

Teacher Knowledge Growth - Language Enrichment

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OVERVIEW

The case study report evaluates the efficacy of Neuhaus Education Center's *Language Enrichment* professional learning course and curriculum in improving teachers' knowledge in literacy instruction, particularly focusing on grades 1-3. The report highlights the background of the study, the methodology employed, and the results obtained from three cohorts: Alabama, Texas, and a general public enrollment class. Pre- and post-test scores indicate significant growth in teachers' knowledge across various literacy domains, albeit with some variations among cohorts. Discussion of the findings includes insights into the effectiveness of professional development activities, the impact of collective participation, and considerations for future course improvements. Furthermore, the report suggests adjustments in course content to align with the evolving landscape of literacy education, emphasizing the application of content knowledge. Future research directions are proposed to explore the link between teacher knowledge and student reading performance, aiming for improved reading outcomes through enhanced teacher training.



SUMMER 2023

Ample research has demonstrated that teachers do not receive adequate training in their preservice programs to effectively teach reading (Binks-Cantrell et al., 2012; Moats, 2014). Furthermore, stagnant reading scores for students in both grades 4 and 8 show the effects of this knowledge-to-practice gap (NAEP, 2019, 2022).

For more than 40 years, Neuhaus Education Center has been a trailblazer in solutions for overcoming obstacles to literacy and is a nationally recognized leader in the science of reading and structured literacy. Neuhaus' professional learning courses and curricula employ evidence-based practices built upon models of reading such as the Simple View of Reading (Gough & Tunmer, 1986), Chall's stages of reading development (Chall, 1983), and Scarborough's Reading Rope (Scarborough, 2001). Neuhaus Education Center equips teachers to be diagnostic and prescriptive in recognizing a student's literacy needs and providing effective support.

Our commitment to educators is to offer the highest quality instruction consistent with the current research evidence. With comprehensive professional learning, teachers return to the classroom equipped to implement new instruction. Our belief in a knowledgeable and effective teacher comes from a body of evidence resting on the idea that "What teachers know and can do is one of the most important influences on what students learn" (Darling-Hammond, 1988. p. 6).

NEUHAUS' LANGUAGE ENRICHMENT COURSE AND CURRICULUM

Language Enrichment is a 30-hour research-based literacy professional learning course with an accompanying curriculum most appropriate for educators of students in grades 1-3 and is offered as a live-virtual, in-person, and on-demand class. Through lectures and practice activities, participants will learn the skills needed for teaching reading and how to develop those skills in a daily lesson routine or through supplemental instruction.

Participants learn about methodology and instructional strategies for basic decoding concepts, including reliable reading and spelling patterns, development of oral language and world knowledge, metacognitive strategies for comprehension (both listening and reading), and implementation of a daily 30–45-minute lesson. Materials and professional learning include guidance and resources for phonological awareness development, sound/ symbol correspondences, the six syllable types, syllable division patterns, common roots and affixes, and listening comprehension lessons that build vocabulary, world knowledge, and strategic thinking. Each reading concept that is taught through the three-year scope and sequence includes multiple opportunities for students to practice and refine their reading skills.

Furthermore, the *Language Enrichment* course includes professional development and resources for *Oral Language and Listening Comprehension*, where participants learn how to use narrative and expository text to build foundational and higher-order comprehension at the listening level using lessons that scaffold and build vocabulary (oral language), world knowledge, strategic thinking, metacognitive strategies, inference making, and written composition skills at the sentence and paragraph level.

To better understand the efficacy of Neuhaus professional learning courses and ways to improve upon our course delivery, the *Language Enrichment* professional learning course was provided in a virtual format with a live instructor in the Summer of 2023 to teachers in three cohorts: Alabama, Texas, and Public (general class with open enrollment).

To measure the growth in teachers' knowledge as a result of the professional learning course, a pre-knowledge survey was delivered to participants using Qualtrics before the first session. Survey items were obtained from the Survey of Basic Language Constructs (Binks-Cantrell et al., 2012) and the Teacher Knowledge of Vocabulary and Comprehension (Hudson, 2022).

