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# A Program Evaluation on the Impact of South Carolina's Child Early Reading Development and Education Program on Kindergarten Reading Readiness in a Small Rural School District

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# A PROGRAM EVALUATION ON THE IMPACT OF SOUTH CAROLINA'S CHILD EARLY READING DEVELOPMENT AND EDUCATION PROGRAM ON KINDERGARTEN READING READINESS IN A SMALL RURAL SCHOOL DISTRICT

By
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## Approval Page

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## Abstract

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This mixed methods study evaluated the effectiveness of the Child Early Reading Development and Education Program (CERDEP) on kindergarten reading readiness using Stufflebeam's (2003) context, input, process, and product (CIPP) model. The program was implemented in a rural school district in 2014 and the program's goal is to provide high-quality instruction to at-risk 4-year-olds in a full-day format. The study's objective was to determine the extent to which the goals of the program have been met. Qualitative data were collected from focus group sessions with prekindergarten and kindergarten teachers to assess CERDEP's alignment with the assessed needs and implementation fidelity. Quantitative data included archived prekindergarten and kindergarten literacy assessment data as well as archived literacy checklist data completed by an education associate from the state department. A thematic analysis of data was conducted to identify recurring themes and patterns, and a series of *t* tests were conducted to determine if there was a statistically significant difference between the given values for the assessments and students' actual scores. Results indicated that the goals of the program were met and students who were enrolled in CERDEP demonstrated significant gains in reading readiness skills. Implications for improvement include providing annual training on implementation practices, opportunities for professional learning, alternative funding avenues for classrooms, and time for vertical articulation

meetings. This study contributes to the body of work on research-based early literacy strategies, CERDEP, and closing the achievement gap for at-risk students in reading.

*Keywords:* CERDEP, early literacy instruction, implementation, intervention, kindergarten readiness, kindergarten reading readiness, kindergarten assessment, prekindergarten, prekindergarten assessment

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# Chapter 1: Introduction

Reading is among one of the most important academic skills, as it is the foundation for all learning (Pinnell & Fountas, 2021). According to Balzacar (2014), there is a 16% chance that a child will drop out of school in the future if they do not have at least rudimentary literacy abilities by the time they start school. In fact, data indicated that "one in six children who are not reading proficiently in third grade do not graduate from high school on time" (Hernandez, 2012, p. 6). Furthermore, helping children develop a foundation for literacy requires skillful teaching. Many children in the United States begin their academic careers in kindergarten; however, prekindergarten can be offered to students in a variety of formats. Early intervention in the form of a prekindergarten education can help young learners be kindergarten ready. Fundamentally, kindergarten readiness is not based on age; it is based on skills, and "without a strong foundation in reading, children are left behind at the beginning of their education" (The Children's Reading Foundation, 2021, p. 1).

Due to the emphasis placed on high-stakes testing beginning in third grade, it is imperative that research-based strategies are implemented in the classroom at all grade levels, even prekindergarten. According to Croft et al. (2016), it is noted that politicians unsuccessfully put pressure on district leaders to increase standardized test scores, thus it is vital that students are prepared and academically ready to participate in these state assessments. Prekindergarten, if implemented correctly, can help ensure that children are equipped to excel in their academic studies.

## Nature of the Problem

Effective prekindergarten programs encourage learning through play and

exploration while introducing young children to language learning. Language and play are the most important tools for early literacy learning as this is how children interpret their surroundings (Pinnell & Fountas, 2021). Furthermore, the National Reading Panel ([NRP], 2000) affirmed that instruction in phonics has the greatest impact on kindergarten and first-grade students; therefore, phonics instruction should be implemented at those grade levels. Based on this information, students will begin to explicitly study sound correspondences in kindergarten; hence, letter knowledge in prekindergarten is very important (Torgerson et al., 2018). Amico (2022) asserted that multi-sensory components such as tracing letters and saying the sounds simultaneously and using manipulatives support students' reading achievement. Additionally, research conducted by Buckingham et al. (2019) indicated that a student's capacity to learn to read is enhanced by rigorous phonics instruction and follows a sequence. The skills in the sequence are explicitly taught and practiced in early grade levels. This systematic and explicit instruction is effective for a variety of young learners (Buckingham et al., 2019).

Moreover, research conducted by Torgerson et al. (2018) on the development of the brain after phonologically based intervention supports the notion that teaching phonics and phonemic awareness helps create a strong foundation for literacy and reading instruction at a young age. Phonics instruction can begin as early as prekindergarten. The researchers emphasized that beginning readers must develop phonemic awareness. The capacity to recognize and participate in word-sound manipulation is known as phonemic awareness, and those sounds are identified as phonemes (NRP, 2000). Students must also understand that sounds can be separated from words to create other sounds, and this skill is also taught in prekindergarten (Torgerson et al., 2018). Furthermore, findings from

NRP (2000) identified the most effective teaching methods for young children. Students must be taught vocabulary, alphabetics, phonics, reading fluency, phonemic awareness, and reading comprehension in order to read. Additionally, these individual skills must be taught explicitly and are primarily introduced and taught at the prekindergarten level (NRP, 2000; Torgerson et al., 2018); hence, reading instructional practices and programs implemented in prekindergarten can propel young children to gain the necessary skills needed to be kindergarten ready. Prekindergarten programs require research, development, and implementation of innovative and effective reading instructional practices. NRP has provided guidance by identifying the most effective teaching methods for young children. To overcome the academic achievement inequities in reading, schools around the country have implemented a variety of literacy programs and curriculums. Among these programs is the Child Early Reading Development and Education Program (CERDEP), implemented in a small rural school district in South Carolina in 2014.

The pilot program for CERDEP was introduced in 2006 as a response to a funding lawsuit initiated by Abbeville County School District which highlighted funding inequities among schools throughout the state of South Carolina. Abbeville School District's at-risk 4-year-olds were given financial aid through the pilot program so they could enroll in a full-day prekindergarten program. Moreover, in 2014, the governor of South Carolina signed a new act into law that focused on students reading on grade level by the time they enter third grade and providing a full-day prekindergarten program to eligible students throughout the state that focuses on building foundational reading skills (South Carolina Department of Education, 2021b). As a result, CERDEP was implemented in the study site school district in 2014. Unfortunately, there is no research

to be found on the effectiveness of CERDEP on kindergarten reading readiness. The inadequate research available regarding this program reduces its reliability and creates doubt regarding the effects it will have on students' reading skills in educational systems implementing it. As such, using a program evaluation paradigm, the aim of this study was to assess CERDEP's impact on kindergarten reading readiness in a small rural school district in South Carolina.

**Impact of the Problem**

CERDEP is a prekindergarten program that provides an opportunity for at-risk 4-year-olds to receive a high-quality education in a full-day format. While this program focuses heavily on enhancing students' literacy skills and preparing students for kindergarten, providing students and their families with a quality prekindergarten education is the primary goal of CERDEP (South Carolina Department of Education, 2021a). Prekindergarten programs can take place in a public school setting, private school setting, childcare setting, or faith-based setting and can be state-funded, federally funded, privately funded, or a combination of all three. As a result, prekindergarten programs operate and can look very different. Several iconic preschool programs, including High/Scope, the Carolina Abecedarian Project, Project Head Start, and Chicago Child-Parent Centers, have served as examples for other preschool programs (Beard, 2021; Garber, 2022). Loewenberg (2022) asserted that despite the insurmountable amount of data analyzing the impact prekindergarten has on academic achievement, there is inadequate data analyzing the characteristics that make prekindergarten effective in general. Similarly, best practices for instruction tend to focus on at-risk youth and students of poverty as opposed to general best practices (Garber, 2022; Loewenberg,

2022). While there is a concentrated amount of data that describe and emphasize the influence of prekindergarten programs on kindergarten literacy and mathematics development, there are deficiencies in data analyzing CERDEP and its effect on kindergarten reading readiness.

This study evaluated CERDEP employing the context, input, process, and product (CIPP) design from Stufflebeam (2003). As a result, this program evaluation included gathering, evaluating, and interpreting both qualitative and quantitative data. To fully understand the reading deficits and/or strengths teachers may have observed in students who attended CERDEP prekindergarten and the most effective components of the prekindergarten literacy curriculum, qualitative data were gathered from a series of focus group sessions with prekindergarten and kindergarten teachers. A thematic analysis of data was conducted to identify recurring themes and patterns.

The quantitative strand of this study was achieved by analyzing archived literacy assessment data and archived literacy environment checklist data. Prekindergarten data from the Phonological Awareness and Literacy Screening (PALS) and kindergarten data from the Measures of Academic Progress (MAP) Reading and the Kindergarten Readiness Assessment (KRA) were used. To ascertain the effect of CERDEP participation on kindergarten reading readiness, a paired *t* test and a sequence of one sample *t* tests were performed. Archived data collected from the Literacy-Rich Classroom Environment checklist completed by an education associate from the state department were analyzed using descriptive statistics.

**Background of the Setting**

The setting, staff, and student demographics were essential to understanding the

study sites included in this research study. Furthermore, understanding the program and its goals was equally important to the development of this research study. Kindergarten students who participated in CERDEP during the 2021-2022 school year in the targeted school district were the focus of this study.

### *Setting of the Study*

Four rural South Carolina elementary schools—Schools A, B, C, and D—each with one to two CERDEP classrooms for a total of seven classrooms—were included in this program evaluation. School A had one CERDEP classroom, while School B had two CERDEP classrooms, and both schools were located in the same building. School C had two CERDEP classrooms, and School D had two CERDEP classrooms; however, these schools were located in separate buildings. Additionally, CERDEP had been implemented in all four schools for 8 years during the focus time of this study. Although School A and School B were located in the same building, each school had its own administrative staff and teachers. Common areas such as the multi-purpose room, cafeteria, media center, playground, and auditorium are shared.

Three of the schools in the study were prekindergarten through fifth-grade schools that offered core instruction in math, reading, writing, language arts, science, social studies, and related arts. School C was a prekindergarten through fourth-grade school that offered the same instructional courses as the other schools. The fifth-grade students from School C were housed at the middle school. Furthermore, School A had an arts-based curriculum and offered additional electives to students such as dance and strings. Dance is offered to all grade levels, while strings is specifically for the intermediate grade levels (3-5). School B had a project-based learning and science-based curriculum; however, the

course offerings at School B were identical to those at School C and School D. Except for School C, every school included in the study was a Title I school. During the 2021–2022 academic year, 84.5% of students at School A were considered students of poverty. This includes students who receive resources from a variety of public assistance services such as Temporary Assistance for Needy Families Program, Supplemental Nutrition Assistance Program, and Medicaid, or were in foster care, were homeless, and/or were migrants. School B had 93.5% of its student population as students in poverty during the 2021-2022 school year followed by School C with 72.2%. Finally, School D had 84.3% of its student population considered as students in poverty during the 2021-2022 school year.

Furthermore, each school's end-of-year testing data were used to provide the school with an overall rating. There are five possible ratings for schools: excellent, good, average, below average, and unsatisfactory. Due to the impact of COVID-19, schools did not receive a rating for the 2019-2020 or 2020-2021 school years. As a result, schools had to carry their same rating from the 2018-2019 school year. The state department resumed providing school ratings for the 2021-2022 school year. Schools A, B, and D received a rating of average during the 2021-2022 school year, which means they satisfied the requirements to guarantee that all students met the state standards set by the state of South Carolina. Conversely, School C received a rating of excellent which means the school exceeded the standards set forth by the state of South Carolina in regard to students meeting state standards.

Table 1 displays the percentage of students in poverty and the school ratings based on student testing data during the 2021-2022 school year. Table 1 provides a

glimpse of the setting where this program evaluation took place.

**Table 1**

*Students in Poverty, School Ratings, and Title I Status 2021-2022*

| School | Students in poverty (%) | School rating | Title I status |
|---|---|---|---|
| A | 84.5 | Average | Title I |
| B | 93.5 | Average | Title I |
| C | 72.2 | Excellent | Non-Title I |
| D | 84.3 | Average | Title I |

It is evident that the percentage of students in poverty was not the only factor that impacted the schools' ratings. As seen in Table 1, Schools A, B, and D received a rating of average, but School B had more students in poverty by nine percentage points. School C received the highest rating but also had the smallest percentage of students in poverty. All the schools included in this program evaluation are Title I, except School C.

Furthermore, the research conducted in this program evaluation examined the reading readiness skills of students who attended the CERDEP program during the 2021-2022 school year based on measures from MAP Reading and the KRA. Prekindergarten students who did not enroll in the district's CERDEP program may have attended a Head Start program, a private daycare, or a faith-based daycare program located in the same geographical area. Consequently, data from these students were not included in the study. Data detailing each student's educational experience prior to kindergarten were obtained through permanent record data. Data from students who were enrolled in prekindergarten during the 2021-2022 school year and kindergarten during the 2022-2023 school year were used for this four-component CIPP comprehensive evaluation.

### *Staff*

School A had a total of 29 teachers, 41.4% of whom had advanced degrees during

the 2021-2022 school year. Teacher retention at School A was low with only 70% of its teachers returning from the previous year. Furthermore, the teacher attendance rate was 93.2%, and 100% of teachers at School A had at least 3 years of experience in the classroom. Similarly, School B had a total of 31 teachers; however, the percentage of teachers with advanced degrees was 67.7%. Teacher retention at School B was higher than School A with 80.6% of its teachers returning from the previous year. The teacher attendance rate was 91.8%, and 96.8% of its teachers had at least 3 years of experience in the classroom.

School C had a few more teachers on staff, as it had 36 teachers during the 2021-2022 school year. Of those 36 teachers, 66.7% had advanced degrees. The teacher retention rate at School C was slightly higher than School B with 88.2% of its teachers returning from the previous year. School C had a teacher attendance rate of 93%, and 100% of the teachers had at least 3 years of experience in the classroom. School D had the smallest number of teachers on staff with 23. Of those 23 teachers, 56.5% had advanced degrees. The teacher retention rate at School D was similar to School A and lower than School C and D with 70.8% of its teachers returning from the previous school year. The teacher attendance rate was 95.4%, and 100% of its teachers had at least 3 years of experience in the classroom.

Table 2 illustrates the number of teachers at each school, the percentage of teachers with advanced degrees, the retention rate, the teacher attendance rate, and the percentage of teachers with at least 3 years of experience in the classroom during the 2021-2022 school year.

**Table 2**

*Staff, Advanced Degrees, Retention, Attendance, and Experience of Teachers 2021-2022*

| School | Number of teachers | Advanced degrees (%) | Teachers returning from previous year (%) | Teacher attendance rate (%) | Teachers with ≥ 3 years of experience (%) |
|---|---|---|---|---|---|
| A | 29 | 41.4 | 70 | 93.2 | 100 |
| B | 31 | 67.7 | 80.6 | 91.8 | 96.8 |
| C | 36 | 66.7 | 88.2 | 93 | 100 |
| D | 23 | 56.5 | 70.8 | 95.4 | 100 |

Staff data were imperative to understanding the school and the quality of teachers each study site had during the focus time of this research study. Teacher retention and years of experience were especially important as CERDEP was implemented in all four schools at the same time. As seen in Table 2, the most significant differences among the four study sites were the number of teachers on staff, the percentage of staff members with advanced degrees, and the percentage of staff members returning from the previous year. The teacher attendance rate and the percentage of teachers with at least 3 years of experience in the classroom did not vary much. In fact, data from the table showed that the classrooms in each building were equipped with teachers who had successfully passed their induction and evaluation year of teaching.

***Student Demographics***

The number of students enrolled at School A during the 2021–2022 academic year was 379. This school served grades prekindergarten through fifth, and of those 379 students, 84.5% were considered students of poverty. Moreover, 5.4% of students in School A were served by the Gifted and Talented program, and 0.6% of the students were retained. School B had a slightly larger student population with 408 prekindergarten through fifth-grade students. The percentage of students in poverty was 93.5%. The

Gifted and Talented program served 3.9% of the students, and 1.1% of the students were retained.

School C had the largest student population during the 2021-2022 school year with 476 students in grades prekindergarten through fourth. School C also had the lowest percentage of students in poverty with 72.2%. They also had the largest percentage of students in the Gifted and Talented program with 12.2% and the largest percentage of student retention with 6.1%. School D had the smallest student population of 344 students in grades prekindergarten through fifth. Although School D had the smallest student population, it also had the second smallest percentage of students in poverty with 84.3%. Of its student population, 11% were served by the Gifted and Talented program, the second largest percentage in the district. Moreover, School D had a student retention rate of 3.3%.

Table 3 demonstrates the student population, students in poverty, the proportion of students who participated in the Gifted and Talented program, and the retention rate for 2021-2022. Each school in the study site district had a unique population of students who required different needs and services.

**Table 3**

*Student Population, Students in Poverty, Gifted and Talented, and Student Retention 2021-2022*

| School | Student population | Students in poverty (%) | Students in gifted and talented (%) | Student retention (%) |
|---|---|---|---|---|
| A | 379 | 84.5 | 5.5 | 0.6 |
| B | 408 | 93.5 | 3.9 | 1.1 |
| C | 476 | 72.2 | 12.2 | 6.1 |
| D | 344 | 84.3 | 11 | 3.3 |

Like staff data, student demographics were essential to understanding the population of students served during the 2021-2022 school year at each study site. As seen in Table 3, the most significant differences noted were the student population, the percentage of students in poverty, and the percentage of students served by the gifted and talented program. The data reflected that a larger student population did not necessarily mean a larger percentage of students in poverty. As prekindergarten and kindergarten student data were used in this research study, it is worth noting that three schools serviced grades prekindergarten through fifth and one school, School C, serviced grades prekindergarten through fourth throughout the focus period of this study.

**Program Description**

CERDEP is a South Carolina-based, free, full-day prekindergarten program for at-risk students. A mixed delivery approach is used to implement the program, allowing both public school districts and authorized private center-based providers to provide services to children who meet the eligibility criteria. Eligibility factors include age, residency, and meeting income guidelines (South Carolina Department of Education, 2021a). Furthermore, teacher eligibility and requirements differ based on the location of the program. Teachers in private facilities are required to have at minimum an associate's degree, while those in public school districts are expected to have a bachelor's degree. In addition to educational requirements, teachers must also participate in yearly professional development trainings on a variety of topics in order to maintain compliance.

Curriculum resources are also an important aspect of CERDEP. While the selected curriculum can include mathematics, science, social studies, and social-emotional development, the primary focus of CERDEP is building foundational literacy

skills (South Carolina Department of Education, 2021a); thus, CERDEP districts and classrooms must integrate a research-based curriculum that focuses on building foundational literacy skills for young children. South Carolina provides a variety of research-based curriculums for districts to choose from for implementation. Each district has the autonomy to select which curriculum it would like to implement. Moreover, funding is another essential aspect of CERDEP. This program is both federally and state-funded with a majority of the funds coming from the state (South Carolina Department of Education, 2021a). Funding is based on enrollment. The funds are given to the district, which is then disbursed to the schools. The schools often use the funds to purchase equipment, manipulatives, and resources for the students.

### *Program Goals*

The goal of CERDEP is "to provide children and their families with quality preschool experiences necessary for school success" (South Carolina Department of Education, 2021a, p. 2). This objective entails a significant obligation to guarantee that kindergarten-age students can access the core curriculum. Moreover, the goal of the implementation of CERDEP in this evaluation was measured by how well students who attended CERDEP in 2021-2022 met grade-level standards and expectations in kindergarten during the 2022-2023 school year as measured by MAP Reading and the KRA. Specifically, MAP Reading data are aligned with South Carolina's end-of-the-year assessment for students in third through eighth grades. As a result, these data identify students who are on track to exceed, meet, or not meet the standards set forth by the state of South Carolina.

### *Program Implementation*

CERDEP was implemented in the school district that Schools A, B, C, and D are a part of in 2014. Located in a rural area, this school district has a significant level of students in poverty. CERDEP teachers participated in training during the summer of 2014 to learn more about the program, its goals, initiatives, eligibility requirements, and the enrollment process. One of the steps in the enrollment process is administering a screening assessment to all students who register. CERDEP teachers also attended training during the same summer to learn how to administer and score the screening assessment. Teachers in the district spent the summer of 2014 enrolling and screening students for the program. As a result, August 2014 is the official CERDEP implementation date for each site included in the study; however, the rate and depth of implementation at each study site varied.

