

Developing Spanish Foundational Reading Skills with First-Grade Bilingual Students in a Title I South Texas Elementary School

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Abstract: Building early literacy skills through a balanced approach has been ranked the highest topic in What's Hot in Literacy Report[1]. This case study aimed to investigate literacy centers' implementation with first-grade bilingual students. The convenience sample consisted of four first grade bilingual classrooms with fifty-nine students from Title I elementary school in south Texas with 97.4% economically disadvantaged students. The researcher used a Contextual Literacy Center Checklist to conduct observations once or twice a week for eleven weeks. The contextual elements consisted of teacher expectations, self-monitoring behaviors, materials and resources, social interactions, and physical design. Frequency coding was determined for each of the contextual elements' domains [2].

Keywords: literacy centers, differentiated instruction, literacy instruction, bilingual student literacy development

1. Introduction

Improving the reading performance of Hispanic students continue to be a priority at the national and state level. PISA (Programme for International Student Achievement) 2018 results showed that the United States ranked eleventh in reading with a mean score of 505 [3]. According to the National Assessment of Educational Progress (NAEP) 2019 reading results, Hispanic students performed lower than other students in 4th grade, nationally. Furthermore, Hispanics obtained an average score of 208, while Whites scored 229, resulting in a 21-point gap in average score. Students eligible for the National School Lunch Program (NSLP) obtained an average score of 207, while English Language Learners received an average score of 191.

Additionally, in Texas, 4th-grade Hispanic students obtained an average score of 208 compared to White students, who received an average score of 232, scoring 24 points higher than Hispanic students [4]. In the spring of 2019, results of the 3rd Grade Spanish Reading STAAR (State of Texas Assessments of Academic Readiness) 69% of students received an Approaches Grade Level, meaning that students passed the test; however, they will need extra help in the following grade level [5]. Grade-Level Retention 2018-2019 data showed 11,807 (3.1%) first-grade students with the highest number of students retained than all elementary grades. 7,438 (3.7%) of Hispanic students compared to Whites 2,394 (2.3%) were retained in first grade [6]. The above data demonstrates the disparities in educational reading achievement between Hispanic and other races. One solution to these issues is establishing a robust early literacy program by implementing literacy centers.

The term literacy centers or literacy work stations are an area designed to provide space and materials for cooperative activities, composed of a library corner and a writing area [7]. Diller coined the term "literacy work stations" to refer to a place where students work independently or with one another to explore and expand their literacy using available instructional materials that teachers had taught [8]. They provide opportunities for practice and extension of skills and strategies independently or collaboratively [9]. Literacy centers or learning centers allow teachers to provide differentiated instruction through various approaches to content, process, and product and based on students' differences in readiness, interest, and learning needs [10]. Research on the effectiveness of literacy centers' implementation has resulted in positive outcomes; however, there is a lack of literature on literacy centers' performance with bilingual students. The following is the research question: How do first-grade bilingual teachers promote literacy acquisition during literacy centers implementation?

The purpose of this study is to address the gap in the literature regarding the implementation of literacy centers with first-grade bilingual students in a Title I school in south Texas. The current literature on literacy centers' performance will be discussed in the next section.

O'Donnell's qualitative action research studied the use of learning centers in a kindergarten classroom. Data collection involved data triangulation through interviews, work samples, anecdotal records, checklists, videotapes, and performance task documents, for six students from the kindergarten classroom. All students in the classroom were provided with 14 literacy centers that contained multiple activities from an extensive review

of the literature. Results demonstrated that at-risk students made progress in achievement, accountability, and motivation [11].

Maurer's qualitative study demonstrated how first grade children learned and practiced the English Language Arts standards while interacting in literacy centers. The population consisted of 19 White non-Hispanic children from a small, rural elementary school in an Ohio school district. Through a rotation schedule, the students completed literacy activities. Findings showed that children learned, practiced, or used 47 of the 79 first-grade literacy skills indicators in the Ohio Academic Content Standards for English Language Arts. Peer dialogue mediated the following English Language Arts standards using literacy centers: decoding skills, vocabulary development, and comprehension skills [12].

