

A Results-based Assessment of  
***Essential Learning Systems'***  
Correlation to the  
National Reading Panel Guidelines

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# A Results-based Assessment of *Essential Learning Systems'* Correlation to the National Reading Panel Guidelines

Shortly after he took office in 2001, President George W. Bush announced that education reform would be the cornerstone of his administration. He felt that the government did not do enough to reward success in the education system, so he created a plan to ensure that no child would be left behind.

The No Child Left Behind blueprint for educational reform involves improving literacy by putting reading first. The blueprint was based on a review of scientific research, specifically, a report that the National Reading Panel (NRP) issued in April 2000. The panel, composed of 14 researchers and educators, reviewed 100,000 studies to determine how students learn to read successfully. During its review, the panel extensively studied the following instructional strategies:

- **Phonemic Awareness Instruction**
- **Phonics Instruction**
- **Fluency Instruction**
- **Vocabulary Instruction**
- **Text Comprehension Instruction**

In a guide titled *Put Reading First: The Research Building Blocks for Teaching Children to Read*, the United States Department of Education summarized the NRP's findings on each of these strategies.

In addition to following the guidelines suggested by the NRP, the No Child Left Behind plan also encompassed the Reading Excellence Act (REA) of 1998. The REA defined reading as "a complex system of deriving meaning from print." The legislation also stated that in order for a child to learn to read, he would need the following:

- A. The skills and knowledge to understand how phonemes, or speech sounds, are connected to print (Phonemic Awareness Instruction)
- B. The ability to decode unfamiliar words (Phonics Instruction)
- C. The ability to read fluently (Fluency Instruction)
- D. Sufficient background information and vocabulary to foster reading comprehension (Vocabulary Instruction)
- E. The development of appropriate active strategies to construct meaning from print (Text Comprehension Instruction)
- F. The development and maintenance of a motivation to read (Motivation)

One of the main purposes of the REA legislation was to ensure that every child could read by the third grade. The following pages show how Creative Education Institute helps students achieve that goal by combining the NRP instructional strategies with the methods recommended by the REA. In addition, the pages include statistical data that details the *Essential Learning Systems* program's success with kindergarten through third-grade students.

# Methodology

To take full advantage of *ELS*' therapeutic nature, CEI recommends that students work on the program 45 minutes per day a minimum of 4 days a week. On the fifth day, students target specific reading skills and receive comprehension instruction. Since the *ELS* program combines the use of software and supplementary materials to improve students' reading ability, it is important to measure the changes that occur throughout the school year. To determine the extent of student achievement, CEI uses the *Diagnostic Screening Test: Reading (DST:R)*, developed by Thomas D. Gnagey, Psy. D, and Patricia A. Gnagey, MS.

Grade	# Students
Kindergarten	244
First grade	2,477
Second grade	3,642
Third grade	3,845
<b>Total</b>	<b>10,208</b>

In 2001, CEI conducted a study that included *DST:R* results for more than 10,000 kindergarten through third grade students who used the *ELS* program during the 2000-2001 school year. CEI determined the percentage of students that represented each of the populations in the study: pre-kindergarten and kindergarteners, 2%; first graders, 24%; second graders, 36%; and third graders, 38%. Results of the study are listed on the following pages.

The *DST:R* is an individually administered evaluation that provides information on a student's basic reading skills. Since facilitators administer a pre- and posttest, results show the gains each student made in basic reading skills and concepts while working on the *ELS* program. The *DST:R* is a quick, valid method for gathering information about a student's reading skills. Each subtest provides a grade level equivalent. Additionally, the test computes four major scores:

- *Word Reading Comfort Level* – The level at which the student knows almost all of the words and reads each without assistance.
- *Word Reading Instructional Level* – The level at which the student knows 85 to 90 percent of the words and therefore reads easily enough to gradually acquire new vocabulary and associated skills.
- *Word Reading Frustration Level* – The level at which the student is unable to read so many of the words that he or she misses the essence of passages and finds the task of reading uncomfortable or unpleasant.
- *Comprehension of Passages* – The level at which the student is able to understand and remember the facts and subtleties of passages (both reading and listening comprehension may be tested).

