Collier County Early Literacy Partnership for Educational Success

Early literacy skills form the foundation for school success

2004-2005
Year 1 Implementation and Evaluation

Report

Prepared by:
Florida Institute of Education at the University of North Florida
in collaboration with
Collier County Early Literacy Partnership for Educational Success

THE COLLIER COUNTY EARLY LITERACY PARTNERSHIP FOR SUCCESS
2004-2005: YEAR 1 IMPLEMENTATION AND EVALUATION REPORT

Written by:
Stephanie Wehry, Ph.D.
Assistant Director for Research
Florida Institute Education
at the
University of North Florida

Introductory Remarks and Appendix by:
Cheryl Fountain, Ed.D.
Executive Director
Florida Institute of Education
at the
University of North Florida

A Look Inside an ELLM Classroom by:
Vicki Winslow
Communications Coordinator
Florida Institute of Education
at the
University of North Florida

TABLE OF CONTENTS

TABLE OF CONTENTS Continued

COLLIER COUNTY EARLY LITERACY PARTNERSHIP FOR EDUCATIONAL SUCCESS

Introduction

The changing society, economy, and workplace make improving the achievement of all children a top priority at local, state, and national levels. Learning to read well is necessary if children are to be successful in school and to later participate in the knowledge-based economy of the 21st century. Despite efforts over the past 50 years, a large achievement gap persists between children from low-income families and their peers from more affluent families. We know this gap forms before children enter formal schooling; therefore, efforts to close the gap must begin before children enter formal schooling.

Furthermore, if we are to ensure that we have a well-educated workforce, we must create and sustain a high-quality education system that begins in preschool. The Florida Institute of Education (FIE) at the University of North Florida (UNF), in collaboration with the UNF College of Education and Human Services, addressed this need by applying academic research to create practical, user-friendly tools designed to improve the quality of early education, with particular emphasis on literacy. The first such tool is the *Early Literacy and Learning Model* (ELLM), a standards-based curriculum and instructional support system that focus on increasing the literacy experiences of preschool and kindergarten children. Later, FIE developed a companion piece to ELLM—the *Skills-based Educational Experiences Delivery System* (SEEDS). SEEDS provides volunteer tutors with activities and materials that enrich children's learning, as they become emergent readers. More information on ELLM and ELLM/SEEDS is included on page 4 and in the Appendix on page 58 of this report.

Collier County Early Literacy Partnership for Educational Success

Even the best tools are only beneficial when used consistently and with regularity in all of the environments in which today's children learn. Successful early education therefore demands a coordinated effort among child- and learning-focused agencies and community groups willing to work across traditional organizational boundaries. A 3-year partnership of three anchor organizations committed to the dramatic improvement of

children's literacy was forged to focus on Collier County and its children in greatest need. The partnership, the *Collier County Early Literacy Partnership for Educational Success* (the Partnership), is led by Fun Time Early Childhood Academy, Florida Gulf Coast University (FGCU), and FIE.

Fun Time Early Childhood Academy

The Fun Time Early Childhood Academy is committed to improving the early learning and school readiness of young children, particularly those living in low-income neighborhoods. Fun Time functions as a preschool demonstration site and hosts ELLM and ELLM/SEEDS.

FGCU

FGCU is committed to raising the quality of learning and instruction at all levels in Southwest Florida. FGCU has numerous partnerships with the public schools including the Public Schools Enrichment Partnership designed to provide assistance and enrichment opportunities for at-risk minority and multicultural students in grades K-16. FGCU serves as the fiscal agent for the Partnership and works with FIE in implementing ELLM in Collier County preschool and Head Start classrooms.

FIE

FIE is a statewide research center hosted by UNF. FIE provides statewide leadership to improve education at all levels by working collaboratively with Florida's universities, community colleges, public schools, school readiness agencies, and communities. FIE developed ELLM and ELLM/SEEDS.

Community Partners

Five community agencies work together to improve the quality of early education for Collier County children living in low-income neighborhoods by supporting the implementation of ELLM and ELLM/SEEDS. Table 1 lists the community partners that support the implementation of Partnership activities.

Table 1
Collier County Community Agency Partners

Agency Partners	Service to the Partnership
Naples Children and Education Foundation	Provided funding for 49 ELLM classes in Naples and Immokalee
Stranahan Foundation	Provided funding for SEEDS tutoring
Christ Child Society	Provided SEEDS volunteers
District School Board of Collier County together with the Collier County Public Schools Head Start Program	Hosted ELLM in Head Start preschool classes across Collier County
Chairman's Council of the Community Foundation	Provided project oversight and support

Additionally, Collier County faith-based, for-profit, and not-for-profit early care and learning centers serving children from low-income neighborhoods supported the Partnership by working diligently to implement ELLM and ELLM/SEEDS in their classrooms.

Partnership Goals

Three long-term goals guide the work of the Partnership: establish a model infrastructure for a community partnership advocating early literacy and learning; establish a network of high-performing, literacy-focused, and results-driven early care and learning centers to serve children living in low-income neighborhoods; and increase levels of emergent literacy ability and language development of the neighborhood children.

Partnership Expected Outcomes

Over the 3-year course of the project, the Partnership expects approximately 3000 children (1000 per year) from low-income neighborhoods to participate in high-quality emergent literacy instruction and learning experiences that are aligned with Collier County's *Reading First* initiative. Expected outcomes include:

- Improved literacy- and print-rich environments in Partnership classrooms.

- Increased use of research-based, literacy-focused instructional practices by Partnership teachers.
- Greater use by Partnership teachers of assessment results to guide instruction.
- Improved emergent literacy skills of Partnership children.
- Improved alphabet letter recognition of Partnership children.
- Improved levels of oral language/vocabulary development of Partnership children.
- Establish a model infrastructure for a community partnership advocating early literacy and learning that other communities can emulate.

A Look Inside an ELLM Classroom

The ELLM classroom is, first and foremost, a language- and print-rich environment. Words are everywhere. Posters and materials are affixed to the walls at the children's eye-level, and even the classroom furniture (tables, chairs, bookcases, etc.) is labeled so that children begin to associate a *word* with its *object*. A Word Wall is always prominently displayed in an ELLM classroom. The Word Wall contains the upper- and lowercase letters of the alphabet, and underneath each letter is a removable card. Under the letter *Ee*, for example, a card with the word *elephant* and a picture of an elephant may be posted. The names and photographs of the children in the class are also on Word Wall cards, so that children may use the Wall to learn the letters of their names, to associate words with pictures, and to learn their classmates' names. ELLM activities are designed so teachers use the Word Wall frequently, incorporating props such as pointers and puppets that pertain to a book being read in the class.

The ELLM classroom is arranged to encourage both small-group and whole-group center work. Writing, Letter, Art, Listening, and Housekeeping Centers, a space with block, and sand/water tables are some of the areas that invite children to engage in creative and educational play. While similar centers may be found in other preschool classrooms, the emphasis in an ELLM class is on offering opportunities for frequent, purposeful early literacy experiences. The Independent Reading Center contains at least 100 books and comfortable places for children to sit and enjoy them. In addition, each

ELLM classroom is equipped with a Classroom Lending Library so that children and their families can read together throughout the year. As with the Word Wall, every center includes props that relate to the books being read in the classroom to reinforce what the children have heard.

Well-defined rituals and routines are an important part of the ELLM environment. The class schedule is posted, and an ELLM chart allows the teacher to move a marker to show students the next planned activity. With each transition from one activity to the next, teachers are trained to engage children in conversations, listen to what the children say, and respond. This affords an opportunity for children to practice oral language skills and learn new vocabulary. Reading aloud is not a once-a-day event; teachers read four times during the day, from a variety of book genres. Read-aloud time involves the children in the activity by asking them specific questions and giving them an opportunity to share their own experiences in the context of the story being read. Children are given time to explore books independently, so that they become familiar with the proper care and handling of books, understand that printed words convey meaning, and learn that text is read from left to right, top to bottom.

Songs, poems, and nursery rhymes are also integral to the ELLM classroom routine. The morning often starts with a welcome song. Themed songs and rhymes are written for every ELLM read-aloud book, and teachers use songs and chants to help children transition from one activity to the next.

The result is a transformed classroom in which everything is geared toward increasing children's acquisition of literacy skills, and no opportunity is lost to weave language and learning into the daily routine.

ELLM is referred to as a curriculum and *system* because it does not merely provide classrooms with instructional materials and planned activities. ELLM goes much farther by supplementing its curriculum with explicit, one-on-one professional development. The largest part of this professional development—over and above intensive, introductory group training during the summer—is delivered by credentialed ELLM literacy coaches who visit the classroom on an ongoing basis.

Coaches spend one hour a week, helping each ELLM teacher develop expertise in the use of research-based instructional strategies. Early in the school year, the coaches

conduct model literacy lessons with children, giving teachers a chance to observe how the ELLM instructional strategies are used. In turn, coaches later observe as teachers conduct lessons, and then provide feedback on how instruction might be improved or adjusted to meet the needs of the children. This frequent, interactive training also opens a two-way communications line from ELLM developers to ELLM practitioners. As coaches hear from ELLM teachers what works well and what does not, they can return to the developers and suggest ways to modify the ELLM materials and activities. This further breaks down the wall between researchers and actual users (and recipients) of the fruits of research.

With ELLM, very little happens in a vacuum. Research leads to the development of tools, teachers receive training and feedback on how to use the tools effectively, teachers relate how the tools behave under real-life conditions, and the tools are perfected to better deliver the results we seek—improved literacy outcomes for every child in Collier County.

The ELLM *Skills-based Educational Experiences Delivery System* (SEEDS) was inaugurated in Collier County ELLM classrooms. With this program, trained SEEDS volunteers, referred to as LARKs (*Learning Advocates Reaching Kids*), work with pairs of children in ELLM classrooms twice a week for thirty minutes. They use self-contained SEEDS Literacy Packets, which include activities related to the ELLM book being read aloud in the classroom and the materials needed to implement each activity.

SEEDS provides children with a deeper immersion in literacy activities, supporting and expanding the skills they learn in the classroom under the leadership of the teacher. In addition, the time spent with LARKs gives children more face-to-face time with an adult, enabling them to participate in more sophisticated, complex conversations.

2004-2005 Implementation of ELLM in Collier County

The Partnership was guided by an Implementation Team composed of representatives from the three anchor partners, a representative from each community partner agency, and the project director. The Implementation Team was charged with creating a culture of cooperation, supporting mutual and ongoing learning, developing

effective communication, connecting with other similar initiatives, and developing strategies to institutionalize effective practices.

The implementation of ELLM and ELLM/SEEDS served 3- and 4-year-old preschool and Head Start classrooms in Collier County. Assessments were not collected from all of these children because of their availability at the time of the fall assessments, because they were too young at the time of the fall assessments (children must be four years old at the time of testing), and because of the special education status of their classes. Table 2 lists the participating agencies, their directors or principals, and the number of classes served.

Table 2

List of Community Early Care and Learning Centers, the Directors, and the Number of Classes Served by the Partnership

Early Care and Learning Center Community Partners	Director	Number of Classes
Avalon Elementary School	Dr. Marilyn Moser	1
Corkscrew Elementary School	Mrs. Terri Lonneman	1
FGCU Family Resource	Dr. Beth Elliott	1
Fun Time Early Childhood Academy	Ms. Kim Long	1
Golden Gate Elementary School	Mr. Mattison	4
Golden Terrace Elementary School	Dr. Jan Messer	1
Guadalupe Family Center	Mr. Sinclaire Williams	2
Immokalee Child Care Center	Ms. Valarie Bostick	1
Lake Trafford Elementary School	Mrs. Irma Miller	2
Lely Elementary School	Ms. Stewart	2
Manatee Elementary School	Mrs. Wiman	4
Naples Park Elementary School	Dr. Linda Chapman	1
Osceola Elementary School	Ms. Jody Jordan	1
Pat's Tot Care	Ms. Sharon Kirkpatrick	2
Redlands Christian Migrant Association	Ms. Anna Neuhauser	9
Shadowlawn Elementary School	Mr. Tim Ferguson	1
The Learning Center - Immokalee	Mrs. G. Miller	10
Village Oaks Elementary School	Mrs. Howard	2
Vineyards Elementary School	Mrs. Mary Smith	2
YMCA Child Development Center	Ms. Beth Hatch	1

The Partnership implemented ELLM with 20 early care and learning center partners in 49 classes serving approximately 825 preschool children. The teachers in the 49 classes were coached weekly by three highly trained ELLM literacy coaches and one lead coach (hereafter all are referred to as ELLM Literacy coaches).

Over the school year, the ELLM literacy coaches visited sites and classrooms weekly. During classroom visits, ELLM literacy coaches either observed teachers or conducted demonstrations lessons. They also conducted teacher-coach feedback conferences. Table 3 summarizes the ELLM literacy coaches' activities and indicates the number of books Collier County ELLM children checked out from the ELLM Classroom Lending Libraries. They also arranged at least four family events each year.

Table 3
Activities of the ELLM Literacy Coaches over the 2004-2005 School Year

ELLM Literacy Coach Activity	Frequency
Visits to Sites	878
Teacher Observations	526
Demonstration Lessons	640
Teacher Conferences	1266
Director Conferences	459
Literacy Team Meetings	127
Classroom Lending Library Use	33108

2004-2005 Evaluation of ELLM in Collier County

Measurement

Three instruments were used to measure children's emergent literacy and language development, the *Test of Early Reading Ability-3* (TERA-3), *Test of Language Development-Primary: Third Edition* (TOLD-P:3), and the Alphabet Letter Recognition Inventory (ALRI). Trained assessors using scannable forms administered the TERA-3 and TOLD-P:3 to children in one-on-one settings. Classroom teachers using scannable forms collected ALRI pretest, mid-year, and posttest data from all children. The TERA-3, TOLD-P:3, and the ALRI tests were electronically scored.

TERA-3 and TOLD-P:3

The TERA-3 is a norm-referenced test that assesses components of early developing reading skills, including familiarity with the letters of the alphabet and numerals, discovery of the arbitrary conventions used in reading and writing English, and recognizing that print conveys information, ideas, and thought. The test is composed of three scales: Alphabet, Conventions of Print, and Meaning, each measuring one of the

three components. A composite score, the Reading Quotient, is the unweighted sum of the three standardized scale scores.

- *Alphabet Scale*—(ALP) measures whether children can differentiate alphabet letters from numbers or designs; recognize names of letters; and isolate beginning, middle, or ending sounds.

- *Conventions of Print Scale*—(CN) measures whether children can differentiate upper- and lowercase letters and can understand book orientation and parts of books.

- *Meaning Scale* (MG)—measures whether children can use labels, figures, or logos as early or proto-reading activities and can identify correct use of relational vocabulary.

- *Reading Quotient* (RQ)—the best indicator of the child's overall reading ability and is the best single predictor of future reading ability.

The TOLD-P:3 is a norm-referenced test that measures language development predicated on three linguistic features (phonology, syntax, and semantics), which combine to form three linguistic systems (listening, organizing, and speaking). Nine scales assess the three features, and the measures combine in pairs to measure the systems. This evaluation used three of the scales, Picture Vocabulary, Oral Language, and Grammatic Understanding and a measure of listening.

- *Picture Vocabulary* (PV)—measures the extent to which children understand meanings associated with spoken English words. The items require no verbal response.

- *Oral Language* (OV)—measures children's ability to give oral definition of common English words spoken by the examiner. The items provide no visual cues.

- *Grammatic Understanding* (GU)—measures children's ability to comprehend meaning of sentences. The items require no verbal response.

- *Listening Quotient* (LiQ)—represents children's ability to understand speech, sometimes called receptive language, and is a composite of the GU and PV scales.

The TERA-3 RQ and TOLD-P:3 LiQ scores are reported as norm-referenced, standardized scores with a mean of 100 and a standard deviation of 15. The TERA-3 ALP, CN, and MG scores and the TOLD-P:3 PV, OV, and GU scores are reported as

norm-referenced, standardized scores with a mean of 10 and a standard deviation of three. Because standardized scores represent the ranking of scores relative to a national normative population, a change in scores represents a change in ranking relative to a normative population. Scale scores do not represent an absolute gain in knowledge. The TERA-3 can be administered to children as young as three years, six months and as old as eight years, six months, and the TOLD-P:3 to children as young as four years, zero months and as old as eight years, eleven months. Because children undergo rapid development over the age spans of the assessments, there are 14 normative populations that cover the age span of the TERA-3 and ten that cover the age span of the TOLD-P:3. Depending upon the time between the pretest and posttest assessments and the age of the child at pretest, a posttest score may be ranked relative to a normative population that is between one and four age increments older than the pretest normative population. This process adjusts the standardized scores for the maturation of the children between the pretest and posttest assessments and allows gains resulting from the normal maturation to be separated from gains resulting from program effectiveness.

Table 4 provides categories delimiting the lower, middle two, and upper quartiles of the TERA-3 and TOLD-P:3 scores of the normative populations. These categories are used in this report to indicate the range of early literacy ability and language development of the Collier County ELLM children.

Table 4
TERA-3 and TOLD-P-3 Scale Scores by Ability Categories

	Categories						
	Very Poor	***Poor***	***Below Average***	***Average***	***Above Average***	***Superior***	***Very Superior***
Reading and Listening Quotient Score Intervals	Below 70	70-79	80-89	90-110	111-120	121-130	Above 130
Scale Score Intervals	Below 4	4-5	6-7	8-12	13-14	15-16	17-20
Percentiles	2^{nd} or lower	2^{nd} to 9^{th}	9^{th} to 25^{th}	25^{th} to 75^{th}	75^{th} to 91^{st}	91^{st} to 98^{th}	98^{th} or higher
Percent of Scores	2.3	6.9	16.1	49.5	16.1	6.9	2.3

ALRI

The ALRI is a locally developed test measuring children's ability to recognize the upper- and lowercase letters of the alphabet when arranged in non-alphabetic order. The children's classroom teachers used alphabet letter flashcards to administer the test one-on-one to the children. The uppercase letters were presented first, followed by the lowercase letters.

ALRI scores are reported in four recognition categories, 0 to 13 letters, 14 to 26 letters, 27 to 39 letters, and 40 to 52 letters. The *Early Childhood Longitudinal Study-Kindergarten* (ECLS-K) provided national benchmarks for alphabet letter recognition. Using a random sample of upper- and lowercase letters, scores were categorized as *proficient* if children recognized at least 75% of the sampled letters.[1] Reports from the ECLS-K stated 66% of the children entering kindergarten for the first time were *proficient* at letter recognition.[2] In this report, ALRI posttest scores are compared to these national benchmarks.

The set of instruments were administered one-on-one to the children with parental consent in fall 2004 from mid-September to mid-October and again in spring 2005 from mid-April to mid-May. Teachers collected ALRI data in the fall, winter (January 2005), and spring. Table 5 shows the number of fall and spring assessments that were made in Collier County. TERA-3 and TOLD-P:3 assessments were administered to all participating children who were four years old on or before September 1, 2004, making them eligible for public kindergarten in fall 2005.

[1] U.S. Department of Education, National Center for Education Statistics. *Early childhood longitudinal study, kindergarten class of 1998-1999: Data files and electronic codebook*. NCES2001-028 {CD ROM} On-line ordering at http://www.ed.gov?pbus/edpubs.html

[2] U.S. Department of Education, National Center for Education Statistics. *Entering kindergarten: A portrait of American children when they begin school: Findings from the condition of education*, Nickolas Zill and Jerry West, NCES2001-035, Washington DC: U.S. Government Print Office, 2001. Available at http://nces.ed.gov/pubs2001/2001023.pdf.

Table 5
The Number of Pretest and Posttest Assessments in Collier County ELLM Classes

Test	Number Of Pretests	Number Of Posttests
TERA-3	507	471
TOLD-P:3	508	469
ALRI	537	505

Attrition of Children

The attrition rate of the Collier County ELLM children is based on TERA-3 scores as it was administered first in the testing sequence. In the fall and spring, 507 and 471 children were assessed, respectively. These numbers represent approximately 7% attrition. There was no evidence suggesting that the attrition of the children did not occur at random. The 471 children with complete TERA-3 scores attended 37 preschool classes supported by 18 community child care and learning centers.

Implementation Sub-Populations

Researchers discovered over the history of ELLM implementation that children with very low scores on the TERA-3 RQ and ALP pretests showed little, if any, improvement on the posttest. Therefore, beginning in 1999-2000 and continuing through 2004-2005, children with very low TERA-3 pretest scores were selected for targeted instruction in phonological awareness (PA). The selected children receive small-group instruction in phonological awareness in addition to that provided the entire ELLM class.

