

Language First!™

SCIENTIFICALLY BASED RESEARCH

The Research Basis for the Language First!™ Multisensory
English Language Development Program



The Research Basis for The Language First!™ Program

Our Commitment to Research

At LeapFrog SchoolHouse, all of our programs are based on the latest scientific research around how students learn most effectively. We have an advisory board of educational experts who are at the forefront of their fields working with our editorial team to ensure that our programs are pedagogically sound. We are committed to providing classroom programs that represent the best and most current research based educational findings.

By incorporating scientifically based research into the Language First! program, LeapFrog SchoolHouse is able to address the key components of English language development effectively, and ensure that positive results are achieved.

The Language First! Program Description

The *Language First!* program helps develop oral and written English skills for English language learners in the early elementary grades (PreK–Grade 2+) by presenting 36 theme-based, leveled interactive books on the LeapPad® platform. The complete program gives students ample opportunities to listen to stories read aloud in meaningful contexts, and exposes students to crucial vocabulary, supported by pictures, that they can access repeatedly. The content of the program was developed based on current research on second language development, including insights into the important roles of:

- Direct integration of specific English language development instruction into the curriculum
- Basic English vocabulary development
- Enriched English vocabulary development, including opportunities to use new words in multiple contexts
- Opportunities for students to share words and interact in the classroom
- Gradual introduction of English grammatical structures
- Combined introduction to spoken and written English
- Text enhancement and comprehension strategies
- The home-school connection

The *Language First!* program directly incorporates each of these findings, bringing the insights of language acquisition research into the classroom. Here's how:

RESEARCH FINDING:

Second language learners need specific programs tailored to meet their unique needs.

Children who arrive at school with minimal or no skills in English face the double challenge of learning a new language and keeping pace with their peers in academic skills such as math and reading. Although immersion does provide opportunities for picking up some aspects of English indirectly, it can also be an overwhelming experience. Current research suggests that...

contrary to conventional wisdom, second-language learning is not easy and automatic for children. Acquiring a second language requires a great deal of trial-and-error, creative hypothesis-testing, and awkward experimentation (McLaughlin, B., August, D., Snow, C., Carlo, M., Dressler, C., White, C., Lively, C., & Lippman, D. 2000).

An appropriate instructional program for English language learners provides a structured, direct introduction to language that allows them to more easily make a full transition to reading and speaking English in both conversational and academic contexts.

Language First! application:

Incorporates English vocabulary and grammatical structure in both written and spoken form.



With four instructional levels grouped around nine core themes (enough to cover an academic year), the **Language First!** program was explicitly designed to support English language development by focusing on the key areas of vocabulary and grammatical structure. In addition to spoken language proficiency, the **Language First!** program supports aspects of early reading instruction by

introducing students to print and allowing them to make word-sound associations. The Placement Guide provides observational instruments that can assist the teacher in assigning students to appropriate levels. As they progress, students read and listen to books containing increasingly complex grammatical structures and vocabulary, with both conversational and academic language. At each level of difficulty, students are encouraged to explore the aspects of the story and text that interest them most, using the LeapPad learning system to repeat individual words or entire sentences. The **Language First!** program serves as a structured, methodical introduction to the English language in a fun, engaging and interactive context. Its “leveled immersion” approach can be integrated into the curriculum and tailored to meet individual students’ needs as they progress.

RESEARCH FINDING:

Basic vocabulary building is a key component of language development.

Research has consistently demonstrated that vocabulary plays a critical role in students' ability to comprehend spoken and written English. During input processing, second-language learners pay more attention to meaning than to sentence structure or morphological markers—and they process the “content” words before everything else (VanPatten 1995). Because these content words, or vocabulary items, form the core of the message, familiarity with them is crucial to language development. This is true not just for spoken language, but for written language too. Batia Laufer, a researcher who specializes in second-language learners says, “It has been consistently demonstrated that reading comprehension is strongly related to vocabulary knowledge, more strongly than to the other components of reading” (1997).

