LETRS[®] **(Language Essentials for Teachers of Reading and Spelling)**
Professional Development Course for Early Childhood Educators
Cohort 1 (Focus on Pre-K Teachers)
Preliminary Evaluation and Outcomes
January 2020

<u>**Key Findings**</u>

- ***Significant growth in participant knowledge***
  - *Participant Information: (LETRS Gradebook)*
    - A total of 109 participants completed the course.
      - 40 were Pre-K lead teachers, Pre-K auxiliary teachers, preschool special educators, and Kindergarten teachers
      - 69 were other participants, including coaches, principals, and administrators
  - *Participant Knowledge Change: (LETRS pre/post test)*
    - Almost all participants (97.2%) showed growth in knowledge from the pre to post test.
    - There was an average of 29 percentage points growth across all participants.
- ***Improved Teacher-Child Interactions and Classroom Quality***
  - *Teacher-Child Interactions and Classroom Quality: (CLASS-Classroom Assessment Scoring System)*
    - LETRS classrooms exceeded the performance of both the national comparison sample and the average of all First Class Pre-K classrooms across all 3 domains and 10 dimensions of the assessment (indicating better quality of teacher-child interactions).
    - The largest differences were observed between LETRS classrooms and the national sample for the Instructional Support domain, including the critical dimension of Concept Development.
- ***Significant growth in meeting developmental expectations and Kindergarten readiness***
  - *Child Outcomes: (Teaching Strategies GOLD)*
    - Children in LETRS classrooms started lower, but finished higher and had larger percentage point growth compared to children in No-LETR classrooms.
    - Percentages of children in LETRS classrooms who were Kindergarten ready at Spring 2019 were higher compared to No-LETRS classrooms.

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Overview

Educators of Pre-K through Grade 3 children are charged with providing students with high-quality instructional experiences that form a strong foundation for future academic success. As part of her education initiative Strong Start, Strong Finish Governor Kay Ivey is creating urgency in setting a goal for every Alabama student to enter the fourth grade as proficient, grade-level readers by 2022. To ensure that teachers fully support all children in obtaining the necessary literacy skills and address the needs of struggling readers, the Alabama Department of Education and the Department of Early Childhood Education collaborated to provide voluntary professional learning.

The knowledge gained by participating in Language Essentials for Teachers of Reading and Spelling (LETRS) is critical to reaching children with the most severe reading challenges. LETRS is a research-based professional development suite focused on literacy and the science of reading. Course materials provide Pre-K to 12th grade teachers with the skills to master the fundamentals of reading instruction, including phonological awareness, phonics, fluency, vocabulary, comprehension, writing, and language.[1] The suite is divided into 3 courses: a general course for K-12 educators, a course specifically for early childhood educators (Pre-K–K), and a course for administrators.

Although Alabama is participating in all 3 courses in the LETRS suite, this report focuses on cohort 1 of the Early Childhood (EC) educator course. The EC course consists of 4 units that can be completed in a single year whereas the general course has 8 units and requires 2 years to complete. The EC course provides early childhood educators with literacy professional development focused on the science of reading to teach the foundational skills young students (Pre-K–K) need before learning to read and write. Course materials are designed to include developmentally appropriate content, providing the in-depth knowledge Pre-K–K teachers need to teach language and literacy skills.[1] Teachers participated in 2 face to face workshops with LETRS facilitators to build upon the knowledge gained through the online learning content. They also engaged in Bridge to Practice activities after completing each unit to apply the newly acquired knowledge during classroom instruction.

Participant Information

- A total of 109 participants completed the Early Childhood Educator course, including all 4 units and both the pre and post test.
    o 40 were Pre-K lead teachers, Pre-K auxiliary teachers, preschool special educators, and Kindergarten teachers
    o 69 were other participants, including coaches, principals, and administrators

Participant Knowledge Change

- o Almost all participants showed growth in knowledge from the pre to post test.
    o 97.2% of participants demonstrated growth; all but 4 showed growth from pre to post test.
- o There was an average of 29 percentage points growth across all participants.
    o Teachers had lower average pre test scores, yet experienced higher average percentage point growth compared to coaches/administrators.