During the 2004-2005 school year, 64 *Learning Advocates Reaching Kids* (LARKs) from the Christ Child Society worked with approximately 145 children in 23 ELLM preschool and Head Start classrooms implementing ELLM/SEEDS in Immokalee and Naples. The initial evaluation design called for the random selection of classrooms implementing the SEEDS component of ELLM and the random selection of children within selected classrooms to work with LARKs. However, implementation challenges prevented the randomization process from being realized. Inspection of Figure 1 on the next page clearly shows that the randomization process did not work and further suggests that ELLM/SEEDS children were selected because of their lower initial ability and, consequently, their more urgent need of small-group tutoring.

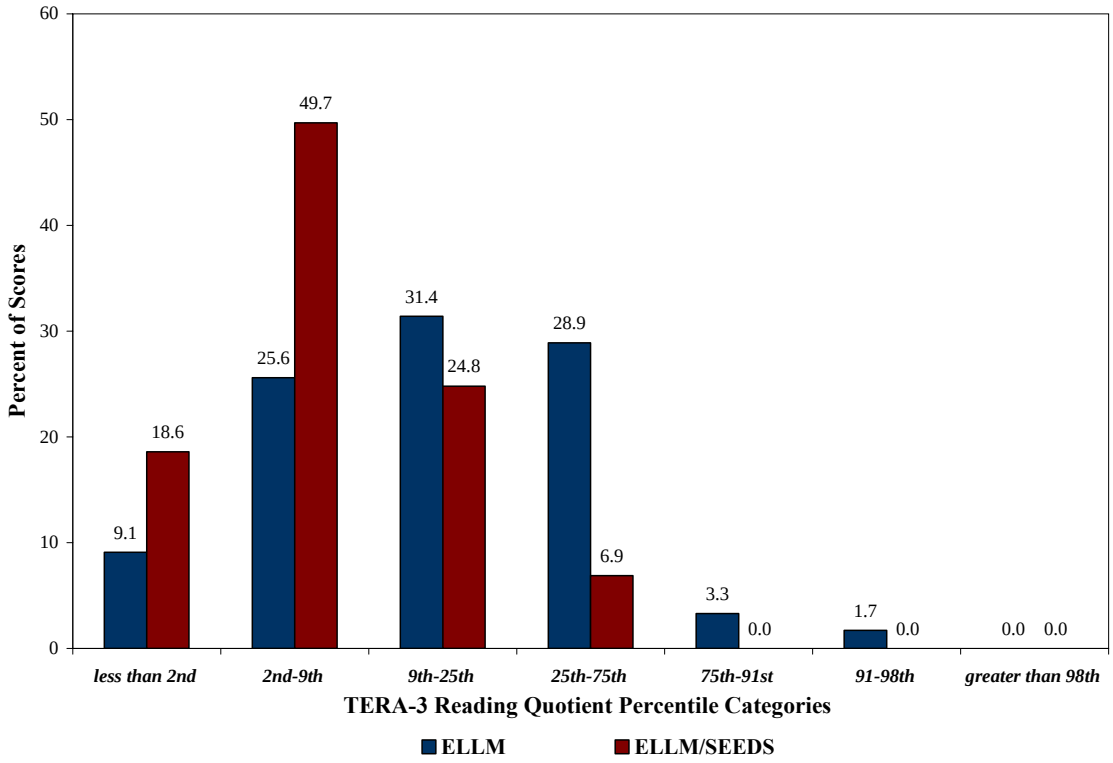


Figure 1.
TERA-3 RQ pretest scores of the ELLM and ELLM/SEEDS children by percentile category.

The TERA-3 RQ score is the best predictor of individual children's future reading ability and, as is clearly shown, the ELLM/SEEDS children (red bars) had much lower initial status than the children in the same classes without the SEEDS intervention (blue bars). As a result, the effectiveness of both ELLM and ELLM/SEEDS was evaluated using a pretest/posttest design and the TERA-3 and TOLD-P:3 normative populations as comparison groups of children rather than using a randomized field experiment comparing ELLM and ELLM/SEEDS outcomes.

Evaluation Questions

All ELLM Children

- **Question 1**: Who were the 2004-2005 Collier County ELLM children?
- **Question 2**: Was ELLM effective in improving the emergent literacy ability and language development of the children based on improved TERA-3 and TOLD-P:3 scores?
- **Question 3**: How did Collier County ELLM children compare to existing national benchmarks in the recognition of the upper- and lowercase letters of the alphabet at the end of the school year?

ELLM Children Selected for Targeted Instruction in Phonological Awareness, ELLM PA

- **Question 4**: Who were the Collier County ELLM children selected for targeted instruction in phonological awareness, and was ELLM PA effective in improving their emergent literacy ability based on improved TERA-3 RQ and ALP scores?
- **Question 5**: How did Collier County ELLM children selected for targeted instruction in phonological awareness compare to existing national benchmarks in the recognition of the upper- and lowercase letters of the alphabet at the end of the school year?

ELLM/SEEDS Children

- **Question 6**: Who were the Collier County ELLM children who participated in SEEDS, and was ELLM/SEEDS effective in improving the emergent literacy ability and language development of children based on improved TERA-3 and TOLD-P:3 scores?
- **Question 7**: How did Collier County ELLM children who participated in ELLM/SEEDS compare to existing national benchmarks in the recognition of the upper- and lowercase letters of the alphabet at the end of the school year?

The answers to these questions come from data obtained in the fall and spring on the TERA-3, TOLD-P:3, and ALRI assessments. Both summary statistics and statistical testing of pretest and posttest mean differences provide the answers. Data from all scales were analyzed as repeated measures ANOVA models. To determine the importance of all statistically significant differences, effect sizes are reported. Cohen classified effect sizes

of 20 to 49 percent of a standard deviation as small, between 50 and 79 percent of a standard deviation as medium, and 80 percent or more of a standard deviation as large.[3] Small, medium, and large effect sizes represent meaningful differences.

Moreover, Whitehurst and Massetti, in a critique of Head Start, noted when evaluation designs lack control or comparison groups, small effect sizes of 20-to-25 percent of a standard deviation should not be attributed to programs. Small effects could easily be associated with regression toward the mean, increased familiarity with tests and assessment procedures in general, or ordinary maturation and experiences.[4] Because this evaluation of ELLM does not involve a comparison or control group other than the TERA-3 and TOLD-P:3 normative populations, only effects larger than 33 percent of a standard deviation are attributed to the children's participation in ELLM.

Evaluation Results

Question 1: *Who were the 2004-2005 Collier County ELLM children?*

The answer to this evaluation question involves a description of the children by gender, ethnicity, classification as *English for Speakers of Other Languages* (ESOL), and age.

Gender

There were 234 boys and 237 girls with complete TERA-3 scores.

Ethnicity

Ethnicity of the children was reported in five categories: *Black, White, Hispanic, Asian*, and *Other*. Of the children with complete TERA-3 scores, 7.9% were *Black*, 12.1% were *White*, 67.3% were *Hispanic*, 0.4% were *Asian*, and 12.3% were *Other*.

[3] Cohen, J. (1988). *Statistical power analysis for behavioral sciences (2nd ed.)*. Hillside, NJ: Lawrence Erlbaum Associates.
[4] Whitehurst, G. J. & Massetti, G. M. (2004). How well does Head Start prepare children to learn to read? In Edward Zigler & Sally J. Styfco (Eds.), *The Head Start debates*. Baltimore, MD: Paul H. Brooks Publishing.

ESOL

Of the children with complete TERA-3 scores, 48.6% were classified as ESOL.

Age

The age of the typical Collier County ELLM child was 54 and ½ months on September 1, the most common age was 56 months, and the median age was 55 months. The categorization of the children as four year olds does not indicate the distribution of the ages of the children. Because of the September 1 birthday cut-off for children attending public kindergarten in Florida, the typical 4-year-old child is between 48 and 60 months old on September 1 of the school year. Figure 2 displays the ages in months on September 1, 2004, of the Collier County ELLM children with complete TERA-3 scores.

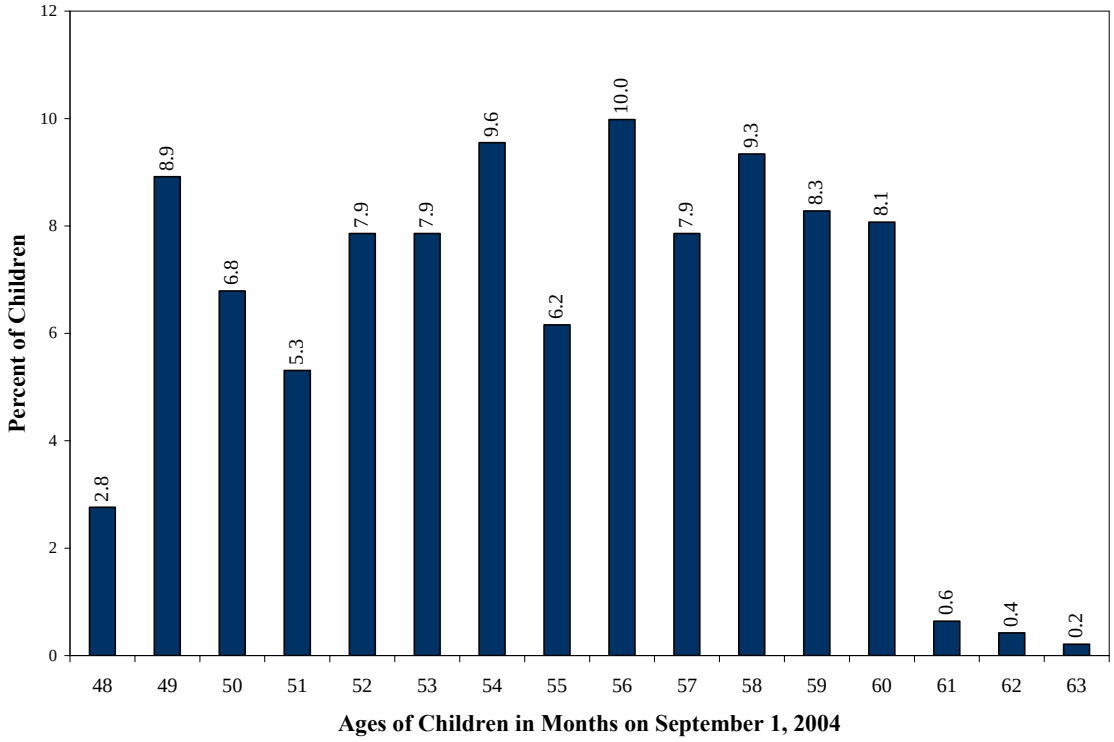


Figure 2.
Ages of the Collier County ELLM children on September 1, 2004 (n=471).

As can be seen, the ages were evenly spaced across the expected span. There were six children in the sample that were older than the typical age of this population.

Question 2: *Was ELLM effective in improving the emergent literacy ability and language development of ELLM children based on improved TERA-3 and TOLD-P:3 scores?*

Outlying TOLD-P:3 OV Scale Data

Children need not be conversant in English to respond to TERA-3 items, because most provide picture cues and only require that children point to a response. The same is true for the TOLD-P:3 PV and GU scales. However, on the TOLD-P:3 OV scale, which measures expressive vocabulary, items do require children to verbally respond to the assessor, and no visual clues are provided. For this scale, the assessor and the child have a dialogue. There are no OV scale practice items that enable the assessor to determine the extent to which the children can express themselves in English prior to the administration of the OV scale; however, the OV scale is administered after the TERA-3 scales and the TOLD-P:3 PV scale have been completed. At this point in the assessment process, the assessor has determined the child has a receptive understanding of English. Because the assessed Collier County ELLM population includes a large number of children classified as ESOL, the children's responses to items on the OV scale are important. The responses of children who responded correctly to no more than one item on the TOLD-P:3 OV scale at year's end were investigated to determine whether or not the children's ability to express themselves in English was sufficient to use the TOLD-P:3 OV scale scores. Furthermore, if there was evidence that the children could not express themselves in English at year's end, data were used to determine whether or not to remove their scores from the evaluation analyses.

One third of the 469 children with TOLD-P:3 OV scale posttest scores responded correctly to no more than one item. At year's end, 87 children did not correctly respond to any OV scale items, and 66 children responded correctly to only one OV scale item. These two groups of children were further divided into two groups depending upon the children's responses on the other TOLD-P:3 scales. This further division was determined by whether or not the children responded correctly to the same number or more items on the PV and/or GU scales at year's end (i.e. experienced a neutral or positive gain measured in raw scores) or whether the children correctly responded to fewer PV and/or GU scale items at posttesting (i.e. experienced a negative gain measured in raw scores). The tree diagram in Figure 3 depicts the delimiting criterion for these divisions.

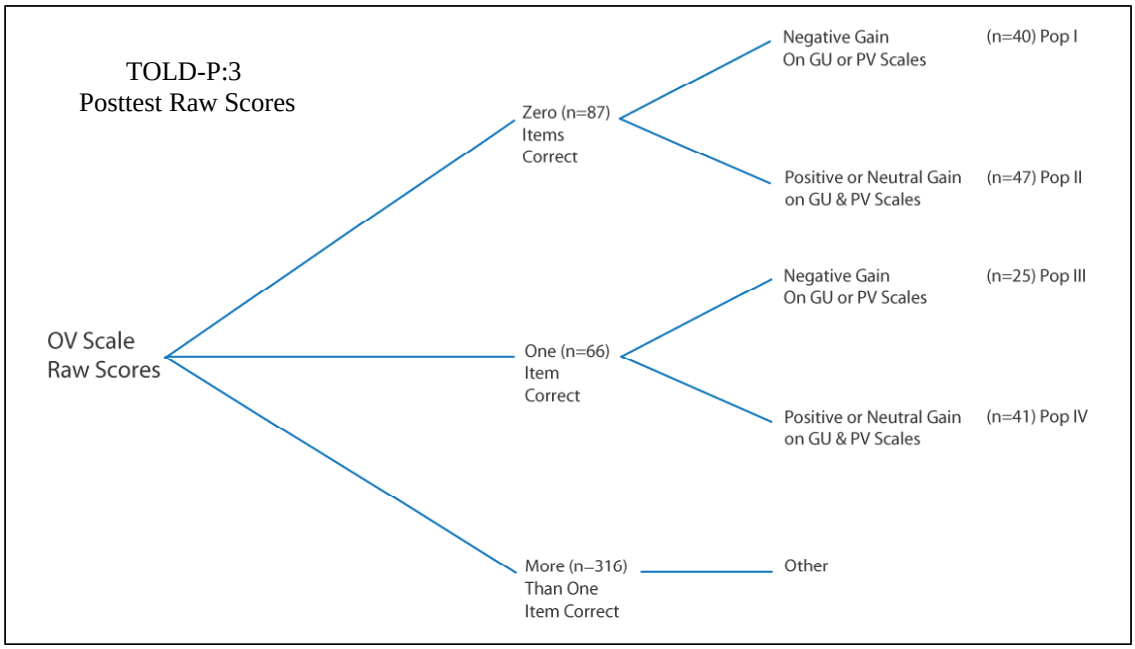


Figure 3.
Tree diagram showing the five distinct population groups determined by TOLD-P:3 OV scale scores at year's end.

Population I: There were 40 children who did not respond correctly to any items on the posttest OV scale and who experienced a negative gain on the PV and/or GU scales. Of these children, 31 did not respond correctly to any OV scale items on either the pretest or posttest.

Population II: There were 47 children who did not respond correctly to any items on the posttest OV scale and who had either a neutral or positive gain on the PV and GU scales. Of these children, 34 did not respond correctly to any OV scale items on either the pretest or posttest.

Population III: There were 25 children who responded correctly to one item on the posttest OV scale and who experienced a negative gain on the PV and/or GU scales. Of these children, 21 did not respond correctly to any pretest OV scale items or they responded correctly to one OV item on both the pretest and posttest.

Population IV: There were 41 children who responded correctly to one item on the posttest OV scale and who had either a neutral or positive gain on the PV and GU scales. Of these children, 36 did not respond correctly to any pretest OV scale items or they responded correctly to one OV item on both the pretest and posttest

Furthermore, if appropriate, participating Collier County ELLM children were classified by their preschool system as ESOL and/or selected by ELLM researchers for targeted instruction in phonological awareness, PA. Selection for PA was based on fall TERA-3 RQ and ALP scale scores. Children whose pretest scores ranked below the 7th percentile on either scale or in the bottom quartile of the local scores on both scales were selected.

Of the 153 children whose TOLD-P:3 OV raw scores indicated potential problems with the TOLD-P:3 assessments, most of the children were either classified as ESOL, selected for PA, or both. Figure 4 shows Venn diagrams for each population that separate the OV scale populations of children into distinct groups by selection for PA, classification as ESOL, or both.

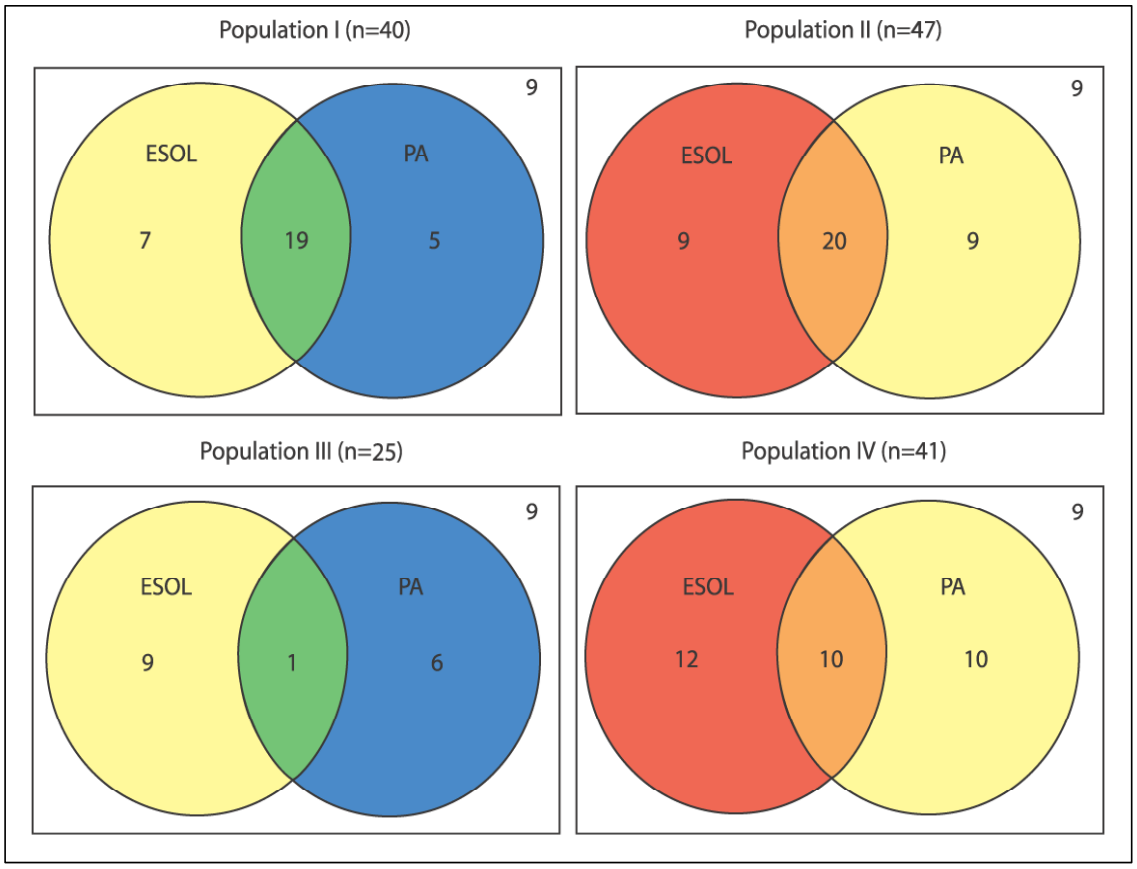


Figure 4.
The number of children classified as ESOL and/or selected for PA in each of the four populations of TOLD-P:3 OV scale scores.

The variation in classification and selection of children within the four populations indicates that not all children classified as ESOL and/or selected for PA struggled with all TOLD-P:3 scales. Populations I and III represent the children whose struggle expressing themselves in English affected other TOLD-P:3 and/or TERA-3 scale scores.