The demands of new vocabulary can be a stumbling block for many students, but especially for ESL students. English language learners face a double challenge: They must acquire a basic English vocabulary (including those words they are already familiar with in their first language) while simultaneously acquiring the more advanced academic vocabulary appropriate for their age level (such as terms from math and science). Vocabulary instruction is of primary importance for them:

English language learners rely more on their vocabulary knowledge than English-only students when reading text. . . . As a result, non-native English speakers can significantly improve their vocabulary development and reading comprehension over time if they receive an enriched program of vocabulary instruction (Ramirez, 2000).

Language First!™ application:

Creates multiple opportunities for basic vocabulary building.

The **Language First!** program incorporates vocabulary building and instruction into every aspect of its design. Students see new words in the text of each story, and hear them in context as the story is read aloud. They see these words again in the accompanying pictures, and are invited to explore both the spoken and written forms of new words by touching on the pictures with the LeapPad® interactive pen. In addition to opportunities for free exploration, structured exercises help students consolidate their knowledge by asking them to point to specific items (“Where is a window?”) and later, to develop skill with definitions (“This helps you to see in the dark. What is this?”). In higher levels of the **Language First!** program, these exercises help students make the important transition from contextualized vocabulary understanding (tied to the basis of the story), to de-contextualized understanding (applies to situations beyond the story).

Because the demands of academic language and text rely so heavily on the ability to comprehend de-contextualized language (Ramirez, 2000), the **Language First!** program offers additional opportunities for learning this skill at every level. The fourth section of each book presents a completely new genre, such as a poem, letter, or photo album. The new genre, and accompanying artwork present the same vocabulary introduced in the first three sections of the book, but in very different contexts. The vocabulary thus “extends itself” outside of the original story, challenging students to transfer their language skills to new situations.

The **Language First!** program teaches new vocabulary in context. The curriculum encourages teachers to incorporate the use of pictures, props, demonstrations and hands-on activities to show the meaning of new vocabulary.

Students learning English need to practice their new language. Interaction among them should be carefully structured so it is cooperative rather than competitive.

RESEARCH FINDING:

Vocabulary enrichment is a prerequisite for progressing from conversational to academic language.

Both researchers and teachers know that vocabulary building involves more than a simple one-to-one relationship between an object and its name. Mastering new words in English involves many other factors. For example, researchers Nation and Newton (1997) point out that deep vocabulary knowledge also includes the ability to:

- Combine words with other words.
- Use words to define other words.
- Use one word to appropriately replace another.

Combining words with other words can involve joining an adjective and a noun appropriately (“*red shirt*”) or forming a correct compound word (“*toothbrush*”). Using words to define or identify other words can be done within the context of a particular story or situation (“Who is clapping?”) or more abstractly (“Clapping is placing your hands together to make a sound”). Using one word to appropriately replace another involves an understanding of its role in sentence structure, as well as its meaning (“This sweater is _____. She is putting away Grandpa’s _____.”) As Nation & Newton (1997) emphasize, each of these aspects of vocabulary building forms an important part of English-language competence.

Language First! application:

Provides a leveled introduction to enriched vocabulary.

As students progress from beginning to more advanced levels of the *Language First!* program, they build vocabulary in increasingly sophisticated ways, practicing each of the skills that research has identified as being important. At Level 1, students explore relatively simple relationships between singular and plural nouns and their names (“*book*”, “*pictures*”). At Level 2, students begin to learn vocabulary that includes adjectives and nouns (“*big box*”), compound nouns (“*baseball glove*”) and even combinations of adjectives and compounds (“*yellow bathmat*”). Also at Level 2, students use the LeapPad interactive pen to respond to questions about the story (“Where is a window?”), which introduces them to the skill of using words to define other words.

At Level 3, students expand on these skills, and build breadth with new nouns (“*lucky poem*”, “*CD player*”) as well as gerunds (“*giggling*”, “*cheering*”). In Level 4, students begin the important practice of using words to define other words in a more abstract manner. Moving beyond the context of the story, they use the LeapPad interactive pen to respond to questions about objects or actions in general (“This helps you see in the dark. What is this?” *Flashlight*). In addition, at all levels, a picture glossary allows students to see the new words they have learned. The technology of the LeapPad learning system allows students to touch any words they want to hear again, thus providing an individualized review for each student.