## Program Evaluation and Program Theory

A program evaluation is a methodical approach of judging a program's value and significance. Evaluation entails identifying, collecting, reporting, and using vital and descriptive data regarding the worth and quality of a product to increase accountability. Additionally, evaluations inform decision-making, help spread best practices, and deepen comprehension of pertinent occurrences (Stufflebeam, 2003). In this study, CERDEP was evaluated to determine its effect on kindergarten literacy achievement. Program evaluation is the process of assessing the value of a certain program, and it is based on the evaluation's findings. The value, in accordance with Stufflebeam (2000b), serves as the starting point for developing the specific evaluation requirements. These in turn provide guidance for choosing/creating the assessment tools and interpretation criteria.

Moreover, the evaluation process must be guided by criteria or guiding principles in order to be considered valid.

### *CIPP Evaluation Model and Program Theory*

The CIPP evaluation model was used for this program evaluation. The goal of this program evaluation was aligned with the framework of this accountability-oriented evaluation paradigm. Daniel Stufflebeam created the CIPP model in 1966 to serve as a compulsory evaluation framework for federally sponsored projects in the United States (Stufflebeam, 2003). Furthermore, evaluation utilizing program theory emphasizes program information that is critical to determining a program's efficacy. The program theory will provide answers to research questions that assess the program's results, facilitate the gathering of data for additional study, and offer enduring values that illustrate how well a program performs (Funnell & Rogers, 2011). The program theory in this program evaluation was based on the participants' anticipated literacy results both during and after enrollment in CERDEP. To enhance the validity and reliability of this program evaluation, these outcomes were assessed through the collection of qualitative and quantitative data.

## Purpose of the Study

The purpose of this study was to evaluate the effectiveness of CERDEP on kindergarten reading readiness in a small rural school district in South Carolina using the program evaluation model. The four evaluation components covered by this model are context, input, process, and product (CIPP). The goal of this program evaluation was to assess CERDEP's value as a literacy education program model for prekindergarten students. Furthermore, while a variety of public and private prekindergarten programs are

available to children and their families, this study evaluated how student participation in CERDEP impacted kindergarten reading readiness. More specifically, this study explored the alignment of the program's goals and identified significant gaps in student reading knowledge and skills. Prekindergarten curriculum resources used in the program were examined in addition to exploring classroom environmental structures. As a result, a mixed methods approach was used to conduct this program evaluation. Kindergarten students who participated in CERDEP during the 2021-2022 school year in the targeted school district were the focus of this study.

**Significance**

School reading readiness continues to be a major concern today. Wood (2019) indicated through research that achievement gaps are found before students enter kindergarten. As a result, prekindergarten is used as an intervention to help identify and begin closing those achievement gaps. Prekindergarten also provides the opportunity for students to receive a high-quality education (Garber, 2022). Furthermore, while more states are beginning to offer universal prekindergarten, those programs can look very different (Loewenberg, 2022). Curriculum resources and classroom environment are a few of the factors that vary among these programs.

A rural South Carolina school district implemented CERDEP in 2014. Due to the variety of settings in which prekindergarten programs can be found, early childhood educators, childcare center directors, principals, and curriculum specialists will find valuable and applicable information in this study. More specifically, CERDEP early childhood educators will be able to glean from other teachers effective prekindergarten literacy practices and programs. They will further be able to identify the necessary skills

needed to positively impact student literacy achievement. Childcare center directors and principals will be able to strategically lead their centers and schools based on the structures in place to ensure success in literacy achievement in their prekindergarten programs to ensure students are kindergarten ready.

In addition to the aforementioned stakeholders, curriculum specialists, and other central office personnel will have access to disaggregated data based on common state assessments that measure kindergarten readiness and literacy development; hence, the proper modifications and adjustments can be made at each level to help prekindergarten students reach their literacy goals and demonstrate kindergarten reading readiness. Consequently, this study contributes to existing bodies of work related to the positive effects of prekindergarten on student literacy achievement in kindergarten. More importantly, due to the limited body of research on CERDEP, this study provides specific research on the program and if the practices and goals of the program are aligned. Moreover, to further guide this program evaluation, a detailed discussion of limitations, delimitations, and assumptions is provided in Chapter 3.

**Research Questions**

The following questions regarding CERDEP were addressed in this study:

1. To what extent does CERDEP align with the assessed needs? (context)
2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input)
3. How closely does the program adhere to its initial design? (process)
4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product)

5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product)

## Definition of Key Terms

The terms listed below are utilized in this program evaluation.

### *CERDEP*

A full-day education program for at-risk 4-year-olds that is funded by the federal government and the state. Its primary focus is to provide high-quality education to at-risk students (South Carolina Department of Education, 2021b).

### *Developmentally Appropriate Practice*

A way to encourage each child's full potential in both learning and development through play-based learning (National Association for the Education of Young Children, 2021).

### *Elementary and Secondary Education Act*

The Elementary and Secondary Education Act (ESEA) was passed to alleviate the disparities in educational opportunities for low-income students and children of color. It was signed by President Lyndon B. Johnson in 1965 (United States Department of Education, 2021).

### *Every Student Succeeds Act*

The most recent reauthorization of ESEA was signed by President Barack Obama in 2015. It is titled the Every Student Succeeds Act ([ESSA]; United States Department of Education, 2021).

### *KRA*

An assessment that examines a child's readiness for school in a number of areas:

social, language/ literacy, mathematics, and physical well-being. The test is administered by teachers to kindergarten students at the beginning of the school year (South Carolina Department of Education, 2021c).

***Kindergarten Reading Readiness***

Refers to the literacy skills a student should have as they enter kindergarten. It includes skills such as recognizing their name, letter identification, letter sounds, and concepts of print (PALS Resource Center, 2022).

***MAP***

An assessment that measures general knowledge in reading, mathematics, language use, and science through a sequence of computerized adaptive exams. In South Carolina, the MAP assessment is administered in the fall, winter, and spring and is aligned with South Carolina's end-of-year state assessment for third- through eighth-grade students (Northwest Evaluation Association, 2022).

***No Child Left Behind***

No Child Left Behind (NCLB) was enacted by Congress in 2002. This federal law placed a strong emphasis on state and school accountability for student development, achievement gaps, and support for all students, regardless of race or socioeconomic status (United States Department of Education, 2021).

***Phonemic Awareness***

The ability to identify and manipulate individual sounds in words; typically the last phase of phonological awareness to develop (NRP, 2000).

***Phonological Awareness***

Understanding and being able to manipulate parts of words. It paves the way for

decoding, blending, and word reading (NRP, 2000).

***Phoneme***

The smallest unit of sound in a language that separates one word from another (NRP, 2000).

***PALS***

A measure of knowledge of emergent literacy skills in young children including name writing, letter knowledge, beginning sound awareness, print awareness, rhyme awareness, and nursery rhyme awareness. This assessment is given to prekindergarten students three times a year (Invernizzi et al., 2004).

***Prekindergarten***

A formal, full-day, education program for 4-year-old children free of charge (South Carolina Department of Education, 2022).

***Title I***

A federal program that provides funds and opportunities for disadvantaged children to receive the resources needed to develop the knowledge and skills necessary to achieve rigorous state content standards (United States Department of Education, 2022).

***Zone of Proximal Development***

A phenomenon developed by Lev Vygotsky. It is the distance between a child's potential development level and their actual development level as measured by their ability to solve problems independently and with adult supervision respectively (McLeod, 2018).

# Chapter 2: Literature Review

Providing young learners with the opportunity to receive a high-quality early childhood education is imperative to their success in school (Pinnell & Fountas, 2021). Early childhood programs can receive funding from different sources and can be classified as private or public. Consequently, prekindergarten programs operate in a variety of settings and can look very different. There is a myriad of data that describe the impact of prekindergarten programs on early learners; however, there are deficiencies in data analyzing the impact of South Carolina's CERDEP program on kindergarten reading readiness. With such a saturated market that tends to evaluate federal programs, it is essential to assess the success of programs that receive both state and federal funds; hence, this research study aimed to conduct a program evaluation on the effectiveness of CERDEP on kindergarten reading readiness.

Prekindergarten programs have grown and can look different across disciplines; however, the goal of prekindergarten remains the same–to provide a high-quality preschool education to all students (Loewenberg, 2022; Pinnell & Fountas, 2021). Prekindergarten programs are offered in a variety of formats and vary from state to state. While prekindergarten is not a mandatory grade level in the state of South Carolina, parents can choose from a variety of options. Oftentimes, students do not enter prekindergarten or kindergarten with the same academic capabilities. As a result, political leaders and policy makers have been pushing the idea of universal prekindergarten to help prepare students for kindergarten (Croft et al., 2016).

The purpose of this study was to conduct a program evaluation on the impact of a South Carolina prekindergarten program on kindergarten reading readiness in a rural

district in South Carolina. In an effort to examine the impact South Carolina's CERDEP program has had on student literacy achievement, a review of related literature was conducted. Furthermore, this literature review explored historical and political perspectives related to education and early childhood programs in the United States. The rise of prekindergarten programs in the United States, and more specifically South Carolina, was also examined. In addition, South Carolina's early learning standards and literacy assessments were explored. Finally, a review of research identifying important reading readiness skills for young learners was summarized.

## Historical and Political Perspectives

The emergence of daycare centers and nursery schools in the United States in the 1830s marked the beginning of early childhood education (Anderson, 2020). These schools focused on the basic care and supervision of young children as a response to mothers who now had to work. Rapid industrialization coupled with massive immigration affected the day nurseries and nursery schools as they continued to grow. Additionally, factors such as the Civil War, World War I, and World War II also impacted enrollment figures (Anderson, 2020). Nursery schools and early childhood programs experienced an influx of growth in the 1920s as these programs became an improved experience for middle class children. There was minimum public interest and support for early childhood programs until the 1960s and 1970s.

In 1964, President Lyndon B. Johnson, a former educator who believed that the key to ending the cycle of poverty was education, issued the War on Poverty. Consequently, in 1965, he officially ratified ESEA. ESEA was established to address the significant disparities in educational opportunities between low-income students and

students of color. Essentially, it was designed to lessen and ultimately eradicate differences in educational quality. ESEA was passed into law during the same period as the Voting Rights Act and the Civil Rights Act (United States Department of Education, 2021). The first federal childcare law was passed by Congress in 1971; however, President Nixon prohibited the legislation as conservatives during this time period focused on blocking any federal childcare initiatives. In the 1980s, services for underprivileged and/or abandoned children, children of working parents, compensatory education, and early education to promote young children's development became more prevalent. ESEA has been reauthorized more than a dozen times and each new implementation of ESEA expands the federal role in education.

Moreover, NCLB was enacted in 2002. Signed by President George W. Bush, NCLB was a reauthorization of ESEA that strengthened the federal government's oversight of schools. The main objectives of NCLB were to increase American competitiveness and reduce the academic achievement gap between underrepresented minorities and their wealthier peers. Additionally, NCLB placed a focus on a number of student subgroups, including English language learners, students with special needs, and poor and minority students. With NCLB requirements, students in Grades 3-8 were expected to reach their annual achievement targets in mathematics and reading. Specific guidelines were implemented to make sure students reached a level of competency. Essentially, the requirements of NCLB became unfeasible for all schools and educators.

Fast forward to today, ESSA was passed to replace NCLB. Consequently, it is the most recent renewal of ESEA, which was signed by President Lyndon B. Johnson in 1965. Signing ESSA into law in 2015, President Barack Obama signed legislation

building on considerable advancements from the previous years. The objective of Title I–which is to reduce educational achievement disparities and give all children the chance to pursue high-quality education that is equitable, fair, and accessible–is the same under ESSA, but it is now known as “Improving Basic Programs Operated by State and Local Educational Agencies” (United States Department of Education, 2021). In essence, Title I is a federal program that provides funds and opportunities for disadvantaged children to receive the resources needed. There are a total of 650 Title I schools in the state of South Carolina, including three of the four schools in this study (South Carolina Department of Education, 2021d).

**Poverty and Education**

According to estimates from the United States Census Bureau (2015), 20% of children nationwide were predicted to be living in poverty in 2020. This indicates that approximately every fifth child belonged to a family earning less than $24,339 per family in annual household income. According to further data on the federal government's free and reduced lunch program, a startling 51% of students in grades prekindergarten through 12 were reported to live in low-income households (Taylor, 2017). This, in turn, creates serious concerns and challenges because there are many economically disadvantaged children in public school classes across the United States.

Poverty has a profound and enduring impact on a child's academic performance. The cognitive and literacy development of young children who grow up in poverty is challenged, as they frequently start school academically and socially behind their peers who come from middle class households (Edelman, 2021). Additionally, low-income children may also experience deficiencies in their physical and cognitive development as

well as differences in their access to healthcare and necessary resources. Furthermore, low-income students are 13 times less likely than high-income students to complete high school on time and are more likely to drop out (Taylor, 2017). As a result, investments in high-quality early education and the appropriate support throughout the public K–12 system must be made to address the various problems that can accompany poverty (Edelman, 2021). Extending this notion, Allgretto et al. (2022) asserted that schools should be funded fully and equitably. According to the Center for American Progress (2018), increased funding for low-income schools can dramatically enhance student performance in reading and math as well as increase student earnings and educational attainment. Essentially, poverty and education are correlated; however, integration of high-quality and rigorous early education increases the likelihood that students from low-income backgrounds will succeed in school and beyond (Edelman, 2021; Taylor, 2017).

**Prekindergarten Programs in the United States**

The early reform movement included the nation's concern for the education of at-risk or extremely impoverished children in the 1980s (Pondiscio, 2018). *A Nation at Risk*, a federal report published in 1983, sparked widespread alarm about the quality of American education; therefore, the publishing of this document served as the driving force behind the urgency of expanding preschool programs to focus on at-risk and low-income children. The Goals 2000: Educate America Act ([Goals 2000], 1994) was approved by Congress on March 31, 1994. By the year 2000, this bill set forth a number of general goals and objectives for public schools in the United States. The federal government was given a new role in supporting education under Goals 2000. In order to better prepare children for kindergarten, the federal government increased demand for

early childhood programs (Goals 2000, 1994).

The National Institute for Early Education Research ([NIEER], 2021) reported that during the 2020-2021 academic year, 34% of America's 4-year-olds attended state-funded preschool programs, while 20% attended private preschool programs. NIEER's report noted that COVID had a negative impact on enrollment. Enrollment decreased from 34% in 2020-2021 to 29% in 2021-2022 for 4-year-olds attending state-funded programs. States vary greatly in the proportion of 4-year-olds served by public prekindergarten. According to NIEER, the District of Columbia had the highest percentage of 4-year-olds enrolled, followed by Oklahoma and Iowa. Prekindergarten program expansions have improved during the last decade, notwithstanding a recent decline in growth on a national level. Prekindergarten funding cuts have caused states to prioritize student access above program quality, which has resulted in a decline in growth (Parker et al., 2018).

Furthermore, with one in every three children participating in a state prekindergarten program operated by a private provider, the role of private providers is essential in the country's quickly growing state prekindergarten system (Parker et al., 2018). At least 50% of prekindergarten students in 14 states receive their education in private settings. Teacher preparation, teacher salary, and access to resources are among the primary differences between state-funded prekindergarten programs given by public and private providers versus programs that are by private providers solely (Parker et al., 2018). Consequently, states and private providers must continue to work together in the United States in order to serve and give access to more students.

In addition to the necessity for universal prekindergarten programs and the

collaboration of private providers to serve all students, high-quality standards are necessary in order to effectively address the needs of every student enrolled in the state's prekindergarten program. The preschool program's quality will determine how well it supports children's learning and growth. Programs can achieve greater levels of quality if specified quality requirements are established in state-level policy. Each publicly sponsored prekindergarten program has its own set of criteria for quality. NIEER compares state prekindergarten programs' quality requirements using a research-based checklist of 10 quality indicators such as inclusive early learning standards, a teacher who holds a bachelor's degree in the arts, specific training related to prekindergarten instruction, a paraprofessional with a credential in child development, at least15 hours of professional development each year for classroom teachers, small class sizes, a maximum teacher-student ratio of 1:10, health services, support services, a minimum of one meal per day; and site visits are all requirements (Weyer, 2021). The above criteria demonstrate a state's dedication to giving every child a successful educational experience.

**Landmark Preschool Programs**

There are several significant early education programs that are often cited by those who are in favor of preschool. The programs have been shown to be of high-quality and effective. There was little public knowledge about preschool during the time the High/Scope Perry Preschool Program and Project Head Start took place. Fortunately, long-term follow-up studies were conducted on each study to assess the outcomes and effects of these early childhood interventions. Today's early childhood education programs are still being shaped by the High/Scope Perry Preschool Program and Project Head Start. The High/Scope Perry Preschool Program was conducted from 1962 to 1967

(Schweinhart, 2018). The High/Scope Perry Preschool Program was built on the Piaget paradigm, which emphasizes children as purposeful learners who learn best through tasks they create, complete, and evaluate (Morrison, 2022). The High/Scope Perry Preschool Study included 123 at-risk students of African American descent who grew up in adversity (Schweinhart, 2018). The specific characteristics of this program included teachers who taught a small group of five to six students, 2.5 hours a day while making weekly home visits (Morrison, 2022; Schweinhart, 2018). A bachelor's degree and certification in education were the requirements for teachers employed in this program.

The High/Scope education model also required teachers to arrange the classroom and daily schedule in a way that promoted self-initiated learning activities (Schweinhart, 2018). Small group and whole group instruction were included in these activities. Furthermore, teachers were educated about this pedagogical style and were regularly trained and supported in its usage. Long-term outcomes and findings have been established since the High/Scope Perry Preschool Program study was carried out over a number of years and monitored for 40 years after it was finished. Conclusions drawn from the study included the recommendation that all young children living in low-income homes should have the opportunity to attend preschool programs with characteristics roughly comparable to those of the High/Scope program (Schweinhart, 2018). The High/Scope curriculum is still used today as an option for early childhood curriculums that can be implemented in CERDEP classrooms (South Carolina Department of Education, 2021a).

Moreover, the War on Poverty was spearheaded by President Lyndon B. Johnson in 1964. This legislation focused on the social welfare of the citizens of the United States.

From this legislation, several federal programs and agencies were created. Project Head Start began in 1965 as an 8-week pilot summer program as a result of this legislation. The program served low-income families and children ages 3 to 4 by addressing the families' emotional, social, health, nutritional, and educational needs (Office of Head Start, 2022; South Carolina Head Start, 2021). Based on the success of the 8-week program, in 1966, Project Head Start was funded for a year operating as a half-day program for 9 months (Office of Head Start, 2022; South Carolina Head Start, 2021). As Head Start continued to grow, a combination of comprehensive services was offered to families. Early Head Start was established in 1995 as an extension of Project Head Start. This program was created to offer services to families who had infants and toddlers.

Teacher quality in regard to education and experience varied in addition to the curriculum used; however, teachers were assisted in implementing a research-based curriculum by receiving professional development and training (Early Childhood Learning and Knowledge Center, 2022). The Head Start curriculum includes five domains: approaches to learning; social and emotional development; language and literacy; cognition; and perceptual, motor, and physical development (Early Childhood Learning and Knowledge Center, 2022). Furthermore, the language and literacy domain includes three subdomains: attending and understanding, communicating and speaking, and vocabulary (Early Childhood Learning and Knowledge Center, 2022). While there is no specific research detailing the delivery of literacy instruction in the Head Start classroom, the curriculum used addressed those three areas (Head Start Impact Study, 2010). The overall major findings of the study suggested that having access to Head Start improved various reading readiness skills such as language and literacy development,

letter and word identification, spelling, pre-academic skills, phonological processing, motor skills, and mathematical processes for students while enrolled in the program (Head Start Impact Study, 2010).

Head Start is still a prominent early childhood education program serving young students of poverty. There are significant similarities and differences between the state-supported CERDEP program and the federally funded Head Start program. Aside from funding, one of the major differences is where the programs take place. For instance, CERDEP programs typically take place in public school buildings, while Head Start programs do not. Additionally, CERDEP programs follow the 180-day school district calendar, while Head Start programs are in session for 166 days. The curriculums used in both programs also differ. In regard to similarities, teachers from both programs must participate in professional development sessions and report those hours each year (South Carolina Department of Education, 2021a).