Population Mean Scores: Positive gains in standardized scores indicate that the measured cognitive development occurred more rapidly across the time between measurements than in the normative populations; neutral gains in standardized scores indicate that the measured cognitive development occurred at the same rate as in the normative populations; and negative gains in standardized scores indicate that the measured cognitive development occurred at a slower rate than in the normative populations. However, positive, neutral, or negative gains in standardized scores can result when children answer more items at posttest than at pretest. Therefore, Table 6 shows the mean standardized pretest and posttest scores of the four populations for all eight scales.

Table 6
Mean Pretest and Posttest TERA-3 and TOLD-P:3 Standardized Scale Scores of the Four Population Groups

	Population I (n=40)		Population II (n=47)		Population III (n=25)		Population IV (n=41)	
Scale	Pretest Mean	Posttest Mean	Pretest Mean	Posttest Mean	Pretest Mean	Posttest Mean	Pretest Mean	Posttest Mean
RQ	73.58	77.58	75.13	85.89	78.28	86.32	76.85	86.63
ALP	6.08	7.93	6.47	9.79	6.64	8.84	6.66	9.95
CN	6.28	6.13	6.36	6.74	6.84	7.32	6.66	6.49
MG	5.33	5.48	5.57	6.89	6.36	7.44	5.88	7.34
LiQ	85.38	76.30	74.98	86.72	90.04	81.28	77.17	91.00
OV	6.93	5.23	7.17	5.43	7.20	6.20	6.93	6.17
PV	7.70	6.83	5.40	7.96	9.28	7.12	6.41	8.88
GU	7.43	5.28	6.26	7.62	7.40	6.64	5.98	8.12

As can be seen, the TERA-3 mean scale scores of all four populations indicated positive gains (with the exception of the CN scores of Populations I and IV). These scores are similar to those found in other ELLM evaluations. The children's inability to express themselves in English did not negate gains in measures of their emergent literacy

ability. However, as expected, the mean gains of children in Populations I and III on all TOLD-P:3 scales were negative, indicating the children's apparent inability to express themselves in English did affect their other measures of language development. Conversely, the Population II and IV children's apparent inability to express themselves in English did not affect their other measures of language development. Population II children, in contrast to their negative mean gain of 58% of a standard deviation on the OV scale, experienced a positive mean gain of 85% of a standard deviation on the PV scale and 45% of a standard deviation on the GU scale. Moreover, the Population IV children experienced a negative gain of 25% of a standard deviation on the OV scale and a large positive gain of 93% of a standard deviation on the LiQ scale.

Decisions: TOLD-P:3 scores reflect the English language development of young children; furthermore, the use of scores from children who lack the ability to express themselves in English even after six months of classroom instruction delivered in English is not valid. The inclusion of invalid test scores undermines the evaluation process; therefore, after thoughtful consideration of the data, decisions were made concerning the removal of data that threaten the interpretation of results of the program evaluation. Table 7 summarizes the decisions concerning the use of the children's scores from these four populations in the evaluation analyses. These decisions were based on population mean gains made in raw and standardized scores over the school year.

Table 7
Summary of TERA-3 and TOLD-P:3 Scores Used in Statistical Analyses

Test	Scale	Population I	Population II	Population III	Population IV
TERA-3	**All Scales**	Use	Use	Use	Use
TOLD-P:3	**LiQ**	Remove	Use	Remove	Use
	OV	Remove	Remove	Remove	Use
	PV	Remove	Use	Remove	Use
	GU	Remove	Use	Remove	Use

Figure 5 shows the percentage of the Collier County ELLM children in each population group of the TOLD-P:3 OV scale.

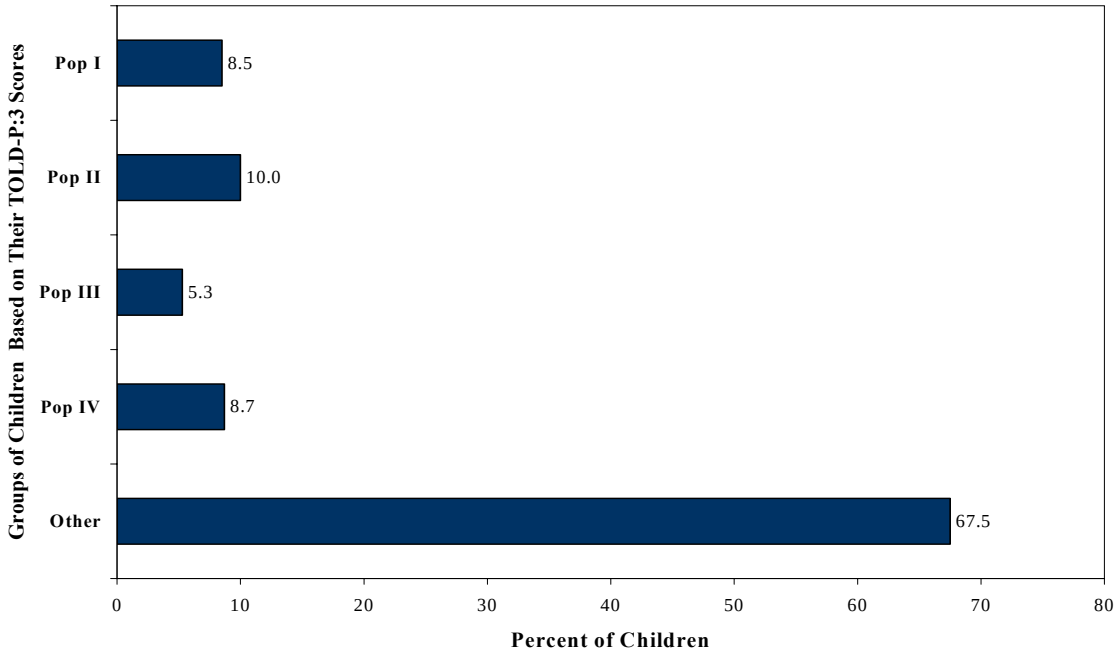


Figure 5.
The percentage of Collier County ELLM children in the five population groups of TOLD-P:3 OV scores.

Slightly less than 14% of the children had all of their TOLD-P:3 scale scores removed from analyses (Pops I and III combined). Slightly more than 75% of the children's scores were unaffected (Pop IV and Other combined).

Results of Analyses

Table 8 presents summary statistics and results from the statistical analyses of the TERA-3 and TOLD-P:3 pretest and posttest scale scores of the Collier County ELLM children.

Table 8

Summary Statistics and ANOVA Results: Collier County ELLM Children's TERA-3 and TOLD-P:3 Scores

		Pretest		Posttest				
Scale	n	**Mean**	St.Dev.	**Mean**	St.Dev.	F-Ratio	p-value	Effect Size
RQ	471	**80.9**	11.8	**91.8**	14.6	384.9	<.0001	0.73**
ALP	471	**7.1**	2.7	**10.5**	3.6	464.1	<.0001	1.12***
CN	471	**4.1**	1.8	**7.8**	2.5	39.8	<.0001	1.24***
MG	471	**6.9**	2.5	**7.9**	2.4	95.4	<.0001	0.34*
LiQ	403	**86.9**	13.6	**94.0**	12.9	113.8	<.0001	0.47*
PV	404	**8.0**	2.9	**9.1**	2.7	44.8	<.0001	0.36*
OV	357	**8.0**	2.2	**10.0**	2.9	167.9	<.0001	0.68**
GU	403	**7.7**	2.7	**8.9**	2.6	94.5	<.0001	0.76**

Note. * Denotes the difference in the pretest and posttest mean scores represents a small, but meaningful effect.

** Denotes the difference in the pretest and posttest mean scores represents a medium effect.

*** Denotes the difference in the pretest and posttest mean scores represents a large effect.

All gains in the measured abilities were statistically significant, and all effect sizes were large enough to attribute the children's gains to their participation in ELLM classes. The gains on the ALP and CN scales were larger than one full standard deviation, and the mean ALP posttest score (10.5) ranked higher than the mean ALP score of the TERA-3 normative population (10.0). The small and medium gains on the TOLD-P:3 scales indicated gains made by the children whose language development could be measured with validity.

To determine if the meaningful improvement in emergent literacy ability and language development occurred across the ability continuum, the TERA-3 and TOLD-P:3 scale scores are displayed in seven ability categories: three categories representing the lowest 25 percentiles, one category representing the middle 50 percentiles, and three categories representing the highest 25 percentiles. (See Table 4 on page 10 of this report.) Figures 6-9 display this information for the TERA-3 scales, and Figures 10-13 display this information for the TOLP-P:3 scales.

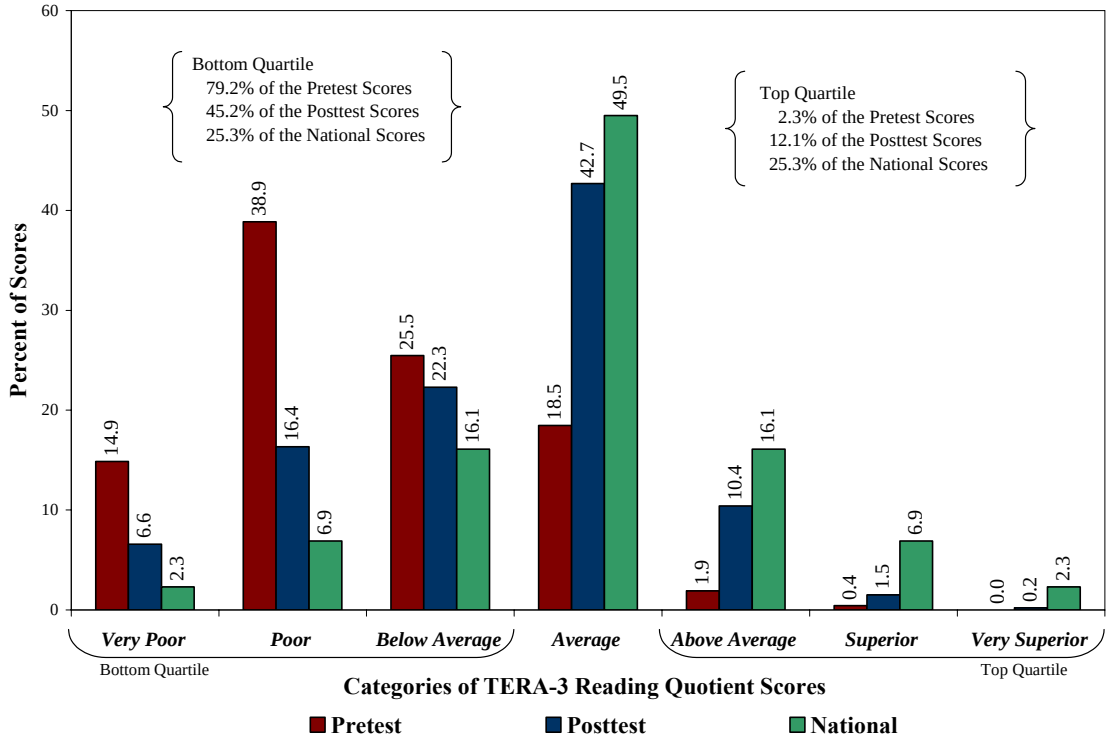


Figure 6.
The percentage of TERA-3 Reading Quotient pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=471).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained higher than in the national normative population (green bars), but there were 34% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) remained less than in the normative population; however, there were 10% more posttest scores ranked in the top quartile than at the beginning of the school year. As can be seen, the distribution of posttest scores shifted closer to the distribution of the national normative population indicating the Collier County ELLM children were closing the gap in achievement measured by the TERA-3 Reading Quotient scale.

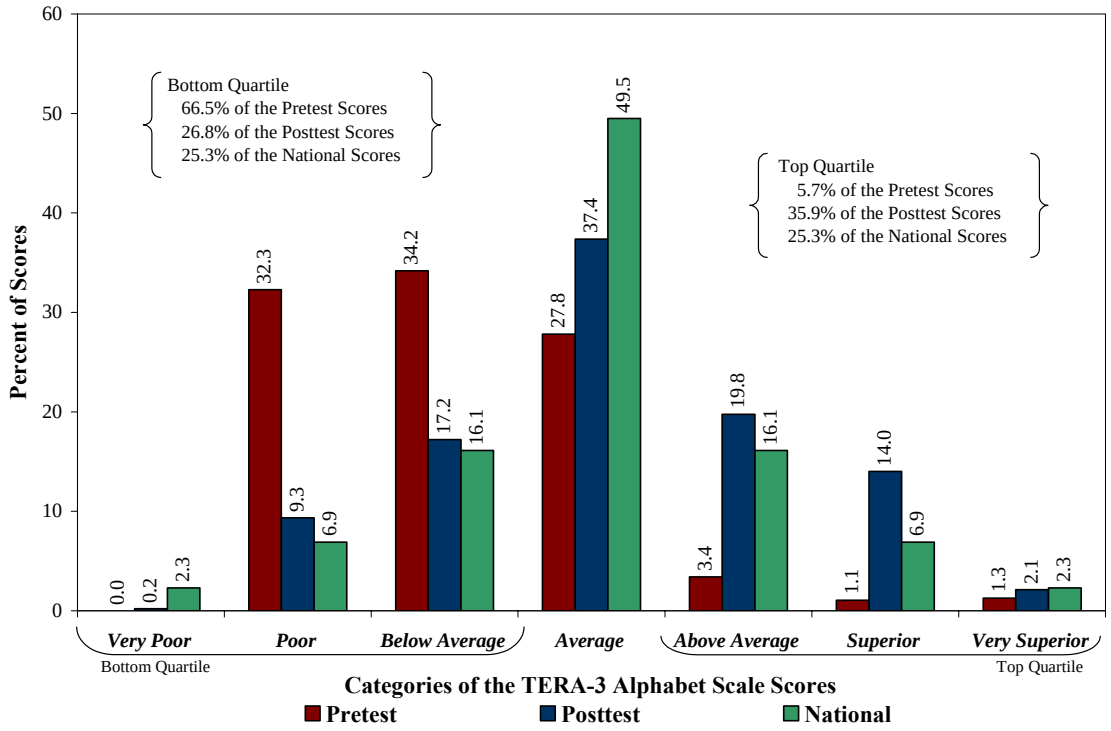


Figure 7.
The percentage of TERA-3 ALP pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=471).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained only slightly higher than in the national normative population (green bars), and there were 40% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). Additionally, there were slightly less than 10% of the posttest scores ranked at or below the 9th percentile (the *Very Poor* and *Poor* categories combined). This nearly matched the national normative population. The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) was 10% greater than in the normative population, and there were 30% more posttest scores ranked in the top quartile than at the beginning of the school year. Additionally, 16% of the Collier County ELLM children's posttest scores ranked at or above the 90th percentile (the *Superior* and *Very Superior* categories combined). As can be seen, the distribution of posttest scores shifted further toward the top quartile than the distribution of the national normative population indicating the Collier County ELLM children more than closed the gap in achievement measured by the TERA-3 Alphabet scale.

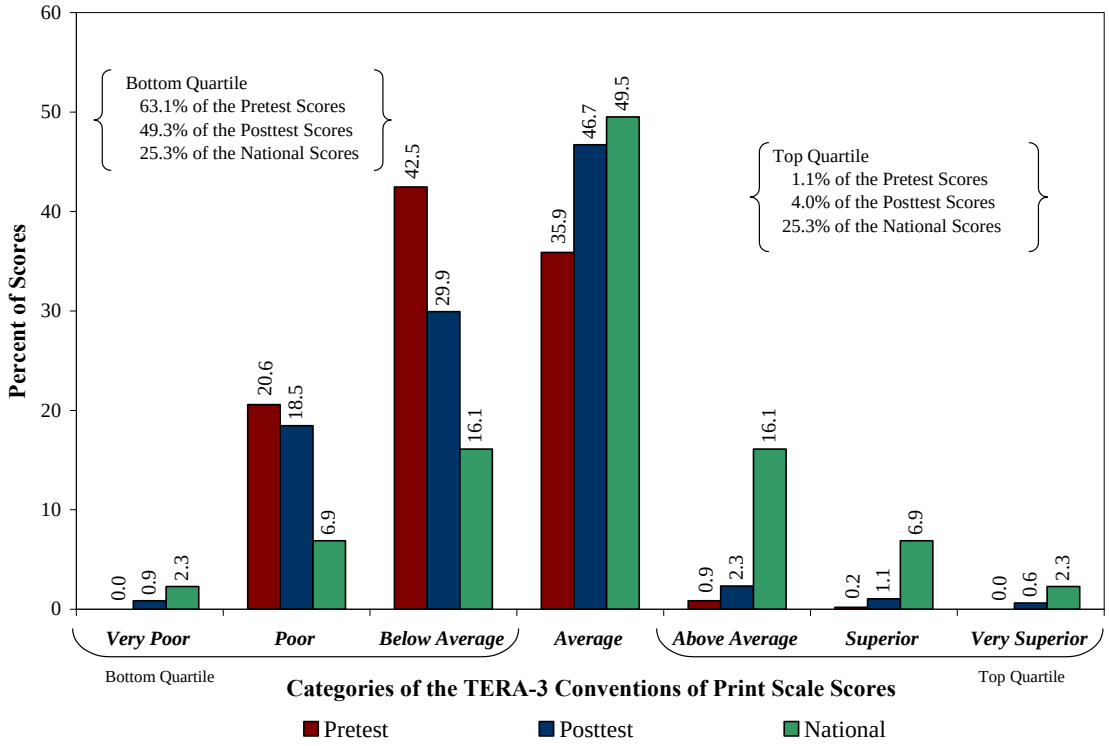


Figure 8.
The percentage of TERA-3 CN pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=471).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained higher than in the national normative population (green bars), but there were 14% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) remained less than in the normative population, and there was very little change from the beginning to the end of the school year. As can be seen, most of the shift in the distribution of posttest scores occurred in the *Below Average* category with 12% of the scores changing from rankings between the 9th and the 25th percentiles (*Below Average* category) at the beginning of the school year to rankings above the 25th percentile at the end of the school year. The Collier County ELLM children whose pretest scores ranked in the bottom quartile began to close the gap in achievement measured by the TERA-3 Conventions of Print scale.

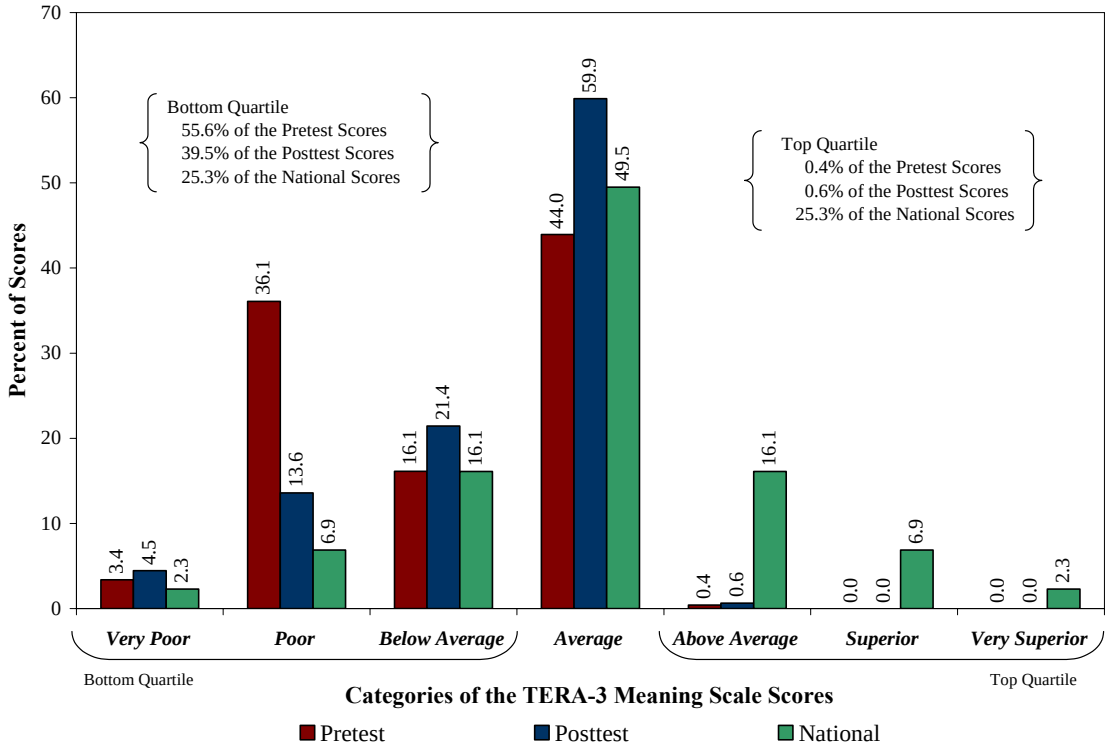


Figure 9.
The percentage of TERA-3 MG pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=471).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained higher than in the national normative population (green bars), but there were 16% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) remained less than in the normative population, and there was very little change from the beginning to the end of the school year. As can be seen, most of the shift in the distribution of scores occurred in the bottom quartile with 21% of scores changing from rankings at or below the 9th percentile (the *Very Poor* and *Poor* categories combined) at the beginning of the school year to rankings above the 9th percentile at the end of the school year. The Collier County ELLM children whose pretest scores ranked in the bottom quartile began to close the gap in achievement measured by the TERA-3 Meaning scale.

