

Out of the future that is not yet: Reading Academies facilitate pre-service teachers' Science of Teaching Reading principles and cultivate a better first year of teaching

Caleb P. Hood, Ph.D.
Lamar University

Yan Yan, Ph.D.
Lamar University

Abstract

The purpose of this study was to assess preservice teachers' comfort levels and familiarity with the teaching competencies embedded in the Texas Reading Academy curriculum. Participants in this study were eight clinical teachers involved in a pilot program with the Texas Education Agency (TEA), which was evaluating the feasibility of extending reading academy content to educator preparation programs. By the end of the study, preservice teachers strongly agreed that they were more knowledgeable about content and felt confident in their ability to teach the Texas Reading Academy curriculum in their classrooms. Although there was some decline in confidence regarding a few competencies, preservice teachers predominantly changed from somewhat agreeing to strongly agreeing with their understanding of the concepts.

Keywords: Texas Reading Academy, pre-service teachers, Science of Teaching Reading

Introduction

As literacy educators, most of us have attended professional development that advocates for the use of systematic and explicit instruction involving phonics. You might have taught at schools that used programs that were approved by the State House Bill 3 (Texas Education Agency, 2020). You possibly have been a part of

efforts to improve STAAR scores or part of the mandate of the Science of Teaching Reading Certification process for new teachers. Additionally, you might have attended Texas Reading Academies; a new addition to these efforts is the move of Texas Reading Academies to Educator Preparation Programs.

New teachers are now participating in a curriculum that aligns them more closely with the real-world practices of literacy professionals. Much like the quote in the title of this article, which describes a young Marine's journey to boot camp before heading to the Pacific in the Second World War, preservice teachers are introduced to the front lines of literacy education but are not yet fully immersed in the day-to-day responsibilities of in-service teachers. As the author, Robert Leckie writes, "Out of the future that is not yet, into the present that is just becoming, back to the past that no longer is" (Leckie, 1957). This was a study of perceptions of pre-service teachers engaged in the Texas Reading Academy, an activity that was previously reserved only for in-service teachers. The researchers aimed to explore the journey of preservice teachers which closely mirrors that of a practitioner but is not quite the same.

In 2019, the state of Texas passed House Bill 3 (Texas Legislature Online, 2019). This required all kindergarten through fifth grade teachers as well as their administrators to attend a Texas Reading Academy (TRA). Participants completed a variety of assignments, including pre- and post-section knowledge checks, submitted learning artifacts, and participated in coaching sessions with academy supervisors. The academy curriculum has twelve modules that cover essential literacy skills such as oral language, vocabulary, phonics, comprehension, and establishing a literacy community.

Additionally, House Bill 3 also required all newly certified elementary school teachers to pass an additional exam, the Science of Teaching Reading (STR). The STR exam is part of the initial certification process for all newly certified teachers who wish to begin teaching in Texas (Pilgrim, 2022). This certification is in addition to the pedagogy and content area certification exams they must complete. Additionally, newly certified teachers are also

expected to complete a TRA within their first year of teaching.

Districts had the option of completing TRA through an authorized provider such as a local region service center or trained cohort leaders from the school district. Academies could be solely live or blended for portions of the academy that are online. The flexibility of the TRA allowed for ease of completing the required sixty hours. Table 1 displays the TRA modules.

Several states have implemented programs similar to the TRA. Mississippi, for example, began a similar program that required kindergarten through third-grade teachers to complete a program that reinforced literacy skills like the ones included in the TRA. These programs have increased teacher knowledge of literacy principles, improved the quality of instruction, and improved student engagement as well as produced better state test scores for their state (Folsom et al., 2017).

Expansion of TRA to Pre-service Teachers

In the spring of 2023, the Texas Education Agency released a call for teacher-educator preparation programs (EPPs) to participate in the TRA's pilot program. One of the goals of EPP participation was to determine the viability of having pre-service teachers complete their TRA requirement before their first year of teaching. After a semester of the pilot program, it was deemed that the working group's feedback and progress appeared to be strong enough to expand the program and offer any educator preparation program who wished to apply the opportunity to be an authorized provider of the TRA.