Participant Type	Average pre-test score	Average post test score	Average percentage point growth
Overall	57% *(range = 15%-90%)*	87% *(range = 40%-100%)*	29 *(range = 0-75)*
Teacher	47% *(range = 25%-75%)*	82% *(range = 40%-100%)*	35 *(range = 0-55)*
Coach/Admin	64% *(range = 15%-90%)*	90% *(range = 40%-100%)*	26 *(range = 0-75)*

Teacher-Child Interactions and Classroom Quality

Measurement Tool:

Relatively small differences in classroom quality may have a substantial impact on the rate of children's academic gains. The CLASS® (Classroom Assessment Scoring System) is a research-based instrument for defining and measuring effective teacher-child interactions and classroom quality.[2] The tool includes 10 dimensions that are rated by a trained external observer using a 7-point scale, from low to high. In general, higher scores indicate better teacher-child interactions for all dimensions. The one exception is the negative climate dimension, for which lower scores are desirable. The 10 CLASS dimensions are aggregated into 3 domains: Emotional Support, Classroom Organization, and Instructional Support.

- Emotional Support (positive climate, negative climate, teacher sensitivity, regard for student perspectives): assesses the degree to which teachers establish and promote a positive climate in their classroom (Higher levels of emotional support have been shown to be associated with social competence in Kindergarten and growth in reading and math achievement from Kindergarten to 5th grade).[3-4]
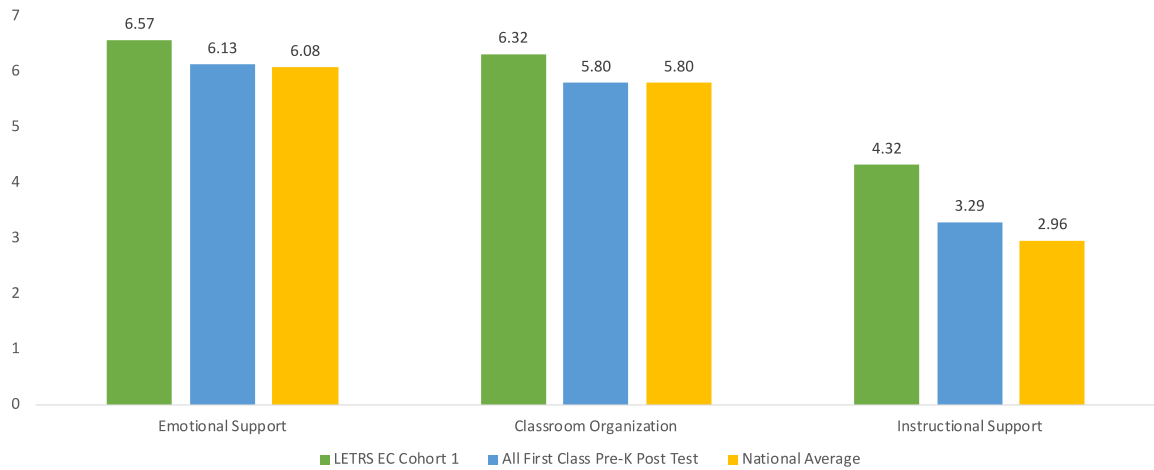
- Classroom Organization (behavior management, productivity, instructional learning formats): assesses classroom routines and procedures related to the organization and management of children's behavior, time, and attention in the classroom (Higher levels of classroom organization have been shown to be associated with gains in literacy in 1st Grade).[5]
- Instructional Support (concept development, quality of feedback, language modeling): assesses the ways in which teachers implement the curriculum to effectively promote cognitive and language development (Higher levels of instructional support have been shown to be associated with gains in pre-reading and math skills in preschool).[6]
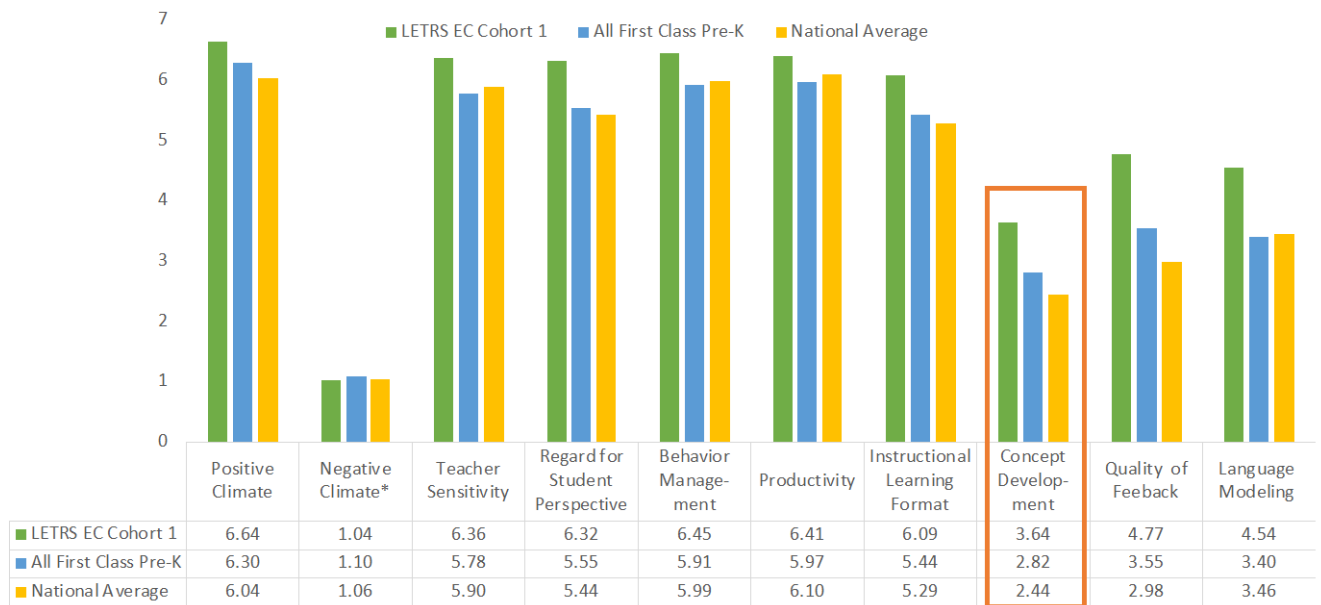
Results:

The following charts present average CLASS scores at the Spring 2019 observation point for 3 groups: First Class Pre-K classrooms with lead teachers who completed the LETRS EC professional development (n=20), all First Class Pre-K classrooms, and the most recent national comparison sample of 4-year-olds in Head Start classrooms.[7]
- LETRS classrooms exceeded performance of both the national comparison sample and the average of all First Class Pre-K classrooms across all 3 domains and 10 dimensions of the assessment (indicating better quality of teacher-child interactions).
- The largest differences were observed between LETRS classrooms and the national sample for the Instructional Support domain.
    - LETRS classrooms scored more than 1 full point above the national sample for this domain and for each of its 3 dimensions
    - Results include the especially important dimension of Concept Development – shown to be associated with later student success in vocabulary, language, and math, particularly when combined with moderate levels of emotional and organizational supports.[8-9]

Quality of Teacher-Child Interactions, by Domain, Spring 2019
CLASS (Classroom Assessment Scoring System)

	Emotional Support	Classroom Organization	Instructional Support
LETRS EC Cohort 1	6.57	6.32	4.32
All First Class Pre-K Post Test	6.13	5.80	3.29
National Average	6.08	5.80	2.96

■ LETRS EC Cohort 1　■ All First Class Pre-K Post Test　■ National Average

Quality of Teacher-Child Interactions, by Dimension, Spring 2019
CLASS (Classroom Assessment Scoring System)