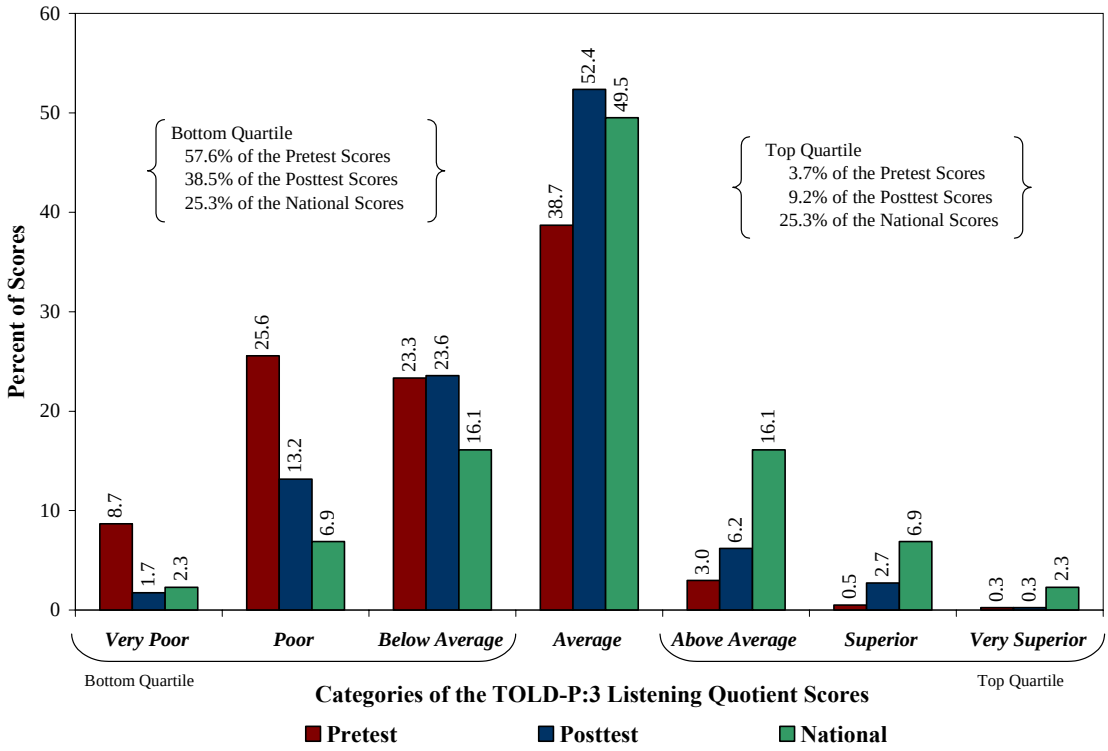


Figure 10.
The percentage of TOLD-P:3 LiQ pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=403).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained higher than in the national normative population (green bars), but there were 19% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) remained less than in the normative population; however, there were 6% more posttest scores ranked in the top quartile than at the beginning of the school year. As can be seen, most of the shift in the distribution of scores occurred in the bottom quartile with 19% of the scores changing from rankings at or below the 9th percentile (the *Very Poor* and *Poor* categories combined) at the beginning of the school year to rankings above the 9th percentile at the end of the school year. The Collier County ELLM children whose pretest scores ranked in the bottom quartile began to close the gap in achievement measured by the TOLD-P:3 Listening Quotient scale.

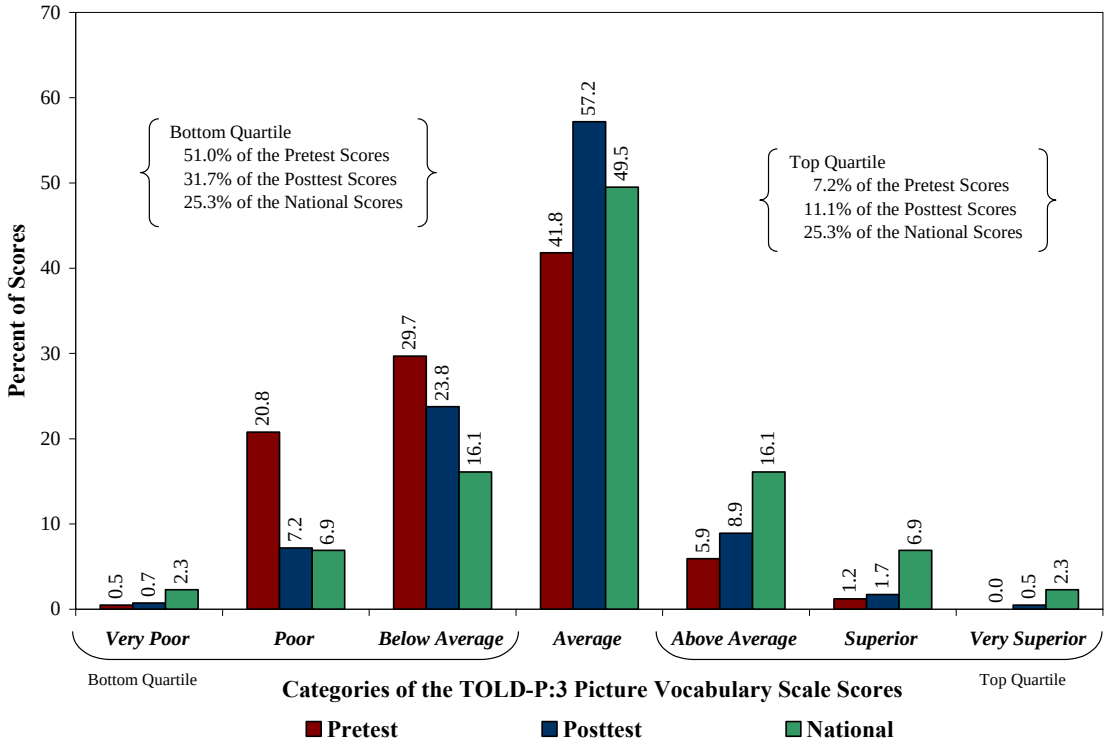


Figure 11.
The percentage of TOLD-P:3 PV pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=404).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained 6% higher than in the national normative population (green bars), but there were 19% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). Additionally, there were slightly less than 8% of the posttest scores ranked at or below the 9th percentile (the *Very Poor* and *Poor* categories combined). This percentage more than matched the national normative population. The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) remained less than in the normative population; however, there were 4% more posttest scores ranked in the top quartile than at the beginning of the school year. The Collier County ELLM children whose pretest scores ranked in the bottom quartile began to close the gap in achievement measured by the TOLD-P:3 Picture Vocabulary scale.

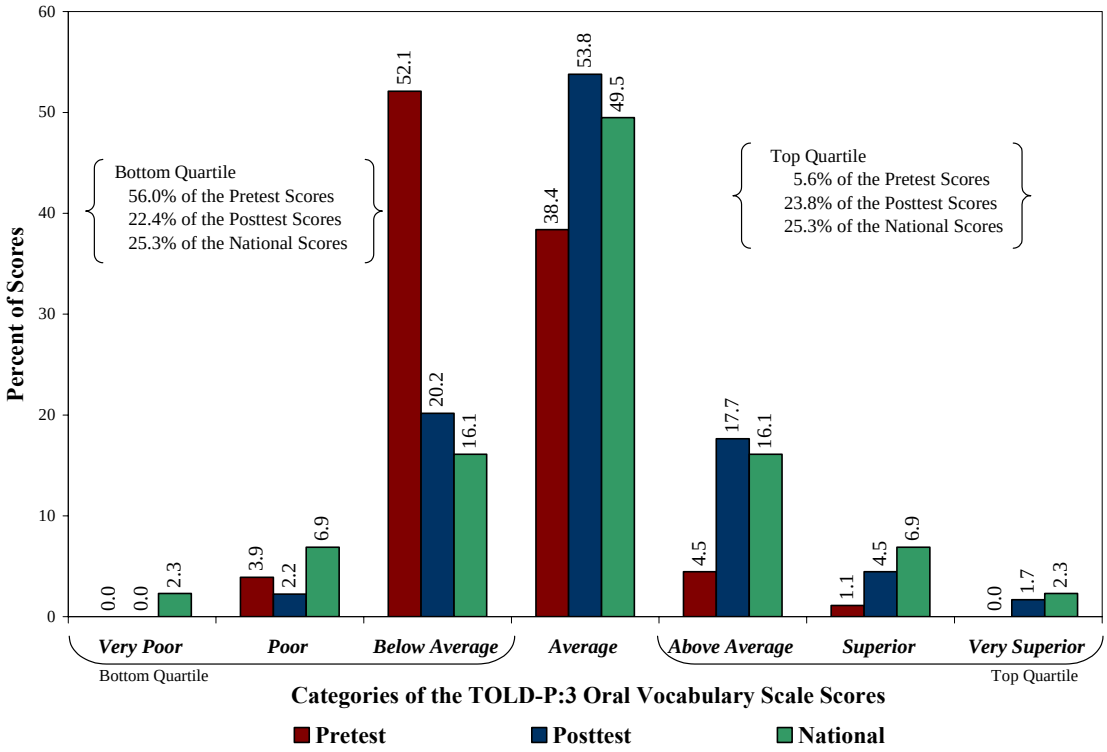


Figure 12.
The percentage of TOLD-P:3 OV pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=357).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) was less than in the national normative population (green bars), and there were 34% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) remained slightly less than in the normative population; however, there were 18% more posttest scores ranked in the top quartile than at the beginning of the school year. As can be seen, the distribution of posttest scores shifted closer to the distribution of the national normative population indicating the Collier County ELLM children were closing the gap in achievement measured by the TOLD-P:3 Oral Vocabulary scale.

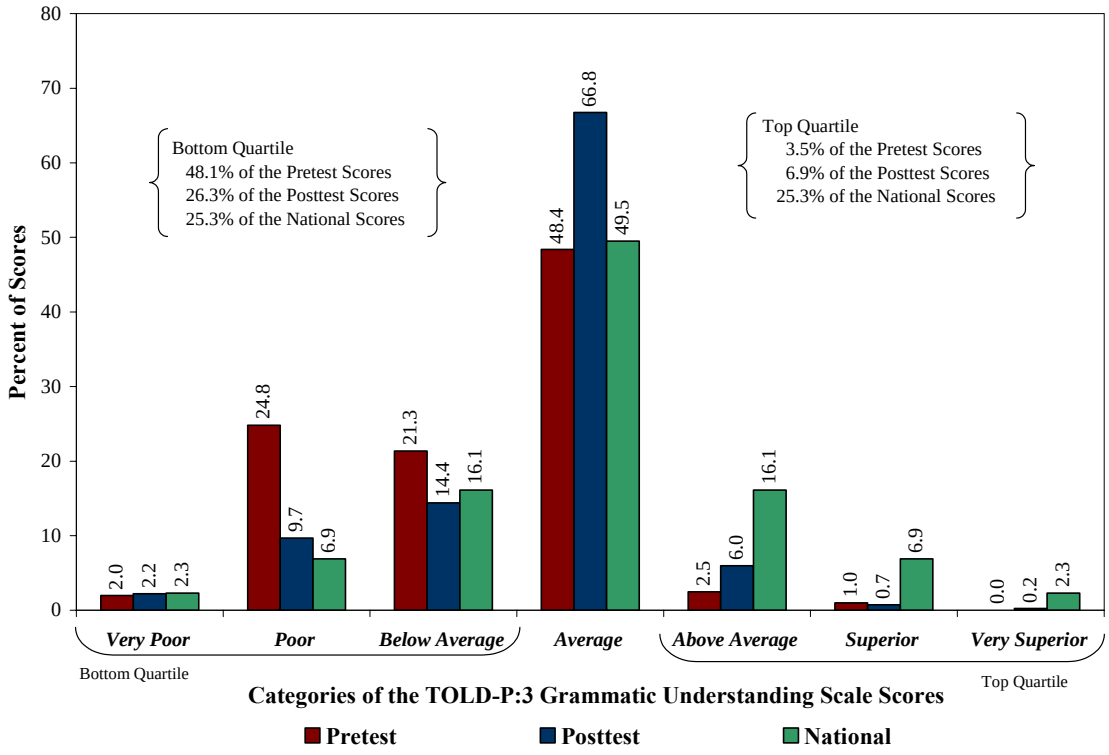


Figure 13.
The percentage of TOLD-P:3 GU pretest, posttest, and national normative population scores in the seven categories of the ability scale (n=403).

The percentage of posttest scores (blue bars) ranked in the bottom quartile (three bars at the left of the figure) remained slightly higher than in the national normative population (green bars), and there were 22% fewer Collier County ELLM children's posttest scores ranked in the bottom quartile than at the beginning of the school year (red bars). The percentage of posttest scores ranked in the top quartile (three bars at the right of the figure) was mostly unchanged. As can be seen, most of the shift in the distribution of scores occurred by moving pretest scores ranked in the bottom quartile to scores ranked in the broad *Average* category at the end of the school year. The Collier County ELLM children whose pretest scores ranked in the bottom quartile began to close the gap in achievement measured by the TOLD-P:3 Grammatic Understanding scale.

Question 2: *Was ELLM effective in improving the emergent literacy ability and language development of ELLM children based on improved TERA-3 and TOLD-P:3 scores?*

Summary of Analyses

One way to look at the Collier County ELLM children's year-end achievement in emergent literacy ability and language development is provided by the change in percentile rankings of the mean scores from the beginning to the end of the school year. Furthermore, looking at the differences in the percentage of scores ranked in the top and bottom quartiles from the beginning to the end of the school year indicates which children were best served by the ELLM intervention. Table 9 summarizes the first aspect of the TERA-3 and TOLD-P:3 gains.

Table 9

Percentile Rankings of TERA-3 and TOLD-P:3 Scale Scores from the Beginning to the End of the School Year

Test	Scale	Mean Pretest Percentile Ranking	Mean Posttest Percentile Ranking	Change in Percentile Ranking
TERA-3	**RQ**	10	29*	19
	ALP	17	57**	40
	CN	2	22	20
	MG	15	24	9
TOLD-P:3	**LiQ**	19	35*	16
	PV	25*	38*	13
	OV	25*	50**	25
	GU	22	36*	14

Note. * Denotes scores ranked at or above the 25th percentile.
** Denotes scores ranked at or above the 50th percentile.

At the beginning of the school year, the TOLD-P:3 PV and OV pretest mean scores were the only mean scores that ranked at or above the 25th percentile (above the bottom quartile). At the end of the school year, the TERA-3 CN and MG mean scores were the only mean scores still ranked in the bottom quartile. All of the TOLD-P:3 posttest scores of the children who could express themselves in English ranked at or above the 35th percentile. Additionally, the OV mean posttest score ranked at the national average, and the TERA-3 ALP mean posttest score ranked above the national average.

Figures 14 and 15 show the differences in the percentage of TERA-3 and TOLD-P:3 scores ranked in the top and bottom quartiles from the beginning to the end of the school year.

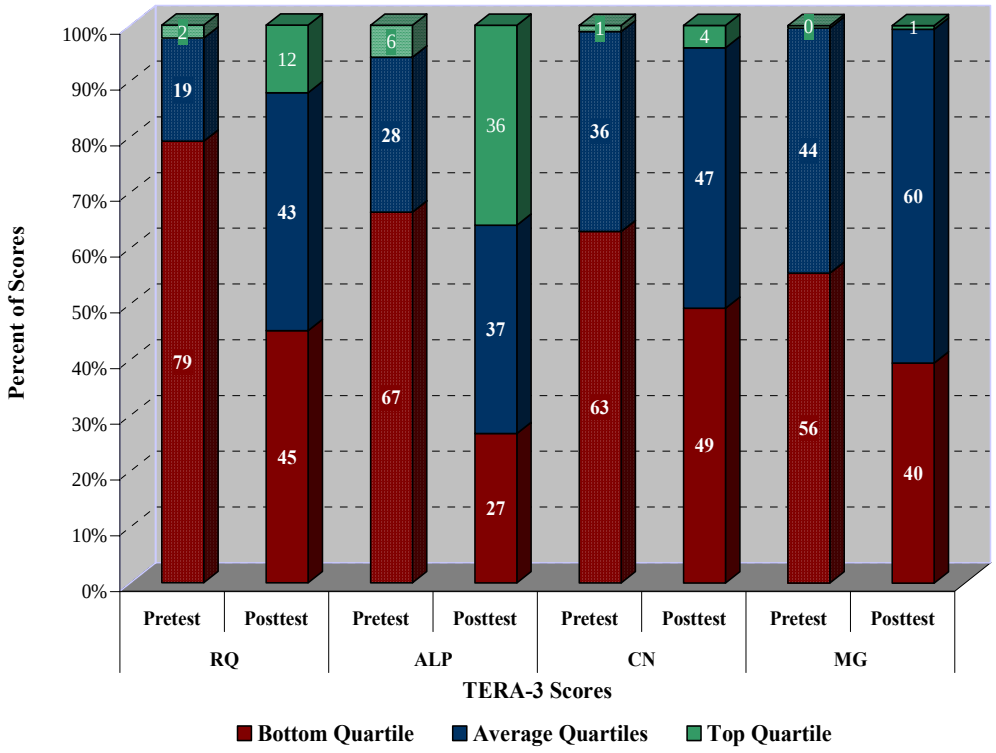


Figure 14.
The percentage of TERA-3 scale scores ranked in the bottom, middle, and top quartiles at the beginning and end of the school year.

The percentage of scores ranked in the bottom quartile (red) was less at the end than at the beginning of the school year for all TERA-3 scales; moreover, the percentage of ALP (Alphabet scale) spring scores, 27 percent, was close to the expected 25 percent. The percentage of scores ranked in the top quartile (green) was basically unchanged from the beginning to the end of the school year for the CN and MG scales (Conventions of Print and Meaning scales), indicating all of the changes in the distribution of scores was between the bottom and middle quartiles. The percentage of scores ranked in the top quartile increased from pretest to posttest for the RQ and ALP scores (Reading Quotient and Alphabet scales). Moreover, there was a higher percentage of ELLM ALP posttest scores ranked in the top quartile, 36 percent, than the 25 percent expected.

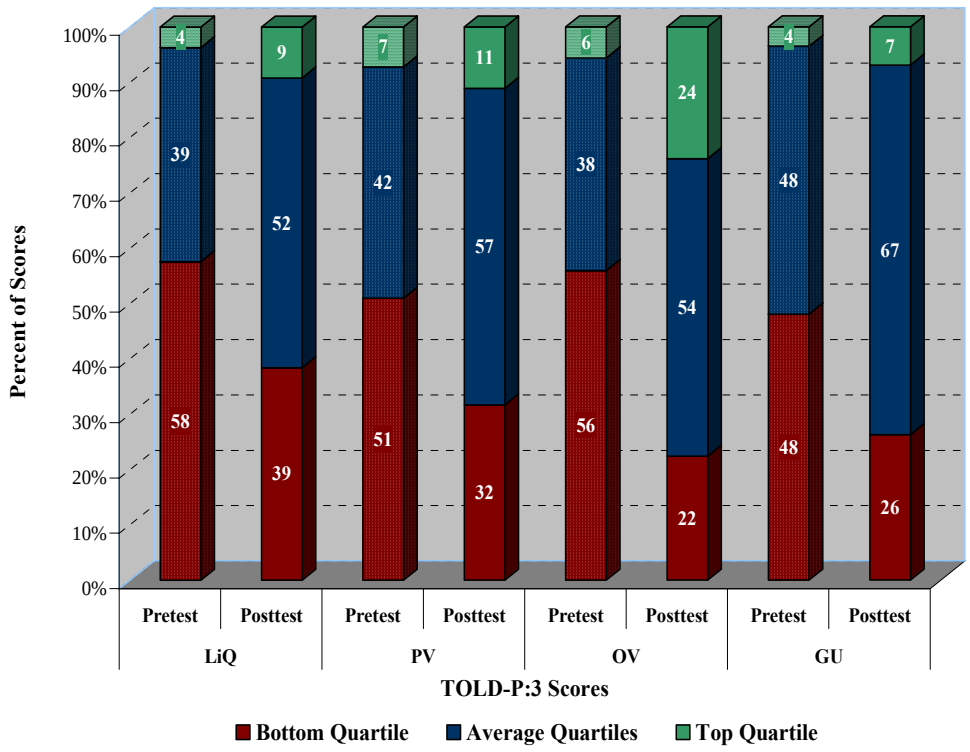


Figure 15.
The percentage of TOLD-P:3 scale scores ranked in the bottom, middle, and top quartiles at the beginning and end of the school year.