**Early Literacy Instruction**

The National Early Literacy Panel (NELP) was established by Congress in 2002. The goal of NELP was to determine the most effective strategies for educators and families to support the language and literacy development of young children in order to inform policy and practice (Pentimonti et al., 2021; Shanahan & Lonigan, 2013). Furthermore, the NELP's report intended purpose was to offer advice on tools for teaching literacy to families and teachers, as well as resources for family literacy practitioners, preschool program directors, and early childhood educators. Since the NELP's report release, several organizations such as the National Institute for Literacy and the National Center for Family Literacy have created materials to aid in the

interpretation of its conclusions and the creation of early literacy instruction guidelines (Pentimonti et al., 2021; Shanahan & Lonigan, 2013). These guidelines are used today to guide early literacy instruction.

The most crucial ability children can acquire in school is reading, which serves as the basis for all other academic topics (Hoover & Tunmer, 2018; Nation, 2017). Reading is a complex notion, and reading ability varies according to context, text demands, reader traits, and reading goals (Nation, 2017). NRP asserted that understanding letter-sound correspondence, using letters and sounds to form words, manipulating sounds in words, and using methods to aid and enhance reading comprehension are all parts of the concept of being able to read. Essentially, reading comprehension, fluency, complicated text analysis, and efficient social and internet communication are all part of the broad idea of literacy (Hoover & Tunmer, 2018; Sanabria et al., 2022). As a result of its multifaceted concept, reading proficiency has been linked to positive academic, career, economic, and societal consequences (Gaab & Petscher, 2022; Seidenberg, 2017).

Learning to read is a right for every child; however, reading is not a skill that comes naturally (Gaab & Petscher, 2022; Sanden et al., 2022). Children from low socioeconomic status homes, those who are dual language learners, and those with linguistic impairments have more difficulties with reading comprehension (Sanabria et al., 2022). This, in turn, puts these groups of students at risk. Students who are deemed at-risk usually require intervention and support to help them succeed academically. As such, the learning environment must be strong in order to meet the students' specific needs (Lonigan et al., 2018; Puglisi et al., 2017). Early literacy skills should be intentionally developed for all children, especially for those with disabilities and those

who are deemed at risk (Beecher et al., 2017); thus, early detection and intervention are vital to the future success of struggling readers (Gilmore et al., 2018).

Moreover, unique precursors have been identified that can predict reading results as early as preschool. These skills include letter and letter-sound knowledge; phonological awareness (the capacity to manipulate language sounds); pseudoword repetition (the capacity to repeat and reproduce orally presented nonwords or pseudowords); oral language abilities, such as vocabulary and oral listening comprehension; and rapid automatized naming (the capacity to quickly locate and identify a group of extremely familiar stimuli arranged in reading direction; Elwer et al., 2015; Kilpatrick, 2017; Lepola et al., 2016; Suggate & Reese, 2018). Consequently, effective literacy instruction is of utmost importance.

It is critical for teachers to aid in children developing literacy skills during the preschool years (Beecher et al., 2017). Early literacy encompasses the acquisition of skills that come before reading, like phonological awareness, knowledge of letters and sounds, and oral language (Beecher et al., 2017; Pentimonti et al., 2021). As such, the best indicators of successful reading are early print knowledge and phonological awareness. Early literacy research indicates that teachers may help young children acquire early reading abilities by creating stimulating environments for language and literacy through the integration of intentional instruction in letter-sound correspondence (Beecher et al., 2017; Sanabria et al., 2022). Furthermore, effective literacy instruction includes a combination of authentic and diverse literacy opportunities for young learners (Justice et al., 2018). Teachers' use of actions that expand students' opportunities to respond to cues, resulting in more practice, feedback, and deeper learning, is a crucial

element of effective literacy instruction (Beecher et al., 2017.) Effective teachers are also skilled at differentiating and scaffolding instruction (Ankrum et al., 2014). Differentiated instruction refers to giving each child individually tailored, scaffolded training based on their current level of performance (Beecher et al., 2017).

In addition to teachers providing differentiated and scaffolded instruction, the way in which the instruction is provided is also important. Small group instruction, according to Behringer (2018), is frequently more effective because it enables closer monitoring and more practice, particularly when students are grouped according to their instructional needs. Additionally, categorizing students according to academic competence levels enables them to study the skills that are most suitable for them, enhancing their success (Behringer, 2018); hence, the use of integrating developmentally appropriate practices, focusing on authentic ways to teach early literacy skills, providing instruction in other content areas, and providing students ways to practice real-life literacies are all critical to long-term literacy development. Even more so, the development of young children's early literacy abilities must be interwoven with broader objectives for their growth, including their social and emotional development and exposure to new concepts and material. Essentially, a strong emphasis on the whole child should be combined with early literacy initiatives (Pentimonti et al., 2021).

**Kindergarten Reading Readiness**

In addition to requiring greater state accountability, the rigorous Adequate Yearly Progress goals of NCLB are met by placing a greater emphasis on reading achievement among educators, school districts, and students. School districts should promote the goal of "school readiness" for all students in an effort to lessen or eradicate the academic

achievement gap. The literacy levels at which students start school have a direct bearing on both their academic success and reading proficiency. Teachers and legislators continue to struggle with the discrepancy between the readiness skills educators believe children require and the actual readiness skills kindergarten students bring to the classroom (Beard, 2021). As a result, school readiness and reading readiness continue to be major concerns today. To combat that concern, lawmakers and political leaders have pushed the issue of universal prekindergarten for all. In fact, research indicates that high-quality early childhood programs can be correlated to student success (Loewenberg, 2022; Wood, 2019). More specifically, readiness skills include physical development, socio-emotional development, cognitive development, and language and communication development (Kelly, 2022); thus, the need for early intervention also becomes important.

Oliver (2021) asserted that the term readiness, which is utilized by both educators and scholars, considers a wide range of societal and personal factors. A child's ability with language includes exposure to social standards in the classroom, socializing with peers and print, and engaging in age-appropriate hands-on learning activities (Oliver, 2021). Babb (2023) also pointed out that readiness to learn is based more on when a child reaches a developmental stage in which they are biologically capable of learning, and readiness for school refers to a child's pre-academic abilities prior to entering kindergarten. According to Snow and Matthews (2016), reading readiness is the acquisition of pre-reading skills that are prerequisites for formal reading teaching in school. Previous research has indicated that reading readiness and reading ability are highly correlated; children who are not reading ready for school will find it more difficult to learn to read in the elementary grades (Seidenberg, 2017). Balzacar (2014) further

suggested that the best times for interventions to improve children's adjustment to school and to prevent subsequent academic issues are at the start of school or in the preschool years. Attendance in preschool has been demonstrated to improve children's readiness skills, which in turn affects their academic success and future economic status (Brown-King, 2020; Lee et al., 2018).

Furthermore, reading studies have indicated that children need to gain a grasp of concepts to motivate reading and writing in order to succeed in school and, more importantly, to achieve academic success throughout their lives. To keep up with the demands of an economy that is ever more competitive, one must learn to read. Reading guarantees that students can find work in the current world, comprehend difficult subject matter, and use written information to solve issues on their own. Reading is utilized to convey important information and lay a solid theoretical and practical foundation. Students' capacity to comprehend stories and express themselves clearly in speech and writing is improved based on one’s vocabulary knowledge. Research has shown that pupils who have verbal abilities, phonological awareness, letter knowledge, and comprehension have few challenges becoming ready to read (Toot, 2019).

The question of when young children should start learning to read has become more contentious. The early childhood years are essential for the development of literacy skills that equip students for reading. Kindergarten students are expected to know and understand a number of literacy-related concepts (Miller, 2017). Early literacy skills and reading readiness involve applying a variety of critical skills. Readiness skills consist of being familiar with all the letters and their sounds; being prepared to learn to read and write; the student's chronological age, or the number of years they have lived; the

teacher's expectations for the classroom; and the student's stage of social, perceptual, motor, and language development (Oliver, 2021; Piasta et al., 2018.). Furthermore, the interactive process of readiness engages the child, family, community, and environment in ways that enhance the development of their social-emotional, physical, emotional, language, and cognitive skills (Early Childhood Learning and Knowledge Center, 2022).

According to the National Association for the Education of Young Children (1998), kindergarteners should engage and form supportive, wholesome relationships with adults. Activities within these relationships include storytelling, dramatic performance, singing, and finger exercises. Additionally, these students should be able to play games, recite poetry and rhymes, write lists, and explore the outdoors and nature. Unfortunately, preschool and kindergarten students often lack the proper experiences and the language and literacy skills needed to be successful readers, especially those in low-income areas (Hustedt et al., 2017); hence, young students are often at risk for reading deficiencies (Oliver, 2021).

The alphabet, phonemic awareness and phonics, reading fluency, vocabulary, and reading comprehension techniques must all be taught to all children in order for them to learn to read (NRP, 2000; Torgerson et al., 2018). Furthermore, a solid foundation for literacy and reading education is built by teaching phonics and phonemic awareness (Simmons, 2021). For instance, letter-sound relationships should be taught in a systematic sequence in which the instruction should follow a logical order and with an explicit teaching emphasis in which the instruction should give instructors clear instructions for teaching letter-sound relationships (Sanden et al., 2022).

Research conducted by Piasta et al. (2018) focused heavily on the relationship

between narrative skills and emergent literacy skills. The capacity to orally tell stories or a sequence of events is a narrative skill. Theoretically, narrative ability serves as a link between spoken language and printed text (Piasta et al., 2018). The research study included 243 children who participated in the longitudinal study over 2 school years. Participants were between the ages of 3 and 5.5 at the start of the study. They participated in a variety of tests comprised of various emerging reading skills such as early word reading, letter identification, concepts of print, narrative skills, phonological awareness, language/syntactic awareness, and letter-sound correspondence. Two years later, study participants completed the same assessments. According to study results, children's narrative skill abilities were correlated with emerging literacy skills such as letter knowledge, phonological awareness, language/syntactic awareness, concepts of print, and identifying letter sounds.

Expanding this work, Hilbert and Eis (2014) conducted a quasi-experimental study that focused on early interventions for emergent literacy development. The research study included 154 students from low-socioeconomic backgrounds who participated in a full-day prekindergarten program. Random selection was used to place participants in either the experimental group or the control group. Experimental group participants received interventions from their teacher that targeted narrative skills, print knowledge, phonological awareness, and vocabulary. Study results indicated that educators can close the reading gap before students receive formal reading instruction and that targeted intervention groups can help students close the gap in early literacy development skills.

Additional studies have revealed that early word reading abilities in children and narrative skills are positively correlated. According to research conducted by Janaideh et

al. (2020), oral language proficiency is essential for reading comprehension. Gardner-Neblett (2022) further asserted that enhancing a child's ability to use complex sentences and nonverbal reasoning helps build both linguistic and cognitive skills. In a longitudinal study conducted by Mesa and Yeomans-Maldonado (2021), 248 children were followed from prekindergarten to third grade to examine the predictors of reading comprehension. Students completed assessments during the spring semester of their kindergarten, first-, second-, and third-grade years. The assessments measured their oral language, memory, and literacy skills. Results from the study indicated that oral language and word reading were the strongest predictors of reading comprehension in third grade.

In addition to oral language and narrative skills, letter knowledge, phonological awareness, and vocabulary are also important (Hilbert & Eis, 2014; Piasta et al., 2018). In their 2019 study, Meira et al. examined the relationship between reading and phonological awareness. A study of 256 preschool children was conducted to evaluate the independence of phonological awareness at the syllable, rhyme, and phoneme levels. Tests of 18 phonological awareness tasks were given to participants. Three models were tested: (a) phonological awareness as a single factor; (b) speech attributes and phonemic awareness as a pair; and (c) syllables, onset and rhyme analysis, and phonemic awareness as a trio. The study's findings indicated that the three-factor model, which suggests that syllable, rhyme, and phoneme awareness are comparatively independent, provided the best fit. As a result, these findings have significant implications for determining how to measure and address sound sensitivity and recognition abilities in preschool.

Pre-reading comprehension strategies are also essential to develop skilled readers. The abilities and competencies young children develop prior to learning how to read

books regularly are referred to as emergent comprehension. Compared to adult comprehension skills, these abilities and skills are more flexible and geared toward children (Hilbert & Eis, 2014). A research study conducted by Hagen et al. (2022) examined the impact of listening comprehension and how it can predict language skills in at-risk preschoolers. The study included 289 preschool students who were among the lowest-scoring students on a vocabulary screening. The test measured listening skills, narrative skills, and comprehension skills. The content of the test consisted of 10 short stories with a series of questions following each story. Teachers administered the assessment, and each child was assessed individually. Results from the study implied that listening comprehension assessments can help determine the level of young children's language skills.

**South Carolina Early Learning Standards**

A White House initiative from the early 2000s called Good Start, Grow Smart advised each state to create early learning standards in order to support early childhood educators in developing classroom procedures that foster young children's development and mastery of skills necessary to demonstrate kindergarten readiness. Created in 2006, the South Carolina Good Start, Grow Smart Guidelines included early learning benchmarks for 3- to 5-year-olds. Children from birth to age 3 are covered by the South Carolina Infant & Toddler Guidelines, a distinct document that was developed in 2008. Both texts have given the field direction and advice on how to set expectations for young learners that are compatible with their developmental stage (South Carolina Department of Social Services, 2022).

Dr. Catherine Scott-Little and Dr. Sharon Lynn Kagan, two leading national early

childhood and standards experts, were commissioned in 2013 by the Department of Social Services (DSS) to conduct a thorough examination of the early learning standards (South Carolina Department of Social Services, 2022). Their recommendations, based on this analysis, served as the cornerstone as work on the changes was underway with input from stakeholders from all sectors. The standards workgroup thoroughly examined the updated early learning standards in numerous other states. The discussions and work on the standards revisions were influenced by this review. The following priorities for the new standards were agreed upon: (a) age groups similar to those found in the previous South Carolina standards would be used to organize the revised standards, which would be updated as a single document illustrating the progression of growth from birth until school entry; (b) age-appropriate rigor and developmentally appropriate practices would be balanced in the standards; the requirements would take into account the needs and growth of all children; (c) the standards must give teachers of young children in South Carolina clear and simple examples to follow; (d) the physical, social/emotional, play-based learning, reading, arithmetic, science, and social studies domains must be covered by the standards; and (e) the criteria must be appropriate for South Carolina families and children on a cultural level (South Carolina Department of Social Services, 2022). The most updated South Carolina Early Learning Standards (SC-ELS) were established in 2017.

Furthermore, the SC-ELS, which outline objectives for the early development and education of children, were created in collaboration with DSS and the Office of Early Learning and Literacy. All South Carolina programs that work with young children use the SC-ELS as a resource. The SC-ELS offer teachers assistance through professional

learning opportunities in working with students who have a variety of learning challenges as well as students from all cultural and linguistic backgrounds. The SC-ELS offer developmentally appropriate goals for each age level. There are six domains that make up the goals and developmental indicators, including language development and communication. There are three subdomains that lie within the language development and communication domain, and each subdomain has goals related to communication, reading, or writing. There are seven goals within the subdomain learning to communicate, five goals within the subdomain foundations for reading, and three goals within the subdomain foundations for writing. The goals from the SC-ELS (South Carolina Department of Social Services, 2022) are as follows:

Learning to Communicate

1. Children understand communications from others.
2. Children participate in conversations with peers and adults in one-on-one, small, and larger group interactions.
3. Children ask and answer questions in order to seek help, get information, or clarify something that is not understood.
4. Children speak audibly and express thoughts, feelings, and ideas clearly.
5. Children describe familiar people, places, things, and events.
6. Children use most grammatical constructions of their home language well.
7. Children respond to and use a growing vocabulary.

Foundations for Reading

8. Children develop interest in books and motivation to read.
9. Children develop book knowledge and print awareness.

10. Children comprehend and use information presented in books and other print media.
11. Children develop phonological awareness.
12. Children develop knowledge of the alphabet and the alphabetic principle.

Foundations for Writing

13. Children use writing and other symbols to record information and communicate for a variety of purposes.
14. Children use knowledge of letters in their attempts to write.
15. Children use writing skills and writing conventions. (p. 12)

Given that every child develops differently, the SC-ELS must include language development and communication, health and physical development, mathematical thinking and expression, emotional and social development, approaches to play and learning, and cognitive development. Since each domain is equally significant, overlap is to be expected. A child's development in one area is often correlated with their development in other areas. As such, the SC-ELS are employed to (a) create shared objectives for children's growth and learning, (b) enhance teachers' understanding of child development, (c) consider the cultural background of each family, and (d) communicate to relatives and the general public developmentally appropriate objectives for children's growth and learning. (South Carolina Department of Social Services, 2022).

Moreover, the six domains addressed in the SC-ELS are representative of the beliefs of early childhood innovators Lev Vygotsky and Jean Piaget. Vygotsky was a pioneer in the field of psychology, and his contributions to education were revolutionary. He believed that development was an important social process. The social construction of

knowledge hypothesis by Vygotsky (1978) emphasized how children's cognitive development occurs through social and cultural interaction with their community and family environment. Conversely, Piaget's (1936) cognitive development theory described how a child creates a mental representation of the world and explains the mechanisms and processes by which children develop into individuals who can reason. He believed that the process of creating knowledge and abilities was also a part of cognitive development, which is an extension of biological growth and comprised of a sequence of four different stages. Cherry (2022) reported that Piaget believed that children master different degrees of comprehension at each stage, and each succeeding stage contains components from the previous stage. Essentially, interactions between parents, teachers, classmates, and siblings assist young children in making sense of their environment. Furthermore, relationships with objects and cultural practices allow children to be active partners in constructing knowledge and skills (Bernier et al., 2017; Mustafa et al., 2019).

## South Carolina Early Literacy Assessments

A comprehensive evaluation of early literacy should include a variety of tests, from those that inform and reflect on classroom practice to those that meet program needs. The three main types of assessment tools that can provide us with important information are screening tools, program evaluation tools, and classroom-based benchmarks (Curtin, 2018; Hunt et al., 2022). The study site school district employs a variety of state-mandated assessments to inform and guide instructional practices.

### *PALS*

The Phonological Awareness Literacy Screening for Pre-kindergarten, a research-based reading exam for classroom instructors to use with prekindergarten students, was

created by researchers at the University of Virginia. The main objective of the Phonological Awareness Literacy Screening for Pre-kindergarten is to gauge a young child's comprehension of critical literacy concepts. There are six subject areas tested: name writing, alphabet knowledge, beginning sound awareness, rhyme awareness, print and word awareness, and nursery rhyme awareness. Scores are given for each of the skill categories evaluated. The results are contrasted with a benchmark range that reflects expectations for the spring of the prekindergarten school year prior to entering kindergarten. Results help teachers plan literacy lessons and classroom activities. The results also assist instructors in identifying specific reading skill areas that require more focus in the classroom so all foundational early literacy skills are addressed. Teachers employed in CERDEP school districts must administer this assessment three times a year: within the first 45 days of school, mid-year, and at the end of the school year (South Carolina Department of Education, 2022).

***KRA***

The KRA is a developmentally suitable assessment that evaluates a child's level of readiness for school in a number of different areas. It also enables kindergarten teachers to effectively address the needs of the students. The KRA analyzes four domains (social foundations, language/literacy, mathematics, and physical well-being) to assess each child's readiness level. Essentially, the KRA gives an overview of students' skills at the start of the academic year. Performance tasks, observation items, and multiple-choice selected response items are all included in the KRA. The assessment is comprised of 50 items, and a rubric is used to score each domain. This assessment is administered at the beginning of a child’s kindergarten school year (South Carolina Department of

Education, 2021c).

### *MAP*

The MAP test is an electronic assessment that measures reading and math proficiency. Each student completes a different test because the computer modifies the question's level of difficulty. Each question's level of difficulty is determined by how effectively the student has responded to previous questions. When paired with other data points, MAP tests provide comprehensive, relevant information on where each student is on their individual learning path (Northwest Evaluation Association, 2022). In addition to tracking student growth over the course of an academic year and between school years, MAP tests distinguish themselves from other data sources by being nationally normed and linked to software programs that aid in planning instruction for teachers and administrators (Northwest Evaluation Association, 2022). Students in kindergarten through eighth grade take this test three times a year—once at the beginning, once in the middle, and once at the end.