The knowledge survey consisted of items that measured both conceptual understanding and application. Before the delivery of the course, instructors aligned the assessment items to the professional learning course to ensure consistency of instruction across the various providers. No personally identifiable information was collected. Pre and post-test results were matched using a unique ID number provided to the students upon registration for the course. Participants attended 30 hours of coursework and, upon completion, were provided the post-test knowledge survey.

Neuhaus Director of Research, Dr. Karol Ann Moore, coded and analyzed the data for each of the three settings and compared the results to determine the change in teachers' knowledge as a result of the course.

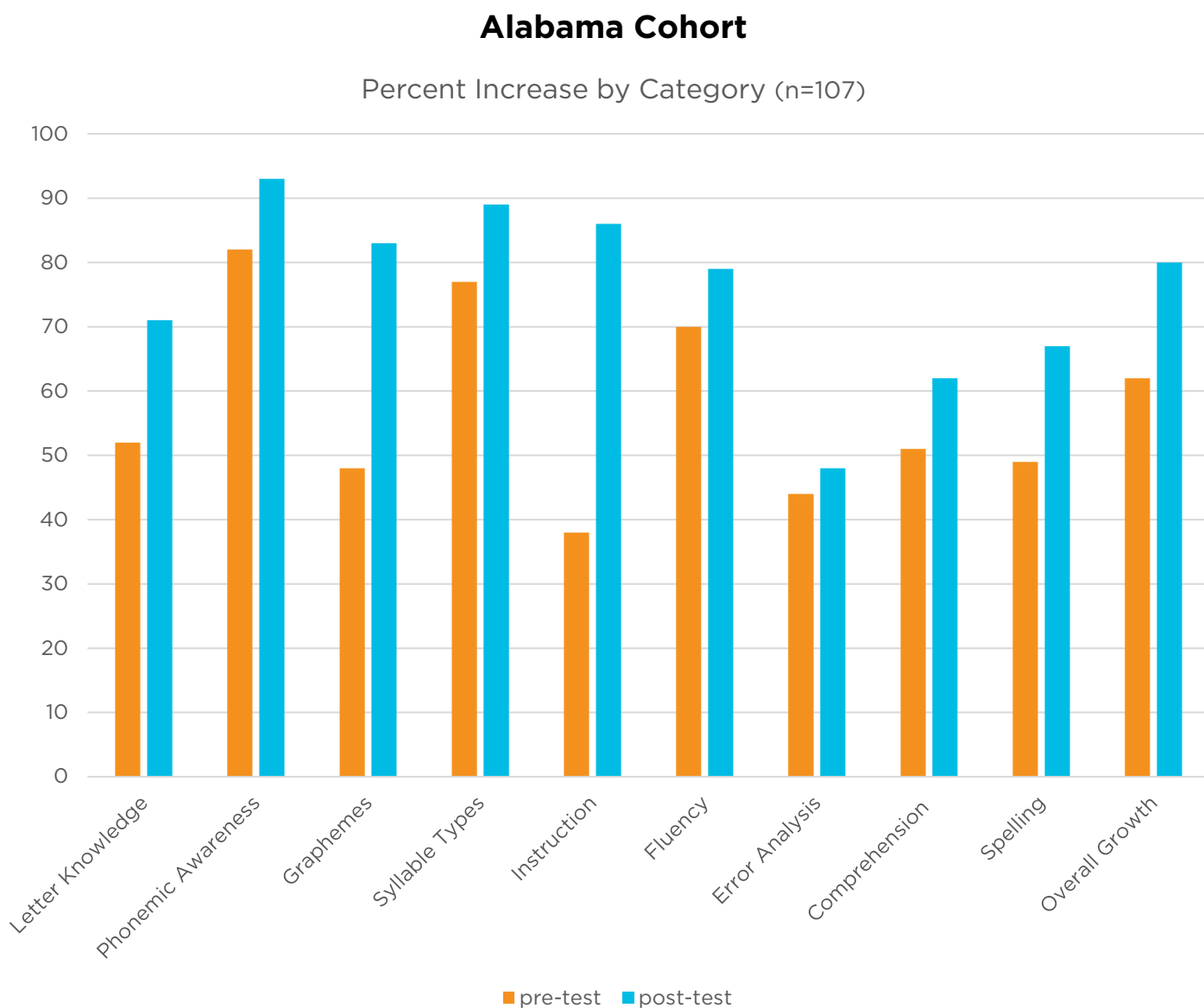


ALABAMA LANGUAGE ENRICHMENT COHORT

Results from a sample of 107 participants who completed both pre-and post-tests were analyzed to examine overall growth as well as domain-specific knowledge growth. Pre-test results showed an average score of 62%, increasing to 81% at post-test. The largest areas of growth were noted regarding letter knowledge, graphemes, and instruction, as shown in Figure 1. In addition, participating teachers demonstrated a solid understanding of phonemic awareness and syllable types – all critical to structured literacy instruction.

Figure 1.