The percentage of scores in the bottom quartile (red) was less at the end than at the beginning of the school year for all TOLD-P:3 scales; moreover, the percentage of OV and GU (Oral Vocabulary and Grammatic Understanding scales) spring scores, 22 and 26 percent, respectively, was close to the expected 25 percent. The percentage of posttest scale scores ranked in the top quartile (green) increased about 4 percent across the LiQ (Listening Quotient), PV (Picture Vocabulary), and GU scales. The OV scale experienced an 18 percent increase in scores ranked in the top quartile at the end of the school year. The percentage of OV scale scores at the end of the school year, 22, 54, and 24 percent, almost mirrored the expected values of 25, 50, and 25 percent for the bottom, average, and top quartiles, respectively.

***Question 3**: How did Collier County ELLM children compare to existing national benchmarks in the recognition of the upper- and lowercase letters of the alphabet at the end of the school year?*

In 2004-2005, 450 Collier County ELLM children had Alphabet Letter Recognition Inventory (ALRI) fall and spring scores. The ALRI fall mean score indicated the typical ELLM child recognized about 21% of the letters (about 11 letters). The ALRI mean spring score indicated the typical child recognized 73% of the letters (about 38 letters). The *Early Childhood Longitudinal Study-Kindergarten* (ECLS-K) described recognizing 75% of the sampled letters as *proficient*; therefore, the typical Collier County ELLM child was almost *proficient* in letter recognition at the end of the school year.

Additionally, there were 440 Collier County ELLM children who had fall, winter, and spring ALRI scores. To determine the range of alphabet letter recognition ability of the children, these 440 ALRI scores are displayed in Figure 16 using four recognition categories: 0-13 letters, 14-26 letters, 27-39 letters, and 40-52 letters.

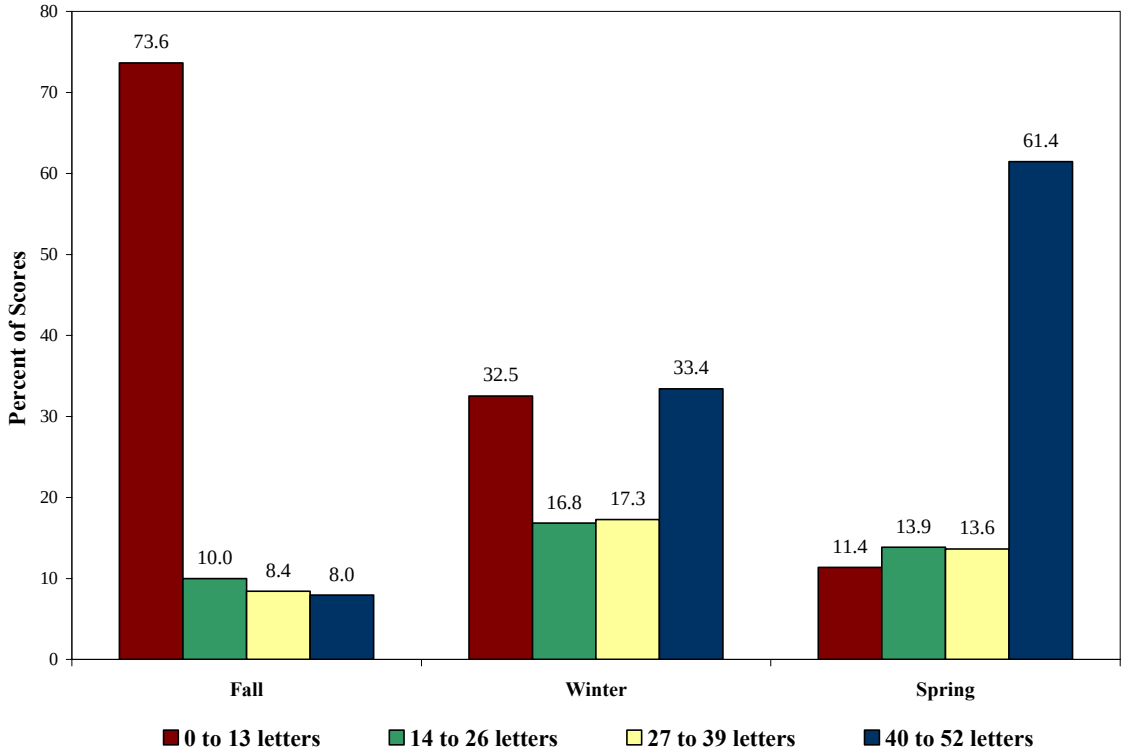


Figure 16.
The Alphabet Letter Recognition Inventory scores of the 440 Collier County ELLM children.

Inspection of Figure 16 indicates letter recognition progress was steadily made throughout the school year with the percentage of *proficient* children changing from 8% at the beginning of the school year, to 33% at mid-year, and to 61% at the end of the school year. Therefore, at year's end, 61% of the 440 children were *proficient*, recognizing at least 75% of the letters. The end of the 4-year-old preschool year is somewhat similar to entering kindergarten for the first time, and ECLS-K researchers reported 66% of all children entering kindergarten for the first time were *proficient*. Collier County ELLM children's letter recognition ability almost matched the national ECLS-K sample of all children entering kindergarten for the first time. Additionally, slightly less than 7% of the children recognized fewer than 8 letters (the minimal federal standard for Head Start achievement in letter recognition), 36% of the children recognized 50 or more letters, and 20% of the children recognized all 52 letters.

***Question 4**: Who were the Collier County ELLM children selected for targeted instruction in phonological awareness, and was ELLM effective in improving their emergent literacy ability based on improved TERA-3 RQ and ALP scores?*

Selection for targeted instruction in phonological awareness, PA, was based on fall TERA-3 RQ and ALP scores. One hundred eighty-two children (38.6% of the general Collier County ELLM population) whose scores ranked below the 7th percentile on either scale or ranked in the bottom quartile of the local scores on both scales were selected. The answer to the evaluation question, *Who were the Collier County ELLM children selected for targeted instruction in phonological awareness?* involves a description of these 182 children by gender, ethnicity, classification as ESOL, age, and by categories of TOLD-P:3 OV scale scores.

Gender

There were 93 boys and 89 girls selected for PA. The percentage of boys, 51%, in the ELLM PA population was slightly higher than in the general Collier County ELLM population, 50% .

Ethnicity

Ethnicity of the ELLM PA children was reported in four categories: *Black, White, Hispanic,* and *Other*. Of the ELLM PA children, 7.1% were *Black*, 3.9% were *White*,

73.1% were *Hispanic*, and 15.9% were *Other*. The percentage of *Hispanic* children in the ELLM PA population was more than in the general Collier County ELLM population, 67%.

ESOL

Of the ELLM PA children, 63.2% were classified as ESOL. It is not surprising, based on selection criterion, that there was a greater percentage of ESOL children in the PA population than in the general Collier County ELLM population.

Age

The typical age of the Collier County ELLM PA children was 55 months on September 1, the most common age was 54 months, and the median age was 55 months. Categorization of the children as four year olds does not indicate the distribution of the ages of the children. Because of the September 1 birthday cut-off for children attending public kindergarten in Florida, the typical 4-year-old child is between 48 and 60 months old on September 1 of the school year. Figure 17 displays the Collier County ELLM PA children's ages in months on September 1, 2004.

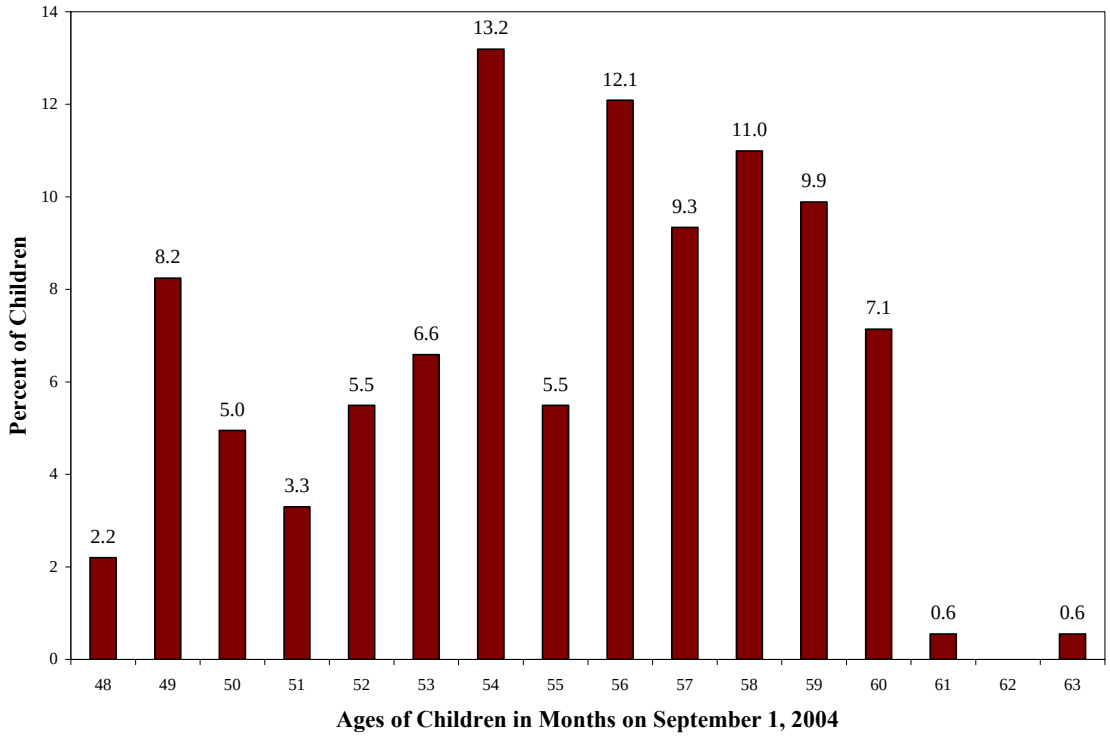


Figure 17.
Ages of the Collier County ELLM PA children on September 1, 2004 (n=182).

The middle age category in the age distribution is 54 months, and 31% of the children's ages are 53 months or less and 56% of the children's ages are 56 months or older. The ELLM PA children are slightly older than the Collier County ELLM general population, and two children were older than typical.

Categories of TOLD-P:3 OV Scale Scores

Figure 18 shows the percentage of the Collier County ELLM PA children whose scores were affected by data decisions based on TOLD-P:3 OV scale scores.

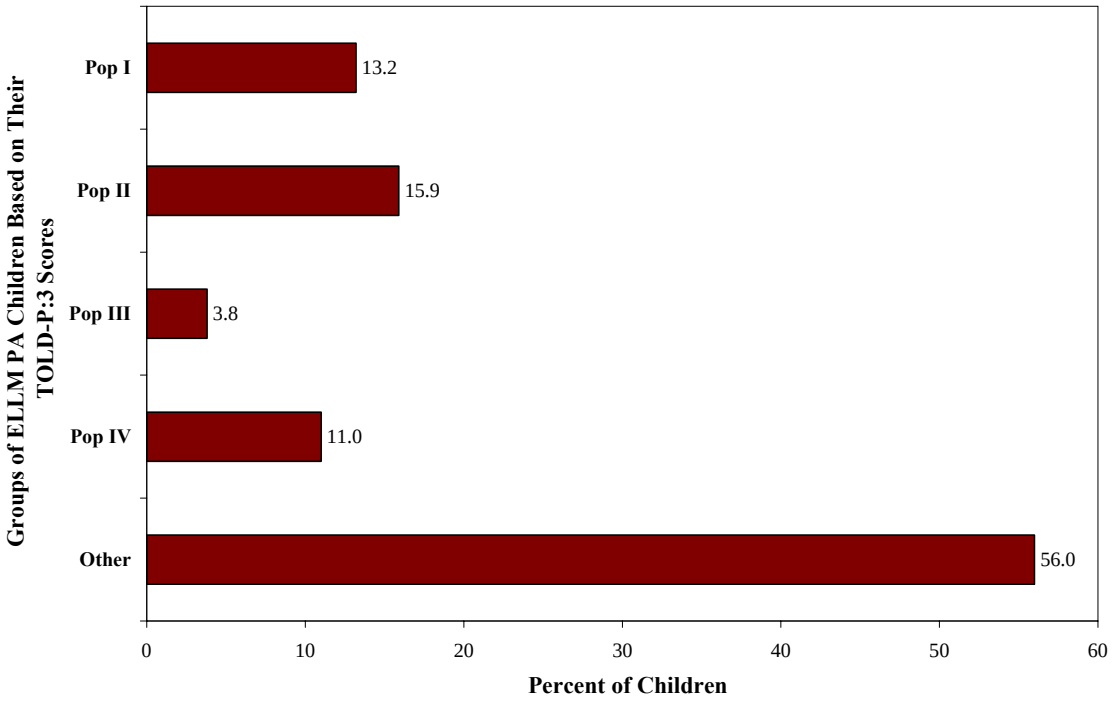


Figure 18.
The percentage of Collier County ELLM PA children in the five population groups of TOLD-P:3 OV scores.

Approximately 17% of the children had all of their TOLD-P:3 scale scores removed from analyses (Pops I and III combined). Approximately 67% of the children's scores were unaffected (Pop IV and Other combined). These numbers differ from the general Collier County ELLM population in expected ways—more OV scale scores were removed, and fewer TOLD-P:3 scale scores were unaffected.

Results of Analyses

Table 10 presents summary statistics and results of statistical analyses of the TERA-3 and TOLD-P:3 pretest and posttest scores of the Collier County ELLM PA children.

Table 10
Summary Statistics and ANOVA Results: Collier County ELLM PA Children's TERA-3 and TOLD-P:3 Scores

			Pretest		Posttest				
Test	**Scale**	n	**Mean**	St.Dev.	**Mean**	St.Dev.	F-Ratio	p-value	Effect Size
TERA-2	**RQ**	182	**70.3**	4.3	**83.3**	11.8	217.4	<.0001	0.87***
	ALP	182	**5.2**	0.9	**8.7**	3.3	208.5	<.0001	1.17***
	CN	182	**5.9**	1.1	**6.7**	1.8	28.8	<.0001	0.27*
	MG	182	**5.0**	1.8	**6.8**	2.2	105.6	<.0001	0.57**
TOLD-P:3	**LiQ**	150	**79.5**	11.3	**88.5**	11.5	73.7	<.0001	0.53**
	PV	150	**6.7**	2.6	**8.3**	2.6	44.4	<.0001	0.55**
	OV	121	**7.1**	1.6.	**8.9**	2.5	64.8	<.0001	0.60**
	GU	149	**6.5**	2.3	**7.8**	2.3	36.9	<.0001	0.45*

Note. * Denotes the difference in the pretest and posttest mean scores represents a small, but meaningful effect.
** Denotes the difference in the pretest and posttest mean scores represents a medium effect.
*** Denotes the difference in the pretest and posttest mean scores represents a large effect.

All gains in the measured abilities were statistically significant, and all effect sizes, with the exception of the TERA-3 CN scale, were large enough to attribute the children's gain to their participation in ELLM classes. The large gains on the TERA-3 RQ and ALP and scales are affirmation of PA selection. The small and medium gains on the TOLD-P:3 scales reflected gains made by the children whose language development could be measured with validity.

To determine if the meaningful improvement in emergent literacy scores of the PA children occurred across the ability continuum, the TERA-3 RQ and ALP scores are displayed in Figures 19 and 20 in seven ability categories: three categories representing the lowest 25 percentiles, one category representing the middle 50 percentiles, and three categories representing the highest 25 percentiles. (See Table 4 on page 10 of this report.)

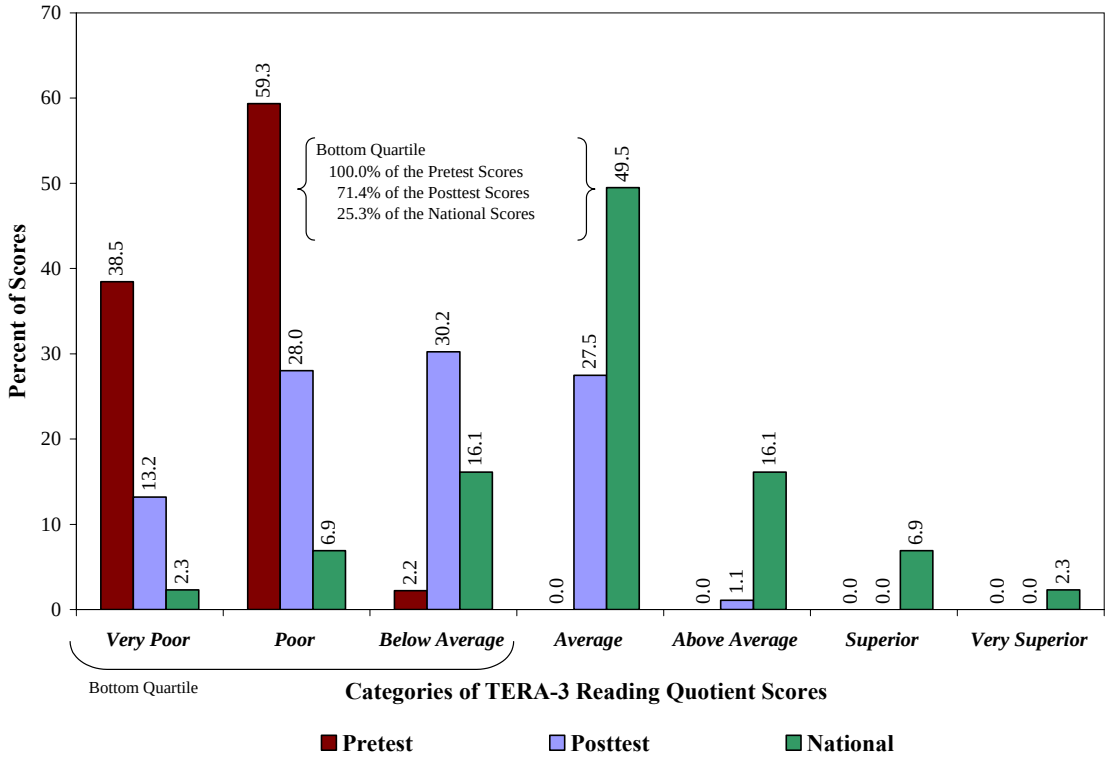


Figure 19.
The percentage of TERA-3 RQ pretest, posttest, and national normative population scores in the seven categories of the ability scale (n =182).

As expected, based on the PA selection criterion, 100% of the pretest scores (red bars) were ranked in the bottom quartile (three bars at the left of the figure). Almost 29% of the children's posttest scores (blue bars) were ranked above the 25th percentile of the national normative population at the end of the school year. The largest shift in the percentage of scores occurred because of the reduction in the 98% of scores ranked at or below the 9th percentile (*Very Poor* and *Poor* categories combined) at the beginning of the school year (red bars) to 41% of the scores ranked at or below the 9th percentile at year's end.