## Prekindergarten Programs in South Carolina

Parents and guardians have a variety of choices when it comes to selecting a prekindergarten program for their child in South Carolina. South Carolina prekindergarten programs can be classified as private, public, or informal (South Carolina Department of Education, 2022). Private prekindergarten programs in South Carolina include military childcare centers, faith-based centers, family home centers, group home centers, and First Steps (South Carolina Child Care Early Care and Education, 2021). Military childcare centers are only for children whose parents are members of the armed forces. The Department of Defense is responsible for providing military families with a

variety of affordable childcare options, which also include an application process (United States Department of Defense, 2021). Consequently, military childcare centers are federally funded. Alternatively, faith-based centers are sponsored by religious groups and must be registered with DSS (South Carolina Child Care Early Care and Education, 2021). Family home centers and group home centers are privately owned and state-funded as well. Family home centers provide care for up to six children, while group home centers care for seven to 12 children. Family and group home centers must also be registered with DSS (South Carolina Child Care Early Care and Education, 2021). First Steps is a private, state-supported, income-based program that provides developmentally appropriate education programs. First Steps programs must abide by DSS regulations and the South Carolina Department of Education guidelines. These programs are typically housed in a private, registered childcare facility (South Carolina Department of Education, 2021b).

Public childcare facilities include Head Start and prekindergarten programs in public schools. The Head Start program, supervised by the United States Department of Health and Human Programs, offers comprehensive early childhood education, health, nutrition, and parent participation programs to low-income families (South Carolina Head Start, 2021). Essentially, by fostering the cognitive, social, and emotional development of children from birth to age 5, this program impacts school readiness. Although eligibility is based on income, foster care children, homeless children, and children from families who receive public assistance are eligible regardless of income. Furthermore, Head Start emphasizes the role of the parents by building relationships with families and recognizing parents as the child's first and most important teacher (South Carolina Head Start, 2021).

According to South Carolina Head Start (2021), South Carolina has 140 Head Start locations. This program is also federally funded and must meet federal guidelines. Conversely, prekindergarten programs in public schools can be state, district, or federally funded (South Carolina Department of Education, 2021b). These programs provide developmentally appropriate programs for 4-year-olds in public schools that follow best practices, include research-based instruction and evaluations, and comply with district and/or federal regulations. (South Carolina Department of Education, 2021b).

**CERDEP**

According to the South Carolina Department of Education (2022), the Child Development Education Pilot Program was established in 2006 as a program for children who resided in the Abbeville County School District and were involved in a school funding lawsuit against South Carolina. This program provided funds for at-risk students who resided in the Abbeville School District to attend a full-day, 4-year-old kindergarten program free of charge. On June 11, 2014, Governor Nikki Haley signed the Read to Succeed Act 9 (South Carolina Department of Education, 2022). Within that act, CERDEP was included. Section 59 156 110 states,

> There is created the South Carolina Child Early Reading Development and Education Program, which is a full day, 4-year-old kindergarten program for at risk children which must be made available to qualified children in all public-school districts within the State. (South Carolina Department of Education, 2021a, p. 3)

As a result, the selected school district implemented CERDEP in 2014 and integrated the SC-ELS.

There are several requirements students must meet in order to be eligible for acceptance into the CERDEP program. Residency, age, family income, and immunization are just a few of the requirements that must be met (South Carolina Department of Education, 2021a). Regarding residency, parents/guardians must provide proof of residency in a qualifying district. Proof of residency includes but is not limited to an electric bill, cable bill, apartment lease, or a notarized renter's agreement (South Carolina Department of Education, 2021a). According to acceptable documentation, such as a birth certificate or an official document from another country, a child must be 4 years old on or before September 1st of the current school year in order to be eligible. Enrollment eligibility based on family income must be demonstrated. An annual family income should not exceed 185% of the federal poverty level, according to the general rule. Paystubs, tax returns, or W-2 forms can be used to verify a family's income. Providing a copy of the child's Medicaid card if they receive those benefits is also encouraged. The final form of documentation needed is immunization records. Although residency, age, family income, and immunization are the minimum requirements, school districts may require additional documentation (South Carolina Department of Education, 2021a).

After the family provides the proper documentation, students then go through a screening process. The assessment used for the state of South Carolina is the Dial-4 Assessment. This assessment includes a fine/gross motor section, a concepts section, and a language section. While the fine and gross motor section of the Dial-4 assessment focuses on the physical capabilities of the child, the concepts section primarily focuses on mathematical concepts such as color identification; counting blocks; rote counting; and sorting by color, shape, and size. The language section includes concepts of expressive

and receptive language. Students are asked to name and identify objects and actions, identify letters and letter sounds, provide rhyming word pairs, and identify words that begin with specific sounds. Parents also participate in the screening process by completing a questionnaire that focuses on the child's adaptive behaviors and social/ emotional skills.

A child's progress in school can be predicted using the DIAL-4 assessment (South Carolina Department of Education, 2021a). Furthermore, classroom teachers are an integral part of the screening process for CERDEP because they administer the assessment. CERDEP often takes place in school buildings. As a result, the teachers must be properly trained in administering and scoring the assessment and must hold a valid South Carolina teaching certificate with licensure for early childhood education. Throughout the school year, teachers are also responsible for administering a variety of informal and summative assessments to guide their instruction. Up until recently, CERDEP teachers and classrooms were governed by the state department and DSS. DSS would make unannounced visits to schools and classrooms and require teachers to participate in continuing education hours. As of the 2021 school year, DSS is no longer involved in CERDEP classrooms; however, CERDEP teachers are required to participate in yearly evaluations conducted by members of the Early Learning and Literacy Department (South Carolina Department of Education, 2021b). During evaluations, members of the Early Learning and Literacy Department use several CERDEP classroom monitoring tools to evaluate the effectiveness of the teacher's classroom. Among these tools is the Literary-Rich Classroom Environment Checklist. The purpose of the checklist is to ensure that teachers are providing students with an immersive literacy environment.

Learning centers, general writing/reading materials, writing displays, and books are the categories assessed by the monitoring tool. Literacy instruction is not addressed on the checklist; however, teachers must employ a research-based and state-approved curriculum in the classroom.

Moreover, the goal of CERDEP is "to provide children and their families with quality preschool experiences necessary for school success" (South Carolina Department of Education, 2021a, p. 2). Consequently, the curriculum implemented in CERDEP classrooms is essential to the success of the students. The state department provides districts with several curriculums that have been approved for teachers to choose from. This in turn allows districts in South Carolina to implement a variety of prekindergarten curriculums. Prekindergarten teachers in the selected district participated in the curriculum adoption process during the summer of 2018. Teachers were presented with several state-approved curriculums: A Big Day for Pre-K, InvestiGator Club, and World of Wonders. Teachers were given an evaluation rubric and selected World of Wonders. World of Wonders is a developmentally appropriate, cross-curricular instructional program for children ages 3 to 5. It focuses on pre-reading and socioemotional skills while integrating science, social studies, math, music, and movement. Each thematic unit is differentiated for students who may be below, on, or above grade level. It is also offered in a digital format. This program allows students to begin working on foundational skills prior to kindergarten (McGraw-Hill Education, 2016). Furthermore, it is research-based and aligns with the *Wonders* balanced literacy curriculum.

**Literacy Curriculum Design**

Teaching students to read and write can be a difficult feat for teachers because of

the overlapping and intricate components. A report published by NRP in 2000 detailed the components of effective literacy instruction. Phonemic awareness, phonics, vocabulary, fluency, comprehension, and writing are all elements of a comprehensive literacy curriculum that are necessary for students to grasp reading and writing (Dataworks Educational Research, 2022; NRP, 2000). Furthermore, it is imperative that each component is taught systematically and explicitly. Individual and/or small group instruction are often the most effective delivery methods, especially for those who are below grade level (NRP, 2000; Schwartz & Sparks, 2019). As a result, a literacy curriculum that integrates time for small group instruction is critical.

In addition to the work reported by NRP, the balanced literacy framework is often regarded as an effective literacy framework that is often included in literacy programs. Reading workshop, language and word study, and writing are the three components of the balanced literacy framework. According to Pinnell and Fountas (2021), the adaptable balanced literacy framework may accommodate changes in content, daily schedules, student groupings, and the amount of teacher-directed instruction. Balanced literacy structures, aligned with the science of reading methodology and instructional practices, utilize multiple modalities of acquisition to provide all students with both explicit skills instruction and authentic reading and writing learning experiences (Pinnell & Fountas, 2021).

Additionally, an effective literacy curriculum for young learners focuses on building foundational skills (Behring, 2022). Print concepts, phonological awareness, phonics and word recognition, and fluency are among the foundational reading skills (Behring, 2022). The introduction of these concepts through instructor modeling,

sufficient practice, and individualized feedback must be supported by an evidence-based scope and sequence that covers subjects ranging from the most basic to more complex (Schwartz & Sparks, 2019). The curriculum should also be well versed in the science of reading methodology and instruct teachers to employ practices that coincide with the science of reading (Schwartz & Sparks, 2019). Essentially, an effective literacy curriculum for young children is one that provides resources and integrates time for whole group instruction, small group instruction, student practice, and progress monitoring and follows a research-based scope and sequence.

### *Wonders Balanced Literacy Curriculum*

The *Wonders* balanced literacy curriculum aims to instill a passion for reading in all children. Through the analysis of texts and daily development of their reading, writing, speaking, and active listening skills, students are able to comprehend the possibilities of literacy. *Wonders* assists teachers in developing skills, advancing learning, and fostering independence. The *Wonders* balanced literacy curriculum includes a variety of components, including teaching the whole child, educational equity, close reading and text complexity, science of reading, writing, and small group differentiation. World of Wonders is an extension of *Wonders*. It is a prekindergarten curriculum, while *Wonders* is a K-5 curriculum. While research has not been conducted on CERDEP programs that have implemented the World of Wonders curriculum, research has been conducted on schools that have implemented the *Wonders* K-5 curriculum.

Dorsey (2015) conducted a study on six Title I schools in rural North Carolina that adopted the *Wonders* curriculum during the 2014-2015 school year. The study included 239 third-grade students. The efficacy of the *Wonders* program was evaluated

using information gathered from the Reading 3D state-wide assessment and the North Carolina end-of-grade reading assessment. The Reading 3D assessment is comprised of the Dynamic Indicators of Basic Early Literacy Skills and Text Reading Comprehension. Results indicated that from the beginning of the year to the end of the school year, Dynamic Indicators of Basic Early Literacy Skills scores for students using *Wonders* increased significantly. Additionally, performance on the end-of-grade reading test in North Carolina revealed substantial inclinations in favor of *Wonders* users (Dorsey, 2015).

In 2011, there was considerable achievement disparity among students in Champaign Community School District in Champaign, Illinois (McGraw-Hill Education, 2022a). The district determined it needed a new, integrated K–5 English language arts program to help its struggling readers while continuing to inspire and challenge its on-level learners. During the next adoption process, Champaign Community School District decided to purchase and implement the *Wonders* curriculum. Data indicated that student scores on the NWEA MAP Reading fluency assessment significantly increased during its first year of implementation. Data from various assessments also reported strong outcomes in early reading (McGraw-Hill Education, 2022a).

Miami-Dade Public County Schools was searching for a curriculum that addressed a series of concerns from reading coaches, teachers, and district staff. In 2013, the district decided to adopt *Wonders* as its English language arts curriculum. Prior to introducing *Wonders*, the percentage of third-, fourth-, and fifth-grade students who scored proficient in reading on the annual Florida Comprehensive Assessment Test was lower than the state average; however, after *Wonders* had been in place for a year, student

proficiency levels exceeded the state average (McGraw-Hill Education, 2022a). Miami-Dade Public County Schools also closed its achievement gap within that year. Lincoln Public Schools in Nebraska experienced similar results for third-, fourth-, and fifth-grade students in 2016 after implementing *Wonders* for 3 years (McGraw-Hill Education, 2022a). Essentially, research implies that implementation of the *Wonders* curriculum is beneficial to students.

**World of Wonders Literacy Instructional Program for Prekindergarten.** World of Wonders offers guidance and structure young readers require through developing cross-curricular knowledge, establishing classroom routines, and meeting the needs of all learners through diverse instructional pathways (McGraw-Hill Education, 2022b). There are several key components included in the curriculum such as (a) thematic units accompanied by weekly integrated lesson plans and resources, (b) a combination of literary and informational texts, (c) a read-aloud kit to help build background knowledge and foster overall literacy, (d) pattern books and little readers that provide scaffolded early reading support, (e) weekly social-emotional books and charts, and (f) a variety of student consumables (McGraw-Hill Education, 2022b).

Furthermore, the curriculum supports kindergarten readiness by placing an emphasis on writing, speaking, gaining knowledge, and listening comprehension; development of social and emotional abilities; developmentally appropriate mathematics materials; and integrating science, social studies, and music (McGraw-Hill Education, 2022b). World of Wonders also helps teachers maximize their class time while addressing the adaptability of the early childhood classroom. The curriculum allows the teacher to develop skills and prepare students for kindergarten, introduce important

classroom procedures, and strengthen content knowledge. It also provides access to a variety of digital resources; integrates an ease of classroom organization and management with a thorough, well-organized educational path broken down into themed units; and provides diverse routes to meet the needs of all students, including those who are English language learners and those with special needs, in the age range of 3 to 5 (McGraw-Hill Education, 2022b).

In regard to professional development, World of Wonders offers online professional development through various models such as a Quick Start Course, Implementation Modules, Coach Videos, and Administrator Support (McGraw-Hill Education, 2022b). The Quick Start course helps teachers prepare their room for implementation for the first 3 weeks of instruction. The Implementation Modules help teachers improve their teaching techniques while expanding their understanding of the program. Coach Videos throughout the course of the school year provide prompt, on-the-spot instruction on a range of topics. Resources for Administrator Support offer instructions for overseeing deployment, controlling technology, and deciphering data (McGraw-Hill Education, 2022b).

An Oklahoma school district was studied by a third-party research firm to determine the effectiveness of World of Wonders in helping early learners develop foundational literacy skills needed to display kindergarten reading readiness (McGraw-Hill Education, 2022b). On the kindergarten early literacy assessment, students who had access to World of Wonders in their district's prekindergarten program were 1.7 times more likely to achieve Level 2, which is two levels higher than the lowest level on the test. The study also reported statistically significant gains on each of the Early Literacy

Quick Assessments. The Early Literacy Quick Assessments assesses alphabet knowledge, phonological awareness, print concepts, and vocabulary (McGraw-Hill Education, 2022b). Unfortunately, there are deficiencies in research data that notates the effectiveness of World of Wonders in South Carolina CERDEP classrooms.

**Program Implementation**

An efficient reading curriculum is founded on evidence-based practices and helps all students become proficient readers and writers. The design, implementation, and sustainability of effective reading instruction are dependent on three factors: effective teaching materials that are aligned with the knowledge base, professional development that equips teachers with a solid knowledge base, and school structures that promote and enable implementation (American Federation of Teachers, 2022). Professional development is essential to providing knowledge for teachers and school leaders to build a strong program, choose the appropriate resources, and create support networks.

Moreover, the best implementation plans for schools consider the necessity of ongoing professional growth in order to establish and maintain a culture of learning and continuous improvement. Teachers require learning time in order to support their learning. Effective professional development must be multifaceted as it can take place in conventional workshop and seminar settings, at school during meetings, or in the classroom (American Federation of Teachers, 2022). One of the most important steps of staff development for implementing a new program includes coaching for classroom application. Coaching entails helping teachers plan and conduct lessons using the new method and involves helping teachers reflect upon their own teaching and make adjustments as needed. Furthermore, with the help of coaching, teachers can access and

apply new information (Aguilar, 2019). Co-teaching and side-by-side coaching are also forms of coaching that support teachers in implementing newly acquired skills (Aguilar, 2019).

Additionally, the instructional tools are essential to a program's success; however, it is imperative that teachers use research-based criteria to evaluate the integrity of the program's materials. Once a program is selected, it is imperative that the program is implemented with fidelity. This is the responsibility of the school administration. School administration is also responsible for uniting the staff behind a shared vision for reading education. The school's principal must possess a thorough knowledge of the elements of a research-based reading program and should create a school climate that prioritizes proven, successful approaches. Ultimately, the leadership of the school is in charge of allocating resources, giving time, and maintaining the course (Glickman et al., 2018).

Furthermore, student achievement data are critical to program implementation. The most effective assessments track student growth, are aligned with the reading program, and monitor teacher pacing and software usage (Alexander et al., 2022). Assessments are also used to inform and guide instruction. In primary grades, it is critical to evaluate the specific abilities and methods used to build the foundation for long-term outcomes like comprehension and fluency. These assessments must also be frequent and precise. Assessments must also be administered according to specific program instructions. Teachers will need training on how to properly administer these assessments. Essentially, information from assessments will show that students are learning and teachers are effectively implementing the curriculum.

Information from assessments can also offer insight into implementation fidelity.

Implementation fidelity measures how closely a program or intervention is delivered in accordance with its goals (Houchins et al., 2022). Moreover, implementation fidelity is a critical aspect of program implementation as fidelity is often linked to the success of the program. Adherence, exposure, quality of delivery, participant responsiveness, and program differentiation are a few aspects that should be considered when assessing program fidelity (IRIS Center, 2022). Adherence denotes that a program is being implemented as intended. Exposure references how often participants receive program elements. Quality of delivery is essentially how a teacher conducts the program. Participant responsiveness references participants' levels of engagement in the program; and the final element, program differentiation, refers to identifying the components necessary for the program's success (IRIS Center, 2022).

Essentially, adherence is the key indicator of implementation fidelity. Fidelity is considered high if a program closely follows the content, frequency, duration, and coverage guidelines set forth by its designers. When a program is implemented with high fidelity, the success of meeting the program's goals can increase significantly (IRIS Center, 2022). Implementation fidelity in conjunction with well-designed and ongoing professional development, research-based tools, and support systems initiated by school leadership is necessary to ensure the successful implementation of a reading program.

**Teacher Quality and Effectiveness**

An important component of creating a successful school with successful students and teachers is developing efficacy and empowerment within the personnel. Teaching methods and student learning are both predicted by teacher efficacy (Hattie, 2018). Additionally, it has been demonstrated to predict student motivation and success. Early

childhood educators and researchers are working diligently to discover educational strategies that promote learning experiences focused on evidenced-based approaches and strategies that provide timely and effective feedback to teachers regarding how their instruction is affecting students (Guskey, 2021).

Furthermore, teacher effectiveness can be measured in a variety of ways. Of these ways, student surveys, classroom observations, and student achievement are the most common (Kim et al., 2019). In fact, the most widely used indicator of a teacher's efficacy is arguably student academic achievement, which serves as a gauge for the depth and advancement of student learning. Test results, both standardized and non-standardized, can be utilized as several types of achievement outcomes (Kim et al., 2019). Another indicator of teacher effectiveness is students' perceptions of their academic abilities. Student performance self-efficacy is typically assessed by asking students to document the grade they anticipate receiving in a certain topic or their level of confidence in successfully completing a task (Kim et al., 2019).

Teacher quality refers to a teacher's educational background and credentials (Etim et al., 2020). In a literature review conducted by Etim et al. (2020), research indicating whether or not teacher certification and student achievement were positively correlated was inconclusive. Factors including student attendance rate and teacher turnover rate were posed as limitations in the studies. As a result, researchers could not attribute student academic success to only teacher credentials. Furthermore, in lieu of teacher credentials or high-quality classrooms having an impact on a child's academic achievement, effective early childhood education calls for a wide range of professional development strategies and policies that concentrate on teachers' instructional strategies

and interactions with young students (Isenberg, 2022).

CERDEP teachers are required to hold a valid South Carolina teaching certificate in early childhood education (South Carolina Department of Education, 2021a). Furthermore, ESSA includes reporting requirements to guarantee that underqualified, ineffective, or unqualified teachers do not educate low-income and minority students at a higher rate than other students (South Carolina Department of Education, 2021a). Additionally, CERDEP teachers are required to attend and participate in professional development provided by their respective schools, district, and state.

**Teacher Professional Development**

Teachers can stay abreast of new information and techniques through professional development, which enables them to keep up with current best practices and discover new ones. In order to be truly effective, professional growth must include a number of elements (Demonte, 2013). According to Demonte (2013), elements of high-quality professional development for teachers include (a) aligning with educational goals, district and state standards and assessments, and other professional learning opportunities; (b) focusing on core content and offering opportunities for active learning of new teaching techniques; (c) enabling teachers to collaborate; (d) and providing follow-up and ongoing feedback. According to Dail et al. (2018), professional development is most successful when teachers actively participate in its planning and direction. Additionally, a study conducted by Van der Heijden et al. (2015) demonstrated that professional development opportunities and job resources are excellent predictors of work engagement. As a result, professional development helps teachers grow personally in addition to improving their teaching abilities.

