

Research Base for Leveled Literacy Intervention

Leveled Literacy Intervention (LLI) consists of a series of planned lessons designed to provide supplementary instruction to kindergarten, first, and second grade children who are finding it difficult to learn to read and write. Teachers first use a systematic assessment to determine children’s instructional reading level, and then form groups of three children who are reading at approximately the same level. Teachers then implement daily 30-minute lessons that incorporate a variety of instructional approaches, each of which is supported by research (Fountas & Pinnell, 2003). In this way, it is possible to identify struggling readers and writers and intervene early rather than allow the path of failure to continue (Juel, 1988). Over the last two decades, research has shown the need for and effectiveness of early intervention in undercutting the costs of failure (Clay, 2007; Goldenburg, 1994; Hiebert & Taylor, 1994; Schmidt, Askew, Fountas, Lyons, & Pinnell, 2005). Acquiring effective reading strategies early, along with having the opportunity to apply them to many texts over the years, builds reading ability over time. Research has long supported the concept that readers learn by reading successfully; that process must be right from the start (Stanovich, 1986).

The Design of Lessons

The design of LLI lessons is based on empirical research on reading acquisition and reading difficulties. Also considered in the design is research on language learning, particularly vocabulary acquisition (Beck, McKeown, and Kulcan. 2002; Lindfors, 1999; Moats, 2001), and research on student motivation (Au, 1997; Lyons, 2003). Twelve design features of LLI and their research base are described below.

- 1. *In LLI lessons, texts are matched to children’s reading ability so that the children read every day at their instructional level with teacher support as well as at their independent level with little or no support. Matching books to readers and then providing strong instructional support provides the base for effective processing (Fountas & Pinnell, 1999).*** Research indicates that “fluency develops as a result of many opportunities to practice reading with a high degree of success.”¹ Careful assessment of the students’ reading levels informs the teacher about the appropriate level at which to begin instruction. The lessons are preplanned and progress up a gradient of text difficulty, with ten days of lessons provided for each text level. Each level brings new challenges in vocabulary, decoding, high frequency words, concepts, and grammar. The teacher provides support, gradually increasing the level of challenge. This enables the students to expand their reading strategies while also experiencing success during every lesson.
- 2. *LLI lessons provide systematic instruction in phonemic awareness.*** LLI lessons are designed to help children develop both phonemic awareness and phoneme discrimination skills. Phonemic awareness—the ability to hear and manipulate distinct sounds in words—is one of the best predictors of how easily children will learn to read. Research suggests that instruction in phonemic awareness is an essential foundation for reading acquisition and is effective in preventing or remediating reading difficulties. Each day LLI children receive explicit instruction about sounds, letters, and their relationship. Within each thirty-minute lesson, ten minutes is allocated to phonemic awareness/discrimination and phonics. Early lessons teach children to manipulate speech sounds without letters. Children work with phonemes, rhymes, words, syllables, and onsets and rimes. After children have learned the task of hearing, identifying, segmenting, and blending phonemes in words, they learn the letters of the alphabet and work with sounds in connection with letters. Research provides evidence that “using letters to manipulate phonemes helps children make the transfer to reading and writing.”² In addition, “teaching sounds along with the letters of the alphabet is important because it helps children to see how phonemic awareness relates to their reading and writing. If children do not know letter names and shapes, they need to be taught them along with phonemic awareness.”³
- 3. *LLI lessons provide systematic instruction in phonics.*** Daily phonics lessons are preplanned and sequenced to provide systematic steps in learning letter-sound relationships (consonants, vowels, digraphs, and blends), as well as spelling patterns (phonograms). Within each thirty-minute lesson, ten minutes are allocated to phonemic awareness/discrimination and phonics.

Concepts are organized along a continuum of difficulty, with one principle building on another. Research supports systematic phonics instruction as more effective than nonsystematic instruction or no instruction.⁴ The early LLI lessons are also carefully structured to help children develop print awareness—how to look at letters, how letters are put together to make words, and how print is arranged from left to right. These basic understandings provide a foundation for using letter-sound relationships (Clay, 2001).