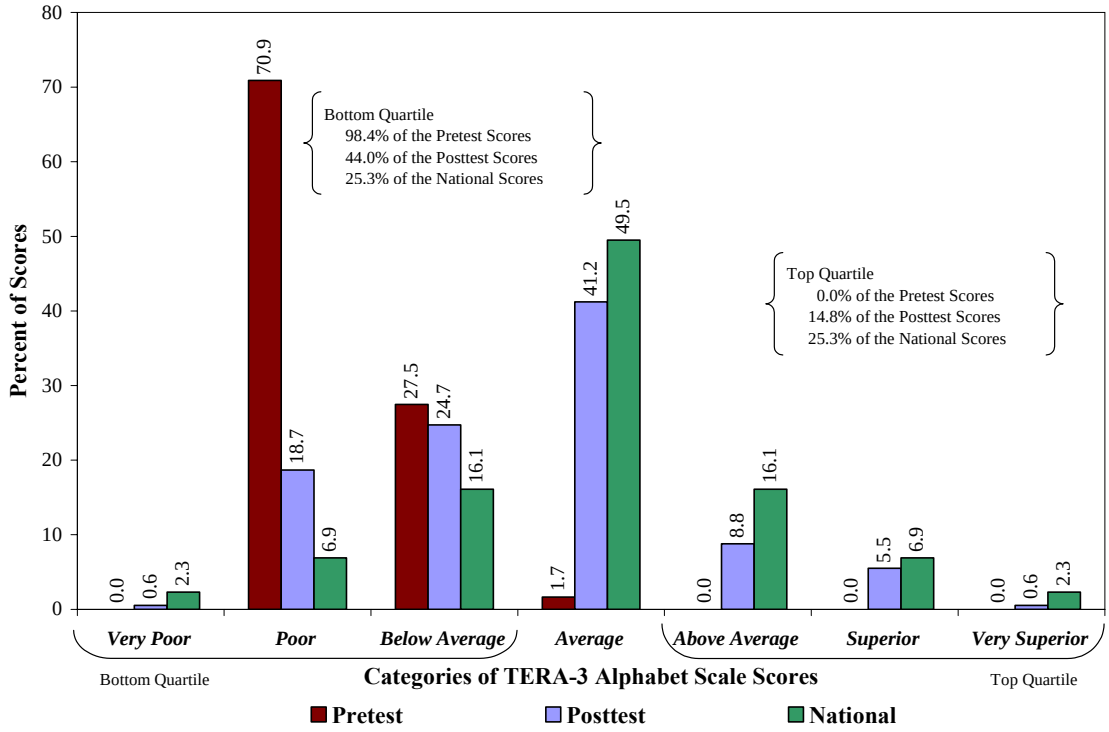


Figure 20.
The percentage of TERA-3 ALP pretest, posttest, and national normative population scores in the seven categories of the ability scale (n =182).

As expected, based on the PA selection criterion, almost 100% of the pretest scores (red bars) were ranked in the bottom quartile (three bars at the left of the figure). Additionally, 71% of the scores at the beginning of the school year ranked between the 2nd and 9th percentiles (the *Poor* category). Only 19% of the scores remained ranked at or below the 9th percentile (the *Very Poor* and *Poor* categories combined) at the end of the school year (blue bars). Additionally, almost 15% of the scores were ranked in the top quartile (three bars at the right of the figure) at year'end, and over 6% of the scores were ranked at or above the 90th percentile (the *Superior* and *Very Superior* categories combined).

***Question 4**: Was ELLM effective in improving their emergent literacy ability of children selected for targeted instruction in phonological awareness based on improved TERA-3 RQ and ALP scores?*

Summary of Analyses

The change percentile rankings of mean scores from the beginning to the end of the school year provides one way to look at the Collier County ELLM PA children's year-end achievement in emergent literacy ability and language development. Table 11 summarizes the gains made from pretest to posttest in the mean scale scores.

Table 11
Percentile Rankings of TERA-3 and TOLD-P:3 Scale Scores from the Beginning to the End of the School Year

Test	Scale	Mean Pretest Percentile Ranking	Mean Posttest Percentile Ranking	Change in Percentile Ranking
TERA-3	**RQ**	2	13	11
	ALP	5	33*	28
	CN	9	14	5
	MG	5	14	9
TOLD-P:3	**LiQ**	9	22	13
	PV	14	29*	15
	OV	17	36*	19
	GU	12	23	11

Note. * Denotes scores ranked at or above the 25th percentile.

Selection for PA is based solely on the children's performance at the beginning of the school year on the TERA-3 RQ and ALP scales. All of the ELLM PA children's mean scale scores ranked in the bottom quartile at the beginning of the school year. Furthermore, the targeted instruction in phonological awareness addresses concepts only measured on the TERA-3 ALP scale. At the end of the school year, the ALP scale mean score ranked above the bottom quartile. Additionally, the posttest scores of the TERA-3 ALP scale were spread across the ability continuum including 15% of the scores ranked in the top quartile. Interestingly though, these children whose pretest mean TERA-3 RQ and ALP scores reflected their opportunity-to-learn and who were able to express themselves in English also made great strides in the language development measured on

the TOLD-P:3 PV and OV scales—the posttest mean scores of these scales ranked above the bottom quartile.

Question 5: *How did Collier County ELLM children selected for targeted instruction in phonological awareness compare to existing national benchmarks in the recognition of the upper- and lowercase letters of the alphabet at the end of the school year?*

In 2004-2005, 173 Collier County ELLM PA children had Alphabet Letter Recognition Inventory (ALRI) fall and spring scores. The ALRI fall mean score indicated the typical child recognized about 7.5% of the letters (4 letters). The ALRI posttest mean score indicated the typical child recognized 61% of the letters (32 letters). The *Early Childhood Longitudinal Study-Kindergarten* (ECLS-K) described recognizing 75% of the sampled letters as *proficient*; therefore, the typical Collier County ELLM PA child was working toward *proficiency* in letter recognition at the end of the school year.

Additionally, there were 166 Collier County ELLM PA children who had fall, winter, and spring scores. To determine the range of alphabet letter recognition ability of the children, ALRI scores are displayed in Figure 21 using four recognition categories: 0-13 letters, 14-26 letters, 27-39 letters, and 40-52 letters.

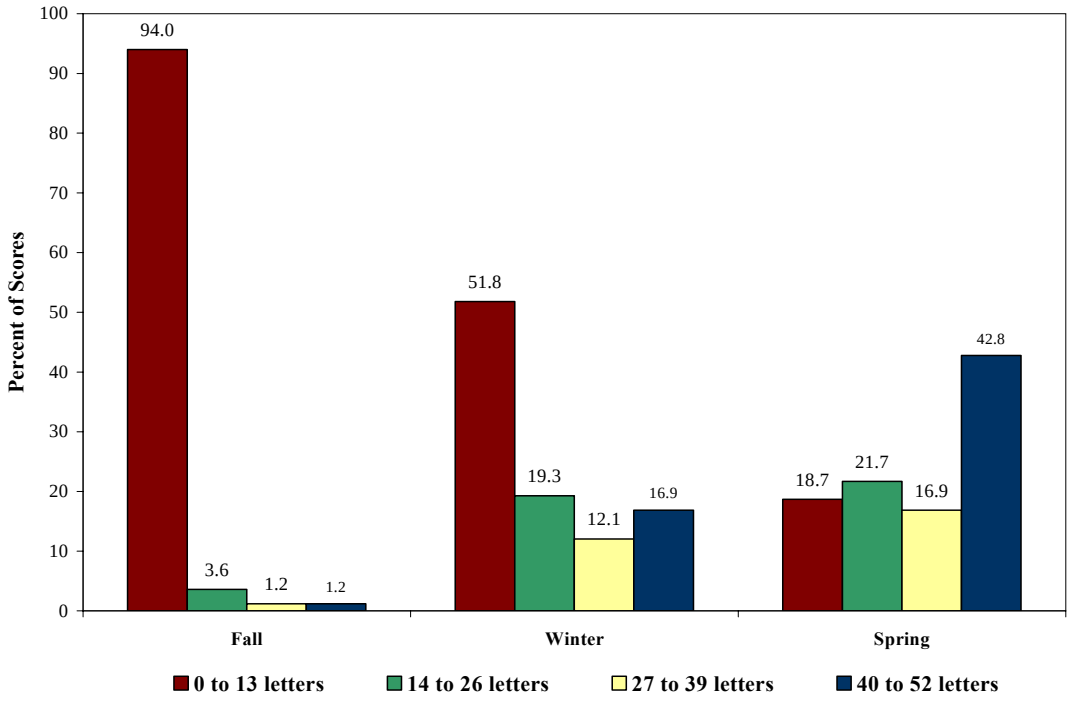


Figure 21.
The Alphabet Letter Recognition Inventory scores of the 166 Collier County ELLM PA children.

Inspection of Figure 21 indicates the greatest growth in letter recognition occurred in the second half of the school year. At year-end, 43% of the scores were in the 40-to-52 letters recognized category (recognizing at least 75% of the letters; therefore *proficient*). Furthermore, slightly less than 13% of the ELLM PA children recognized fewer than 8 letters (the minimal federal standard for Head Start achievement in letter recognition), and 3% of the children recognized at least 50 letters.

Question 6: *Who were the Collier County ELLM children who participated in SEEDS, and was ELLM/SEEDS effective in improving the emergent literacy ability and language development of children based on improved TERA-3 and TOLD-P:3 scores?*

One hundred forty-five children and 64 trained LARKs participated in the ELLM/SEEDS intervention. The answer to the evaluation question *Who were the Collier County ELLM children who participated in SEEDS?* involves a description of these 145 children by gender, ethnicity, classification as ESOL, selection for PA, age, and categories of TOLD-P:3 OV scale scores.

Gender

There were 76 boys and 69 girls scores who participated in the ELLM/SEEDS intervention. The percentage of boys, 52%, in the ELLM/SEEDS population is slightly more than in the general ELLM population, 50%.

Ethnicity

Ethnicity of the ELLM/SEEDS children was reported in four categories: *Black, White, Hispanic,* and *Other*. Of the ELLM/SEEDS children, 6.2% were *Black,* 7.6% were *White,* 69.7% were *Hispanic*, and 16.6% were *Other*. The percentage of *Hispanic* children in the ELLM/SEEDS population is slightly more than in the general ELLM population, 67%.

ESOL

Of the ELLM/SEEDS children, 60.7% were categorized as ESOL. There were a greater percentage of ESOL children in the ELLM/SEEDS population than in the general Collier County ELLM population (49%).

Selected for PA

Of the ELLM/SEEDS children, 49.7% were also selected for PA.

Age

The typical age of the Collier County ELLM/SEEDS children was 54.3 months on September 1, the most common age was 54 months, and the median age was 54 months. The distribution of the children's ages was slightly older than typical, but was more in line with the general ELLM population than with the ELLM PA population.

Categories of TOLD-P:3 OV Scale Scores

Figure 22 shows the percentage of the Collier County ELLM/SEEDS children whose scores were affected by the TOLD-P:3 OV scale data decisions.

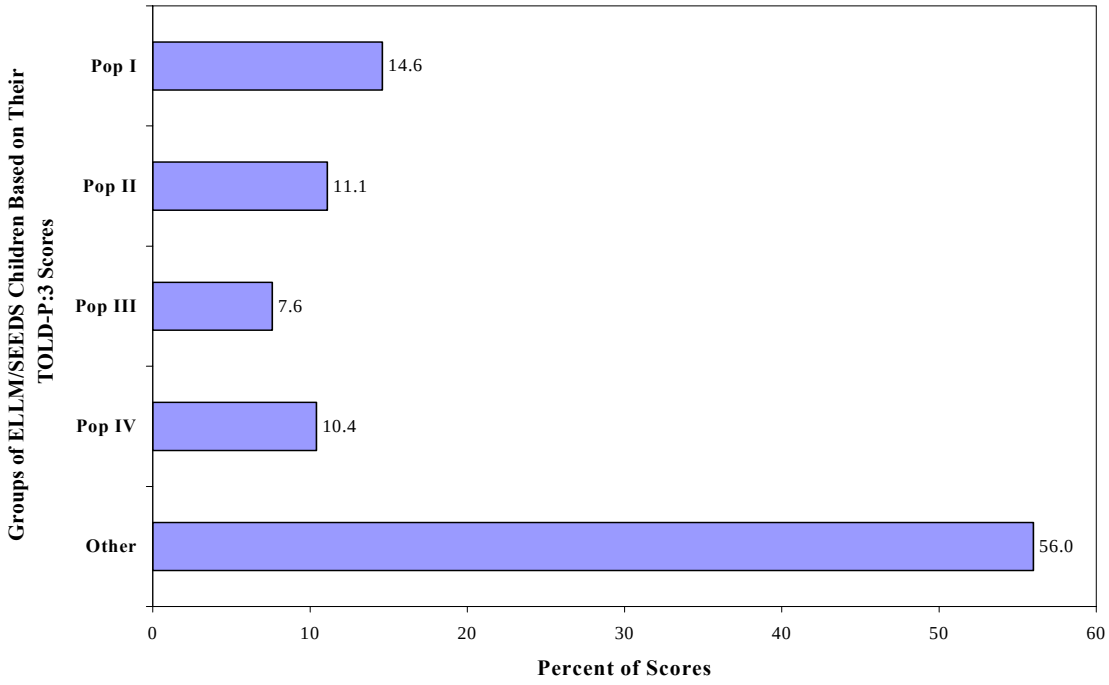


Figure 22.
The percentage of Collier County ELLM/SEEDS children in the five categories of TOLD-P:3 OV scale categories.

Approximately 22% of the ELLM/SEEDS children had all of their TOLD-P:3 OV scale scores removed from analyses (Pops I and III combined). Approximately 66% of the children's scores were unaffected (Pop IV and Other combined).

Question 6: *Was ELLM/SEEDS effective in improving the emergent literacy ability and language development of children based on improved TERA-3 and TOLD-P:3 scores?*

Results of Analyses

Table 12 presents summary statistics and results of statistical analyses of the TERA-3 and TOLD-P:3 pretest and posttest scores of the Collier County ELLM/SEEDS children.

Table 12
Summary Statistics and ANOVA Results: Collier County ELLM/SEEDS Children's TERA-3 and TOLD-P:3 Scores

			Pretest		Posttest				
Test	**Scale**	n	**Mean**	St.Dev.	**Mean**	St.Dev.	F-Ratio	p-value	Effect Size
TERA-3	**RQ**	145	**76.7**	9.0	**87.6**	13.7	117.1	<.0001	0.73***
	ALP	145	**6.3**	2.0	**9.6**	3.5	142.8	<.0001	1.09***
	CN	145	**6.7**	1.6	**7.4**	2.1	16.0	<.0001	0.25*
	MG	145	**6.1**	2.5	**7.2**	2.5	33.3	<.0001	0.36*
TOLD-P:3	**LiQ**	112	**85.0**	12.9	**92.3**	12.6	37.6	<.0001	0.45*
	PV	112	**7.7**	2.8	**8.8**	2.9	12.9	.0005	0.37*
	OV	96	**7.7**	1.9	**9.1**	2.8	21.4	<.0001	0.44*
	GU	112	**7.4**	2.5	**8.7**	2.6	34.9	<.0001	0.44*

Note. * Denotes the difference in the pretest and posttest mean scores represents a small, but meaningful effect.
** Denotes the difference in the pretest and posttest mean scores represents a medium effect.
*** Denotes the difference in the pretest and posttest mean scores represents a large effect.

All gains in the measured abilities were statistically significant, and all effect sizes, with the exception of the CN scale, were large enough to attribute the children's gains to their participation in ELLM/SEEDS classes. The large gains on the TERA-3 RQ and ALP scales were expected as almost half of the ELLM/SEEDS children were also selected for PA. The small and medium gains on the TOLD-P:3 scales reflected the same pattern of language development gains made by the general ELLM population; however, both the initial status and year-end mean scores are lower than in the general ELLM population. However, neither set of mean scores was as low as evidenced by the ELLM PA population.

The random assignment process for SEEDS selection clearly did not work. (See pages 12-13 of this report.) Consequently, there is no true comparison population of ELLM children without the SEEDS intervention. Table 13 presents the characteristics of the three populations of ELLM children, ELLM, ELLM PA, and ELLM/SEEDS, and clearly indicates why it is difficult to find a comparison population of children for ELLM/SEEDS within the ELLM family.

Table 13
Characteristics of ELLM, ELLM PA, and ELLM/SEEDS Children

Scale	Percent of ELLM (n=471)	Percent of ELLM PA (n=182)	Percent of ELLM/SEEDS (n=145)
All TOLD-P:3 Scores Removed	14	17	22
Only TOLD-P:3 OV Scores Removed	24	33	33
No TOLD-P:3 Scores Removed	76	67	66
Classified ESOL	49	63	67
Selected PA	39	100	50

ELLM PA children do not make a good comparison population for ELLM/SEEDS because ELLM/SEEDS children have higher initial emergent literacy ability as evidence by the 50% selection for PA, and ELLM PA children have greater ability to express themselves in English at the end of the school year as evidenced by the 17% of all of their TOLD-P:3 scores were removed from the analyses.

However, the ELLM/SEEDS tutoring looks very promising when the raw scores (the use of raw scores neutralizes the effect of age on the standardization process) of the ELLM PA and ELLM/SEEDS PA children from Populations I, II, III, and IV were compared. This comparison adjusts for any teacher effect as the children participated in the same ELLM classrooms, for low initial emergent literacy ability as all of the children were selected for PA, and for the apparent inability to express themselves in English as all children were categorized in Populations I, II, III, and IV based on their TOLD-P:3 OV scale scores. ANCOVA models controlling for initial abilities and gender were estimated to obtain the mean adjusted posttest raw scores and the standard deviations necessary to calculate effect sizes. None of the analyses produced statistically significant results, which is not surprising due to the small sample sizes, design imbalance, and small effects; however, all comparison of adjusted mean scores favored the ELLM/SEEDS program. Table 14 shows these results.

Table 14
Descriptive Comparisons of ELLM PA and ELLM/SEEDS PA Mean Adjusted Raw Scores

Test	Scale	ELLM Adjusted Mean Score (n=44)	ELLM/SEEDS Adjusted Mean Score (n=36)	St Dev.	Effect Size
TERA-3	**ALP**	6.56	7.08	5.98	0.09
	CN	1.99	2.32	2.06	0.16
	MG	4.30	4.40	2.27	0.04
TOLD-P:3	**PV**	7.00	7.38	4.01	0.09
	GU	7.01	7.50	4.58	0.11

The largest and most promising effects among this group of children were on the TERA-3 Conventions of Print and the TOLD-P:3 Grammatic Understanding scales. This is a nice finding as the LARKs extended the ELLM read-aloud component to small-group, intensive read-aloud experiences. The SEEDS tutoring also provided children with more experiences handling books and practice with English conversation.

Question 7: *How did Collier County ELLM children who participated in SEEDS compare to existing national benchmarks in the recognition of the upper- and lowercase letters of the alphabet at the end of the school year?*

In 2004-2005, 140 Collier County ELLM/SEEDS children had Alphabet Letter Recognition Inventory (ALRI) fall and spring scores. The ALRI fall mean score indicated the typical child recognized about 11.7% of the letters (6 letters). The ALRI spring mean score indicated the typical child recognized 64.5% of the letters (about 34 letters). The *Early Childhood Longitudinal Study-Kindergarten* (ECLS-K) described recognizing 75% of the sampled letters as *proficient*; therefore, the typical Collier County ELLM/SEEDS child was working toward *proficiency* in letter recognition at the end of the school year.

Additionally, there were 136 Collier County ELLM/SEEDS children who had fall, winter, and spring scores. To determine the range of alphabet letter recognition ability of the children, ALRI scores are displayed in Figure 23 using four recognition categories: 0-13 letters, 14-26 letters, 27-39 letters, and 40-52 letters.