Moreover, professional development for literacy instruction should (a) strengthen a teacher's capacity to implement early intervention and remediation programs; (b) prepare teachers in all fundamental components of reading instruction; (c) share information on instructional materials, programs, and techniques that are based on scientific reading research; and (d) facilitate the use of assessment data to guide instruction and meet the needs of all students, particularly those with special needs (Chauvin & Theodore, n.d.). Providing opportunities for teachers to practice through modeling and demonstrations and providing a variety of training formats are also important. Professional development plans should always be created with teacher and student needs in mind (Demonte, 2013). Although each professional development plan's content will differ between schools, districts, and states, they should all cover the following fundamental topics: (a) scientifically-based reading research and instruction, (b) program specifics, (c) intervention strategies and how and when to apply them, (d) assessment administration and data analysis, and (e) ongoing training and follow-up throughout the year (Aguilar, 2019; Chauvin & Theodore, n.d.).

All staff members who provide instruction and classroom support are required by participating CERDEP legislation to participate in a minimum of 15 hours of professional development each year in order to improve educational outcomes (South Carolina Department of Education, 2021a). Professional development topics must also include discussing issues pertaining to teaching children from poverty as well as addressing age-appropriate emergent literacy practices. These topics should be included in the district's yearly professional development reading plan and/or the district's professional learning community for prekindergarten teachers (South Carolina Department of Education,

2021a).

## Program Evaluation Design

Program evaluation is an evaluation prepared and carried out to determine the merit and value of an object or program (Fitzpatrick et al., 2011). Because of the depth of research and conclusions, a program evaluation is an essential step in designing and assessing a program. According to Stufflebeam (2003), evaluating a program should involve the following steps: (a) setting criteria and standards that would determine excellence in accordance with either absolute or relative standards; (b) gathering pertinent data; and (c) using the standards to assess the program's worth, effectiveness, and usability. Program reviews frequently provide opportunities to endorse and emphasize the program's worth in relation to its intended goals (Fitzpatrick et al., 2011).

**Program Evaluation Standards.** A collection of 30 standards created by the Joint Committee on the Standards for Education Evaluation were regarded as a manual for conducting assessments and determining the validity of educational projects, programs, and resources. The Standards for Evaluations of Educational Programs, Projects, and Materials were published in 1981 after being provided in 1980 by the McGraw-Hill Company (Stufflebeam & Madaus, 1983). The Joint Committee matched the 30 criteria according to their utilities, applicability, propriety, and accuracy. The possibility that the evaluation will satisfy consumers' informational demands is determined by the utility component. The expectation that the evaluation will be reasonable, prudent, and economical is established by feasibility. The propriety element sets forth the expectation that the assessment will be carried out morally, lawfully, and with consideration for all study participants. The evaluation's final accuracy factor

indicates the probability that the assessment will generate sufficient data for stakeholders to judge the worth and merit of the program or item under discussion (Stufflebeam & Madaus, 1983). The Joint Committee on the Standards for Education Evaluation advocated using the CIPP model to evaluate programs, and the requirements for accuracy, propriety, utility, and feasibility evaluation closely follow that recommendation (Fitzpatrick et al., 2011; Stufflebeam, 2003).

**CIPP Evaluation Model.** The CIPP evaluation model's primary focus and goal is to identify value. The value serves as the cornerstone for creating the designated program evaluation criteria. The informational demands of the study are created by the criteria in conjunction with stakeholder inquiries. Selecting evaluation tools and interpretation standards is guided by these criteria and questions (Stufflebeam, 2000b).

A thorough framework for conducting and reporting evaluation findings is provided by the CIPP evaluation model. Context, input, process, and product are the four characteristics that make up the CIPP evaluation model (Fitzpatrick et al., 2011; Stufflebeam, 2000a). Evaluations of the context use needs, issues, and opportunities as the foundation for setting objectives and determining the importance of results. When developing programs and allocating resources, input evaluation evaluates various methods of addressing needs. Process evaluations look at how plans are carried out to direct activities and later to assist in explaining results. For the purpose of determining success and helping to keep the process on track, product assessments identify desired and unintended results.

Utilizing four interrelated methods of evaluation will enable evaluators to conduct assessments that will launch, design, and manage high-quality programs as their main

objective (Fitzpatrick et al., 2011). The CIPP model promotes objectivity in the evaluation process. According to Stufflebeam (2000a), objective evaluations are intended to produce outcomes that are accurate across time rather than accurate or incorrect in relation to the preferences, positions, standing, or viewpoints of the evaluator or any other party. In order to get the most accurate information possible on a program or item, this creates a neutral evaluation environment.

In order to improve and demonstrate learning, the CIPP approach provides both formative and summative evaluation (Stufflebeam, 2003). When evaluations actively link data gathering and reporting to improvement, CIPP evaluations are formative. Stufflebeam (2003) further asserted that evaluations are summative in nature when they reflect on the completed project, program, or service performances; compile and summarize the value of pertinent data; and place a strong emphasis on accountability.

The CIPP methodology offers the chance to develop a number of critical inquiries to look at and determine suggestions for changing and enhancing every aspect of a program that is being reviewed (Stufflebeam, 2003). Four conclusions are reached when the CIPP model has been applied. The first step in making a decision is to identify program-relevant needs and set relevant objectives. Here is where choices regarding the strategy can be made. Finding readily available materials and efficient tactics is the next step. Planning for the structure occurs during this stage. Third, the effectiveness of implementation is assessed, along with any potential obstacles and any adjustments needed to strengthen the program. At this stage, decisions about implementation are made. The impact of the evaluation outcomes on all parties can also be analyzed, and that is the final step. At this time, a decision regarding whether to keep using the program

should be made (Fitzpatrick et al., 2011; Stufflebeam, 2003).

The CIPP evaluation model was used for the evaluation of CERDEP. This decision was influenced by the four components and the implied integrity of results. This study was complex in nature because of the many components of CERDEP; as a result, a program sequence model was adopted. This study included both qualitative and quantitative data. Qualitative data were collected from a series of focus group sessions with prekindergarten and kindergarten teachers to gain an in-depth understanding of the literacy gaps teachers are noticing in students who attended CERDEP prekindergarten and the most effective aspects of the prekindergarten literacy curriculum. A thematic analysis of data was conducted to identify recurring themes and patterns. The quantitative strand of this study was achieved by analyzing archived literacy-rich classroom environment checklist data and literacy assessment data from PALS, MAP Reading, and the KRA. A series of *t* tests and descriptive statistics were conducted to determine the impact of participating in CERDEP on kindergarten reading readiness.

**Summary**

According to the literature, achievement gaps are found before students enter kindergarten; as a result, quality prekindergarten is recommended as an intervention (Dodge et al., 2017; Garber, 2022; Lipsey et al., 2018; Sasser et al., 2017). Researchers discovered that student academic success was significantly influenced by their preparation for school (Beard, 2021; Garber, 2022; Hagen et al., 2022). Additionally, for a child to thrive academically, early language and literacy acquisition throughout the first few years of life are essential (Barbu et al., 2015; Early Childhood Learning and Knowledge Center, 2022; Hilbert & Eis, 2014**).** According to Weiland and Yoshikawa

(2016), a child's early growth lays the groundwork for future achievement and basic reading abilities including phonological awareness, vocabulary, and letter naming serve as a child's early foundation (Gullo, 2013; Justice et al., 2018). It is imperative that educators identify the specific competencies required for children to succeed academically before they begin school so early intervention and support may be implemented.

Moreover, regulations at the federal and state levels have greatly influenced the funding, production, and maintenance of student academic achievement (Gullo, 2013). The research also supports the notion that children from low-income and disadvantaged areas and children from other populations have been disproportionately influenced by early childhood education and literacy practices (Weinberg & Weinberg, 2016). Furthermore, early childhood education in the form of prekindergarten encourages improvements in literacy performance and closes the achievement gap for students in low socioeconomic areas (Balzacar, 2014; Duncan & Sojourner, 2013; Weiland & Yoshikawa, 2016). CERDEP was implemented in the targeted school district in 2014 to provide at-risk 4-year-olds the opportunity to receive a high-quality prekindergarten education that focuses on building foundational literacy skills. There is no research to date on the effectiveness of CERDEP on student literacy achievement in kindergarten; hence, this research study is a program evaluation that assessed CERDEP and its effect on student literacy achievement in kindergarten in the targeted school district. As a result, this research study aimed to answer the following questions:

1. To what extent does CERDEP align with the assessed needs? (context)
2. How closely do the elements of CERDEP’s goals correspond to the identified

needs? (input)

3. How closely does the program adhere to its initial design? (process)
4. What are the most significant gaps in student reading knowledge and skills among students who attend CERDEP? (product)
5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product)

While there is a deficiency in research, there is also a lack of evidence indicating that CERDEP is effective. This program evaluation contributes to existing literature related to the effects of prekindergarten on student literacy achievement in kindergarten. More importantly, due to the limited body of research on CERDEP, this study provides specific research on the effectiveness of the program and if the practices and goals of the program are being executed.

# Chapter 3: Methodology

CERDEP is a full-day, free-of-charge, 4-year-old kindergarten program that is offered to students who meet the eligibility criteria in South Carolina. Based on previous research, there are deficiencies in data analyzing CERDEP and its effect on kindergarten reading readiness in a small rural school district. CERDEP was implemented in the study site school district in 2014; however, a program evaluation has not been conducted to determine if the program's goals and intended outcomes have been met. The purpose of this study was to evaluate the effectiveness of CERDEP on kindergarten reading readiness in a small rural school district in South Carolina using the program evaluation model.

## Evaluation Model

The CIPP evaluation model was used for this program evaluation. The four components of the CIPP evaluation model are context, input, process, and product. Context evaluates if goals are aligned with the assessed needs, input evaluates how and what is needed to meet the program's goals, process evaluates the implementation process, and product evaluates if the goals of the program have been met (Stufflebeam, 2003). Essentially, evaluation utilizing program theory emphasizes program information that is critical to determining a program's efficacy. The program theory will answer research questions that evaluate a program's performance, make it easier to collect data for further investigation, and offer enduring values that show how effectively a program functions.

Moreover, the goal of this program evaluation was to assess CERDEP's value as a literacy education program model for prekindergarten students. This evaluation also

included all four components of the CIPP model. The rationale behind using the CIPP model for this program evaluation is grounded in the theory that the evaluation will offer data on how well the implementation practices are aligned with CERDEP's intended goals. Additionally, the research gathered in this program evaluation provided insight into how the study site district may improve implementation to ensure alignment and program success.

**Evaluation Strategy**

To further understand the impact of the research problem, a variety of types of data were evaluated and triangulated as part of this program evaluation. The purpose of the CERDEP Evaluation Strategy Matrix (see Table 4) is to provide a graphic representation of the elements of this program evaluation (Fitzpatrick et al., 2011). The four CIPP model components were taken into consideration when the study questions were developed. As such, this program evaluation was guided by the following questions to determine the impact of CERDEP on kindergarten reading readiness:

1. To what extent does CERDEP align with the assessed needs? (context)
2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input)
3. How closely does the program adhere to its initial design? (process)
4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product)
5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product)

**Table 4**

*CERDEP Evaluation Strategy Matrix*

| Research Question | Type of data to collect | Method of data collection | Information source | Analysis procedures | Interpretation procedures and criteria |
|---|---|---|---|---|---|
| 1. To what extent does CERDEP align with the assessed needs? (context) | Qualitative | Focus group session | Teachers | Thematic analysis | At least 75% of the participants would agree that the program goals met the assessed needs. |
| 2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input) | Qualitative | Focus group session | Teachers | Thematic analysis | At least 75% of the participants would agree that CERDEP's goals met the identified needs. |
| 3. How closely does the program adhere to its initial design? (process) | Qualitative | Focus group session | Teachers | Thematic analysis | At least 75% of the participants would agree CERDEP components were implemented with fidelity. |
| | Quantitative | Literacy-rich classroom environment checklist | Chief academic officer/district data manager | Descriptive statistics analysis | At least 75% of the prekindergarten classrooms observed implemented the components of the literacy-rich classroom environment checklist. |

(continued)

| Research Question | Type of data to collect | Method of data collection | Information source | Analysis procedures | Interpretation procedures and criteria |
|---|---|---|---|---|---|
| 4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product) | Qualitative | Focus group session | Teachers | Thematic analysis | Codes developed by themes are linked to raw data. |
| | Quantitative | Student achievement data | Chief academic officer/district data manager | Paired *t* test with descriptive statistics for prekindergarten students at all four schools using fall 2021 and spring 2022 pals data from the 2021-2022 school year. | The null hypothesis in this study for the district is that as a result of the implementation of CERDEP, there will not be a significant difference in the mean scores. |
| 5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product) | Qualitative | Focus group session | Teachers | Thematic analysis | Codes developed by themes are linked to raw data. |
| | Quantitative | Student achievement data | Chief academic officer/district data manager | 1 sample *t* test with descriptive statistics for kindergarten students at all four schools using fall KRA data from the 2022-2023 school year.<br><br>1 sample *t* test with descriptive statistics for kindergarten students at all four schools using fall MAP Reading data from the 2022-2023 school year. | The null hypothesis in this study for the district is that as a result of the implementation of CERDEP, there will not be a statistically significant increase in kindergarten reading readiness. |

**Development and Design of Evaluation Instruments**

This program evaluation was carried out using a mixed methods approach. More specifically, a convergent mixed methods design was used to better address the research problem. Creswell (2018) contended that collecting both qualitative and quantitative data enhances one's understanding of a research topic. In addition, he claimed that one method of data collection had advantages that can balance out the shortcomings of the other. Neither quantitative nor qualitative methodologies alone would be sufficient to describe the impact of CERDEP on kindergarten reading readiness due to the myriad of factors that influence young children's reading abilities. In the convergent mixed methods design, both quantitative and qualitative data are gathered concurrently, and each dataset is independently analyzed. The outcomes of each dataset are then contrasted to determine if they are consistent with one another or not (Creswell, 2018).

In quantitative research, variables and the relationship among the variables are the focus of the study (Creswell, 2018). Additionally, key instruments in quantitative research tend to focus on numbers, occurrences, and categories. Data collection methods for quantitative research include surveys and experiments. Quantitative data in the form of archived literacy achievement data for prekindergarten students and their scores on the fall 2021 and spring 2022 PALS assessment were retrieved and analyzed. A paired *t* test was used to analyze the results of the fall 2021 and spring 2022 PALS data to test whether the mean difference between the pairs of measurements was zero or not.

Additionally, archived literacy achievement data of kindergarten students were analyzed in this study based on beginning-of-the-year fall 2022 MAP Reading scores and beginning-of-the-year fall 2022 KRA scores. A one-sample *t* test was also used to

analyze these data to determine if there was a statistically significant difference between the mean scores and given values of MAP Reading and KRA. Archived Literacy-Rich Classroom Environment Checklist data (see Appendix A) completed by an education associate was also used as a form of quantitative data for this program evaluation. These data were analyzed by descriptive analysis of statistics detailing the distribution, central tendency, and dispersion to interpret results. The Literacy-Rich Classroom Environment checklist includes several areas: (a) learning centers, (b) general reading/writing materials, (c) writing displays, and (d) books.

Conversely, qualitative research focuses on the actions and interactions humans give to social or human situations. In fact, qualitative researchers are the key instruments in collecting data and have the ability to take an active role or observer role (Creswell, 2018). Data collection tools for qualitative research also include documents/media, surveys, interviews, focus groups, observations, and field notes (Creswell, 2018). Furthermore, themes can be developed throughout the process, or the researcher can conduct the study with a set of themes already identified. Qualitative data in this program evaluation were collected from a series of focus group sessions with prekindergarten and kindergarten teachers. Questions in the prekindergarten focus group session (see Appendix B) focused on the implementation practices of CERDEP and the prekindergarten literacy curriculum, while the kindergarten focus group session (see Appendix C) focused on discussing literacy gaps (if any) teachers have noticed in students who completed CERDEP. Furthermore, teachers were provided with documentation on which students in their class participated in CERDEP through access to permanent record data.

Due to the limited number of participants and close proximity, focus groups rather than individual interviews were conducted. Furthermore, focus group sessions allow participants to discover and discuss concepts and issues that may not have been previously discussed (SIS International Research, 2022). Focus groups also provide the flexibility for group members to discuss concepts that arise during the discussion. Conversely, focus group sessions can impact how participants respond to questions as opposed to using semi-focused interviews. Semi-focused interviews offer an environment in which participants may answer questions more honestly and openly (Doyle, 2022). Interviews also allow the researcher to observe body language, facial expressions, and eye contact to decipher nonverbal indicators (Pollock, 2019).

While there are advantages and disadvantages to using a focus group, I wanted to employ an environment of rich discussion based on observations and experiences among the participants. Through the district's professional learning community initiative, the prekindergarten and kindergarten teachers have worked closely together in the past. I minimized the risk of confidentiality by (a) using the district-provided virtual platform; (b) using a password-protected virtual session in which participants have to be admitted into the session by the host; (c) asking participants to sign a confidentiality statement; and (d) keeping all recordings in a secure and locked area.

In this study, the context, input, and processes of CERDEP implementation were evaluated using an agreement criterion of 75% for both the focus group and the checklist outcomes. Cohen's Kappa is a common statistic used to evaluate the performance of a classification model (Pykes, 2020). Although there is no official scale, a substantial degree of agreement is between .61 and .80 (Pykes, 2020); hence, the 75% criterion was

selected as the agreement criterion as it falls in the middle of the substantial degree of agreement. Additionally, the evaluation criterion was 75% due to the fact that a minimum of 75% of students enrolled in CERDEP must meet the guidelines to remain in compliance (South Carolina Department of Education, 2021a). Furthermore, identifying the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program and determining the extent to which student participation in CERDEP impacts kindergarten reading readiness were assessed using thematic analysis. Thematic analyses provide researchers with extensive, detailed, and sophisticated data (Kiger & Varpio, 2020). Furthermore, thematic analysis goes further than merely noting words and phrases to identify and clarify recurring themes. The codes developed for concepts or themes are then connected to or applied to quantitative data for additional analysis, which may include comparing the frequency of subjects or themes mentioned, seeking code co-occurrence, or visually exhibiting code relationships (Maguire & Delahunt, 2017). Essentially, this program evaluation included a variety of data collection tools that addressed the research questions. Using multiple forms of data elicited all possibilities. Moreover, quantitative and qualitative data were both important to addressing the research questions as each method provided insight into interpretation across multiple databases.

**Data Collection**

Data collection procedures often detail the participant selection criteria and process, the overall procedures for data collection, the role of the researcher, and how validity and reliability are established in research studies.

### *Participant Selection*

The research tool that was used for the qualitative strand of the study was a focus group session comprised of current prekindergarten and kindergarten teachers. I invited 16 teachers via email by describing the purpose of the session and asking if they were willing to participate. Prekindergarten teachers received an email (see Appendix D), and kindergarten teachers received an email (see Appendix E). Seven of the teachers invited were CERDEP teachers, and nine of the teachers invited were kindergarten teachers. Teachers from four of the five elementary schools were invited to participate. Prekindergarten and kindergarten teachers from my school were not invited to participate. This decision was made to ensure participant answers were transparent, honest, and not influenced by researcher-participant relationships. Due to the number of study sites and their various locations around the district, the focus group sessions were held virtually. In addition to explaining the layout of the session, I also explained to teachers that participation in the focus group session was completely voluntary and that their responses would remain confidential. This information was reiterated in the informed consent letter teachers received upon agreeing to participate. Prekindergarten teachers received an informed consent letter (see Appendix F), and kindergarten teachers received an informed consent letter (see Appendix G).

I expected to have a minimum of 10 teachers total participate; therefore, a minimum of two focus group sessions were conducted. According to Cyr (2019), the ideal size for a focus group is five to eight people. Groups with more than 10 participants are challenging to manage and they reduce the chance for each member to express their thoughts and observations. Additionally, when people are unable to describe their

experiences, group dynamics can be altered (Cyr, 2019). As a result, I hosted two separate focus groups–one for prekindergarten teachers and one for kindergarten teachers. During the focus group sessions, I used Microsoft Teams and Otter to transcribe participant responses. The transcriptions were then used to conduct coding procedures to find recurring themes and patterns. The analysis of the focus group questions is discussed further in the data analysis section.