4. ***LLI lessons provide daily opportunities to increase fluency through oral rereading of texts.*** Within each thirty-minute lesson, five minutes are reserved for oral rereading of texts. The teacher supports the readers, demonstrating and prompting for fluency and rapid word solving. This activity helps the children develop fluency and phrasing, which are essential for reading comprehension. Research provides evidence that “repeated and monitored oral reading improves reading fluency and overall reading achievement.”⁵
5. ***LLI lessons provide daily opportunity to read new texts with teacher support.*** Texts are carefully sequenced to help students apply what they know from reading previous texts when they begin with a new text. In particular, books are sequenced to build a reading vocabulary of high frequency words as well as words that need to be decoded. Research indicates that “children need opportunities to use what they have learned in problem-solving unfamiliar words that they encounter within continuous text. They use word-solving strategies to take words apart while keeping the meaning in mind. Reading words accurately and automatically enables children to focus on the meaning of text.”⁶

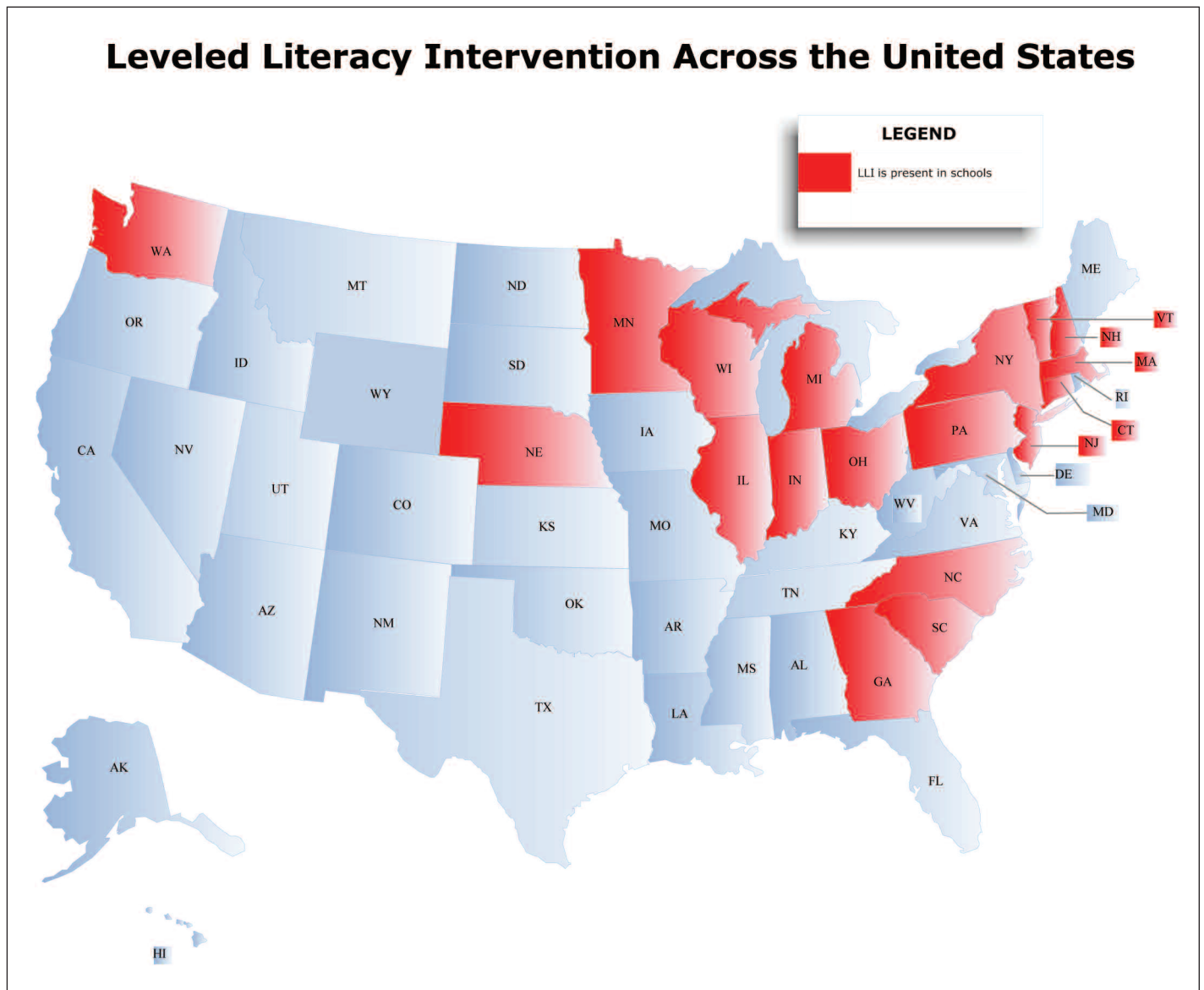
In the “Getting Started Lessons” in the Orange and Green systems, teachers use the same instructional framework each day. Children are introduced to a new book each day using the shared writing of a “lap size book,” and they then have opportunity to engage in shared and independent reading of the same book in a small version. After the ten “Getting Started” lesson in Orange and Green (and throughout the Blue system) two lesson frameworks are used on alternating days throughout the time children participate in LLI. For example, on the first day, children are introduced to an *instructional* level text that they then read with teacher support. The instructional level text is a more challenging book; however, with teacher support, they can process it effectively, stretching their reading abilities in the process. The teacher introduces the instructional text in a way that supports the children as they work to read a new text that is more difficult than their independent reading level. This text will be read twice more on subsequent days. On the following day, children write about the instructional text introduced the day before. They are introduced to a new text that is easier than their instructional level. The teacher provides an introduction that is slightly less supportive than for the instructional texts. Students read this easier text independently; in the process, they gain fluency, experience very efficient processing, and gain confidence. The next day, the instructional text lesson framework is applied again, and the lessons keep on alternating. Each “level” of instruction provides five instructional level texts and five texts that are slightly easier. Introductions to texts include specific conversation about vocabulary and about the meaning of the text. Research indicates that “teaching specific words before reading helps both vocabulary learning and reading comprehension.”⁷ In addition, conversations about books are very important in helping children relate new words and concepts to their prior knowledge and experience (Armbruster, Lehr, & Osborn, 2001).