Table 1
Twelve Modules of Reading Academy

Module Number	Modules of Reading Academy
Module 1	Intro to Reading Academy
Module 2	STR
Module 3	Establishing a literacy community
Module 4	Using data to inform instruction
Module 5	Oral language and vocab
Module 6	Phonological awareness
Module 7	Pre-reading skills
Module 8	Decoding, encoding, word study
Module 9	Reading fluency
Module 10	Reading comprehension
Module 11	Composition
Module 12	Putting it all together

Research Purpose

This mixed methods study measured the knowledge and experience of preservice teachers in a pilot study with the Texas Reading Academy. It also determined participants' perceptions of the academy's benefits and the potential barriers they might encounter in implementing its content.

The Texas Education Agency pilot program provided a starting point for learning how pre-service teachers might engage with the content of the TRA as well as to validate the content of educator preparation course material that had been delivered before they participated in the study. This pilot program could also provide a way for researchers to better understand student experiences to enable future success. Therefore, the questions for this study were:

1. To what degree do preservice teachers' knowledge and experience of literacy content change during the Texas Reading Academy?
2. In what way can the Texas Reading Academy benefit preservice

teachers and help identify barriers during their first year of teaching?

Literature Review

Literacy education requires that a prospective teacher be able to demonstrate an understanding of a variety of skills such as fluency, vocabulary, comprehension, automaticity, and composition (Caravalos, 2019). The process of helping preservice teachers develop a deeper understanding of literacy's role across disciplines and its impact is a key responsibility of education departments and should be an essential component of teacher education.

A frequent critique of Science of Reading and subsequently, in Texas, of Texas Reading Academies, is that there is an over-emphasis on decoding and phonics skills and no real attention given to the importance of comprehension (David et al., 2020; Duke & Cartwright, 2021). The revision of English Language Arts TEKS (Texas Education Agency, 2017) attempts to bring together rather than separate the many aspects of literacy that are taught in TRA. Yet, there is still no alignment with how these skills

are to be used in schools (David et al., 2020). Literacy programs that help develop teacher knowledge in important literacy skills, can help in the creation of a foundation that can serve for continued interaction among literacy professionals and state legislations (Folsom et al., 2017).

Resistance to Reading Academies

While the Science of Reading movement may have many supporters, it also faces barriers. Many teachers found value in the content of the TRA but were very unhappy with the extra time it took to complete the mandated course material (Lopez, 2022). The TRA is designed to take sixty hours to complete, but the same Lopez study (2022) found that many teachers devoted up to one hundred and twenty hours to finish all the reading, activities, artifact creations, and coaching sessions.

In-service teachers may acknowledge that TRAs have content that can be helpful. However, it may be difficult to develop an association with the importance of the content when having to contend with the frustration of in-service teaching and completing the course material outside of normal working hours. St. John (2023) found that in-service teachers needed support in implementing reading academy content. Largely, the contrast between state requirements and the existing curriculum in many schools does not align and makes it challenging to implement the reading strategies from the TRA. Teachers require time to implement these strategies, but without sufficient time allocated, there is resistance to adopting the TRA-based curriculum.

Method

This study was conducted with mixed-method research including survey questions with response analysis, and semi-structured interviews.

Participants and Research Design

Eight participants agreed to take part in the study. Seven of the eight participants were part of a yearlong clinical residency while one remained in the traditional semester-long clinical practice. All participants were female. One participant was African American and seven were White. The participants were required to attend the Texas Reading Academy sessions on designated Fridays throughout the academic year. At the start of the study, all participants had completed their state certification exams except the Science of Teaching Reading exam. The participants were completing their clinical teaching internships in schools. This enabled them to practice and receive feedback from their mentor teachers.