Quantitative data were analyzed using archived Literacy-Rich Classroom Environment checklists that an education associate from the state department completed during the 2021-2022 school year. All seven prekindergarten classrooms were included in this portion of the study. After receiving Institutional Review Board (IRB) approval, I sent an email (see Appendix H) to the district's chief academic officer requesting a data file containing the completed Literacy-Rich Classroom Environment checklist for each classroom included in the study. In the letter, I asked for data to be sent without teacher names, classroom numbers, or school names to ensure confidentiality and anonymity. Furthermore, teachers and their classrooms were not identified by those factors or any other identifiable variables within the study. Additionally, teacher checklist data were not shared with anyone, and the data were kept in a secured directory on my computer. The initial request for data was sent to the chief academic officer, and the data file was sent by the district's data manager. All data were properly destroyed after reporting results. The analyses of these data are reported in the data analysis section.

Moreover, the remaining quantitative data were collected from kindergarten literacy assessment data for students who attended CERDEP during the 2021-2022 school year. Student data were retrieved from all three attendance areas in the district and

students must have had an enrollment date of August 16, 2021 to be included. I reached out to the district's chief academic officer after receiving IRB approval to request data files with fall 2021 and spring 2022 PALS data for prekindergarten students, fall 2022 MAP Reading data for kindergarten students, and fall 2022 KRA data for kindergarten students (see Appendix I). In the letter, I asked the data to be sent without student names, gender, birthdates, and student identification numbers to ensure confidentiality and anonymity. Furthermore, students were not identified by those factors or any other identifiable variable within the study. Additionally, student data were not shared with anyone, and student data were kept in a secured directory on my computer. The initial request for data was sent to the chief academic officer, and the data file was sent by the district's data manager. All data were properly destroyed after reporting results. The analyses of these data are reported in the data analysis section.

Census sampling was used for this program evaluation as I included every student who attended CERDEP during the 2021-2022 school year. This in turn provided me with a minimum sample size of 30 (Creswell, 2018). Census sampling was selected as the sampling method as this is typically employed when a researcher is attempting to collect data from their school or district, the population is small, and the data are important for making decisions particular to the district (Berndt, 2020). Participants were not recruited for this portion of the study as I used raw PALS data, MAP Reading data, and KRA data provided by the district's chief academic officer. To analyze these data, a one-sample *t* test was conducted for each school. These statistical tests and analyses are discussed further in the data analysis section.

### *Role of the Researcher*

The design of my study required me to take on the role of the researcher as a statistician. In my role as a statistician, I used raw data to conduct a series of statistical tests to help me answer my research questions. Additionally, while I did not have any personal relationships with the participants, I did have professional relationships with staff members who participated in the focus group interview I conducted. These relationships were not supervisory in nature. Furthermore, as a researcher, it was imperative to be aware of my own biases. As a former prekindergarten teacher in the district I was researching, my interpretations of the themes and data presented could have been shaped based on my past experiences; thus, including data from similar studies was imperative to maintaining external validity.

## Validity and Reliability

Quantitative data and qualitative data were both essential to this program evaluation; hence, there were several steps that were in place to maintain internal validity. The quantitative instrument retrieved in this study was an environmental checklist completed by an education associate from the South Carolina Department of Education. This instrument is a published document; therefore, reliability and validity have already been established and this is a component of the study design that other researchers can follow. Additionally, I have been trained on how to use and analyze the environmental checklist. Moreover, the archived data I retrieved contained vital assessment data. Teachers who administered these assessments were trained on how to properly administer these important tests. Throughout the process of the qualitative component of this study, I used a fellow colleague as a peer debriefer to review the study.

This provided clarification on the study and allowed me to present facts based on the data collected and analyzed (Tracy, 2020). Intercoder reliability was also used as a tool to help avoid researcher bias. During the data analysis process, I identified negative and discrepant information and presented data from multiple data resources for justification; hence, using multiple validation procedures such as using a peer debriefer, intercoder reliability, and reporting discrepant information ensured the validity of the qualitative component of this program evaluation.

### *Cost/Benefit Analysis*

The instruments included in this program evaluation were a published environmental checklist and focus group interview questions that I designed based on the CIPP model. The environmental checklist is a public domain document with no associated cost. Moreover, the focus group questions focused on evaluating the context, input, and process of CERDEP. The remaining data utilized in this study were archived student data. I sent a letter of request for testing data to the district's chief academic officer with the proposal and IRB approval attached, asking for a data file containing fall 2021 PALS data, spring 2022 PALS data, fall 2022 KRA data, and fall 2022 MAP Reading data. As a result, there was no cost associated with the design of this program evaluation. Furthermore, there was no monetary benefit associated with this study; however, the study site school district has research-based information about CERDEP which will help guide future implementation decisions in the district. Additionally, districts with similar demographics will be able to replicate this study using the data instruments included in this study.

**Data Analysis**

Data analysis is critical to research as it is the interpretation of the data collected. The data analysis methods for quantitative data requires statistical analysis, while qualitative data requires coding. The data obtained from the participating schools in this study were comprised of female and male students who attended prekindergarten during the 2021-2022 school year and kindergarten during the 2022-2023 school year. The quantitative portion of this program evaluation included archived PALS data, MAP Reading data, and KRA data. Fall and spring PALS data from students who were enrolled in CERDEP during the 2021-2022 school year were retrieved to determine if students were on track for kindergarten reading readiness. The main purpose of the PALS assessment is to ascertain what students already know and what they are prepared to learn next. A paired *t* test was conducted for each school to test whether the mean scores between the pairs of measurements were zero or not. A one-sample *t* test was also conducted for each school to determine if the mean scores were significantly more, less, or different from the given value for PALS. The given value for PALS was determined by the spring developmental ranges in each section of the assessment. Furthermore, these ranges dictated where students should be performing at that specific time of year to demonstrate kindergarten reading readiness (PALS Resource Center, 2022).

MAP Reading scores are numerical and categorized by “does not meet,” “approaching,” “meets” or “exceeds.” The purpose of the MAP Reading assessment is to determine if students are below, on, or above grade level for a particular time of year in reading. The assessment is also directly aligned with the state’s end-of-year assessment and predicts student performance on SC Ready (South Carolina Department of

Education, 2022). Student MAP Reading scores for those who attended CERDEP during the 2021-2022 year were retrieved for the beginning of the 2022-2023 school year. A one-sample *t* test was conducted for each school to determine if the mean scores were significantly less, more, or different from the given value for MAP Reading. The given value for MAP Reading was predetermined by the RIT (Rasch Unit) scale, which measures academic achievement and growth. The RIT scale is consistent throughout all grades, making it possible to compare a student's performance over the course of their academic career (Northwest Evaluation Association, 2022).

The KRA gives an overview of a student's skills at the start of the academic year across several domains, including language and literacy. Students can be assessed as "demonstrating readiness," "approaching readiness," or "emerging readiness" (South Carolina Department of Education, 2021c). Student KRA scores in language and literacy for those who attended CERDEP during the 2021-2022 year were retrieved for the beginning of the 2022-2023 school year. A one-sample *t* test was conducted for each school to determine if the mean scores were significantly less, more, or different from the given value for the KRA. The given value for the KRA was predetermined based on the standard error of measurement for the student's specific domain/area (South Carolina Department of Education, 2021c). A checklist completed by an education associate with the state department was also included in the quantitative portion of this research study. I was trained in 2016 by an education associate from the state department on how to use and apply the checklist in a CERDEP classroom. A descriptive analysis of statistics detailing the distribution, central tendency, and dispersion was conducted to interpret results.

For the qualitative portion of this program evaluation, teachers participated in focus group sessions. These data in turn were collected and analyzed by me. The focus group session was recorded and transcribed via the district-provided platform, Microsoft Teams. I also used an additional application, Otter, to transcribe the focus group sessions. Multiple transcription software programs were in place to account for the possibility of technical difficulties. After printing the transcripts, I conducted an overview of the data by reading the transcripts and gathering general ideas on what the participants were saying in their responses, the tone of their ideas, and the overall depth of the information they provided. I then coded the data. During the coding process, I read through each transcript again and made a list of all topics, clustering similar topics together. After I created my topics, I went back through the data and assigned the code to the corresponding text. I performed several rounds of coding as new categories and codes emerged. After coding the data, I used those codes to create themes. Those themes along with supporting evidence (direct quotes referenced as Educator and a corresponding numeral) were shared with the participants to ensure my interpretations of their responses were valid. During the focus group sessions, I asked teachers questions regarding CERDEP's objectives, components, and implementation fidelity in order to gain further insight into the context, input, and process of the program. Core themes were discovered through the thematic analysis process. The core themes from the focus group were addressed in Research Questions 1, 2, 3, and 4.

**Professional Evaluation Standards**

The purpose of the professional evaluation standards is to guarantee that evaluations are handled morally, legally, and with due consideration for the welfare of all

parties involved (Gullickson & Howard, 2009). The following details the measures that were taken to ensure confidentiality throughout data collection, processing, and reporting of results. Teacher participants in the study were not identified by name, classroom number, or building location. This was to ensure confidentiality. Furthermore, I was transparent when explaining the purpose of the research study and data collection procedures. Participation in this study was voluntary and I communicated that during the recruitment process. To ensure anonymity with student archived data, I requested documentation that omits students' names, birthdates, gender, and identification numbers. Also, classrooms included in the study for the literacy classroom checklist were not identified by school, location, teacher name, or room number.

Moreover, while there are no physical or social risks involved in this program evaluation, information risks such as loss of privacy or breach of confidentiality were potential risks. To minimize these risks and protect participants from these risks, participant data were not shared with anyone, and all documents and recordings remained in a secured directory on my computer. My computer remained in my possession at all times or locked in my desk. All data and recordings were destroyed after the report was finalized. Additionally, I was an employee in the study district and have professional relationships with some of the participants in the study. This potential conflict of interest remained at the forefront during the data collection and analysis process of this program evaluation. I remained aware of the risks and was transparent with participants throughout the duration of this study.

The IRB process took place after the proposal, which consisted of Chapters 1, 2, and 3. My proposal was successfully defended on November 28, 2022. I completed the

most updated IRB application detailing how data and research would be conducted and analyzed throughout this program evaluation. I also identified potential risks and conflicts of interest and explained how those would be minimized throughout the study. Additionally, participant confidentiality and anonymity were of utmost importance. As a result, I also explained how participants and participant data would be protected. The application was submitted on December 4, 2022. I received correspondence on December 9, 2022 that included several minor changes. After submitting an updated IRB application on December 10, 2022, I received IRB approval on December 12, 2022.

**Study Timeline**

Table 5 details the specifics related to the timeline of conducting this program evaluation. Within the table, specific activities, the timeline, the persons responsible, and the resources needed were listed. The details provided helped guide me through the completion of the study, including the data collection and data analysis process. The study timeline acted as a living document as dates changed based on receiving permission to proceed with the proposal, receiving IRB approval, undergoing the data collection process, and completing the data analysis process.

**Table 5**

*Program Evaluation Timeline*

| Specific activity | Timeline | Persons responsible | Resources needed |
|---|---|---|---|
| Development of proposal | January 2022-October 2022 | Researcher; dissertation chair | Texts and research articles related to topic; Program Evaluation Outline |
| Research instruments | October 2022 | Researcher | Archived data; focus group protocol; focus group questions |
| Proposal defense | November 28, 2022 | Researcher; dissertation committee | Proposal; research instruments |
| IRB process | December 2022-January 2023 | Researcher; dissertation chair | IRB application; research instruments |
| Pilot study | January 2023 | Researcher | Research instruments; access to archived data |
| Data collection | January 2023 | Researcher | Research instruments; access to archived data; focus group sessions |
| Data clean-up | January-February 2023 | Researcher | Research instruments; statistical analyses document from EDLS 736 |
| Data analysis and interpretation of results | January-February 2023 | Researcher | Research instruments; statistical analyses document from EDLS 736 |

## Assumptions, Limitations, and Delimitations

The following assumptions, limitations, and delimitations for this program evaluation aided in directing the process of gathering and analyzing data, as well as determining the significance of the findings.

### *Assumptions*

For the purpose of this study, several assumptions were made. First, it was assumed that every prekindergarten teacher employed by the CERDEP program used and implemented with fidelity the World of Wonders as the literacy curriculum. The curriculum adoption process took place in 2018 with teachers who were employed at the time. As of the date of this research study, a new curriculum has not been adopted. It was also assumed that teachers who participated in the focus group portion of the study answered questions to the best of their ability and honestly.

Furthermore, analyzing assessment data provided by the teachers was a vital aspect of this research study. As a result, assumptions were made related to the validity and reliability of the data collected. It was assumed that teachers were trained on how to properly administer PALS, the KRA, and the MAP Reading assessment. Additionally, it was assumed that these assessments were administered in similar testing conditions.

### *Delimitations*

The information obtained from the participating schools in this study was comprised of female and male students who attended prekindergarten during the 2021-2022 school year and kindergarten during the 2022-2023 school year. If students did not begin the school year in August and did not complete the full school year term, their information was excluded from this study. If students moved from one school to another within the district in the same school year, their data were also excluded. Children needed to be 5 years of age on or before September 1st in order to attend kindergarten. Students attended the schools based on their area of residence.

Additionally, the scope of the study was my school district. As a result, my

specific school of employment was not included as a study site to minimize the risk of researcher bias and to minimize conflict of interest. Furthermore, it was also important to address factors such as teacher qualification, teacher effectiveness, and years of experience. Teacher qualification and teacher effectiveness were factors I could not control; however, to address years of experience, all the CERDEP classrooms had teachers who were employed with the district for a minimum of 3 years.

***Limitations***

As this study focused on seven South Carolina prekindergarten classrooms in four elementary schools, the limited sample size only provided a glimpse of how children attending CERDEP programs affected kindergarten reading achievement. Additionally, three of the four elementary schools included in this study were considered Title I schools. CERDEP targets at-risk 4-year-olds; therefore, the program's requirements limit the type of students eligible for participation. Also, the school district in which this research study took place is small. With a county population of 32, 244 and a median household income of $42, 442, the district served approximately 4,833 students. Another limitation was related to the standards. CERDEP used the SC-ELS, while kindergarten through fifth grade used the South Carolina College- and Career-Ready standards. The terminology used in the SC-ELS differs from the terminology used in the South Carolina College- and Career-Ready standards; as a result, teachers interpreted the standards differently.

# Chapter 4: Results

The purpose of this study was to evaluate the effectiveness of CERDEP on kindergarten reading readiness in a small rural school district in South Carolina using the program evaluation model. This study also investigated the impact of CERDEP implementation and program fidelity on student literacy outcomes. This study included four South Carolina elementary schools, School A, School B, School C, and School D. Additionally, this study used a convergent mixed methods design that was chosen to help gain a better understanding of the research questions. According to Creswell (2012), a complete picture of a study problem arises from gathering both quantitative and qualitative data. Moreover, this design also strengthens the weakness of using one data collection form. In order to thoroughly investigate CERDEP and its effect on kindergarten literacy achievement, both quantitative and qualitative data were gathered. Quantitative data were collected using descriptive statistical analyses of Literacy-Rich Classroom Environment Checklists and statistical analyses of student literacy achievement data from PALS, the MAP Reading assessment, and the KRA to determine if there was a statistically significant difference between students' actual scores and the given values of each literacy assessment. Qualitative data collection included two separate focus group sessions with prekindergarten and kindergarten teachers. Furthermore, the outcomes reported in this chapter are provided in relation to Stufflebeam's CIPP evaluation approach. The following evaluation questions guided this program evaluation study:

1. To what extent does CERDEP align with the assessed needs? (context)
2. How closely do the elements of CERDEP's goals correspond to the identified

needs? (input)

3. How closely does the program adhere to its initial design? (process)
4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product)
5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product)

As part of this program evaluation, a variety of types of data were analyzed and triangulated in order to better understand the impact of the research problem. The goal of the CERDEP Evaluation Strategy Matrix (see Table 6) is to graphically describe the components of this program evaluation (Fitzpatrick et al., 2011).

**Table 6**

*CERDEP Evaluation Strategy Matrix*

| Research question | Type of data to collect | Method of data collection | Information source | Analysis procedures | Interpretation procedures and criteria |
|---|---|---|---|---|---|
| 1. To what extent does CERDEP align with the assessed needs? (context) | Qualitative | Focus group session | Teachers | Thematic analysis | At least 75% of the participants would agree that the program goals met the assessed needs. |
| 2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input) | Qualitative | Focus group session | Teachers | Thematic analysis | At least 75% of the participants would agree that CERDEP's goals met the identified needs. |
| 3. How closely does the program adhere to its initial design? (process) | Qualitative | Focus group session | Teachers | Thematic analysis | At least 75% of the participants would agree CERDEP components were implemented with fidelity. |
| | Quantitative | Literacy-Rich Classroom Environment Checklist | Chief academic officer/district data manager | Descriptive statistics analysis | At least 75% of the prekindergarten classrooms observed implemented the components of the Literacy-Rich Classroom Environment Checklist. |

(continued)

| Research question | Type of data to collect | Method of data collection | Information source | Analysis procedures | Interpretation procedures and criteria |
|---|---|---|---|---|---|
| 4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product) | Qualitative | Focus group session | Teachers | Thematic analysis | Codes developed by themes are linked to raw data. |
| | Quantitative | Student achievement data | Chief academic officer/district data manager | Paired *t* test with descriptive statistics for prekindergarten students at all four schools using fall 2021 and spring 2022 data from the 2021-2022 school year. | The null hypothesis in this study for the district is that as a result of the implementation of CERDEP, there will not be a significant difference in the mean scores. |
| 5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product) | Qualitative | Focus group session | Teachers | Thematic analysis | Codes developed by themes are linked to raw data. |
| | Quantitative | Student achievement data | Chief academic officer/district data manager | 1 sample *t* test with descriptive statistics for kindergarten students at all four schools using fall KRA data from the 2022-2023 school year.<br><br>1 sample *t* test with descriptive statistics for kindergarten students at all four schools using fall MAP Reading data from the 2022-2023 school year. | The null hypothesis in this study for the district is that as a result of the implementation of CERDEP, there will not be a statistically significant increase in kindergarten reading readiness. |

Based on the matrix, qualitative and quantitative data were collected through

focus group sessions and archived literacy achievement data. The interpretation procedures for this study included both thematic analysis and using an agreement criterion of 75%. A common statistic used to assess a model's effectiveness is Cohen's Kappa (Pykes, 2020). A significant degree of agreement is between .61 and .80, even though there is no formal scale. As a result, the 75% criterion—which falls in the middle of the large degree of agreement—was chosen as the agreement criterion. Moreover, the evaluation standard was 75% because CERDEP enrollment requires that at least 75% of students adhere to the rules in order to remain compliant (South Carolina Department of Education, 2021a).

**Summary of Findings**

A combination of quantitative and qualitative data was collected to answer the research questions guiding this study. Information gathered from focus group sessions with prekindergarten and kindergarten teachers was utilized to help answer research questions related to context and input. In addition to data collected from focus group sessions being utilized to answer context and input questions, qualitative data from the focus group sessions in conjunction with quantitative data were utilized to answer research questions related to process and product. The final research question related to product was answered utilizing only quantitative data.

**Participants of the Study**

Qualitative data were collected by conducting focus group sessions with prekindergarten and kindergarten teachers. Quantitative data consisted of requesting and retrieving literacy archived data for prekindergarten and kindergarten students. Specific information regarding each group of participants is detailed below.

### *Focus Group Participants*

Prekindergarten teachers from four of the five elementary schools in the study site school district that implemented CERDEP during the 2021-2022 school year were invited to participate in the prekindergarten focus group session. The prekindergarten teacher from the school where I am employed was not invited to participate to alleviate potential bias. As a result, a total of seven prekindergarten teachers were invited to participate–one teacher from School A, two teachers from School B, two teachers from School C, and two teachers from School D. Table 7 displays the number of teachers from each school who were invited, the number of teachers who participated, and the number of years each prekindergarten teacher has taught in the CERDEP program.

**Table 7**

*Prekindergarten Focus Group Teacher Information*

| School | Number of teachers invited | Number of teachers who participated | Years taught in CERDEP |
|---|---|---|---|
| A | 1 | 1 | 9 years |
| B | 2 | 2 | Teacher 1: 9 years<br>Teacher 2: 3 years |
| C | 2 | 1 | 5 years |
| D | 2 | 1 | 9 years |

Five of seven (71%) prekindergarten teachers participated in the session, and all three attendance areas were represented as one teacher from School A, two teachers from School B, one teacher from School C, and one teacher from School D were present during the focus group session. It was also evident that the teachers participating had varied levels of experience with the program; however, each teacher in the focus group

session was on a continuing contract and considered a veteran teacher. Questions during the prekindergarten focus group session were related to CERDEP training, resources, implementation, and program sustainability (see Appendix B).