# Phonemic Awareness Instruction

During the past 20 years, research has identified the lack of phonemic awareness as one of the main causes of reading disabilities (Grossen, 1997; Fletcher, et. al, 1994; Lyon 1994). Without phonemic awareness, students are unable to turn spelling into sounds; thus, they are unable to decode

single words accurately and fluently. Many students entering the *ELS* program do not have adequate phonemic awareness.

*ELS* reinforces phonemic awareness by presenting a balance of print-based and other supplementary activities. In *ELS*, Sensory Integration Training (SIT) exercises implant phonemes and graphemes, the basic units of

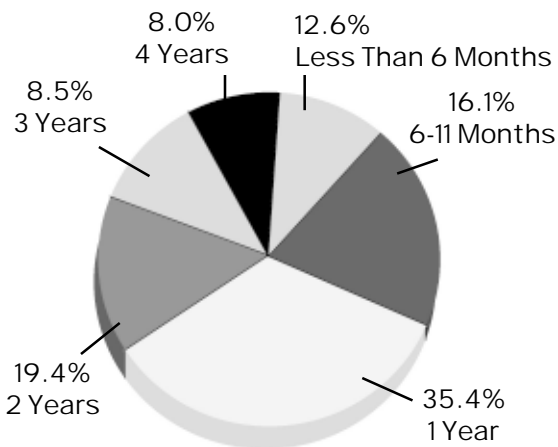
sound, in the brain so that it can retrieve and combine the phonemes to produce words. In addition, the *ELS* lesson word lists are linguistically structured to enhance the learning of phonemic awareness. This is done by highlighting the study of single phonemes through the use of a word list that is comprised of words that are of minimal phonemic contrast.

EXAMPLE: Cat  
Rat  
Fat  
Mat  
Sat

As part of the *ELS* program, CEI publishes the *Phoneme Awareness* manual, which shows the phonemic makeup for each *ELS* lesson word in Levels I and II. CEI recommends that students use their index finger to track each phoneme as they say it aloud. Another *ELS* lesson task, the *Word Building Worksheet*, reinforces the information students learn in the *Phoneme Awareness* manual.

*Studies (Torgesen and Mathes, 2000; Grossen, 1997) determined that as students with reading disabilities improved their phonological awareness, they also strengthened their reading scores and reading growth.*

## Overall Study



### Average Gain: 1.88

This study includes a total of 10,208 students. After working on the *ELS* program an average of 156 days, these students gained an average of 1.88 grade levels in reading comprehension! 35.9% of the students had an average increase of two to four years.

# Phonics Instruction

Phonics instruction focuses on helping beginning readers understand how letters are linked to sounds to form letter-sound correspondences and spelling patterns. G. Reid Lyon of the National Institute of Child Health and Human Development discussed the necessity of phonics instruction in his 1996 Washington Post article titled “Why Johnny Can’t Decode.”

## Why Johnny Can’t Decode

*“In order for a beginning reader to learn how to connect or translate printed symbols (letters and letter patterns) into sound, the would-be reader must understand that our speech can be segmented or broken into small sounds (phoneme awareness) and that the segmented units of speech can be represented by printed forms (phonics). ... if children cannot perceive the sounds in spoken words — for example, if they cannot “hear” the “at” sound in “fat” and “cat” and perceive that the difference between these sound segments lies in the first sound — they will have significant difficulties decoding words accurately and fluently.”*