A convenience sampling strategy was used in the study. The participants in the Reading Academy were invited to join the study; the Reading Academy initially had twelve participants and eleven completed the program. Two academy participants chose not to participate in the study. Each phase of the study was conducted at the end of three designated Reading Academy sessions.

Data Analysis

Data Collection Steps

The initial step in data collection, the pre-survey, began in September for the yearlong clinical residents ($n = 8$). One participant remained in the traditional semester clinical experience. The second, intermediate, phase of data collection occurred in January, which was halfway through the completion of the Texas Reading Academy. The third phase of data collection was the post-survey that was administered in April of 2024. Finally, after completion of the post-survey, participants were given an open-ended follow-up set of concluding questions that provided qualitative data.

Data Analysis Techniques

To analyze the survey questions regarding the participants' perceived knowledge of TRA content and their experience teaching the concepts, we first reviewed the data midway through the year to identify any possible changes that might be occurring as the year progressed. At the end of the year, we read through the three stages of data collection again and looked at the percentage change in responses.

For example, the statements, “I am knowledgeable in how to establish a literacy community” and “I have experience in establishing a literacy community” were viewed for their changes in perception throughout the year. The qualitative portion of the study used the codes implicit in the questions asked of the participants (Table 2). After reading through the participants' responses, the researchers independently read the open-ended responses and agreed that all responses fit within the categories of the questions.

TABLE 2

Concluding Questions Following Pre-, Intermediate, and Post-Surve

Number	Concluding Questions
1	What are your perceptions about reading academies' ability to impact your first year of teaching?
2	What modules of the reading academy do you perceive to have had the most impact on your knowledge and experience of teaching reading? And why? For example, Establishing a literacy community Using data to inform instruction Oral language and vocab Phonological awareness Pre-reading skills Decoding, encoding, word study Reading fluency Reading comprehension Composition
3	What are the perceived benefits of having reading academies during your last year of undergraduate work in preparing you for your “Science of Teaching Reading” teacher license exam?
4	What are the perceived barriers to implementing strategies taught in reading academies you might encounter during your first year of teaching?

Results and Findings

Participants' responses were organized around the open-ended questions they were given. Several themes revealed themselves through the responses to the questions. Participants found the Texas Reading Academy helpful for

developing teaching strategies, developing awareness about data, becoming more confident, and acknowledging barriers to the implementation of what they had learned. Each theme heading was developed from the questions presented to the participants.

Strategies for implementation

When asked about their perceptions of the reading academy's ability to impact the first year of teaching, all participants responded that it had given them, "Strategies, resources, and insights into literacy instruction," as well as developing a "Clear understanding of how to implement the science of teaching reading with a toolbox full of activities and examples to follow." The remaining examples also emphasized the importance they felt of having strategies, lessons, and examples that they could easily integrate into their first year with their classrooms. For example, one participant explained, "Being in the classroom for student teaching now, I can see how those things I learned are useful in real life." Another participant acknowledged, "The information I have learned and resources I've gained will aid me in being prepared to help my students more efficiently."

Becoming Aware

The second open-ended question asked participants what modules of the reading academy they perceived to have the most impact on their knowledge and experience of teaching reading, and why. Participants cited several areas that they felt impacted them the most: reading comprehension, composition, fluency, using data to inform instruction, and phonological awareness. Participants expressed these areas impacted them the most because, "I felt I understood how to implement teaching them the least," and that these topics were "the building block foundations for reading." Notably, using data was cited more than any other section. For example, participants wrote that it helps to "identify areas of strength and areas needing improvement and allow for differentiated instruction." A final explanation of the growing awareness of using data from a participant highlights how data affects various aspects of the teaching process. She wrote that:

It has been eye-opening to see how analyzing data can guide my teaching decisions, especially in a fourth-grade class where individual student needs can vary widely. By using data effectively, I can tailor my instruction to better support each student's reading development, thus leading to more meaningful progress.