■ LETRS EC Cohort 1　■ All First Class Pre-K　■ National Average

	Positive Climate	Negative Climate*	Teacher Sensitivity	Regard for Student Perspective	Behavior Management	Productivity	Instructional Learning Format	Concept Development	Quality of Feeback	Language Modeling
LETRS EC Cohort 1	6.64	1.04	6.36	6.32	6.45	6.41	6.09	3.64	4.77	4.54
All First Class Pre-K	6.30	1.10	5.78	5.55	5.91	5.97	5.44	2.82	3.55	3.40
National Average	6.04	1.06	5.90	5.44	5.99	6.10	5.29	2.44	2.98	3.46

*Want lower score

Child Outcomes

Demographics

The following table presents the demographic characteristics for children in First Class Pre-K classrooms with a lead teacher who had completed the LETRS EC professional development (LETRS) compared to those in classrooms with lead teachers who did not complete this training (No-LETRS). These data are limited to children who had both a pre (Fall 2018) and post (Spring 2019) Teaching Strategies GOLD assessment (see further below).

- Children in LETRS vs. No-LETRS classrooms were generally similar with the exception of race and ethnicity.
  - LETRS classrooms had higher percentages of Hispanic and White children, yet lower percentages of Black children.
  - These differences are statistically significant (p<0.05).

Demographic	LETRS		No-LETRS	
	Number	Percent	Number	Percent
Gender				
Female	180	49.7	7,925	50.1
Male	182	50.3	7,884	49.9
Race*				
White	247	74.4	7,356	49.6
Black	69	20.8	6,500	43.8
Other-multi	16	4.8	987	6.6
Ethnicity*				
Non-Hispanic	336	92.8	15,058	95.3
Hispanic	26	7.2	747	4.7
English is Primary Language	340	93.9	14,963	94.6
Has IEP	9	2.5	250	1.6
Low Income	130	35.9	5,945	37.6
Total children	362		15,809	

*Differences between LETRS and No-LETRS for race and ethnicity are statistically significant (p<0.05).

Measurement Tool:

Teaching Strategies GOLD® (TS GOLD) is an ongoing, observation-based, research-validated assessment system[10]. Grounded in current research related to child development and learning, the assessment includes 38 objectives across six domains of development (social-emotional, physical, language, cognitive, literacy, and math) that are associated with school success based on school readiness standards.

Students are assessed at entry (Fall), midpoint (Winter), and exit (Spring) of the preschool year, with scores compared to widely held expectations (WHE) for children of their age and grade as provided by TS GOLD for each time point. Results are typically dichotomized to "below expectations" and "meets or exceeds expectations." Fall and Spring checkpoint data were compared for each child in order to assure equal comparison of children with both an entry/pre assessment and exit/post assessment.

TS GOLD also provides an assessment of Kindergarten readiness by domain based on selected items. Kindergarten readiness is assessed for 4-year-olds in First Class Pre-K classrooms at the Spring checkpoint (exit) and for Kindergartners at the Fall checkpoint (entry).

Results:

The following tables present results of comparison of performance for children in classrooms with a lead teacher who completed the LETRS EC professional development (LETRS) compared to those in classrooms with lead teachers who did not complete this training (No-LETRS). These are 4-year-olds in First Class Pre-K classrooms who had both a Fall and Spring assessment. Although language and literacy are the domains most closely associated with the LETRS professional development materials, it is typical to assess development and school readiness more holistically at this age. Therefore, the evaluation team includes the comprehensive findings across all domains instead of limiting solely to the language and literacy subset.