RESEARCH FINDING:**Students learn language through interaction.**

Research in second language acquisition has established that one of the best ways to learn is through interaction—for example, by using the new words in a classroom activity or in conversations with peers. Interaction provides a meaningful communicative context for new words and grammatical structures that cannot be achieved with lists and drills. Professor Virginia Collier writes, “Students achieve significantly better in programs that teach language through...discovery learning in highly interactive classroom activities” (1995).

Language First!™ application:**Encourages classroom interaction through themes.**

Each theme in the *Language First!*™ program introduces a core set of words and concepts to students at all four levels. The Home theme, for example, uses words and concepts such as “visits”, “party”, “playing”, and “helping” in each of Levels 1, 2, 3, and 4. In the lower levels, these words are integrated into simpler sentences; in the higher levels, they are integrated into increasingly complex sentences with additional vocabulary. As a result, while each student receives the targeted instruction in English that he or she needs, the teacher can effectively engage the entire classroom in interactions that rely on the concepts and vocabulary introduced by the theme. The Teacher’s Edition of the *Language First!* program contains multilevel activities, suggestions for individual and whole-group instruction, and reproducible student activity pages that support interactive learning for all students, at all levels.

Instruction for the whole class can be planned around a single theme, ensuring inclusion and appropriate instruction for all students.



RESEARCH FINDING:

Students acquire English grammatical structures in a fixed order.

Grammatical structures, or morphemes, are those elements that help to indicate a word's role in a sentence. For example, when the morpheme *-s* attaches to a verb, it indicates a third person singular subject in English sentences ("Betsy walks to school"). Not surprisingly, some morphemes pose more difficulty for learners than others. In fact, researchers have shown that morphemes differ consistently in the accuracy with which they are used by English language learners, and that "this remains more or less the same irrespective of the learners' mother tongues, their age, or whether or not they have received formal language instruction" (Ellis, 1997).

Based on this data, researchers claim that there is an order of morpheme acquisition that all learners follow. Typically, students acquire the plural *-s*, the auxiliary verb *be*, and the progressive *-ing* first, followed by the articles *a(n)* and *the*. Only later do they acquire the more difficult morphemes to indicate, for example, the third person singular and the past tense (Ellis, 1997). Furthermore, according to the Teachability Hypothesis proposed by researcher Manfred Pienemann, effective language instruction follows this natural order by introducing new morphemes gradually (Pienemann, 1988). Direct instruction in a difficult grammatical structure will have little or no positive effect if the learner is not ready for it. Instead, a good curriculum introduces each morpheme at the appropriate point in the learner's language development.

Language First! application:

Promotes gradual introduction of increasingly complex English grammatical structures.

Each level in the *Language First!* program contains a restricted set of appropriate morphemes. As students progress from one level to another, they begin to learn more difficult morphemes, following the typical order of acquisition for English. For example, singular and plural nouns are introduced early, in Level 1, while past tense verbs are introduced only later, in Level 4. This approach maximizes instructional effectiveness and applies equally well to students from different language backgrounds. As Professor Kenji Hakuta notes, "The structural patterns of the native language have minimal influence on the patterns of second language acquisition, especially at the syntactic level" (1990). In addition, this approach ensures that students at every level receive comprehensible input, a key ingredient to successful language acquisition (Krashen 1993).

After the text has been read, the interactive LeapPad learning system instructs students to touch the numbered buttons at the bottom of the page. The first button tells them to touch a part of the picture or a word; then they hear the word spoken. The second button activates a series of questions or commands; they respond by touching the correct part of the picture. These activities promote acquisition of vocabulary and comprehension of increasingly complex sentence structures.

RESEARCH FINDING:

Reading is an interactive part of English acquisition.

The importance of reading has taken center stage in the national dialogue about education. Of course, reading well is as critical for English language learners as for any other student:

Quite simply, without solid reading proficiency, second language readers cannot perform at levels they must in order to succeed, and they cannot compete with their native English-speaking counterparts (Carrell, 1998).