Boosting Confidence

The third question concerning the perceived benefits of having reading academies during the last year of undergraduate work in preparing for the Science of Teaching Reading license exam elicited a strong positive response. Participants felt it helped, "Engrain the information into their head" and was "crucial information for the exam and in my teaching career." Also, participants felt that Reading Academies "have helped me a ton with the STR exam. Everything we have learned here was on the exam and as someone who is teaching upper elementary this has helped me tremendously with understanding the exam's content." Another stated, "It provided background knowledge to make me more successful on the test." Lastly, one participant explained:

...it provided a focused attention on key areas that I was weak in like decoding, encoding, and phonological awareness, reinforcing the concepts with practical examples. This course aided in my understanding of these critical elements and also helped me feel more confident and prepared for the exam.

Barriers

Lastly, when considering barriers to implementing Reading Academy concepts, participants felt it might be challenging to implement the strategies due to the numerous demands faced by new teachers. These include curricular expectations from schools that may

not align with what they learned, limitations in available material they possibly must deal with, and “lack of support regarding phonics instruction.” Notably, participants acknowledged the gaps that students might have in their future classrooms: “My students are missing some key foundational skills due to COVID and interrupted education like reading fluency and comprehension as well as phonological awareness and word recognition.” Lastly, recognition of diverse classrooms emerged as a challenge that participants knew they would encounter. A participant wrote:

Each classroom is unique, with its own dynamics, student needs, and learning styles. Adapting strategies taught in reading academies to meet the diverse needs of your students, including English language learners, students with disabilities, and those from culturally and linguistically diverse backgrounds, may require additional planning and differentiation.

Discussion

The preservice teacher participants in this study rated their understanding of content knowledge and experience in teaching strategies in different ways throughout the study. They reported a high degree of confidence in all portions of content covered in Texas Reading Academies. All participants improved in confidence in their knowledge of teaching reading and their ability to teach the strategies related to that knowledge.

Figures 1 through 16 show positive changes from the beginning to the middle and end of the Texas Reading Academy competency indicators. For example, in Figure 15, “I have experience in how to establish a literacy community” improved from zero percent to sixty-two and

half percent by the conclusion of the academy. Surprisingly, some areas of TRA found a decrease in confidence by the end of the study. Figure 8, “Knowledge of how to conduct a word study program” and experience in “How to conduct a word study Program” showed a significant decrease in confidence. However, the change was from a strong degree of confidence to somewhat agreeing they felt confident in conducting a word study program. Additionally, figures 11 and 12 show that pre-service teachers' confidence in their experience in teaching both phonological awareness and phonemic awareness improved from twenty-five percent to seventy-five percent. Teacher knowledge is positively associated with experience with classroom emergent literacy practice (Piasta et al., 2020), so it might be inferred that after a year of working through a word study, the participants found word study to be more complex than they first imagined when they first encountered the concepts in their course work.

Also of interest were participants' concerns about their ability to implement TRA concepts in schools or departments that might not be aligned with their training. They recognized the complexities of classrooms, including diverse student needs and additional tasks, which could make it challenging to teach in the way advocated by the TRA.

Figure 1
Using Assessment to Inform Instruction.