Rodriguez's quasi-experimental study examined emergent literacy of bilingual students between or among types of instruction they received and level of administrative support during the implementation and monitoring of center learning in literacy-enriched environments. Participants consisted of 50 low socioeconomic status, bilingual, early childhood preschool children in five south Texas summer school sites. The study was conducted for four weeks during the summer school program. The control group consisted of 20 students, while the experimental group had 30 students. The students' experimental group was involved in the seven supercenters that consisted of a pretend and learn center, ABC center, creative center, construction center, math or science center, library or listening center, and writing center. At the end of the study, the experimental group had a significant difference in gains with emergent literacy CIRCLE scores posttests in eight areas. The eight areas included letter knowledge, vocabulary, listening skills, rhyme task 1, rhyme task 2, alliteration, words in a sentence, and syllabication [13].

Through the naturalistic approach, Bates explored literacy centers' contextual elements in a first-grade classroom and how the factors influence children's literacy development. Participants included the teacher and 21 students, as well as the researcher. The study yielded five contextual elements: teacher expectations, self-monitoring behaviors, materials and resources, social interactions, and physical design. These current research results inspire educators and provide further reinforcement suggesting that literacy centers help students acquire early foundational literacy skills [14].

2. Theoretical Framework

The theoretical framework for implementing literacy centers in four bilingual first-grade classrooms is based on Lev Vygotsky and Jean Piaget's socio-cultural and constructivist theories. Vygotsky posited that children learn more from one another than from manipulating objects. By interacting with others, children will complete tasks that they cannot complete individually [15]. Vygotsky introduced the concept of the Zone of Proximal Development. According to Vygotsky, "it is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p. 86) [16]. McLeod added that interaction with peers is an effective way of developing skills and strategies [17]. Riddle described the instructional design based on Vygotsky's theory. This theory requires the teacher and students to adopt untraditional roles as they collaborate. The physical classroom should contain clustered desks or tables for peer instruction, collaboration, and small group instruction. The instructional design should promote and encourage student interaction and cooperation [18].

According to Vygotsky's theory, Piaget's theory emphasized that a child acquires new knowledge by interacting individually with objects to construct meaning from them [19]. Piaget believed that a child receives experience by interacting with the world through assimilation and accommodation. According to McLeod, the classroom environment should be centered on active discovery learning, where the teacher's role is to facilitate learning [20]. The following should be encouraged in the classroom: focus on the process rather than the end product; implement active methods that require rediscovering; plan and integrate collaborative and individual activities; devise situations that present useful problems and create disequilibrium, and set practical tasks based on the level of the child's development [21].

3. The Local Context of the Study

The current study was conducted in a south Texas Title 1 elementary school with 100% of Hispanic, 97.4% Economically Disadvantaged, 83.6% Limited English and 89.4% At-Risk students. A school is assigned as a Title I school based on the numbers or high percentages of children from low-income families to ensure that all children meet challenging state academic standards. This study's participants comprised a convenience sample of 59 students from four first bilingual classrooms. According to Johnson and Christensen, convenience sampling allows the researcher to recruit individuals willing to participate in the research study [22]. Most of the study students come from "colonias," which are incredibly low-income communities along the Texas-Mexican border. Compared to the other three Border States, New Mexico, Arizona, and California,

Texas, it has both the largest number of "colonias" and the largest "colonia" population [23]. Specifically, Texas has approximately 2300 colonias with a total population of at least 450,000.

4. Methodology

This study utilized a qualitative case study to investigate how first-grade bilingual teachers promote literacy acquisition during literacy centers implementation. The nature of qualitative research allows the researcher to achieve the research goal and understand how literacy centers support literacy acquisition in first-grade bilingual students [24]. Data collection occurred during the study's 11-week duration. Also, classroom observations were conducted one or two times a week for the study's course, using the Contextual Elements Checklist for Literacy Centers. Furthermore, participating teachers received professional development in literacy centers. The researcher assisted them in preparing the literacy center activities weekly based on the Literacy Centers Planning Sheet. The following are the literacy centers implemented in the study:

- **Spelling Center:** In the spelling center, the teacher placed different games or activities that allowed the student to practice weekly spelling words. For example, in the "ransom words" activity, students cut out magazine or newspaper letters to construct the words.
- **Writing Center:** In the writing center, students practiced the weekly writing objectives by completing foldable or different writing activities, such as pop-up cards or dioramas.
- **Library Center:** In this center, students had the opportunity to read a self-selected book independently or with a reading buddy. After reading a book, students completed a reading log with information about the book and a graphic organizer.
- **Computer Center:** Students played educational games or listened to the week's story from the reading adoption website in the computer center.
- **Art Center:** Students completed an art project from the adopted art book using different materials such as paint and tissue paper.
- **Poetry Center:** In the poetry center, students practiced reading a Spanish nursery rhyme, such as "Tortillitas" [25]. They also worked in a poetry notebook by pasting in the nursery rhyme and illustrating it. Additionally, they sorted the poem's words or sentences on the pocket chart or the floor.
- **Pocket Chart Center:** In the pocket chart center, students manipulated sentence strips or picture cards with words to practice weekly reading skills such as hearing beginning sounds or noticing different types of punctuation in sentences.
- **Listening Center:** the listening center contained stories on audio from the Capstone library website. Students completed the listening log after the story.
- **Word Study Center:** Students engaged in hands-on activities or games to practice reading words with the week's phonics element or high-frequency words in the word study center.
- **Small-Group Instruction Center:** In this center, the teacher met with several students based on their needs to provide differentiated instruction such as blending, segmenting, and reading with fluency. Teachers used this time to listen to the students read orally from the reading adoption's level readers.

To answer the research question, the researcher used an A Priori checklist containing the five Bates contextual elements to conduct classroom observations during literacy centers implementation. The contextual literacy center checklist consisted of the following contextual factors: teacher expectations, self-monitoring behaviors, materials and resources, social interactions, and physical design. The Contextual Elements Checklist for Literacy Centers was used twice a week for the study duration during classroom observations. Each of the contextual elements contained different domains that needed to be evident during the literacy centers' implementation. Frequency coding for each of the domains for Bates Contextual Elements collected analyzed, and interpreted is presented in the results section.

5. Results

Contextual Elements Checklist data were analyzed to answer the study's research question: "How do first-grade bilingual teachers promote literacy acquisition in literacy centers?" Frequency coding was determined for each of the contextual elements' domains [26]. In the next section, each contextual element's most frequent characteristic is described and provided with examples gathered from the classroom observations on how literacy is supported during literacy centers implementation. The frequency for each contextual element's features is reported in the next section.

5.1. Teacher Expectations

In the contextual element for teacher expectations, the characteristic that occurred the most was small-group instruction ($f = 51$). The frequencies for the other characteristics under the teacher expectation contextual element include the following: heterogeneous grouping ($f = 15$); implementation of routines and procedures ($f = 25$); development of proficient readers and writers ($f = 35$); and purposeful and authentic activities ($f = 5$). Teachers in the four experimental classrooms implemented small-group instruction based on the Tejas LEE results throughout the study. Examples of this implementation were:

- Use of leveled readers to develop decoding, fluency, and comprehension skills
- interventions using Tejas LEE interventions on phonemic awareness, phonics, fluency, and comprehension
- letter formation using students' names
- writing conferences on students' writing samples

Students were pulled out from the self-chosen literacy center for small-group instruction based on the group name that the teacher assigned for heterogeneous grouping. During an observation in the fifth week, Teacher A used *El bebeelefante* [27], a Spanish leveled reader from the Tesoros reading adoption, to develop students' fluency development through various choral strategies echo, and repeated reading. Teachers assisted students with words they struggled to improve their fluency rate or reading accuracy. In another observation, Teacher C was timing students during small-group instruction to check their fluency and accuracy rates using Tesoro's fluency passages. During the first week of the study, teachers did not conduct small-group instruction because they ensured that students followed literacy center routines and procedures. Besides, during the first week, teachers visited literacy centers and supervised students. Some teachers displayed on a poster board behind the small-group instruction table the group's name and the names of the students in each group: *perritos* (puppies), *patitos* (ducklings), *jirafas* (giraffes), and *Tiburón* (sharks). As soon as students mastered specific Tejas LEE tasks, they were moved to another group. Students did not stay in the same group throughout the year. Teachers taught comprehension skills during small-group instruction. On several occasions, the teachers used the leveled readers, such as *Animales de la granja* (Animals from the Farm) [28], to review the main ideas and details' comprehension objectives.

During small-group instruction, teachers met with students to review different reading skills assessed on the Tejas LEE. For sound identification, Teacher B used the activity, *Mr. Sound Box*, with the students during week five, in which students place the picture card that contains a targeted sound either at the beginning or at the end of the word. In week six, Teacher B played *BINGO de palabras* (Word BINGO) with the students to practice reading words that contained a particular phonics element or the on-level high-frequency words. Students were smashing flies with a fly swatter that contained a certain word the teacher had selected in another observation. Teachers also held writing conferences with individual students during small-group instruction to review their rough drafts.