G. Reid Lyon – National Institute of Child Health and Human Development

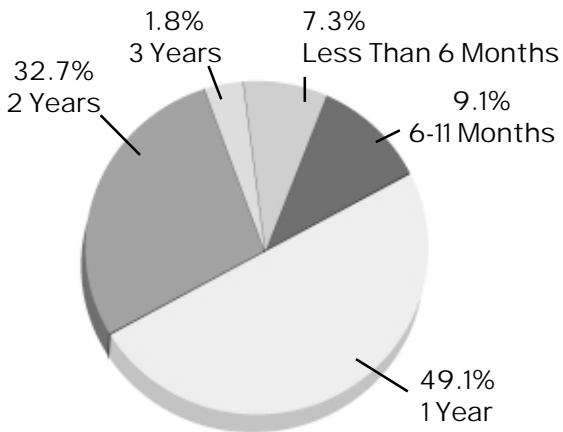
The lesson setup plays a major role in the way *ELS* handles phonics instruction. Instruction is systematic and explicit. *ELS* lessons consist of a complex matrix of sight-sound combinations necessary for spoken and written English. The program groups the lessons into six levels according to sound patterns, and those levels

contain over two hundred lessons. Each level teaches a sequence of phoneme/grapheme or letter combinations.

*ELS* incorporates phonics instruction into the Sensory Integration Training, or SHARE exercises. During these exercises, the computer teaches students whole words and then breaks them down by letters. The computer voice says each letter aloud as the student types it. The repetition of the letter-sound relationships helps students learn to read, spell and recognize the words both instantly and accurately.

In addition to developing the students’ understanding of phonics during Sensory Integration Training exercises, *ELS* instruction helps students learn how to apply this knowledge to reading. Once the students complete the Sensory Integration portion of each lesson, they move on to application tasks. For example, during Echo, the computer sets the pace by saying and flashing each word. The student, matching that pace, speaks each word either before or after the computer. In Copy-Write, students begin auditory dictation as the computer reads a sentence. Students repeat the entire sentence spoken by the computer and, depending on the lesson type, write a specific word or phrase or the entire sentence on paper.

## Kindergarten Study



### Average Gain: 1.70

This study includes the scores for 244 pre-kindergarten and kindergarten students. After working on the *ELS* program an average of 200 days, these students gained an average of 1.70 grade levels in reading comprehension!

# Fluency Instruction

Fluency occurs when students can read a text both rapidly and efficiently, and research shows word identification skills play an important role in developing fluency.

*“Two ways to develop word identification skills are repeated oral readings of simple texts and modeling by a more fluent reader.”*

(Samuels, 1979)

The *ELS* program includes several tasks to help the students understand both lesson and non-lesson words in context. Through repeated exposure to the lesson words, which are often components of larger non-lesson words, children learn to identify — quickly, accurately and effortlessly —

regular and irregular words in a variety of reading materials.

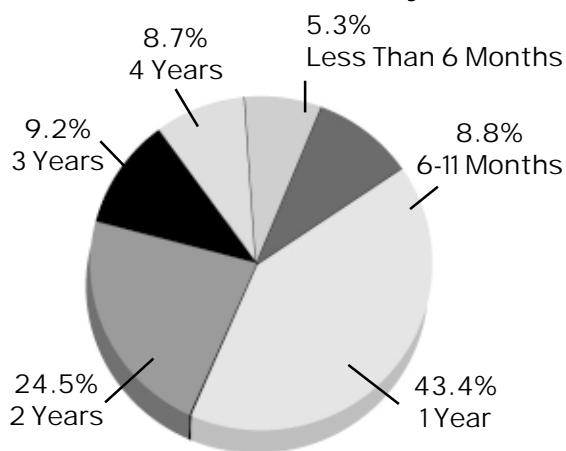
The last of the Sensory Integration Training exercises, See Say, contributes to fluency development. After Look Listen See Say, See Hear Spell and Hear Spell, the computer prompts the students to use the *Lesson Manual* and read the words aloud to the facilitator. The screen asks the students if they would like to practice the words before going to the *Lesson Manual*. During See Say practice, the program flashes and says each lesson word, allowing the student enough time to repeat the word that appears on the screen.