Alabama Language Enrichment Cohort Summer 2023

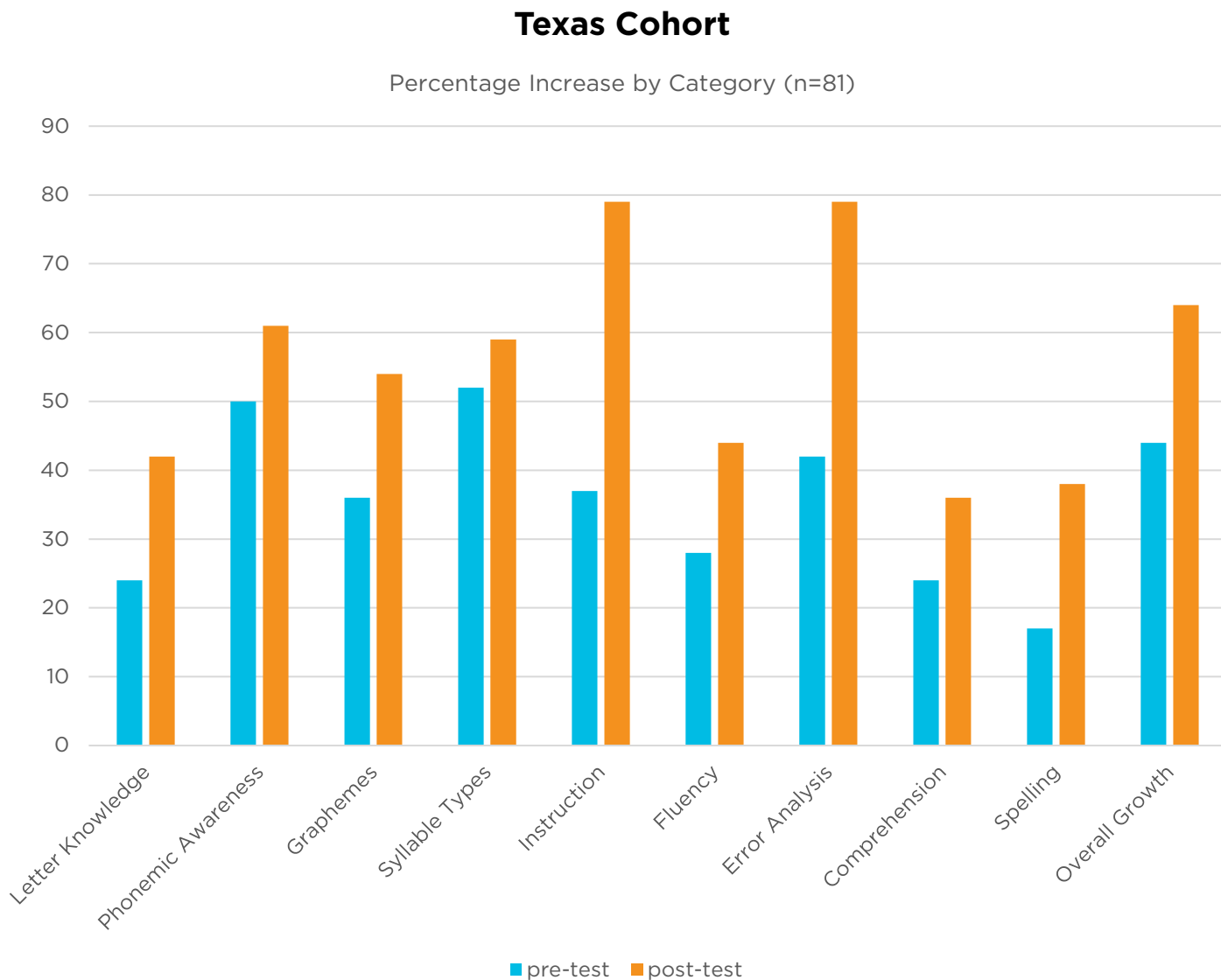


TEXAS LANGUAGE ENRICHMENT COHORT

Pre and post-test results were also matched for 81 participants in a large Texas district that has implemented multiple Neuhaus courses over the last several years. Teachers' results were again analyzed to determine overall growth as well as domain-specific knowledge growth. Pre-test results showed an average score of 51%, with an increase to 70% at post-test. The largest areas of growth were noted regarding letter knowledge, graphemes, instruction, and error analysis (Figure 2). Participating teachers also demonstrated a solid understanding of phonemic awareness and syllable types.

Figure 2.