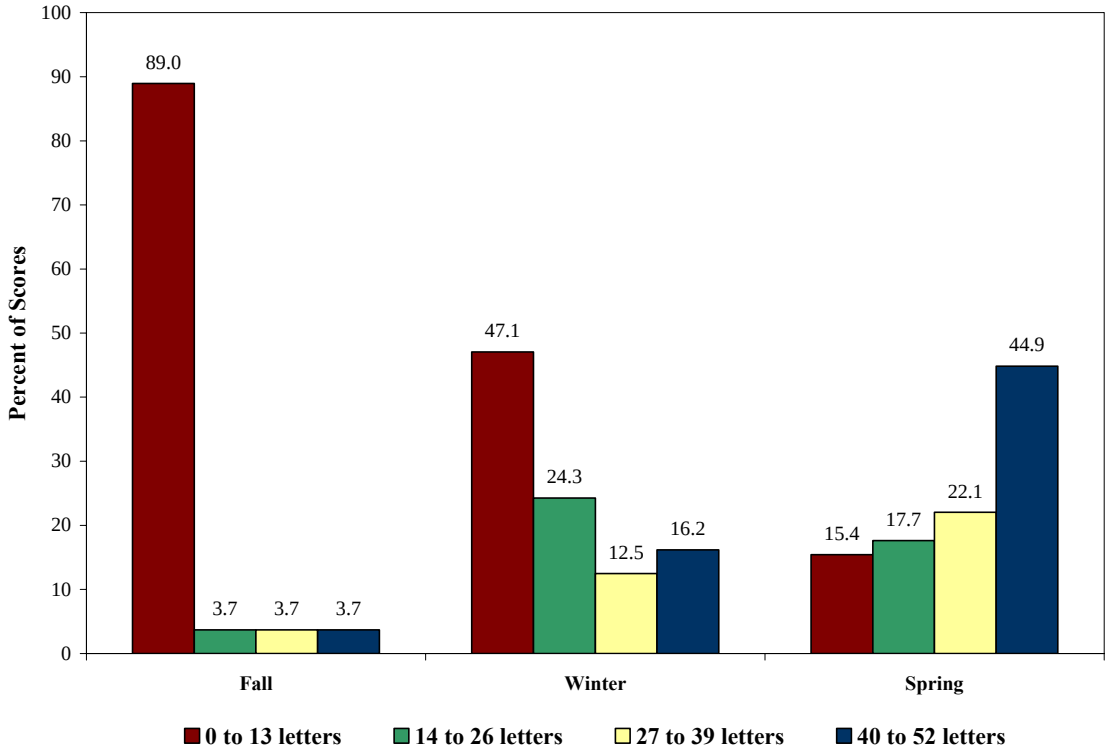


Figure 23.
The Alphabet Letter Recognition Inventory scores of the 136 Collier County ELLM/SEEDS children.

Inspection of Figure 23 indicates that by year's end, 45% of the scores were in the 40-to-52 letters recognized category (recognizing at least 75% of the letters); therefore *proficient*. Furthermore, slightly less than 9% of the children recognized fewer than 8 letters (the minimal federal standard for Head Start achievement in letter recognition), and 22% of the children recognized at least 50 or more letters.

Conclusions

The Partnership successfully implemented ELLM in 49 preschool and Head Start classes in Collier County and implemented ELLM/SEEDS in 23 classes. The ELLM/SEEDS program trained 64 volunteer LARKs from the Christ Child Society and served 145 children. The effectiveness of ELLM was evaluated in a pretest/posttest design using three measures of emergent literacy and language development. The achievement of the Collier County ELLM children was compared to the national

normative populations of the two standardized measures, and the alphabet recognition ability of the Collier County ELLM children was compared to national benchmarks established by the *Early Childhood Longitudinal Study-Kindergarten* (ECLS-K).

Emergent Literacy

The children's achievement in emergent literacy was assessed using the four scales of the TERA-3 and the ALRI. The Collier County ELLM children made gains over the school year of 73%, 112%, 124%, and 34% of a standard deviation on the TERA-3 Reading Quotient, Alphabet, Conventions of Print, and Meaning scales, respectively. This achievement is attributed to the children's participation in ELLM classrooms. Furthermore, at the end of the school year, 35% of the children's Alphabet scale scores ranked above the 75th percentile and 16% ranked above the 90th percentile. The ALRI spring scores indicated 61% of the children recognized at least 75% of the letters (ECLS-K described this as *proficient*) and 20% recognized all upper- and lowercase letters.

Language Development

The children's language development was assessed using four scales of the TOLD-P:3. However, some scores on the Oral Vocabulary scale were removed because the children could not express themselves in English at the end of the school year. The children with valid TOLD-P:3 scale scores made gains over the school year of 47%, 36%, 68%, and 76% of a standard deviation on the Listening Quotient, Picture Vocabulary, Oral Vocabulary, and Grammatic Understanding scales, respectively. The end of the year language development measured on all TOLD-P:3 scales ranked at or above the 35th percentile.

PA Achievement

The 182 children selected for small-group targeted instruction in phonological awareness were selected based on low fall TERA-3 RQ and ALP scale scores. In comparison to the general ELLM population, more of these children's TOLD-P:3 scores were removed from the analyses and more of these children were classified as ESOL. The targeted instruction in phonological awareness should affect the TERA-3 ALP and

RQ scale scores. The ALP score is affected because it is the only scale that has any items that measure phonological awareness, and the RQ scale score is affected because it is a composite formed, in part, by the ALP scale score. The ELLM PA children made gains of 87% and 117% of a standard deviation on the RQ and ALP scales, respectively. Furthermore 15% of the ALP posttest scores ranked above the 75th percentile.

ELLM/SEEDS

The proposed random assignment of children in 23 classes to ELLM or ELLM/SEEDS status in order to comparatively evaluate ELLM and ELLM/SEEDS did not work. (See pages 12-13 and Figure 1 on page 13 of this report.) When evaluated against the national normative populations, the ELLM/SEEDS children made gains of 73%, 109%, 25%, and 36% of a standard deviation on the TERA-3 Reading Quotient, Alphabet, Conventions of Print, and Meaning scales, respectively, and gains of 45%, 37%, 44%, and 44% of a standard deviation on the TOLD-P:3 Listening Quotient, Picture Vocabulary, Oral Vocabulary, and Grammatic Understanding scales, respectively. With the exception of the TERA-3 Conventions of Print scale, all gains are attributed to the children's participation in ELLM/SEEDS classrooms.

Discussion

The summary of the achievements of the Collier County ELLM children presented on pages 32-34 of this report indicates that most of the gains made in emergent literacy and language development occurred by shifting scores from rankings in the bottom quartile at the beginning of the school year to rankings in the broad *Average* category (between the 25th and 75th percentile) at the end of the school year. The only exceptions to this were the TERA-3 Alphabet scale scores and the TOLD-P:3 Oral Vocabulary scale. (The TERA-3 Reading Quotient's increased percentage of scores ranked in the top quartile is because of the influence of the Alphabet scale score.) The percentage of scores ranked in the top quartile (above the 75th percentile) was mostly unchanged across the other scales.

Alphabet Knowledge

Evaluations of ELLM in other areas of Florida have consistently shown the similar pattern of emergent literacy achievement. However, this finding is not inconsequential. The importance of alphabet knowledge (letter naming, letter recognition, and letter sounds) to the acquisition of reading should not be underestimated. Table 15 highlights the connections between the TERA-3 Reading Quotient scores (the best predictor of the individual child's future reading) and the ALRI spring score. The information is presented for three groups of TERA-3 Reading Quotient spring scores: Scores ranked in the *Poor* or *Very Poor* categories (ranked below the 9th percentile), Group A; scores ranked in the *Below Average* category (ranked between the 9th and 25th percentiles), Group B; and scores ranked in the broad *Average* category (ranked between the 25th and 75th percentiles), Group C. Scores from Group A—ranked at or below the 9th percentile—represent scores nearly at or more than two standard deviations below the national mean score and, therefore, putting the children at elevated risk for future special education placement. Thus, it is important to note the differences among the Group A, B, and C children and their measured abilities. Table 15 shows these differences.

Table 15
Descriptive Statistics of Group A, B, and C Children and Their Measured Abilities

	Group A (n=108)	Group B (n=105)	Group C (n=201)
% Boys	50	46	54
% TOLD-P:3 OV Scale Scores Removed	54	25	17
% Classified as ESOL	56	55	44
% Selected PA	69	52	25
% ELLM/SEEDS	44	31	31
% Recognized ≤13 Letters in Spring	36	10	0
TERA-3 RQ Fall	73	76	84
TERA-3 RQ Fall	72	85	99

As can be seen, about half of the posttest scores ranked in the bottom quartile—Groups A and B combined— were in Group A, and there were as many scores in Group C as in Groups A and B combined. The striking difference in these three groups of children lies in two areas—the percentage of spring ALRI scores in the category recognizing no more than 13 letters and the percentage of children who were unable to express themselves in English at the end of the school year. Of the children whose

TERA-3 RQ scores ranked in Group A, 54% were unable to express themselves in English at the end of the school year and 36% could not recognize more than 13 letters at the end of the school year. To further highlight the relationship between letter recognition and TERA-3 RQ, Figure 24 shows the letter recognition growth trajectories over the school year by RQ posttest scores of the three groups of children.

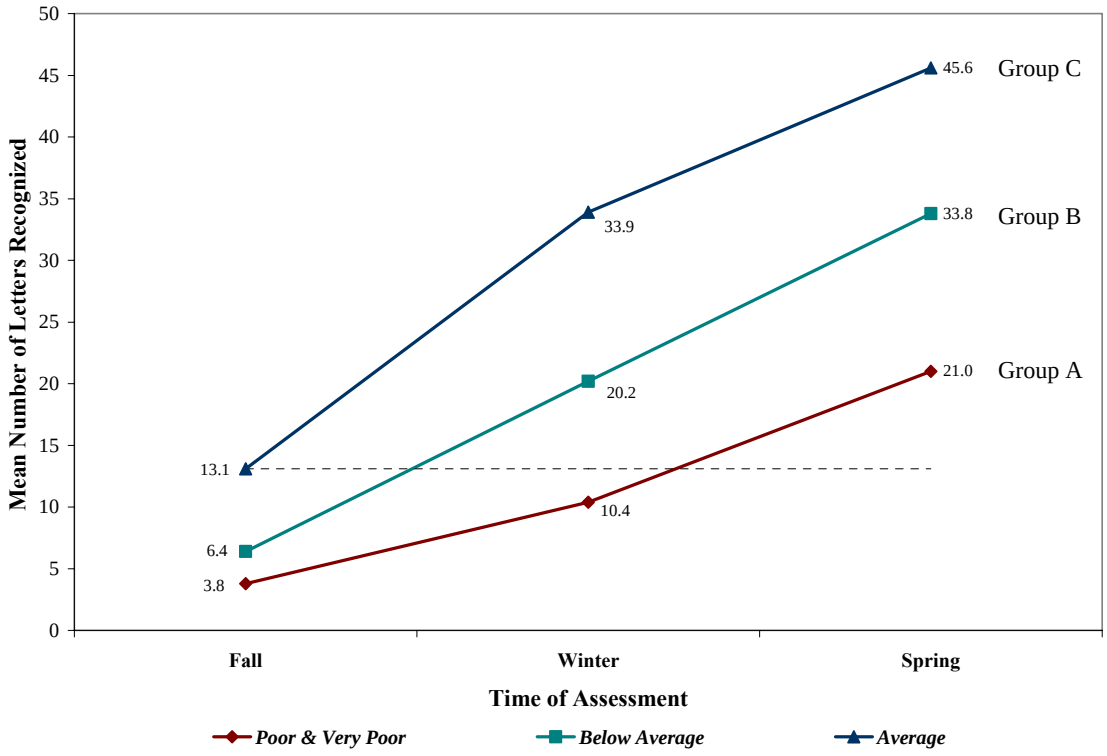


Figure 24.
ALRI growth trajectories over the school year for children whose spring TERA-3 RQ score ranked in the *Poor* and *Very Poor* categories combined (Group A), the *Below Average* category (Group B), and the *Average* category (Group C).

The Group A children experienced the flattest growth in letter recognition from fall to winter, but their acquisition of letter recognition accelerated from winter to spring. In fact, at mid-year, the mean letter recognition of the Group A children was less than the initial ability of the Group C children and 10 letters less than the mid-year ability of the Group B children. The fall and winter ALRI scores are used primarily to inform classroom instruction. ELLM literacy coaches use alphabet letter profiles derived from the children's ALRI assessments to show teachers how to cluster letter instruction by which letters the children can and cannot recognize. The importance of the mid-year assessment is clearly evident on the growth trajectory of children whose fall recognition

ability was minimal. The decline in the rate of letter recognition for the Group C children is due to a ceiling effect. (There are only 52 letters to recognize.)

Opportunity-to-Learn

The letter recognition growth trajectories by TERA-3 RQ spring scores by ability points out the importance of the opportunity-to-learn (OTL), whether the opportunity is provided in the context of the family or the availability of high-quality 3-year-old preschool programs. Fall scores represent that availability of OTL rather than the children's true ability.

Another way to consider the importance of the Collier County children's OTL is to look at the children's fall responses, measured in raw scores, on the six scales. Table 16 shows the number of children who correctly responded to no scale items in the fall, the number of children who correctly responded to no scale items in the spring, and the number of children who correctly responded to no scale items in fall and spring.

Table 16
The Number of Collier County ELLM Children Who Could Correctly Respond to No Scale Items in the Fall, Spring, or Both

Test	Scale	Pretest Raw Score = 0	Posttest Raw Score = 0	Pretest & Posttest Raw Scores = 0
TERA-3	**ALP**	83	6	4
	CN	183	44	28
	MG	23	3	2
TOLD-P:3	**OV**	234	87	65
	PV	44	10	3
	GU	68	15	5

As can be seen and has been previously discussed, the TOLD-P:3 Oral Vocabulary (OV) scale had the greatest number of scores in all three columns. However, the TERA-3 Conventions of Print scale was the next most difficult scale for the children, with 39% of the children unable to respond correctly to any items in the fall. This indicates that a great many Collier County ELLM children had few experiences with books prior to the 2004-2005 school year and emphasizes the need for high-quality preschool programs for Collier County three year olds.

Oral Vocabulary

There are numerous reasons why 4- and 5-year-old preschoolers do not give oral responses to trained assessors. Reasons such as they are too shy to talk, they are not having a good day and choose not to talk, the testing process distracts them, and they have not acquired enough ability (or are too uncertain with their acquired ability) with the English language to respond. As a consequence of the large number of Collier County children with spring raw OV scores no greater than one, it is logical to theorize that children, who are naturally shy or who are learning English as a second language or both, provide the most prevalent reasons for this group of children's inability to express themselves in English at the end of the school year. It is surprising, however, how little oral vocabulary ability affected the emergent literacy ability of the children — no TERA-3 scale scores were removed from the data. Additionally, the TOLD-P:3 Oral Vocabulary data used in the analyses (see Figure 12 on page 30 of this report) indicated a movement of scores out of the bottom quartile and of scores into the top quartile at the end of the school year. This suggests there may be a threshold of oral English language ability that once overcome, oral vocabulary rapidly develops. For the purposes of this evaluation, that threshold was set at responding correctly to no more than one item at the end of the school year. That threshold may need upward adjustment, but the notion of overcoming the threshold before oral language develops is viable. Additionally, one could consider both of the suggested prevalent reasons for the apparent inability to express oneself in English at the end of the school year as forms of shyness. It is therefore important that children in high-quality preschool classes are provided with many opportunities to individually express themselves in English (as opposed to class choral responses). These opportunities must occur in non-threatening environments and with encouragement.

LARKs

Among children with low initial emergent ability and an inability to express themselves in English, the most promising effects were on the TERA-3 Conventions of Print and the TOLD-P:3 Grammatic Understanding scales**.** These findings suggest that even though the children were unable to express themselves in English, they were acquiring knowledge of the structure of the English language and coupled with the

discussion of the TOLD-P:3 Oral Vocabulary, OTL, and the opportunity-to-express in English suggest future foci for the ELLM/SEEDS LARK volunteers. It is documented that many Collier County ELLM children had few experiences with books before the beginning of the 2004-2005 school year. LARK visits provide experiences with books and print beyond what all ELLM children receive. Additionally, LARKs develop rapport with their children in the small groups—an excellent, non-threatening place for shy or hesitant children to practice expressing themselves in English. Moreover, if a threshold in oral English language ability does exist, perhaps the emergent literacy achievement the children gained through the work of the LARKs is latent and not immediately measurable. At some future point during the children's acquisition of reading, when the children overcome the theorized threshold, their oral language development may accelerate because of their small-group work with LARKs during their 4-year-old preschool ELLM/SEEDS experience.

Summary

The Partnership successfully implemented ELLM in 49 preschool and Head Start classes in Collier County. Evaluation results indicated ELLM, ELLM PA, and ELLM/SEEDS were all effective interventions that increased the emergent literacy and language development of the Collier County children. The achievement in the areas of alphabet knowledge is particularly impressive. Evaluation results suggest several future avenues for the Partnership to consider. The first and most obvious is to continue doing what is working, the second is to expand the availability of high-quality preschool classes for three year olds in Collier County, and the third is to expand the use of LARK tutoring.

Analyses of raw scale scores from the beginning of the school year point out the Collier County children's lack of experiences with oral English language and print prior to their 4-year-old preschool year. This lack of opportunity-to-learn presents itself again in the analyses of the lowest ranking spring TERA-3 RQ scores in conjunction with the children's alphabet letter recognition ability at the beginning of the school year. An achievement gap possibly caused by the lack of OTL has formed by the time the children enter their last year of preschool before kindergarten. Alphabet letter recognition growth trajectories indicated this gap represents more than one-half a preschool year's

achievement. As was pointed out, children who initially recognized 13 letters and experienced some version of ELLM had year-end emergent literacy achievement ranked above the 25th percentile while children who initially recognized 3 letters and experienced some version of ELLM had year-end emergent literacy achievement ranked below the 9th percentile placing them at elevated risk of future special education placement. The Partnership could possibly expand the availability of Collier County three year olds opportunity-to-learn.

It is difficult to separate the effect of ELLM/SEEDS and ELLM serving average Collier County preschool and Head Start children from low-income neighborhoods. However, there is evidence to support that LARK tutoring does make a difference with children who have very few opportunities to learn as three year olds and are for whatever reason unable to express themselves in English even after a school year of instruction in English. LARK tutoring should be continued and possibly targeted at children with low initial scale scores on the TERA-3 Conventions of Print and the TOLD-P:3 Oral Vocabulary scales. Additionally, detailed feedback from the LARKs could provide better insight about the effects of the tutoring, especially if the effects are latent indicating the achievement cannot be measured until later in the child's acquisition of reading. Furthermore, the LARK tutoring could be expanded to include 3-year-old preschool and Head Start classes.

Appendix

The Early Literacy and Learning Model (ELLM)

ELLM Vision

All children enter school with the skills, knowledge, and dispositions they need to become successful readers and learners.

ELLM Overview

ELLM is based on a long and rich history of implementing successful collaborative educational reform efforts linking teacher preparation and urban public school practices. In 1996, the ELLM program was developed to decrease readiness gaps and improve literacy achievement among children in urban Head Start and subsidized child care centers; and preschool, kindergarten, and first-grade classrooms. Beginning in the fall of 2004, the ELLM program narrowed the age span to focus on children enrolled in preschool and kindergarten programs.

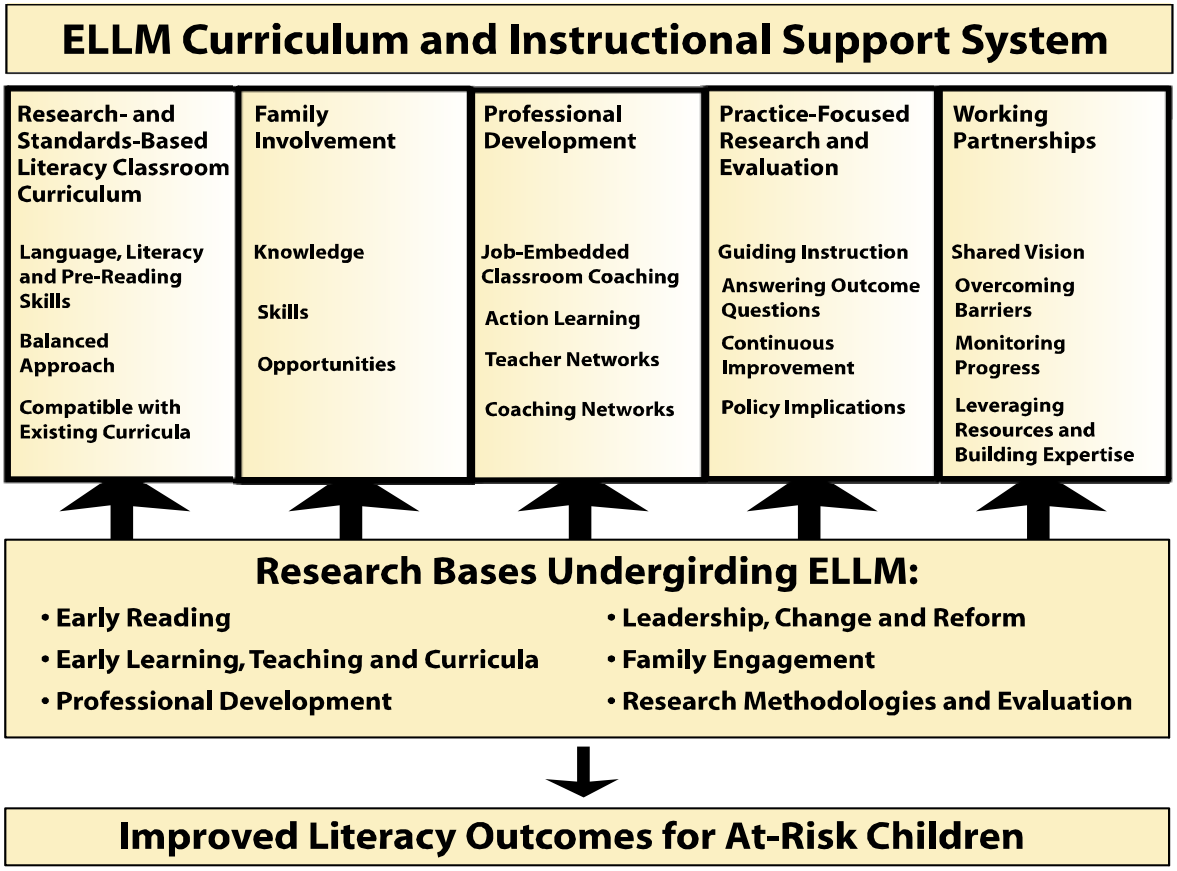
Undergirded by scientific and evidence-based research, ELLM is a standards-based program that utilizes a professional development delivery system designed to improve the language and emergent literacy skills of at-risk children. Five ELLM components—a research- and standards-based literacy curriculum for the classroom, family involvement, professional development, practice-focused research and evaluation, and working partnerships—help focus instruction and increase the literacy opportunities young children experience.