Fluent reading also requires immediate recall. Echo is a quick, simple exercise that builds that instant recall and launches fluency by repeating the lesson words both visually and orally. Some sequences require the students to complete Teacher Echo, a form of Echo in which the student and facilitator work together, independent of the computer.

Quick Pick and Quick Talk are two more immediate recall exercises. During Quick Pick, the computer displays groups of three words. The computer then says a word, and the student uses the arrow keys to highlight the spoken word. At the end of the exercise the computer displays the student’s current and best times for that number of words. During Quick Talk, the computer flashes a lesson word, and students say that word as quickly as possible.

*ELS* also affords guided oral reading opportunities. Some sequences require the students to read Fluency Passages. These guided oral passages are simple sentences used to help students learning the words in Levels I and II. Students using the Fluency Passages learn to recognize and read the lesson words in short sentences. CEI also incorporates guided oral reading procedures into the *Quick Tales* and *eQuickTales* short stories.

## First Grade Study



### Average Gain: 2.16

This study includes the scores for 2,477 first grade students. After working on the *ELS* program an average of 181 days, these students gained an average of 2.16 grade levels in reading comprehension! 42.4% of the students had an increase of two to four years.

# Vocabulary Instruction

Extended and rich instruction of vocabulary is a cornerstone of the *ELS* program. The program develops the skill through high frequency and multiple repeated exposures to vocabulary material. Each lesson consists of 24 total words, divided into three “segments” of eight words each. The first two segments are new words, while the third segment always reviews words from the first two segments.

Direct vocabulary instruction starts in the first of the Sensory Integration Training Exercises, Look Listen See Say. Look Listen See Say presents each lesson word, says the definition and uses the word correctly in a sentence. The screen can also show a picture to reinforce the word meaning.

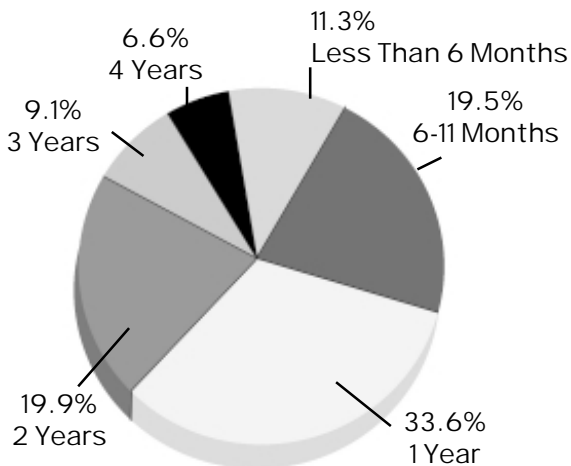
*ELS* also supports vocabulary instruction in Word Match and the Word Match Worksheet. Students may complete one of eight Word Match versions on the computer. In Version 1, the computer shows either the picture or the definition, and the student selects the correct word. Version 2 says the definition with a sentence or says only the definition, and the student selects the correct word. Version 3 says and shows the word or says only the word, and the student selects the correct definition. Version 4 allows the student to type either the word that matches the definition or the letter that corresponds to the word that matches the definition. For the Word Match Worksheet, the student writes the word in the blank next to each definition or writes the letter that represents the word.

*Quick Tales* and *eQuick Tales* stories also use newfound vocabulary words and comprehension questions to ensure reading application. Stories are available in print and on the computer so that teachers can adjust the level of support necessary for each student.

*In order for students to comprehend what they learn, they must have prior knowledge of the content. When this prior knowledge is not possible, vocabulary instruction is an essential prereading activity for helping students put information into a familiar context.*

(Christen and Murphy, 1991; Kueker, 1990)

## Second Grade Study



### Average Gain: 1.82

This study includes the scores for 3,642 second-grade students. After working on the *ELS* program an average of 148 days, these students gained an average of 1.82 grade levels in reading comprehension! 35.6% of the students had an increase of two to four grade levels.