6. ***LLI lessons provide explicit instruction on comprehension.*** During the introduction of new books and during the discussion *after* reading, teachers take pre-planned actions to demonstrate effective comprehending strategies, expecting children to take them on immediately as they read, write, and talk about the text. During reading, teachers prompt children to use these strategies; after reading, they help the children focus on the strategies. Comprehension strategies are organized along a leveled continuum, making this instruction sequenced and systematic. Research supports instruction in specific comprehension strategies as a means to helping children understand the meaning of texts. In the Day 2 lesson, when readers have had ample time to process instructional text, comprehension strategies are reinforced through writing, which often involves using simple charts or graphic organizers that help readers “focus on concepts and how they are related to other concepts.”⁸

- 7. *LLI lessons provide opportunities for writing.*** Every other day in each ten-lesson sequence, the children write for fifteen minutes. Writing is preplanned to coordinate with the instructional text the students read the previous day; thus reading and writing are integrally connected. Writing helps the students analyze the new words using letter-sound relationships and word parts. Saying words slowly in order to write them helps children attend to the sequence of sounds and connect them to letters (National Institute of Child Health and Human Development (2001a). Writing also helps the students increase and extend their comprehension of the new text. The writing is done either by the teacher on a chart, with children contributing letters or doing sound analysis, or by the students in individual books. Research indicates that “although children need to be taught the major consonant and vowel letter-sound relationships, they also need ample reading and writing activities that allow them to practice this knowledge.”⁹
- 8. *LLI lessons provide opportunities to learn a core of high frequency words.*** Children must learn to take words apart to decode them, but it is also important for them to develop a core of words that they can process rapidly and automatically. Short and frequent words such as “the” or “and” are not decoded every time they are encountered in text, but rather are remembered for their visual features. In LLI lessons, children build words with magnetic letters and work with high frequency word cards, which they also take home. Rapid word recognition frees attention for thinking about the meaning of the text.
- 9. *LLI lessons are designed to expand vocabulary and develop oral language.*** Oral language is a foundation for children’s development of reading and writing skills. Through conversations with “expert others”—teachers and other adults—children expand both their oral language abilities and their academic thinking skills (Vygotsky, 1998). LLI lessons provide children with many opportunities every day to participate in conversations with their teacher and the other two students in their group. Small group conversations expand children’s vocabulary and mastery of the complex English grammar found in books. These conversations are particularly important for children who are struggling with reading, including English language learners. Rather than correct the students’ language, LLI teachers use conversation to model advanced vocabulary and complex English grammar and to expand and enrich the language that the children use. Moreover, the talk is centered on literary texts, providing students with opportunities to use the new words and grammatical structures that are found in the books they are reading (Snow, Burns, and Griffin, 1998).
- 10. *LLI lessons are highly motivating for children and teachers.*** Instruction is ineffective if children experience reading as drudgery or “skill and drill.” The National Reading Panel Report cautions that “the motivation of both students and their teachers is a critical ingredient of success.”¹⁰ The LLI books are matched to the children’s current reading abilities and provide opportunities for daily success, providing positive feedback both to the students and their teachers. Texts are selected and sequenced not only for success, but also for enjoyment and continuity from one text to another. Writing experiences are designed to extend the enjoyment of the texts.
- 11. *LLI provides a direct, practical link to classroom instruction.*** Teachers are provided with suggestions and materials that children can take back to their classrooms. The suggested activities are simple and extend what children have learned in the lesson. Activities include phonics work such as writing words, matching, or sorting pictures and words. Other activities include writing to extend the children’s understanding of the texts they read during their LLI lesson. Children also receive a Take-Home Book version of the book they read in their LLI lesson the previous day. This Take-Home Book supports more independent reading at home and in the classroom (Armbruster, Lehr, & Osborn, 2001).
- 12. *LLI lessons facilitate a home-school literacy connection.*** LLI activities support a home-school connection for children around literacy learning. They are given a specific word study or writing activity to do at home as well as the Take-Home Book version of every book they read in their lessons. These black-and-white versions of the books are inexpensive. Children and their families can build a home collection of books that the children can read.

Results of the Development Years

Leveled Literacy Intervention has been developed over a five-year period during which it was implemented in 70 districts in 15 states across the country serving thousands of children, including both urban and suburban districts such as Atlantic City, New Jersey; Boston, Massachusetts; Greenwood, South Carolina; and Cambridge, Massachusetts. See figure below:



Findings from implementation across the years include the following:

In Greenwood, South Carolina, 105 2nd graders participated in LLI in 2006. Pre-LLI scores on the Developmental Reading Assessment (DRA) showed none of the LLI students reading at the 2nd grade level. Eighteen weeks later, DRA scores showed 66% of the students reading at the 2nd grade level.

In Atlantic City, 337 K–2 students participated in LLI in 2005–2006, including 64 English Language Learner students. Pre-LLI score on the DRA showed only 3% of the LLI students reading on grade level. Post-LLI scores showed 45% reading on grade level. Atlantic City students also showed significant gains in phonological awareness, letter naming, word recognition, and decoding, as measure by the DIBELS assessment.

In a large city on the east coast, a study of 165 K–2 children in LLI found that children in all three grade levels made significant gains on the Gates-MacGinitie Reading Test (Harrison, Grehan, Ross, Dexter, and Inan, 2008). While before the intervention only 5% of the students were reading at or above average, after the intervention 34% were reading at or above average. 90% of the teachers felt that LLI had a positive impact on their students, and 81% believed LLI had improved their reading instruction. “Teachers were overwhelmingly positive about the LLI training and suggested that it further reinforced their belief that struggling readers can achieve and become readers” (p. 18).

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¹ Armbruster, Lehr, & Osborn (2001), p. 27.

² National Institute of Child Health and Human Development (2001a), p. 2–33.

³ Armbruster, Lehr, & Osborn (2001), p. 6.

⁴ Ibid, p.13.

⁵ Ibid, p. 22.

⁶ Ibid, p.18.

⁷ Ibid, p. 36.

⁸ Ibid, p. 50–51.

⁹ Ibid, p. 17.

¹⁰ National Institute of Child Health and Human Development (2001b), p. 8.