Kindergarten teachers from four of the five elementary schools were invited to participate in the kindergarten focus group session. Kindergarten teachers from the school where I am employed were not invited to participate to alleviate potential bias. A total of nine teachers were invited to participate–three teachers from School A, two teachers from School B, two teachers from School C, and two teachers from School D. Table 8 displays the number of teachers from each school who were invited, the number of teachers who participated, and the number of years each kindergarten teacher has taught in the school district.

**Table 8**

*Kindergarten Focus Group Teacher Information*

| School | Number of teachers invited | Number of teachers who participated | Years taught in district |
|---|---|---|---|
| A | 3 | 1 | 2 years |
| B | 2 | 0 | |
| C | 2 | 1 | 11 years |
| D | 2 | 1 | 2 years |

While only three of nine (33%) kindergarten teachers participated in the session, all three attendance areas were represented as one teacher from School A, one teacher from School C, and one teacher from School D were present during the focus group session. Similar to the participants in the prekindergarten focus group session, participants in the kindergarten focus group session also had varied levels of experience. One educator even mentioned having previous experience teaching kindergarten in the

state of Ohio prior to coming to the study district. Questions during the kindergarten focus group session were related to literacy skills and the overall impact of CERDEP on kindergarten literacy achievement (see Appendix C).

### *Literacy-Rich Classroom Environment Checklist Participants*

A representative from the state department completed the Literacy-Rich Classroom Environment Checklist (see Appendix A) for seven classrooms in the study site school district. These data were collected during the spring semester of the 2021-2022 school year. Table 9 displays how many classrooms from each school site were referenced in this program evaluation in regard to this specific data.

**Table 9**

*Literacy-Rich Classroom Environment Checklist Participants by School*

| School | Number of CERDEP classrooms | Number of CERDEP classrooms referenced in study |
|---|---|---|
| A | 1 | 1 |
| B | 2 | 2 |
| C | 2 | 2 |
| D | 2 | 2 |

Data from each classroom that participated in the checklist were included in this study. Results from the checklists were highlighted along with a detailed data analysis for each checklist. Checklist data are further discussed and analyzed in the process section of this chapter.

### *Student Participants*

Although students were not physically involved in this study, they were involved in the data collection aspect as archived literacy achievement scores were utilized in the quantitative strand of this study. Literacy achievement data from all prekindergarten

students who were enrolled in CERDEP during the 2021-2022 school year were used throughout the evaluation. Scores from a total of 151 students (N=151) were utilized in this program evaluation. Students' fall 2021 and spring 2022 PALS scores were requested from the district's data manager. In addition to students' prekindergarten scores, the same students' fall KRA scores and fall MAP Reading scores from the 2022-2023 school year were also requested. The KRA and the MAP Reading assessment were administered to kindergarten students during the first semester of the 2022-2023 school year. These student scores underwent a variety of statistical *t* tests to determine if there is a statistically significant difference between students' actual scores and the given value of each assessment. A detailed data analysis is discussed further in the product section of this chapter. Table 10 displays the student participation information for each assessment.

**Table 10**

*Assessment Student Participation*

| Assessment | Student participants |
|---|---|
| PALS | 2021-2022 prekindergarten students |
| KRA | 2022-2023 kindergarten students who were enrolled in CERDEP during the 2021-2022 school year |
| MAP Reading | 2022-2023 kindergarten students who were enrolled in CERDEP during the 2021-2022 school year |

## Analysis of Research Questions

The four CIPP model components were taken into consideration when this study's research questions were developed. As a result, each research question addresses one component of the CIPP model. Table 11 displays the alignment of the focus group questions to the research questions for this study.

**Table 11**

*Research Question and Focus Group Question Alignment*

| Research question | Prekindergarten focus group questions | Kindergarten focus group questions |
|---|---|---|
| 1. To what extent does CERDEP align with the assessed needs? (context) | How closely do the CERDEP components correspond to the needs of your students? | N/A |
| 2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input) | What resources were you provided when implementing the program? | N/A |
| | What relevant opportunities (e.g. funding opportunities, administrative support, professional development) exist for CERDEP? | N/A |
| | How closely does implementation adhere to the CERDEP framework? | N/A |
| | How sustainable is the program? | N/A |
| 3. How closely does the program adhere to its initial design? (process) | What did the initial training for CERDEP entail? | N/A |
| | What were the expectations for implementation in the classroom? | NA |
| | What implementation problems have been encountered? | N/A |
| | Is the program running efficiently? Why or why not? | N/A |
| 4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product) | Do you see or note any advantages for students being enrolled in CERDEP? Give examples. | What differences (if any) in literacy achievement have you noticed in students that attend CERDEP as opposed to those who do not? |
| | Do you see or note any disadvantages for students being enrolled in CERDEP? Give examples. | Do you see or note any advantages for students being enrolled in CERDEP? Give examples. |
| | | Do you see or note any disadvantages for students being enrolled in CERDEP? Give examples. |

(continued)

| Research question | Prekindergarten focus group questions | Kindergarten focus group questions |
|---|---|---|
| 5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product) | N/A | What overall impacts of the program have been observed? |

Prekindergarten focus group questions were aligned with Research Questions 1-4, and kindergarten focus group questions were aligned with Research Questions 4 and 5. The thematic analysis of each research question is discussed further in the thematic analysis section.

Moreover, each component and research question has a section below in which the data collected was shared, highlighted, and analyzed. For confidentiality purposes, when direct quotes from focus group sessions were referenced, participants were identified as Educator with a corresponding numeral.

**Context**

The context evaluation analyzes an organization's needs and goals as well as its capacity to achieve those goals (Stufflebeam, 2003). To examine the context aspect, Research Question 1 asked, “To what extent does CERDEP align with the assessed needs?” To answer this question, a series of questions were developed related to CERDEP’s components and their alignment with students’ needs. Table 11 displayed the alignment of the focus group questions to their relative research question.

CERDEP was implemented in the study site school district in 2014 as a response to academic achievement inequities in reading. Implementing this program was a part of legislation mandated by the state of South Carolina. On June 11, 2014, Governor Nikki Haley signed the Read to Succeed Act 9 (South Carolina Department of Education, 2022). Section 59 156 110 states,

> There is created the South Carolina Child Early Reading Development and Education Program, which is a full day, 4-year-old kindergarten program for at risk children which must be made available to qualified children in all public-school districts within the State. (South Carolina Department of Education, 2021a, p. 3).

As a result of this legislation, the study site school district did not have a choice in regard to implementing this program.

When teachers were asked, "How closely do the CERDEP components correspond to the needs of your students," Educator 5 stated,

> I think the thing I like about the standards is it gives a range. So it's birth all the way up to late 4-year-olds, so you can see where they are on that spectrum. So even if you have a kid, that's not all the way in that upper 4, you can see where they are if they're performing as a 3-year-old, or if they're performing as a lower 4-year-old. So that's kind of what I like about those standards is it gives that range.

Educator 4 also reported the same sentiments about the standards.

Educator 2 and Educator 3 emphasized the reading component of the program. In fact, Educator 3 stated,

> I think the reading aspect is an important component and definitely aligns to the needs of my students. Every year I have students who are very low in both reading and math, but especially reading. I like that CERDEP really focuses on the reading aspect.

Educator 2 added, "As a former kindergarten teacher, I can really appreciate the emphasis

CERDEP puts on reading skills-letter recognition, letter sounds, rhyming, nursery rhymes, sight words, and understanding print concepts are so important for being kindergarten ready." Educator 1 felt it was important to note that the parent engagement aspect of CERDEP was "also beneficial as it ensures that parents are aware of what their child should be able to do, where they stand academically, and potential problems in the future." Educator 2 added that "CERDEP is a great form of early intervention because we can detect possible issues earlier and get these kids the help they need sooner." Educator 1 and Educator 5 agreed that the components of CERDEP allow the program to serve as a form of early intervention so students can "receive services earlier in their academic years."

Throughout the discussion, the early learning standards, the emphasis on reading, and parent engagement continued to emerge throughout the conversation among the teachers. Teachers reported that these components were essential to meeting the needs of their students. A more detailed analysis is discussed in the thematic analysis section of this chapter. Furthermore, Table 12 displays the relevant questions, criterion, and results related to Research Question 1.

**Table 12**

*Alignment Summary for Research Question 1*

| Focus group question | Criterion | Focus group results |
|---|---|---|
| How closely do the CERDEP components correspond to the needs of your students? | At least 75% of the participants would agree that the program goals met the assessed needs. | 100% of the participants agreed that the CERDEP components correspond to the needs of their students. MET |

Based on the focus group discussion all the participants agreed that the

components of CERDEP met the needs of their students. Teachers expressed that the standards used in the program and the parent engagement aspect of the program allow parents to be aware of and understand important developmental milestones. It is also important to note that the teachers reported how CERDEP could be used as a form of early intervention for students who may need additional resources.

**Input**

The input evaluation analyzes issues regarding the methods and resources required to carry out the goals and objectives of the program (Stufflebeam, 2003). It also examines the contents of the curriculum. To examine input, Research Question 2 asked, "How closely do the elements of CERDEP's goals correspond to the identified needs?" To answer this question, a series of questions were generated related to relevant opportunities, resources provided, and implementation adhering to the CERDEP framework. Table 11 displayed the alignment of the focus group questions to their relative research question.

Teachers were asked, "What relevant opportunities related to funding, administrative support, and professional development exist for CERDEP?" Educator 4 noted, "The first thing that comes to mind is the money we've received"; however, Educator 5 quickly stated, "But we don't get that every year." Educator 4 went on to say that receiving funds has been "random" and "hasn't been consistent" throughout the years. According to Educator 5, it has been "at least 3 years" since prekindergarten teachers have received funding. Educator 2 asked if the program has any money, and Educator 1 responded, "No, I don't think there's no money. I think the only money they're using now is to start the new districts that are actually becoming part of the

program, but I think that's it."

In regard to the professional development aspect, the teachers noted how they are required to receive 15 hours of professional development to remain in compliance with CERDEP. Educator 1 noted that "each school used to pay for prekindergarten teachers to go to the prekindergarten and kindergarten conference in Columbia to get our hours, but they claim they don't have the money to do that now." Educator 3 added,

> And what about the SCECA conference? They don't send us to that anymore either. It's sad how the funding has not only affected what we can purchase for our classrooms, but now we are responsible for getting our own hours.

When asked, "What resources were you provided when implementing the program," Educator 5 laughed and responded, "a handbook." Educator 1 agreed that teachers received "pretty much the handbook and the good start grow smart standards to make sure we were in compliance with that." The remaining teachers noted how the resources received outside of the funding were very minimal. Educator 5 stated, "I guess they expected us to purchase everything we needed with the money we got, but we didn't get the money until a few weeks after school started. What were we supposed to do before then?"

Educator 5 also offered insight into how implementation adheres to the CERDEP framework:

> I felt like we did really good with that. I mean, I can't speak for I mean everyone, but with our school, when we've had CERDEP visits, they've always said we're in compliance. Our rooms look good. You know, those kinds of things.

Educator 1, Educator 3, and Educator 4 also emphasized the fact that they have also

remained in compliance and have never had the state department return for a second CERDEP visit within the same school year.

In regard to Research Question 2, the common emerging themes were funding, minimal resources, and the Literacy-Rich Classroom Environment Checklist. A more detailed analysis is discussed in the thematic analysis section of this chapter. Table 13 displays the relevant questions, criterion, and results related to Research Question 2.

**Table 13**

*Alignment Summary for Research Question 2*

| Focus group question | Criterion | Focus group results |
|---|---|---|
| What relevant opportunities (e.g. funding opportunities, administrative support, professional development) exist for CERDEP? | At least 75% of the participants would agree that CERDEP's goals met the identified needs. | 100% of the participants agreed that they have been provided with relevant opportunities related to funding, administrative support, and professional development. MET |
| What resources were you provided when implementing the program? | At least 75% of the participants would agree that CERDEP's goals met the identified needs. | 60% of participants agreed that they received adequate materials for program implementation. NOT MET |
| How closely does implementation adhere to the CERDEP framework? | At least 75% of the participants would agree that CERDEP's goals met the identified needs. | 80% of participants agreed that their classrooms have followed the CERDEP framework based on the Literacy-Rich Classroom Environment Checklist. MET |

Results from Table 13 suggest that the agreement criterion for relevant opportunities related to funding, administrative support, and professional development was met. Results also indicate that teachers reported that they did not receive adequate

materials for program implementation. As a result, the agreement criterion was not met in this specific area. Conversely, based on focus group discussions, teachers indicated that they were implementing the components of CERDEP with fidelity by utilizing the Literacy-Rich Classroom Environment Checklist.

**Process**

The process evaluation entails reviewing the methods and techniques by which a program has been implemented (Stufflebeam, 2003). To examine the process aspect, Research Question 3 asked, "How closely does the program adhere to its initial design?" To answer this question, a series of focus group questions in addition to quantitative data collected from Literacy-Rich Classroom Environment Checklists were generated to facilitate understanding. The focus group questions were geared towards initial training, expectations for implementation, implementation problems, efficiency of the program, program sustainability, and the overall impact of the program. Table 11 displayed the alignment of the focus group questions to their relative research question.

Teachers were asked a question related to the initial training they received when the district first implemented the program. Discussions around the lack of training when the program was first introduced were apparent as Educator 4 stated, "I don't think we had any training." Educator 1 also added,

> I don't remember having a lot of training for CERDEP. They came in and told us we were going to do this and we initially did the required things like fingerprinting and turning in your information as far as your education background information. That was pretty much what we did.

Moreover, discussions regarding assessments were then mentioned as Educator 5 stated,

"I did a PALS training when I first started." Educator 1 then added, "Well they did include PALS, but otherwise, they didn't really train us." Educator 4 went on to say,

> We didn't have a workshop, or PD, or any type of training that I remember. We've had programs that the state department has asked us to include, like what she was talking about the PALS. But as far as like an actual training, there was no training for that.

Furthermore, when asked, "What were the expectations for implementation in the classroom," the literacy checklist was among the first response from the teachers participating in the session. Educator 5 mentioned that she looks "for those same kinds of things" to be implemented in her classroom, hence providing an environment rich in literacy and an environment where young children are immersed in literacy is expected. Also, implementing a state-approved assessment in the classroom is an expectation. At the moment, PALS is the prekindergarten assessment tool that all CERDEP classrooms must use; however, according to Educator 5, "Next year, we're using a new, we've got to use a new assessment." Educator 1 added that a teacher-created district assessment is also an expectation for implementation in the classroom. The teacher-created assessment allows teachers to progress-monitor more often, whereas the state-approved assessment, PALS, is only administered three times a year.

Additionally, it is expected that CERDEP teachers implement a state-approved curriculum. Educator 5 noted that "right now, it's World of Wonders, but we're in the curriculum adoption process now as we've had World of Wonders for 5 years." Educator 3 quickly noted that "the district says they don't have funds to purchase a new curriculum for each CERDEP classroom, so I don't know what they're going to do." When asked,

"How sustainable is the program," responses quickly mentioned the lack of funding affecting sustainability. Educator 5 stated, "I think it would be financially difficult for the district"; and the teachers agreed. However, Educator 4 mentioned the impact of an effective teacher: "Well, if you're an effective teacher and doing your job, you're going to make it work. The funding does help enhance it, and it will get you the things you need."

In addition to discussing the expectations for implementation, prekindergarten teacher participants were asked about issues with implementation. The teachers noted that program implementation has been smooth and they have received support from various stakeholders. Educator 3 mentioned the support of administrative staff at the school and district levels and the support of the parents. Educator 2 stated, "I wish I had more parental support, but the administrative staff has been very supportive with implementation. It's difficult to get my parents here this year, but it was the complete opposite last year with parental involvement." According to the teachers, parental involvement is an important aspect of CERDEP, but the level of participation from parents varies from year to year. Educator 1 reflected on the level of parental support for her class: "Last year, I pretty much had 100% participation in every engagement activity I offered. But this year, I could barely get them in for conferences and that's supposed to be mandatory." Educator 5 noted that it was the opposite for her: "I barely saw parents last year despite the many attempts to invite them for math night, literacy night, conferences, and classroom activities. This year, I can't seem to get rid of them, which is a good problem to have."

In regard to program efficiency, the funding aspect was mentioned again as

teachers felt that without the funding, the program will not be as successful as it could be. Educator 4 reflected on the importance of receiving funding annually:

> It does concern me that we don't get funding every year, though because you have expectations of things that are supposed to happen. And if you're not funded every year, you might not have the money to provide some of the things that you might need to have in a classroom, like consumables.

Educator 1 also mentioned that it would be "really great if we received the money every 2 years or 3 years." Her rationale behind this idea is that items can be replaced in a timely manner. Adding more to the conversation, Educator 5 posed the following question for reflection to the group: "The program is running efficiently for now, but what happens when we no longer have the materials to support the program and no funding to do so?" The remaining educators agreed as they pondered that thought.

Focus group discussions regarding Research Question 3 brought about the following themes: CERDEP compliance, inadequate training, state-approved curriculum, administrative support, parent engagement, and funding. A more detailed analysis is discussed in the thematic analysis section of this chapter. Table 14 displays the relevant questions, criterion, and results related to the qualitative strand of Research Question 3.

**Table 14**

*Alignment Summary for Research Question 3*

| Focus group question | Criterion | Focus group results |
|---|---|---|
| What did the initial training for CERDEP entail? | At least 75% of the participants would agree CERDEP components were implemented with fidelity. | 20% of participants agreed that they received adequate training for CERDEP. NOT MET |
| What were the expectations for implementation in the classroom? | At least 75% of the participants would agree CERDEP components were implemented with fidelity. | 100% of the teachers agreed that the expectations for implementation were aligned with the components of CERDEP and were implemented with fidelity. MET |
| What implementation problems have been encountered? | At least 75% of the participants would agree CERDEP components were implemented with fidelity. | 100% of the teachers agreed that they have not encountered any implementation problems and have received support from various stakeholders. MET |
| Is the program running efficiently? Why or Why not? | At least 75% of the participants would agree CERDEP components were implemented with fidelity. | 100% of the participants agreed that CERDEP is running efficiently for now. MET |
| How sustainable is the program? | At least 75% of the participants would agree CERDEP components were implemented with fidelity. | 0% of the participants agreed that the program is sustainable. NOT MET |

Focus group data results provided insight into how program components were being implemented. Results from the table suggest that the agreement criterion for initial training was not met; however, the teachers agreed that they have not encountered any implementation problems. Teachers also agreed that the expectations for implementation were aligned with the components of CERDEP and were implemented with fidelity.

Focus group discussions further revealed that although the program is running efficiently now, the lack of funding does not allow the program to be sustainable.

Moreover, quantitative data were collected from the Literacy-Rich Classroom Environment Checklists which were completed by a representative from the state department during the spring semester of the 2021-2022 school year. The purpose of this checklist created by the state department is to measure how closely prekindergarten classrooms are adhering to the CERDEP framework. The detailed checklist used features five domains: classroom structure, curriculum, the language environment, books and book reading, and print and early writing (see Appendix J). These domains are inclusive of the areas teachers use to assess their literacy environment (see Appendix A). Within each domain, there are descriptors, and each descriptor is given a score between 0 and 5. Scoring a 5 indicates there is compelling evidence supporting that specific descriptor, while scoring a 1 indicates deficient evidence supporting that specific descriptor. To remain in compliance with the framework set forth by CERDEP, teachers must receive an average score of at least a 3 for each domain, which indicates there is some evidence supporting that specific descriptor (South Carolina Department of Education, 2021b). Checklist results for each classroom included in this program evaluation are detailed in Tables 15-19. These were archived data collected by a state department representative during their annual site visit. These visits are only completed once a year unless a classroom does not meet the minimum requirement of scoring a 3 for each domain. Furthermore, the checklist data only represents one environmental observation. All site visits took place during the spring semester of the 2021-2022 school year. Table 15 displays the checklist results of School A for the 2021-2022 school year.