Reading has often been viewed as a learning process that can begin only “on top of” the foundational skills of language. But recent research suggests otherwise, at least for second-language learners. “In the last ten years,” writes William Grabe (1998), “the accepted theory of ESL reading has changed dramatically, from a serial (or bottom-up) model, to ‘reading as an interactive process’.” In this interactive process, every reader brings a multitude of skills and knowledge to the task: decoding skills, word-recognition skills, vocabulary knowledge, knowledge of grammatical structures, conceptual knowledge, and cultural background. Each of these contributes to the ultimate goal, comprehension of the written message. An instructional program that simultaneously strengthens each of these areas will effectively support learners as they take the first steps to successful reading.

Language First!™ application:

Combines the introduction to spoken and written language.

The **Language First!** program begins introducing children to print immediately. Designed to work as a supplement to direct instruction in reading skills, it presents a tight integration of spoken and written English in a meaningful, story-based context. Beginning students may use multiple cues, such as the pictures or the spoken pronunciations provided by the LeapPad® system, in concert with the sound-symbol correspondences they have learned through direct instruction, to successfully recognize the printed words and sentences. With practice, more advanced students learn to recognize the printed words and sentences automatically, with minimal contextual support, and to make use of sophisticated cues, such as complex grammatical structures or context, to learn new word meanings. In this way, the **Language First!** program provides English language learners with many of the necessary tools to achieve reading competency in English.

The student books feature:

- Multicultural characters with whom young language learners can identify
- Interactive LeapPad technology that allows children to hear the story, demonstrate comprehension, and practice vocabulary
- Patient repetition
- Appealing art and interesting stories that encourage children to read and reread



RESEARCH FINDING:

Text enhancement, as well as direct instruction in comprehension strategies, can help certain children with language delays.

While the needs of children with language delays vary widely, research has shown that some of them benefit from text enhancement, such as an audio presentation of a written text. These enhancements may “improve comprehension by helping intensify stimuli and by focusing attention on significant facts and relationships” (Mastropieri & Scruggs, 1997). In addition, instruction in comprehension strategies—where students learn to stop and ask themselves who is participating in the story and what is happening—is an effective method of helping children with language delays learn to read.

The key features in all of these studies [on comprehension strategies] include teaching students to stop and question themselves before, during, or upon completion of reading to promote understanding of the printed material (Mastropieri & Scruggs 1997).

Language First! application:

Provides audio text enhancement, plus questioning-for-comprehension.

The **Language First!** program provides audio enhancement to every text, and the LeapPad learning system allows students to listen to repeated readings of any story, even while working independently. In addition, the **Language First!** program helps teach students to verify their own comprehension, by posing who? and what? questions on each page of the book.

RESEARCH FINDING:

Home-based activities have a direct impact.

The research community agrees that students who engage in language and reading activities at home are better prepared for the process of learning to read. Parents and caretakers who support school programs with home-based activities help create a learning community for their children. The National Research Council identified family involvement to build supportive environments at home and home-school connections as a key attribute of effective schools and classrooms that benefit all students, especially English learners. Researcher Robert Calfee (1997) points out that it's also important for the home and school to share a vision of outcomes—in other words, both parent and teacher must agree upon the progress that each child is expected to make.

***Language First!*™ application:**

Allows the portable LeapPad® learning system and interactive books to go home for more practice.

Students can take the portable LeapPad learning system home for continued practice with the *Language First!* interactive books. Encouragement, positive responses, and lots of opportunity to practice are some of the key elements in learning a language. By taking home the theme-based books, not only can students share the interactive instruction and practice with their family members, but they also can involve them with the theme being discussed in class. The vocabulary lists at the end of each book and activities throughout the interactive pages serve as a clear guide for what each student should master from the material. Introducing the themes and English vocabulary content into the home enriches the student's understanding of the vocabulary and concepts, involves the parents/guardians and siblings, and leads to increased student achievement.



Conclusion:

The *Language First!* program was created based on current research on English language development, making it easier for teachers to implement these tools effectively.

The *Language First!* program makes it possible for educators to bring research-based language instruction to English language learners from a wide variety of backgrounds. The program includes extensive opportunities for practice and repetition with crucial English vocabulary and grammatical structures. With integrated instruction, vocabulary building and enrichment, English grammatical structures, reading, and audio accompaniment, the *Language First!* program directly incorporates the key findings established by the field of language acquisition research.

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