ELLM a) models successful literacy strategies that are known to influence and enhance reading success; b) provides regular and ongoing coaching/teaching sessions that develop and model effective early literacy instructional strategies; c) provides monthly Literacy Packets and children's books for classroom use; d) promotes family and community partnerships; and e) provides ELLM Classroom Lending Libraries, family literacy calendars, and regular family and school activities.

ELLM Goals

- Increase literacy achievement of preschool and kindergarten children.
- Establish literacy and learning networks to share evidence-based practices, build teacher instructional expertise, and encourage community collaboration to address academic and non-academic barriers to improving children's literacy and learning.
- Increase policy makers' understanding of and support for the structures and support needed to improve at-risk children's early literacy skills and readiness for school.

Five ELLM Components



Florida Institute of Education at the University of North Florida

Component 1: ELLM Classroom Building Blocks and Curriculum

Recent research confirms that learning to read is influenced by a set of fundamental skills and experiences that take place in family and formal early care settings. The ELLM classroom curriculum is based on a developmental model of reading acquisition, consists of learning materials and explicit strategies teachers use to help children acquire and use three emergent literacy skills, and engages in three kinds of emergent literacy experiences.

Reading Aloud and Emergent Comprehension

Reading aloud enriches a child's background knowledge, develops a child's vocabulary and comprehension, and increases a child's interest in reading and writing (National Reading Panel, 2000). Reading aloud has been acclaimed as being critical for building literacy knowledge (Morrow, 1998). It also provides opportunities for listening, interpreting, and discussing text relationships. It increases word recognition and fluency, creates a mental dictionary for the child, and provides an opportunity for the child to learn many words that are not spoken. Researchers claim that reading to children develops their vocabulary and enables them to develop schema that aids in expanding their worlds (DeBruin-Parecki, 1994; Whitehurst, 1988). Children who spend

considerable time with books become good readers themselves. Interaction with books includes reading, looking at illustrations, retelling the story, or making up new endings to the story. When children are actively being read to by their parents, positive results were produced as compared to children who were not being read to at all (Lonigan & Whitehurst, 1998).

Oral Language, Listening, and Vocabulary Development

A child's language begins around the age of one year, and many children show a sharp increase in the size of their vocabularies during that year. Most children learn approximately 3,000 words a year (Snow, 1998). They do this by interacting with other, more skilled, language users. When this does not occur, the learning of language is limited. A child's oral language capacity is the foundation of learning to read (Ruetzel, 1994; Snow & Tabors, 1993). Children use oral language to tell us whether they understand what they hear or what they read. The language around them influences children; research shows that children who are early readers come from homes where the use of oral language is important. Vocabulary is stimulated through instruction in oral language. A study by Stahl and Fairbanks (1986) found that children who received vocabulary instruction outperformed others on vocabulary measures.

Letter and Sound Knowledge

The single best predictor of first-year reading achievement is the child's knowledge of and the ability to recognize and name the upper- and lowercase letters of the alphabet (Adams, 1990; Honig, 1996; Riley, 1996). Stahl (1997) found that knowledge of letters of the alphabet is the strongest predictor of reading success in fourth grade. Instruction on letters of the alphabet is important because one of the biggest responsibilities of a beginning reader is to figure out how the alphabet works. A child with automatic, accurate recognition of letters will have an easier time learning the letters of the alphabet (Wood & McLemore, 2001).

Phonological Awareness

Phonological awareness is a predictor of reading success and is a critical ingredient in learning to read and spell words (Gunning, 2000; Juel, 1994; Snow, 1998). Phonological awareness refers to a child's understanding that speech is composed of identifiable units—words, syllables and sounds—and can be defined as a conscious understanding of the sound structure of language. Well-developed phonological awareness is the ability to know that spoken words are made up of sounds or phonemes. It encompasses the ability to detect, isolate, manipulate, blend or segment words, syllables or phonemes. When a child possesses a high level of phonological awareness, he/she will find learning to read easier (Erickson & Juliebo, 1998; National Reading Panel, 2000; Troia, 1999). Research repeatedly demonstrates that when children have an awareness of phonemes through explicit instruction in phonemic awareness, the incidence of reading failure is diminished (Adams, 1996; Snow, 1998; Stanovich, 1993).

Print Concepts and Emergent Writing

Most children from families with low socioeconomic status have had limited literacy experiences in the home environment and limited experiences with print. Many such children have been read to fewer than 50 hours and are behind their peers in print awareness skills, such as recognition of letters of the alphabet, recognition of simple words, and reading left to right. Middle-class children often come to school with developed print awareness, having had up to 1,000 hours of print exposure (Clay, 1991; Cunningham & Allington, 1999). Therefore, there is a wide variance between the number of print-rich hours that children experience. Children begin to acquire their knowledge of print with exposure to print-rich environments where print labels, signs, and books are available.

Literacy-Rich Environments

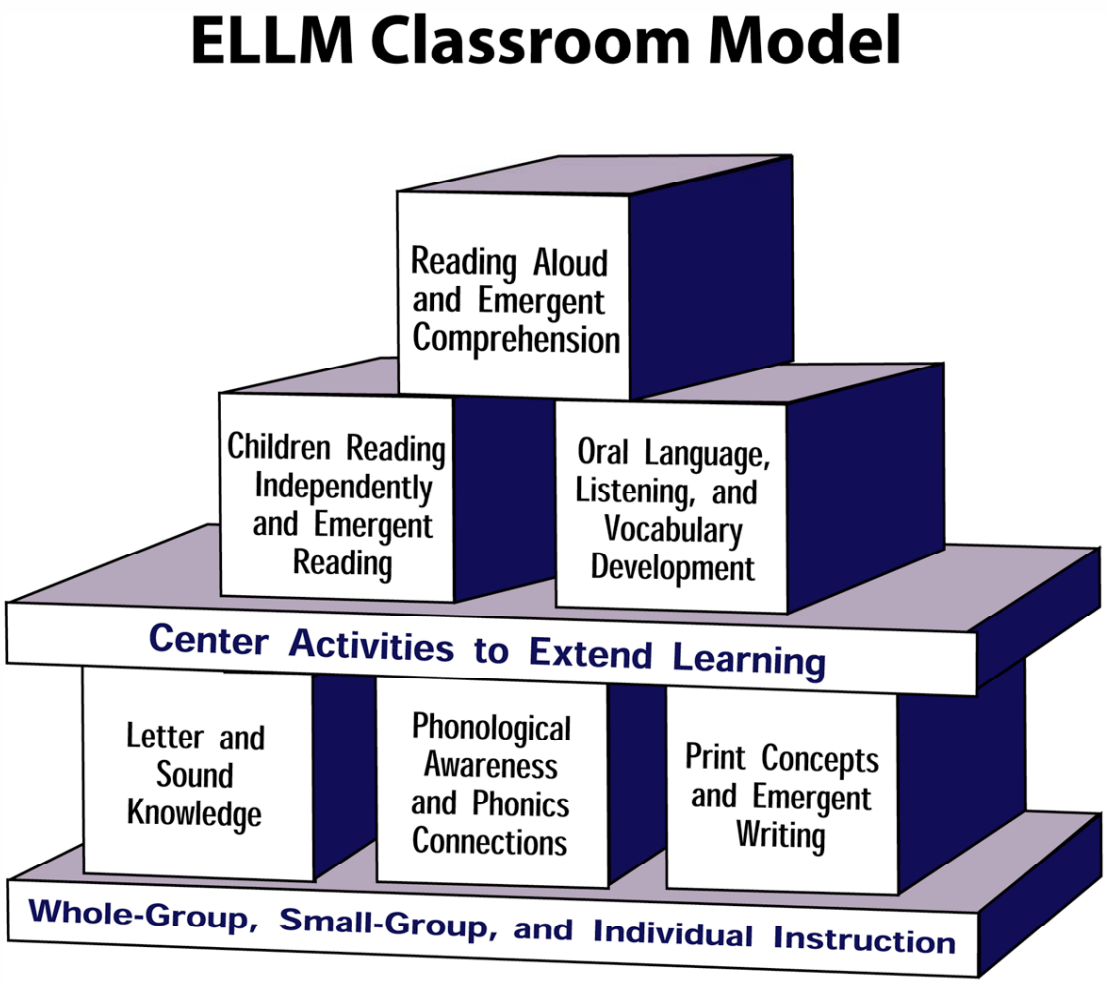
In a joint position statement of the International Reading Association and the National Association for the Education of Young Children (1998), it was clearly stated that one of the best predictors of whether a child will function competently in school is the level to which the child progresses in reading and writing. The classroom environment is an important resource for supporting the demonstration of skills that children need to become successful readers. Research has demonstrated the impact of the print-rich environment on a student's emergent literacy development (Pressley, M., Rankin, I., &Yokoi, L., 1996: Taylor, 1999). Print-rich environments should have labeled furniture and displays of favorite books. Access to shape and alphabet posters, charts, books, audio books and magazines leave a literacy imprint on the child. The literacy-rich classroom should include picture and word walls, story-telling props, flannel boards, manipulative letters, letter stamps, and space and supplies for early writing experiences because they all leave a literacy imprint on children.

The effective classroom provides a balance of materials that can be used by teachers and students for a variety of purposes (Duke, 2000). Classrooms that promote literacy-rich environments should use a wide array of high-quality books of different genres—fiction and nonfiction. Other types of reading material in the classroom should include picture books, chapter books, leveled books, big books, magazines, newspaper, charts, and electronic texts (Wade, Maje, 2000). Additional types of books in classrooms include award-winning books, fairy tales, nursery rhymes, and poetry books. Books about friends and families, popular characters, celebrations, traditions, holidays, and seasons should also be available.

Books should be displayed in a manner that invites children to read. Teachers who designate attractive book displays in the classroom will see children deliberately and purposefully use the available books. All children should be able to engage in daily independent experiences with books. Effective teachers designate daily time for all children to independently read for short periods of time. These experiences support and ensure successful readers.

Putting Research into Practice

ELLM provides monthly literacy packets with easy-to-use activities that build children's skill and knowledge in each of the five learning-to-read building blocks depicted below.



1 hour of literacy instruction daily = 180 hours of literacy instruction each year.

ELLM coaches (a) model effective strategies early literacy instructional strategies; (b) provide regular and ongoing coaching sessions to help teachers develop and use those strategies; (c) help teachers promote family and community partnerships; and (d) encourage the use of the ELLM Classroom Lending Libraries, family literacy calendars, and regular family and school activities

Component 2: Family Involvement

Meaningful family involvement can have significant impact on academic outcomes, especially for at-risk children. The ELLM family involvement component addresses the major barriers to meaningful family involvement: (a) lack of knowledge on the part of both teachers and family members about what families can do to help children learn to read and about how to put what is known to work into daily practice; and (b) lack of opportunity for involvement when other factors vie for attention.

To address these barriers, ELLM families have access to many resources, including books from the ELLM Classroom Lending Library, monthly family tips suggesting literacy activities they can do at home with their children, literacy bracelets that children wear home with questions parents can ask about books being read in the classroom, and opportunities to engage in site-based family activities during the year.

Other ELLM family component tools include: (a) four family meetings that take place throughout the school year, with an emphasis on early literacy; (b) a family literacy calendar that describes free and inexpensive literacy-related activities that parents can do with their children each month; and (c) an ELLM Family Involvement Manual for teachers that provides suggested family activities for each month (aligned with the month's targeted literacy standards), sample letters that explain program components and how parents can support their children's learning, and take-home activities.

Component 3: Professional Development

If children's literacy-related outcomes are to improve, so must the capabilities of the teachers who work with them. Effective teachers are a critical factor contributing to increased student achievement, especially those in at-risk settings where children are more likely to find themselves in classrooms staffed by inexperienced, poorly qualified teachers.

The ELLM professional development component bridges the divide between practice and research and overcomes the gaps between what we *know* and what we *do*. ELLM professional development focuses on literacy content, how children learn, and helping teachers become proficient users of research-based curricular and instructional tools.

Focused Training for ELLM Teachers

All ELLM teachers attend an intensive two-day summer training course that provides instruction on how children learn and on the use of the ELLM curriculum and tools.

Site-Wide Professional Development

Literacy Team Meetings: Each month the literacy coach plans a site-wide Literacy Team meeting for all teachers in the school—including non-ELLM teachers. These meetings attempt to define literacy goals of the school.

Teacher Get-Togethers: ELLM teachers gather at one of the school sites four times during the school year. An expert in the field of early literacy gives a keynote address, and several of the ELLM teachers share successful literacy strategies that were implemented in their classrooms.

Component 4: Practice-Focused Research and Evaluation

This component informs instruction, answers outcome questions, fuels continuous program improvement, and contributes to ongoing knowledge building.

Instruments include the *Test of Early Reading Ability - Third Edition* (TERA-3), a nationally normed, standardized test; a locally developed *Alphabet Letter Recognition Inventory* (ALRI) that assesses children's knowledge of all upper- and lowercase letters of the alphabet; and the *Test of Language Development-Primary: Third Edition* (TOLD-P:3). Fall TERA-3 pretest scores are used to help teachers focus instruction and identify children for targeted phonological awareness instruction. Results from the ALRI are returned to teachers in a classroom profile that helps teachers identify letter clusters on which to focus and personalize instruction.

Component 5: Working Partnerships

The mission of FIE is to improve student outcomes, especially for at-risk students in Florida, by collaborating with school districts, state agencies, community organizations, and frontline practitioners and families. Where ELLM is implemented, FIE partners with educational institutions, local government, social service agencies, and early childcare centers (representing subsidized, school-based, faith-based and Head Start delivery systems). FIE's partners assume responsibility for monitoring implementation of ELLM, help overcome implementation barriers, and assist in the transfer of effective practices to other centers and programs.

ELLM/SEEDS Volunteer Tutoring Program

The ELLM *Skill-based Educational Experiences Delivery System* (SEEDS) volunteer program is designed to support and extend the early literacy skills and knowledge learned by children in ELLM classrooms. SEEDS specifically addresses the challenges of at-risk children by providing them with individual attention as they develop the concepts and oral language skills they need to become successful readers.

Twice each week a trained volunteer works with pairs of children participating in the ELLM/SEEDS program for thirty minutes using a self-contained SEEDS Literacy Packet. Tutoring sessions began in November, with full implementation taking place in January and continuing through April.

The ELLM/SEEDS Coordinator worked with each ELLM site to schedule the tutoring sessions. The Coordinator also assumed responsibility for preparing and distributing the SEEDS Packets to the volunteers.

The goals of the SEEDS program are to:

- Increase the numbers of research-based and individualized literacy experiences in which children are engaged.
- Provide opportunities for children to engage in conversations (characterized by adults and children taking multiple turns) with adults who encourage them to explain, describe, and ask questions.
- Provide opportunities to develop the background knowledge, vocabulary and understanding of concepts they will need to construct meaning from printed texts later on.
- Encourage the development of positive and nurturing relationships with adults over a sustained period of time.
- Provide children with models for using complex language by:
    - Speaking clearly and using grammatically correct sentences,
    - Modeling how to express ideas in complete sentences and helping children to do so,
    - Using descriptive language and checking to see that children understand the meaning of words, and
    - Linking previously learned words to a new activity or book.

References

Adams, M. (1995). *Beginning to read: Thinking and learning about print.* Cambridge, MA: MIT Press.

Clay, M. (1991). *Becoming literate: The construction of inner control.* Portsmouth, NH: Heinemann.

Cunningham, P. M., & Allington, R. L. (1999). *Classrooms that work: They can all read and write*. New York: Longman.

Debruin-Parecki, A., Paris, S., & Siedenburg, J. (1997). Family literacy: Examining practice and issues of effectiveness. *Journal of Adolescent and Adult Literacy, 40,* 596-605.

Duke, N.K. (2000). 3.6 minutes per day: The scarcity of informational texts in first grade. *Reading Research Quarterly*, *35*(2), 202–224.

Ericson, L., & Juliebo, M. F. (1998). *Phonological awareness handbook for kindergarten and primary teachers*. Newark, DE: International Reading Association.

Gunning, T. (2000). Best books for building literacy for elementary school children. Boston: Allyn & Bacon.

Honig, B. (1996). *Teaching our children to read: The role of skills in a comprehensive reading program.* Thousand Oaks, CA: Corwin Press.

National Association for the Education of Young Children and International Reading Association. (1998). *Learning to read and write: Developmentally appropriate practices for young children.* Newark, DE: International Reading Association.

Juel, C. (1994). *Learning to read and write in one elementary school.* New York: Springer-Verlag.

Morrow, L., Strickland, D., & Woo, D. (1998). *Literacy instruction in half- and whole-day kindergarten.* Newark, DE: International Reading Association.

National Reading Panel. (2000). *Teaching children to read: An evidenced-based assessment of scientific research literature on reading and implications for reading instruction.* Washington, DC: National Institute for Child Health and Development.

Pressley, M., Rankin, J., & Yokoi, L. (1996). A survey of instructional practices of primary teachers nominated as effective in promoting literacy. *Elementary School Journal, 96,* 363-384.

Riley, J. (1996). *The teaching of reading.* London: Paul Chapman.

Ruetzel, D., Hollingsworth, P., & Eldridge, J. (1994). Oral reading instruction: The impact on student reading development. *Reading Research Quarterly, 29(1),* 4000-62.

Snow, C., Burns, M., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Snow, C., & Tabors, P. (1993). *Language skills that relate to literacy development: Language and literacy in early education.* New York: Teachers College Press.

Stahl, S. (1997). *An evaluation of the use of the Waterford Reading Program.* Unpublished manuscript, University of Georgia at Athens.

Stahl, S., & Fairbanks, M. (1986). The effects of vocabulary instruction: A model-based meta-analysis. *Review of Educational Research, 56,* 72-110.

Stanovich, K. (1993). Does reading make you smarter? Literacy and the development of verbal intelligence. *Advance in Child Development and Behavior, 25,* 133-180.

Taylor, D. (1999) Beginning to read and the spin doctors of science. Urbana, IL: NCTE

Troia, G. A., (1999). Phonological awareness intervention research: A critical review of the experimental methodology. *Reading Research Quarterly, 34,* 28-53.

Wade, S. E., & Moje, E. B. (2000). The role of text in classroom learning. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 609-627). Mahwah, NJ: Erlbaum.

Whitehurst, G., & Lonigan, C. (1998). *Child development and emergent literacy*. Retrieved from http://www.Whitehurst.sbs.sunysb.edu/pubs/ cdel.htm

Wood, J., & McLemore, B. (2001). Critical components in early literacy: Knowledge of the letters of the alphabet and phonics instruction. *The Florida Reading Quarterly, 38,* 14-18.