5.2. Self-monitoring Behaviors

For the self-monitoring behaviors contextual element, the frequently implemented characteristic was students' familiarity with routines and procedures ($f = 59$). The frequencies for the other characteristics on the self-monitoring behaviors include literacy center ownership ($f = 15$) and self-monitoring ($f = 7$). At the beginning of the study, teachers in the experimental group went over the routines and procedures and allowed teachers to conduct small-group instruction. Students practiced the routines and procedures for each of the literacy centers. Examples of this implementation were:

- self-monitoring and returning materials and resources to their original locations after use
- keeping track of literacy center visits
- placing their selected item (ladybug) on a center management board (enlarged flower)
- expectations for each literacy center
- use of the literacy folder

During the observations, the researcher noted that students had a self-monitoring chart to track assigned activities. During week four observation, one of Teacher B's students colored "auditivo" (listening) on her flower management board after completing the listening log for the story *Mantenerse activo/Being Active* [29]. On one occasion during week four's observation, Teacher C had students place their ladybugs on the flower center management board and get the literacy folder from a rack at the beginning of literacy centers. Students selected a literacy center that had available slots. Students changed their ladybug or bee once they finished with the literacy center. During the week three observation, one student from Teacher's A class said, "Me falta escritura, poesía y ortografía" (I need writing, poetry, and spelling), looking at his flower, to see what

literacy centers needed to be visited. On Mondays, teachers reviewed all the literacy center activities for that week based on the literacy center plan so that students knew what to do the following days. For example, Teacher B implemented the "fishing for words" game in the Word Study center. Students gathered the colorful fish that contained words with a particular phonics element and the fishing rod and fish for words. Students kept the fish if they read the word correctly. In the spelling center, Teacher A had students copy one of the spelling words into a construction paper strip and made a loop. Then they wrote another word on another strip and linked it with the other spelling word. They continued this procedure until they had a word chain with all the spelling words. In another observation of the poetry center, one student in Teacher C's class independently read the Spanish poem *El patio de mi casa* (The yard of my House) [30], written on chart paper and placed the poem's words in order.

5.3. Materials and Resources

In the contextual elements of materials and resources, resources related to literacy task ($f = 42$) was the characteristic that was most frequently implemented by the four teachers in the experimental group. The frequency for the characteristics under the materials and resources contextual element include the following: choice, organization, meaningful relevance, and motivation ($f = 37$); displayed resources for guidance ($f = 24$); and visible, modeled, revisited, and rotated ($f = 9$). Examples of this characteristic's implementation were:

- implementation of various hands-on activities in each literacy center
- accessibility to materials needed to complete activities
- familiarity with the location of required materials
- introduction of different activities weekly
- choice of literacy center and materials used to complete the activities

Every week, the researcher provided teachers different materials and resources needed for students to complete the literacy center activities. Teachers prepared their literacy center activities based on the provided planning form. For example, for week five, teachers had to gather newspapers or magazines for the spelling center's Ransom Words activity. Students had access to the materials and resources for each literacy center activity. Students did not have to go across the room to get the materials and resources needed to complete the literacy center activities. The spelling center contained paper strips, markers, and glue for spelling chains activity. Tissue paper was provided in the art center for students to make a mosaic with small pieces of colored paper to illustrate their favorite part of the story for *La patabonita* (The Beautiful Duck) [31]. After the illustration, students wrote sentences about their illustrations. Pocket chart activities were placed in baggies with appropriate materials to complete the task that allowed them to practice the weekly objective. The baggies contained pictures representing phonics elements, and students had to match the corresponding word with an image, for example, (e.g., word *novia* with the picture of a bride). For the word study center, teachers had to create the Fishing for Words activity with construction paper.