Texas Language Enrichment Cohort Summer 2023

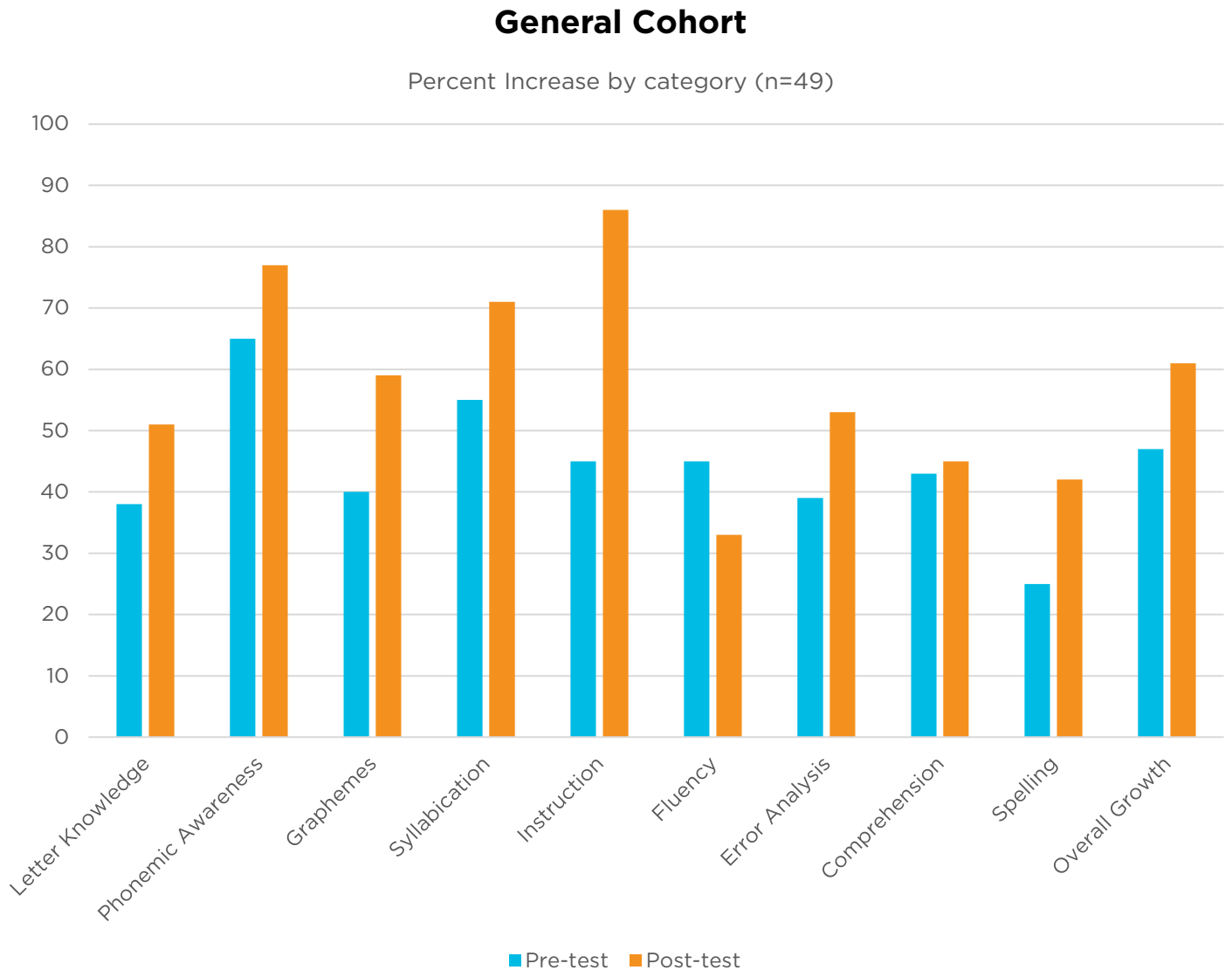


GENERAL ENROLLMENT PUBLIC CLASS

Finally, the general enrollment class consisted of participants from a variety of contexts and locations across the United States. Pre- and post-test results were collected and matched for 49 participants. Pre-test results resulted in an average score of 43% and increased to 59% at post-test. For this cohort, the most significant gains in knowledge growth were related to graphemes, knowledge growth, and spelling, as shown in Figure 3. Interestingly, scores on questions related to fluency decreased indicating a need to examine instruction related to this topic to ensure this was adequately addressed in this particular cohort or to identify a problem related to the survey question itself.

Figure 3.