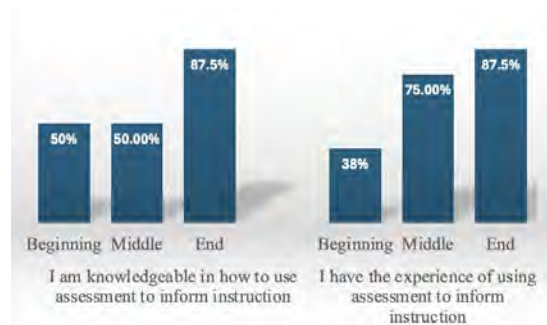


Figure 2
Teaching Print Awareness Skills

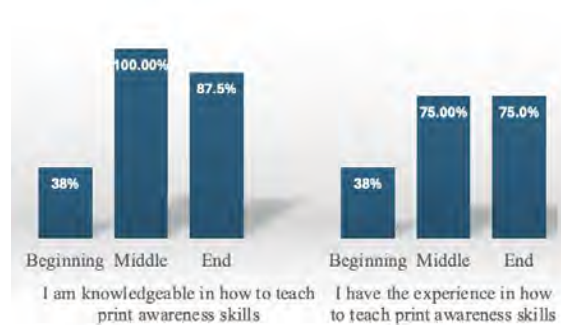


Figure 3
Teaching Reading Fluency

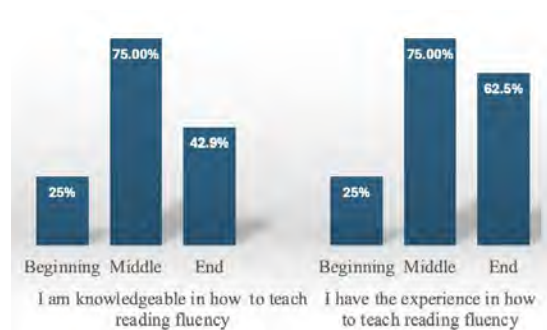


Figure 4
Teaching Reading Comprehension

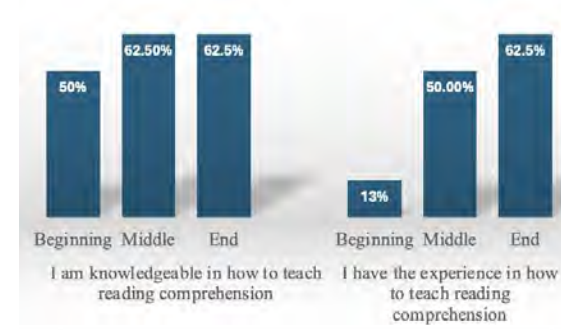


Figure 5
Teaching Writing Comprehension

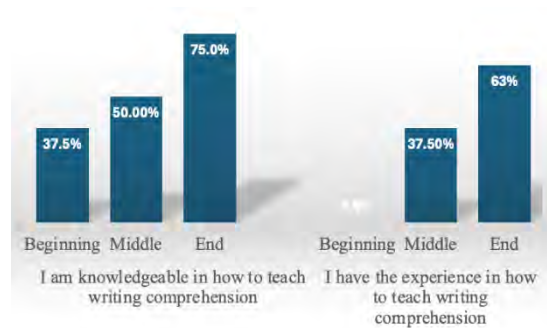


Figure 6
Teaching Decoding

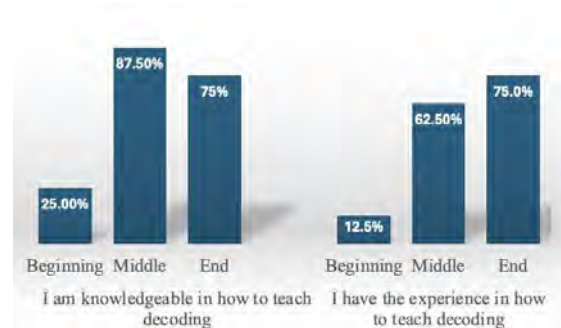


Figure 7
Teaching Encoding

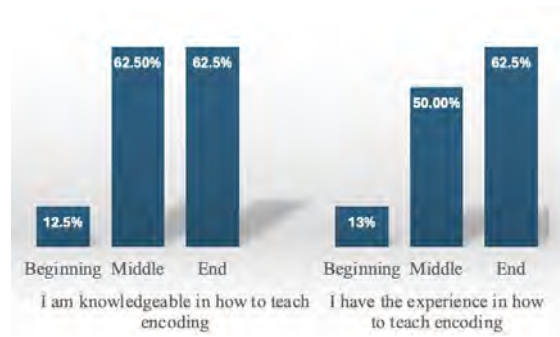


Figure 8
Conducting a Word Study Program