5.4. Social Interactions

In the contextual element of social interactions, scaffolding among children occurred the most ($f = 38$), compared to the other two characteristics. The frequency for the characteristics under the social interactions contextual element includes ulterior conversations ($f = 4$); and positive children interrelationships ($f = 23$). Examples of this implementation were:

- classmates helped each other on reading literacy center activity instructions
- a proficient reader helps a student who is not yet reading
- classmates help each other complete the activities

During the observations, the researcher noted that students helped each other with the literacy center activities. For instance, in the reading center, one student from Teacher D's class helped his non-reader classmate with activity-related instructions that the teacher had displayed at the center. After the student read the instructions to his center partner, he completed the literacy center activity. The student also read a book to another student. Teacher D's week three students reminded each other what needed to be done in the art center- *necesitas que hacer formas y pegarlas en tu papel* (you need to make shapes and paste them on your paper). During Teacher B's week three at the listening center, one student said to another student, "food es comida" while listening to the book *Unavista en la granja* / A Visit to the Farm [32]. Teacher A's week five students helped each other sort pictures into *personas* (persons), *animales* (animals), and *lugar* (places) y *cosa* (things) in the pocket chart center. Teacher B's week six students helped each other sorting pumpkins containing /r/ and /rr/ words. At Teacher A's week 7, two students worked together to place words from a poem in a pocket chart in the appropriate order based on the poem, *Los pollitos* (The Chicks) [33]. At week 8, Teacher A's students at

the fishing game helped each other read the worm game's words by breaking them down into syllables and blending them.

5.5. Physical Design

In the contextual element of physical design, the characteristic evident was that literacy centers were placed around the perimeter of the classroom ($F = 62$). The characteristic of well-designed literacy centers obtained a frequency of 12. Before starting the study, teachers were provided with professional development on literacy center environments, and they were assisted in setting up the centers. The experimental group teachers had the following nine literacy centers around the classroom, which remained constant throughout the study: library center, spelling center, writing center, computer center, listening center, art center, poetry center, pocket chart center, and word study center. A kidney-shaped table was also in the classroom for small-group instruction, where the teacher could supervise all students during literacy centers. Each of the literacy centers contained a center sign to understand the center boundaries. Students were allowed to use literacy centers on Tuesday, Wednesday, and Thursday. On Mondays, teachers taught all the weekly objectives during whole-group instruction and reviewed the activities that would be in the centers.

This study validates and supports Vygotsky's concept of Zone of Proximal Development (ZPD) that states that children learn by interacting and communicating with others. For example, during literacy center implementation, scaffolding among children occurred the most in the social interaction contextual element. Teacher D's week three students reminded each other what needed to be done in the art center-necesitas que hacerformas y pegarlasentupapel(you need to make shapes and paste them on your paper.). Besides, teachers scaffolded instruction during small-group work in phonemic awareness, phonics, fluency, and comprehension using leveled readers or the Tejas LEE intervention activities. For the task of sound identification, Teacher B used the activity, Mr. Sound Box, with the students during week five. Students placed the picture card containing a targeted sound either at the beginning or at the end of the word.

The results may have been different if the Contextual Elements Checklist's characteristics frequently observed may have occurred more often. For example, in the contextual element of teacher expectations, purposeful and authentic activities occurred the least ($f = 5$) compared to the rest of the characteristics. According to Hickey, Moore, and Pellegrino (2001), authentic tasks increase achievement and motivation [34]. Furthermore, the characteristic of using each other to self-monitor ($f = 7$), under the contextual element of self-monitoring behaviors did not occur frequently.

6. Conclusion

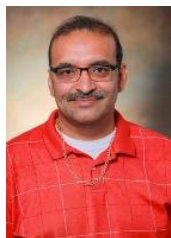
The research question addressed how first-grade bilingual teachers promote literacy acquisition during literacy centers. This study was designed to extend the current research on the implementation of literacy centers with bilingual students and their literacy development in foundational reading skills. Students acquired early literacy skills in phonemic awareness, phonics, fluency, and comprehension through the implementation of literacy centers. Furthermore, teachers could provide differentiated instruction to each group during small-group instruction to improve the student's reading foundational skills.

The research question's findings are consistent with previous research that indicated that literacy centers are effective in improving students reading ability and motivation. Overall, the implementation of literacy centers to develop foundational reading skills was effective. At the beginning of the study, 24 students were considered non-readers or at the frustrational level in the Tejas LEE reading inventory; however, at the end of the eleven weeks, only 9 students remained at that level. Even though, the emphasis of this study was not from the quantitative perspective, testing results show the effectiveness of using literacy centers in the classroom. These results will be useful to teachers, teacher educator programs, and administrators in deciding on curriculum implementation to foster foundational reading skills to decrease the achievement gap in Hispanic students and the number of students in poverty.

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