Meeting/Exceeding Widely Held Expectations by Domain:
- Across all domains, children in LETRS classrooms started at lower levels of meeting/exceeding WHE compared to non-LETRS classrooms
  - These differences were statistically significant for language, literacy, social-emotional, and physical domains.
- Significant growth was observed between Fall and Spring for both groups; however, percentage point growth was larger in LETRS classrooms for all domains.
  - Largest percentage point growth was observed in the math domain for both groups.
  - This is an important finding as research suggests early math skills not only predict math achievement through high school, but also may be a better predictor of later reading achievement than even early reading skills.[11]
- Percentages of children in LETRS classrooms who were meeting/exceeding widely held expectations at Spring 2019 were higher compared to No-LETRS classrooms for all domains expect social-emotional.
  - The difference for language was statistically significant ($p < 0.05$).

Percent of Children Meeting/Exceeding Widely Held Expectations, Fall 2018 to Spring 2019, LETRS vs. No-LETRS Classrooms

Domain	Fall 2018		Spring 2019		Percentage Point Growth: Fall 2018 to Spring 2019	
	LETRS	No-LETRS	LETRS	No-LETRS	LETRS	No-LETRS
Language	43.6*	53.3*	94.2**	90.8**	50.6	37.5
Literacy	41.7*	51.5*	95.8	94.7	54.1	43.2
Social-Emotional	42.5*	50.0*	92.8	93.0	50.3	43.0
Physical	48.6*	56.5*	96.9	94.6	48.3	38.1
Cognitive	42.1	43.6	94.5	92.2	52.4	48.6
Math	29.3	30.2	89.8	87.0	60.5	56.8

*Differences between LETRS and No-LETRS at Fall are statistically significant (p<0.05).
**Differences between LETRS and No-LETRS at Spring are statistically significant (p<0.05).

Kindergarten Readiness by Domain:
- Percentages of children in LETRS classrooms who were Kindergarten ready at Spring 2019 were higher compared to No-LETRS classrooms for all domains except math.
    - The differences for language, physical, and cognitive were statistically significant (p<0.05).

Percent of Children who were Kindergarten Ready, Spring 2019, LETRS vs. No-LETRS Classrooms

Domain	LETRS		No-LETRS	
	number	percent	number	Percent
Language*	314	86.7	12,948	82.6
Literacy	286	79.4	12,409	79.2
Social-Emotional	314	86.7	13,947	89.1
Physical*	337	93.6	14,213	90.5
Cognitive*	323	89.5	13,211	84.6
Math	256	70.7	11,213	71.7

*Differences in Kindergarten readiness between LETRS and No-LETRS are statistically significant (p<0.5).

Summary and Conclusions

Results presented in this report are a preliminary look at the initial cohort of teachers, coaches, and administrators who participated in the Early Childhood course of the LETRS professional development suite. This is a small sample and first look intended to provide trends that may represent more generalizable outcomes as the project expands. Results presented here should be interpreted with caution due to the small sample – children in LETRS classrooms in this initial cohort are different compared to No-LETRS classrooms, and there may also be differences in the characteristics of teachers who chose to participate in the professional development course.

Preliminary results are encouraging and positive. Substantial growth in participant knowledge was observed from pre to post testing (average 29 percentage points growth). Teacher-child interactions and classroom quality was higher in LETRS classrooms, especially compared with national averages and for the Instructional Support domain, which includes the critical domain of Concept Development. Children in LETRS classrooms started at lower levels of meeting/exceeding widely held expectations across all developmental domains compared to children in No-LETRS classrooms. Both groups of children had considerable growth from Fall (pre) to Spring (post) testing, as would be expected given the similar results consistently observed in the high quality First Class Pre-K program. However, percentage point growth was larger for children in LETRS classrooms compared to No-LETRS classrooms and Spring (post) percentages of children meeting/exceeding expectations were higher for LETRS classrooms – including both language and literacy. Further, percentages of children in LETRS classrooms who were Kindergarten ready at Spring 2019 were higher compared to No-LETRS classrooms.

Evaluation of the LETRS professional development project is ongoing, including additional cohorts and courses in the suite. Data will be required from the Alabama State Department of Education to assess child outcomes in Kindergarten and beyond, including the seminal standardized reading proficiency benchmark at 3rd grade.

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