# Text Comprehension Instruction

*Research indicates that reading instruction should begin with specific decoding skills and strategies and then progress to high-level comprehension skills and strategies.*

(Tarver, 1986)

Program developers incorporated this principle as they determined the structure for the *ELS* lessons. Each lesson contains three portions: memory input, exercise of memory recall and application.

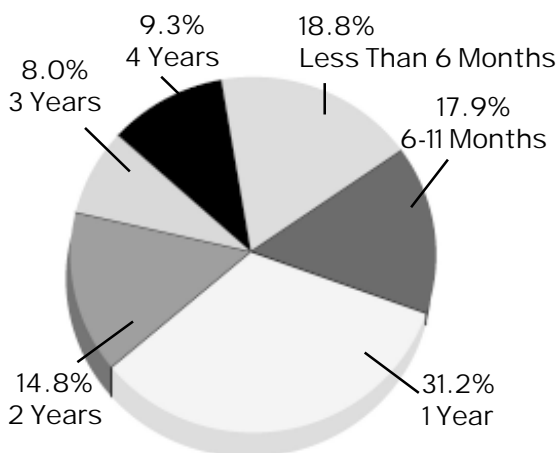
During the application portion of the lesson, students practice comprehension. The *ELS* program

includes several activities that are specifically geared to promote the students' comprehension of both lesson and non-lesson words within different contexts. In these activities, the *ELS* program merges the comprehension strategies that the NRP found most effective when teaching students to comprehend text. These strategies include self-monitoring, using graphic or semantic organizers, answering questions, generating questions, recognizing story structure, summarizing, incorporating prior knowledge and experience and promoting mental imagery.

Combining the comprehension strategies and using them flexibly helps students learn to adjust their strategies to accommodate the requirements of various texts. While the program uses these different strategies throughout different exercises, the wide variety of information covered in the *Quick Tales* and *eQuick Tales* stories necessitates the combination of all of the techniques. These two exercises require students to read short stories that include questions to help students increase their comprehension abilities.

The *Quick Tales* questions assess the students' abilities in a variety of categories — recalling details, sequencing, using contextual clues, understanding character motive, making inferences, drawing conclusions, predicting outcomes and determining the main idea to name a few. In addition to answering questions, students generate questions of their own, summarize portions of text, organize and clarify information within the text, make predictions about events discussed in the text and draw conclusions about the text.

## Third Grade Study



### Average Gain: 1.77

This study includes the scores for 3,845 third-grade students. After working on the *ELS* program an average of 145 days, these students gained an average of 1.77 grade levels in reading comprehension! 35.5% of the students had an increase of two to four grade levels.

# Motivation

CEI knows that one of the key factors in helping students learn to love reading is motivation. Positive reinforcement is an important step in solidifying correct responses and correcting learning patterns.

First, *ELS* provides feedback by asking students to type the letters of a word and by speaking each letter as it appears on the screen. This immediate feedback provides essential visual and auditory stimulation.

*ELS* also uses consistent positive reinforcement that immediately lets students know whether or not an answer is correct. If the answer is correct, the computer voice praises students, while if students respond incorrectly, the program reviews the concept to help the students understand their mistakes.

To help students maintain an interest in reading, CEI recommends that students work on the program four days a week and work on comprehension activities on the fifth day. That day, students can work on *Quick Tales* or *eQuick Tales*, complete *Creative Crosswords* or *Creative Word Searches*, read stories as a group, or even practice journal writing. These activities allow the students to carry over what they learn on the program into a more relaxed setting.

On the subject of setting, CEI also recommends that lab facilitators create a fun and non-threatening environment in which the students can work. During their lab visits, our Educational Consultants observe the learning environment and make suggestions on how facilitators can include more motivational activities. In addition, CEI holds facilitator workshops each year, and during the workshops, facilitators have the opportunity to share the motivational strategies that they have found to be most effective. CEI's SHARE newsletter includes even more tips for keeping the students interested in and excited about learning.

*Research indicates that children who experience success in learning to read are more likely to want to read and to enjoy reading.*

(Stanovich, 1986; Juel, 1988)

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