five-point scale) to determine children’s progress.

### SUMMARY

The embedded–explicit emergent literacy intervention model presents a comprehensive framework for organizing early childhood literacy programs to support all learners and to specify and endorse the role of the SLP in these programs. The embedded–explicit model emphasizes the dual importance of embedded and explicit literacy-learning opportunities within the context of multitiered interventions that differentiate children’s learning opportunities using a response-to-treatment paradigm. Concepts and skills that are explicitly targeted at first and second tiers of instruction include phonological awareness, print concepts, alphabet knowledge and writing, and narrative and literate language. This comprehensive model of emergent literacy intervention is designed to ensure the successful transition of all young children from prereaders to readers, and endorses the integral involvement of SLPs in supporting all learners, including those who are vulnerable for difficulties in such transitions.

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