Figure 9
Teaching Alphabet Knowledge



Figure 10
Teaching Handwriting

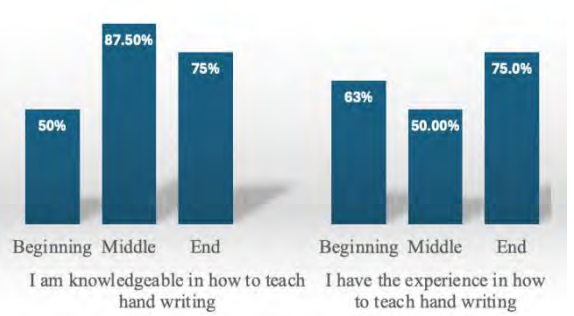


Figure 11
Teaching Phonological Awareness

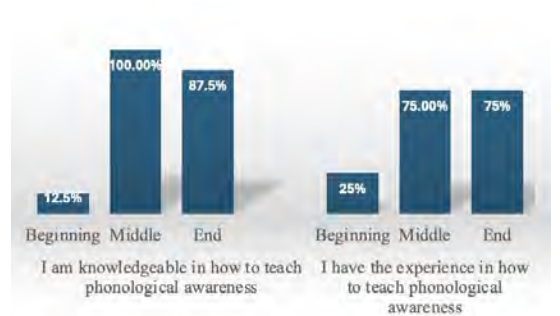


Figure 12
Teaching Phonemic Awareness



Figure 13
Teaching Oral Language Skills

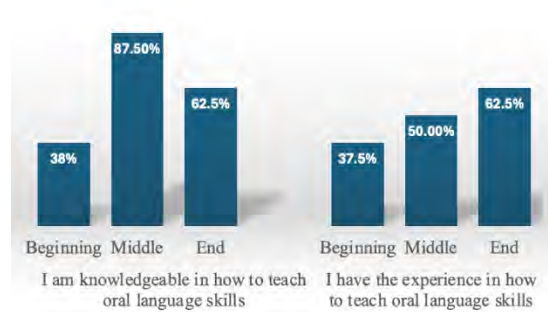


Figure 14
Conducting Vocabulary Instruction

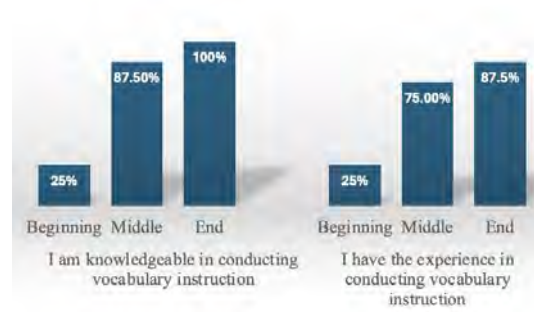


Figure 15
Establishing a Literacy Community

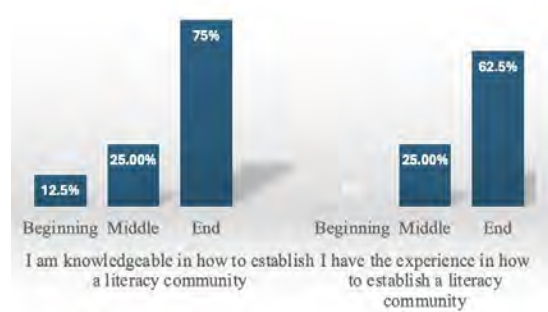
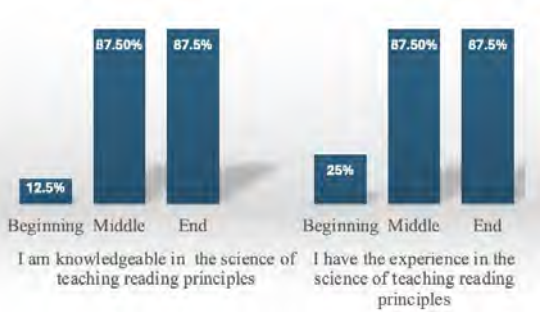