General Language Enrichment Cohort Summer 2023



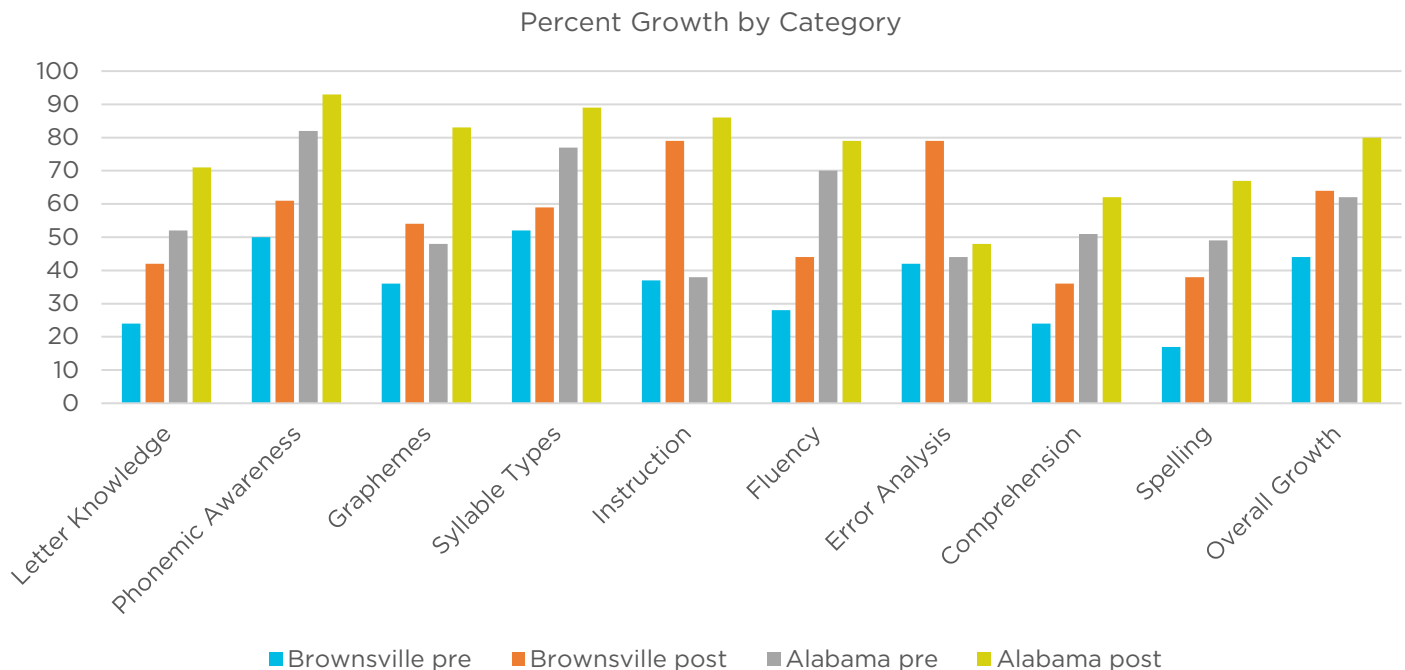
DISCUSSION

Results across all constructs demonstrated growth in teachers' knowledge except for fluency in the general cohort. Questions were grouped by topic to gain insight into participants' overall understanding of specific concepts before and after the professional development course. Furthermore, grouping allowed us to consider the role of instruction during the professional development course and adjust for greater impact in future cohorts.

Desimone (2009) highlights the important factors of effective professional development that include activities that focus on specific content and how students learn that content, as well as promote coherence where the activities are consistent with other professional learning over time. When teachers collectively participate in professional development, they tend to support one another in implementing the content leading to improved student outcomes (Desimone, 2009). Participants in the Alabama cohort scored higher on the initial survey than the Texas cohort (Figure 4) which illustrates the benefit of the longstanding partnership between Neuhaus and the Alabama Department of Education, as well as the benefits of long-term implementation of our programs and professional learning. Alabama teachers also demonstrated the strongest growth with a post-test average of 81%. Teachers in the Texas cohort demonstrated similar growth, but their overall scores were lower on both pretest and posttest than the Alabama teachers.

Figure 4.

Comparison of Scores between Alabama and Texas



It is important to note that most Texas elementary teachers in grades K-3 have participated in the Texas Reading Academies following legislation that was passed in 2019. The Reading Academies contain approximately 60 hours of content related to foundational reading skills. Given the fact that Texas teachers are required to take this content, our assumption was that they would perform higher on both pre and post-test surveys. While participants showed growth across all constructs, scores for the Texas cohort were lower than the Alabama cohort, except for error analysis. Further analysis should be conducted to understand possible reasons contributing to this performance and ways it might translate to adjustments in the professional development course to ensure that knowledge gaps are addressed appropriately for participating teachers.

The General cohort, which contained teachers from a variety of locations and roles, had the lowest overall results on both pretest and post-test. While they still made considerable gains in knowledge, the idea of collective participation (Desimone, 2009) could be one explanation for the difference in scores. Desimone (2009) found that teachers who participate in professional development activities from the same grade, subject, or school often build an interactive learning community together. Future course offerings should consider ways to foster an ongoing interactive community among participants to enhance teacher knowledge growth over time.

In addition, as states have continued to pass legislation around the science of reading and structured literacy, teachers are coming to professional learning courses with a greater understanding of foundational literacy skills. As a result, we can revise our professional learning courses to focus more on the application of this content knowledge rather than a focus toward building the content knowledge itself.

Future studies on teachers' knowledge growth because of Neuhaus professional learning courses will examine changes in student reading performance when learning from a teacher who participated in a Neuhaus course to understand the impact of a more knowledgeable teacher on student reading development and improved reading outcomes.



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Neuhaus Education Center is a nationally recognized provider of research-based literacy solutions dedicated to promoting reading success for all. By laying the groundwork for sustainable change, Neuhaus equips teachers to be diagnostic and prescriptive in recognizing students' literacy needs and how best to utilize the resources made available to them by their district.

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