Figure 16
Teaching Reading Principles



Implications/ Significance of the Study

Teacher educators and policymakers in Texas expect future teachers to understand how literacy skills are learned. How that process might look is still unclear. The Science of Teaching Reading emphasizes sound phonological and phonics instruction, but how that is implemented after preparation efforts, also remains uncertain. House Bill 3 (Texas Education Agency, 2020) requires teachers to use state-approved literacy programs. Often these policies and their approved programs make less than clear connections between phonics and skills, such as comprehension. The Texas Reading Academies EPP pilot sought to bridge

understanding of the many strands of literacy and the application of those skills (Scarborough, 2001). Findings from this study suggest that preservice teachers who have been through reading academies feel more confident in their knowledge of the science of teaching reading principles taught in the TRA. Additionally, they remain concerned about their skills in teaching those concepts.

Limitations

Limitations of this study stem from the small sample size of participants. The small convenience sample size made it difficult to provide as reliable quantitative data as might be

desired. Consequently, participants will not necessarily reflect a representative sample of EC-6 clinical teachers. The study sought to mitigate the sample size by using a mixed methodology that could help provide a qualitative element to the quantitative data. The qualitative questions provided a rich source of data about participant perceptions of the TRA as they prepared to move into their first year of teaching. Seeking further interviews would help in providing greater clarity to some of the data, but time constraints for the study prevented that from happening. The findings reflect reported perspectives on knowledge and teaching ability but do not fully reflect what they did in their classrooms. Participants probably reported understanding and teaching concepts in ways that do not align with practices advocated for in TRA (Dole et al., 2021).

Additionally, the longitudinal limitations of the study leave gaps in reporting on the impact that TRA can have on early career teachers. Planning follow-up studies with participants may provide greater clarity on how TRA has influenced their literacy teaching practices as well as barriers that might have prevented them from implementing those practices.

Finally, this study was a pilot study with the Texas Education Agency and our university. The state has provided an option for other EPPs to have TRA-embedded programs. The options available to EPPs may change the nature of how literacy teacher education content is delivered.

Conclusion

This study will serve as another step in understanding novice teachers' comfort with literacy education skills and their ability to teach them in Texas classrooms. Literacy faculty in Educator Preparation Programs have been a part of the back-and-forth about what constitutes best practices in literacy education. The Science of Teaching Reading used in Texas Reading Academies is based on research-based practices

but still needs discretion and knowledge in its execution to avoid such pitfalls as the overuse of skills that new teachers may feel the need to focus on in their instruction. Being cognizant of the weaving of the many literacy strands that TRA seeks to strengthen and the contradictions that exist between policy and practice can be beneficial to EPPs (David et al., 2020). Being willing to revisit past beliefs (Duke & Cartwright, 2021) and a willingness to move past ideologies both educationally and politically will drive understanding and improvement in literacy pedagogy and achievement. Literacy professionals across the state have this opportunity through their participation in the development of the Reading Academies.

AUTHORS' BIOGRAPHIES

Caleb Hood holds a Bachelor of Arts degree in English from Abilene Christian University, a Master of Education in reading from Sam Houston State University, and a Doctorate in Interdisciplinary Learning and Teaching from The University of Texas at San Antonio. Dr. Hood has worked in Texas schools for twenty years. His research interests are in writing curriculum, language arts teacher professional development, multi-literacies, writing to learn, and teacher education.

Yan Yan is an Assistant Professor of Reading and Literacy Education at Lamar University. Dr. Yan has research experience in the areas of literacy teacher preparation, the Science of Teaching Reading, K-12 English language learners' reading and literacy development, instruction, and assessment, as well as teacher preparation through working on NSF and Spencer Foundation projects and internally funded grants. Dr. Yan focuses on developing, implementing, and evaluating evidence-based reading intervention programs that emphasize improving diverse background students' reading comprehension, phonemic and phonological awareness, and word knowledge.

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