**Table 15**

*School A Literacy-Rich Classroom Environment Checklist Results 2021-2022*

| Classroom 1 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 4 |
| | Contents of the classroom | 4 |
| | Classroom management | 4 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 4 |
| | Characteristics of books | 4 |
| | Books for learning | 4 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 3 |

Based on the scores, it is evident that School A's prekindergarten classroom followed the framework set forth by CERDEP. Scoring a 4 in a variety of areas also indicates there was strong evidence to support those specific parameters. Scoring a 3 shows that there is room for growth in the areas of approaches to curriculum, efforts to build vocabulary, and the early writing environment.

Table 16 displays the checklist results from School B for the 2021-2022 school year. School B had two CERDEP classrooms during the 2021-2022 school year.

**Table 16**

*School B Literacy-Rich Classroom Environment Checklist Results 2021-2022*

| Classroom 1 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 4 |
| | Contents of the classroom | 4 |
| | Classroom management | 4 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 4 |
| | Characteristics of books | 5 |
| | Books for learning | 5 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 3 |

| Classroom 2 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 4 |
| | Contents of the classroom | 4 |
| | Classroom management | 4 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 4 |
| | Characteristics of books | 5 |
| | Books for learning | 5 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 3 |

Scores from both Classroom 1 and Classroom 2 indicate that they were both in compliance with the CERDEP framework. It is noted that both classrooms also demonstrated compelling evidence for characteristics of books and books for learning during the state department's visit, as both classrooms received the highest rating

possible for those areas. Conversely, Classroom 1 and Classroom 2 demonstrated that both classrooms need improvement in the approaches to curriculum, efforts to build vocabulary, and the early writing environment domains.

Table 17 displays the checklist results from School C for the 2021-2022 school year. School C also had two CERDEP classrooms during the 2021-2022 school year.

**Table 17**

*School C Literacy-Rich Classroom Environment Checklist Results 2021-2022*

| Classroom 1 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 4 |
| | Contents of the classroom | 4 |
| | Classroom management | 3 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 3 |
| | Characteristics of books | 4 |
| | Books for learning | 4 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 2 |

| Classroom 2 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 4 |
| | Contents of the classroom | 4 |
| | Classroom management | 5 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 4 |
| | Characteristics of books | 4 |
| | Books for learning | 4 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 3 |

Based on the scores, it is evident that Classroom 1 has room for growth as a score of 2 was received for the early writing environment. This score indicates there was limited evidence supporting the print and early writing domain. This score also indicates that this classroom is not in compliance with the CERDEP framework for this specific area; however, Classroom 2 scored at least a 3 in each area to remain in compliance with the expectations set forth by CERDEP. Classroom 2 also received the highest score possible for classroom management.

Table 18 displays the checklist results from School D for the 2021-2022 school year. School D also had two CERDEP classrooms during the 2021-2022 school year.

**Table 18**

*School D Literacy-Rich Classroom Environment Checklist Results 2021-2022*

| Classroom 1 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 3 |
| | Contents of the classroom | 3 |
| | Classroom management | 4 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 3 |
| | Characteristics of books | 4 |
| | Books for learning | 4 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 2 |

| Classroom 2 | | |
|---|---|---|
| Domain | Criteria | Score |
| Classroom structure | Organization of the classroom | 4 |
| | Contents of the classroom | 4 |
| | Classroom management | 4 |
| Curriculum | Approaches to curriculum | 3 |
| The language environment | Efforts to build vocabulary | 3 |
| Books and book reading | Organization of book area | 4 |
| | Characteristics of books | 4 |
| | Books for learning | 5 |
| | Quality of book reading | 4 |
| Print and early writing | Early writing environment | 3 |

Based on the scores, it is evident that Classroom 1 has room for growth as a score of 2 was received for the early writing environment. This score indicates there was limited evidence supporting the print and early writing domain. This score also indicates

that this classroom is not in compliance with the CERDEP framework for this specific area; however, Classroom 2 scored at least a 3 in each area to remain in compliance with the expectations set forth by CERDEP. Classroom 2 also received the highest score possible for books for learning.

The checklist data for all the CERDEP classrooms included in this study revealed that five of seven classrooms received a rating of 3 or better for each criterion listed in the Literacy-Rich Classroom Environment Checklist, thus 71% of the classrooms in the district were in compliance with the framework set forth by CERDEP.

Table 19 displays the mean scores for each criterion of the Literacy-Rich Classroom Environment Checklist for the CERDEP classrooms during the 2021-2022 school year.

**Table 19**

*Mean Scores from the Literacy-Rich Classroom Environment Checklist Results 2021-2022*

| Domain | Criteria | Mean score |
|---|---|---|
| Classroom structure | Organization of the classroom | 3.86 |
| | Contents of the classroom | 3.86 |
| | Classroom management | 4.0 |
| Curriculum | Approaches to curriculum | 3.0 |
| The language environment | Efforts to build vocabulary | 3.0 |
| Books and book reading | Organization of book area | 3.71 |
| | Characteristics of books | 4.29 |
| | Books for learning | 4.43 |
| | Quality of book reading | 4.0 |
| Print and early writing | Early writing environment | 2.71 |

Strengths noted in Table 19 are related to books for learning and characteristics of

books. The mean scores for both of these criteria were 4.43 and 4.29 respectively. The weakness and outlier noted is the early writing environment in which the mean score was 2.71. Based on this, the domain in which the district demonstrated the most strength was books and book reading, while the district's area of weakness was in print and early writing.

**Product**

The product evaluation entails evaluating the merit, worth, relevance, and probity of a program's results (Stufflebeam, 2003). Qualitative and quantitative data were collected to examine Research Question 4, which asked, "What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program?" Quantitative data were collected to examine Research Question 5, which asked, "To what extent does student participation in CERDEP impact kindergarten reading readiness?" These questions were included to not only measure the success of the program thus far but to measure the impact the program has on kindergarten literacy achievement. To help answer Research Question 4, prekindergarten teachers reflected on the advantages and disadvantages of students being enrolled. Table 11 displayed the alignment of the focus group questions to their relative research question.

Discussions surrounding the advantages and disadvantages of students being enrolled in CERDEP were insightful. When asked, "Do you see or note any advantages for students being enrolled in CERDEP," Educator 5 quickly stated,

> I think it's a huge advantage when kids are here for the entire school year. I mean not just the academic components that they pick up. But because kindergarten is

> now so academic focused, they don't get that social-emotional component as much in kindergarten. And I think that is a huge part of our program.

Educator 1 also added,

> I think it is too because they learn to do school. It's been a big shout-out for the kids that came in from the pre-k programs really being ready, doing exceptionally well on the MAP testing and other tests that they are doing with them. So I know the program is very beneficial.

Educator 1 went on to add that the summer school option for prekindergarten students has also been beneficial as it allowed students to get a few more weeks of intense instruction before going into kindergarten to help students get on target. Educator 4 made a point to mention that another advantage of students being enrolled in CERDEP is teachers being aware of students who may struggle and may need an Individualized Education Plan: "This kind of helps those kindergarten teachers to get them placed correctly. You kind of catch some of that before they start kindergarten."

Educator 2 described a situation in which she received a new student mid-year who was enrolled in daycare. Based on assessments, the new student is behind her current students despite being enrolled in school elsewhere. Educator 2 said, "She's not where my children are right now. She has a lot of rote memory stuff. But she does not know how to apply what she knows, to further her learning." The teachers noted that this particular student would be a good candidate for summer school. Upon asking the teachers about disadvantages, the teachers did not note any disadvantages for students being enrolled in CERDEP. Further themes that emerged throughout the discussions were social/emotional development, kindergarten readiness, and early intervention. A more

detailed analysis is discussed in the thematic analysis section of this chapter.

A kindergarten focus group session was also conducted to help answer Research Question 4. The participants reflected on the differences in literacy achievement of students who attended CERDEP as opposed to those who did not and the literacy skills the students possess upon entering kindergarten. Kindergarten Focus Group Questions 2, 3, 4, and 5 were used to answer the product component of this program evaluation (see Appendix C).

When asked, "What differences (if any) in literacy achievement have you noticed in students that attend CERDEP as opposed to those who do not," Educator 1 responded,

> A BIG difference. We actually, [Educator 8] and I, was actually talking about this, at the beginning of the year, even compared to now, because a lot of the student that had the experience of attending the pre-k program, CERDEP program, they came in knowing a lot of the standards that we master around December. So for me, I know it's a big difference.

Educator 8 added, "I noticed they do not have the same performance levels." Educator 6 mentioned the communication levels of the students: "Students who have come through the CERDEP program have a better understanding of how to communicate." The participants also agree on the communication aspect. In fact, when the teachers were discussing the different literacy skills students enter kindergarten with, communication and listening skills were on the list. Educator 8 noted, "They have the kindergarten readiness skills to sit and listen to a read-aloud, they can tell me their name, they know how to ask a question, they know how to talk to their friends." Understanding the rules, routines, and procedures of school was also noted by Educator 6.

Other skills that were discussed among the teachers related to literacy were letter identification, letter sounds, advanced background knowledge, name writing, sight word recognition, and rhyming. Educator 7 noted, “They come in knowing a lot already, knowing their uppercase letters, lowercase letters, already knowing sounds, and knowing some sight words.” Educators 7 and 8 also explained that in kindergarten, they introduce one letter per day as opposed to prekindergartners who generally study one letter a week. Having students who can identify letters and have knowledge of letter-sound correspondence “makes for an easier transition to writing letters and forming simple words.” Kindergarten teachers in the focus group session were also asked about the advantages and disadvantages of students being enrolled in CERDEP. In regard to advantages, Educator 6 was very vocal about those students demonstrating kindergarten readiness: “Students who are enrolled in CERDEP seem to be better equipped for kindergarten. They tend to have an understanding of the classroom setting and routines. This allows more time for instruction.” Additionally, Educator 8 added that students who were enrolled in CERDEP are “able to hold a pencil, they know their colors, and they have those skills that are necessary to get through the kindergarten program.”

Furthermore, the teachers did not note any disadvantages to students being enrolled in CERDEP. In fact, Educator 7 asserted, “99.9 would recommend. It’s very necessary-like it should be a requirement.” Based on the discussion with the kindergarten teachers, the general consensus was that “overall children who are enrolled in CERDEP come to kindergarten with a better understanding of literacy. We think CERDEP gets children ready for the rigor of kindergarten literacy.” The kindergarten focus group session brought about the following themes: concepts of print, phonics, phonological

awareness, and kindergarten readiness. A more detailed analysis is discussed in the thematic analysis section of this chapter.

In addition to collecting qualitative data through focus group sessions, quantitative data were also used to answer Research Question 4. Prekindergarten student achievement data from the PALS assessment were received for the beginning and end of the 2021-2022 school year. These data were requested to gain a better understanding of the effectiveness of CERDEP on prekindergarten students' literacy achievements. There are eight areas assessed on the PALS assessment: name writing, beginning sound awareness, uppercase letter recognition, lowercase letter recognition, letter-sound correspondence, print awareness, nursery rhyme awareness, and rhyme awareness. Scores of prekindergarten students who were enrolled in CERDEP during the 2021-2022 school year were included in this study. Students had to be enrolled no later than August 16, 2021 and had to stay in the program for the full school year in order to be included in the study. Furthermore, after receiving the data, I analyzed all qualifying student data collectively as opposed to analyzing the data individually by school because the data were sent without any school, teacher, or student identification. Additionally, analyzing the data collectively provided a picture of how students were performing in the district overall.

Table 20 displays the descriptive statistics of prekindergarten students' scores from the fall 2021 administration of PALS and the spring 2022 administration of PALS.

**Table 20**

*Means and Standard Deviations of Scores on Fall 2021 PALS and Spring 2022 PALS*

| Area | Fall 2021 | Spring 2022 |
|---|---|---|
| Name writing | 2.53(2.26) | 6.17(1.52) |
| Beginning sound awareness | 1.90(2.55) | 7.04(3.46) |
| Uppercase letter recognition | 4.89(7.33) | 20.4(7.85) |
| Lowercase letter recognition | 3.54(6.53) | 19.4(8.28) |
| Letter-sound awareness | 0.52(2.37) | 13.21(8.24) |
| Print awareness | 1.91(2.19) | 7.23(2.74) |
| Nursery rhyme awareness | 3.53(2.48) | 7.72(2.31) |
| Rhyme awareness | 2.66(2.66) | 6.40(3.13) |

*Note.* N=151; standard deviations are presented in parentheses.

Results from Table 20 indicate that the mean scores for each area assessed increased from fall administration to spring administration. The most significant areas of growth noted were for uppercase letter recognition from fall (M=4.89, SD=7.33) to spring (M=20.4, SD=7.85) and lowercase letter recognition from fall (M=3.54, SD=6.53) to spring (M=19.4, SD=8.28).

Furthermore, a paired *t* test was conducted to analyze the results of the fall and spring PALS data to test whether the mean difference between the pairs of measurements was significantly different. Table 21 displays the results of the paired *t* test for PALS for each area assessed.

**Table 21**

*Fall 2021 and Spring 2022 PALS Data Paired t Test Results*

| Area | *M* | *t (150)* | *p* | 95%CI |
|---|---|---|---|---|
| Name writing | 3.64(2.31) | 19.40 | .001 | [3.27,4.01] |
| Beginning sound awareness | 5.05(3.95) | 15.71 | .001 | [4.41,5.68] |
| Uppercase letter recognition | 15.52(9.40) | 20.28 | .008 | [14,00, 17.03] |
| Lowercase letter recognition | 15.93(9.26) | 21.14 | .007 | [14.44,17.03] |
| Letter-sound correspondence | 12.25(8.46) | 17.79 | .008 | [10.89,13.61] |
| Print awareness | 5.32(3.22) | 20.29 | .007 | [4.81,5.84] |
| Nursery rhyme awareness | 4.18(3.05) | 16.84 | .002 | [3.69,4.68] |
| Rhyme awareness | 3.74(3.53) | 13.04 | .001 | [3.17,4.31] |

*Note.* N=151; standard deviations are presented in parentheses; CI=confidence interval.

Results indicated that the mean difference between the pairs of measurements for name writing (M=3.64, SD=2.31) was significantly different after CERDEP implementation with t(150)=19.40, $p$ =.001. Since the $p$ value, $p$=.001, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for name writing.

Results also indicated that the mean difference between the pairs of measurements for beginning sound awareness (M=5.05, SD=3.95) was significantly different after CERDEP implementation with $t$ (150) =15.71, $p$ =.001. As a result, since the $p$ value, $p$=.001, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for beginning sound awareness.

Further results indicated that the mean difference between the pairs of

measurements for uppercase letter recognition (M=15.52, SD=9.40) was significantly different after CERDEP implementation with $t$ (150) =20.28, $p$ =.008. Furthermore, since the $p$ value, $p$=.008, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for uppercase letter recognition.

In regard to lowercase letter recognition, results indicated that the mean difference between the pairs of measurements (M=15.93, SD=9.26) was significantly different after CERDEP implementation with $t$ (150) =21.14, $p$ =.007. Since the $p$ value, $p$=.007, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for lowercase letter recognition.

Moreover, reflecting on results regarding letter-sound correspondence, results indicated that the mean difference between the pair of measurements (M=12.52, SD=8.46) was significantly different after CERDEP implementation with $t$ (150) =17.79, $p$ =.008. As a result, since the $p$ value, $p$=.008, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for letter-sound correspondence.

Results also indicated that the mean difference between the pairs of measurements for print awareness (M=5.32, SD=3.22) was significantly different after CERDEP

implementation with $t$ (150) =20.29, $p$ =.007. Since the $p$ value, $p$=.007, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for print awareness.

Further results indicated that the mean difference between the pairs of measurements for nursery rhyme awareness (M=4.18, SD=3.05) was significantly different after CERDEP implementation with $t$ (150) =16.84, $p$ =.002. Since the $p$ value, $p$=.002, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for nursery rhyme awareness.

Moreover, results related to rhyme awareness indicated that the mean difference between the pairs of measurements (M=3.74, SD=3.53) was significantly different after CERDEP implementation with $t$ (150) =13.04, $p$ =.001. Since the $p$ value, $p$=.001, is less than α=.05, we reject the null hypothesis that as a result of the implementation of CERDEP, there is not a statistically significant difference in the mean scores and conclude that there is enough evidence to support the claim that the implementation of CERDEP affected student scores for rhyme awareness. Furthermore, based on the overall results of the paired $t$ test data, it can be concluded that the implementation of CERDEP positively affected student scores for all eight areas assessed on PALS.

Quantitative data were also collected to answer Research Question 5, which asked, “To what extent does student participation in CERDEP impact kindergarten

reading readiness?" To help answer this question, kindergarten MAP Reading data and KRA data from fall 2022 were requested and received for those students who attended CERDEP during the 2021-2022 school year. A series of one-sample *t* tests were conducted to determine if there was a significant difference between the given value for each assessment and students' mean score on the assessment. In regard to MAP Reading, data indicated that the given value mean (M=137, SD=0) was not significantly lower than students' actual mean score (M=137.97, SD=11.44), with $t$ (150) =1.05, $p$=.149. The 95% confidence interval for the mean difference between the given value score and students' mean score after attending CERDEP the previous year was -2.8 to 0.87; thus, since the *p* value, p=.149, is greater than α=.05, we fail to reject the null hypothesis that as a result of implementing CERDEP, there is not a statistically significant increase in kindergarten reading readiness and conclude that there is not enough evidence to support the claim that as a result of CERDEP implementation, skills related to kindergarten reading readiness increased.

Moreover, results from the fall administration of the KRA were also analyzed. Data suggested that the given value mean (M=270, SD=0) was significantly lower than students' actual mean score (M=257.7, SD=33.25), with $t$ (150) =-4.52, $p$=.006. The 95% confidence interval for the mean difference between the given value score and students' mean score after attending CERDEP the previous year was 6.91 to 17.60. Since the *p* value, p=.006, is less than α=.05, we reject the null hypothesis that as a result of implementing CERDEP, there is not a statistically significant increase in kindergarten reading readiness and conclude that there is enough evidence to support the claim that as a result of CERDEP implementation, skills related to kindergarten reading readiness

increased.

Essentially, while data from MAP Reading scores indicated that CERDEP implementation does not have an effect on kindergarten reading readiness skills, data from the KRA indicated otherwise.

## Thematic Analysis

Focus group sessions were held with both prekindergarten and kindergarten teachers to gather quantitative data relative to the various aspects of CERDEP. Discussions provided insight into the components of CERDEP and revealed a variety of revelations that were used to help answer the research questions that guided this evaluation. The following section graphically displays the common themes that emerged during both focus group sessions.

### *Themes With Prekindergarten Teachers*

Several common themes were identified when analyzing the focus group discussion with the prekindergarten teachers. Prekindergarten focus group questions addressed CERDEP expectations, CERDEP implementation, the advantages and disadvantages of being enrolled in CERDEP, and student literacy achievement. Table 22 provides the overarching topics indicated by the prekindergarten teachers.

**Table 22**

*Common Themes Identified from Focus Group Discussion With Prekindergarten Teachers*

| CIPP evaluation questions | Focus group question topics | Themes |
|---|---|---|
| Research Question 1: To what extent does CERDEP align with the assessed needs? (context) | • Correlation of CERDEP components to needs of students | • Emphasis on foundational literacy skills<br>• Parent engagement<br>• State mandated<br>• Early learning standards |
| Research Question 2: How closely do the elements of CERDEP's goals correspond to the identified needs? (input) | • Relevant opportunities<br>• Resources provided<br>• Implementation adhering to the CERDEP framework | • Inadequate resources<br>• Inconsistent funding<br>• Professional development opportunities<br>• Literacy-rich classroom environment checklist |
| Research Question 3: How closely does the program adhere to its initial design? (process) | • Initial training<br>• Implementation expectations<br>• Implementation problems<br>• Program efficiency<br>• Sustainability of program | • Lack of training<br>• CERDEP compliance<br>• Appropriate level of funding<br>• State-approved resources<br>• Administrative support<br>• Parent engagement |
| Research Question 4: What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product) | • Advantages of enrollment<br>• Disadvantages of enrollment | • Kindergarten readiness<br>• Social/emotional development<br>• Early intervention |

Analyzing Research Question 1 which was related to CERDEP's alignment with the assessed needs, teachers highlighted the fact the CERDEP was a program mandated by the state department. As such, teachers did not have a choice in the matter. Another

theme that emerged was the emphasis placed on foundational literacy skills. Teachers agreed that they like the emphasis CERDEP places on literacy skills because their students show little to no knowledge in that area upon beginning the program. Parent engagement is another theme that emerged as teachers discussed the varying degrees parents have been involved with the program. Additionally, the format of the early learning standards and its ease of use and interpretation also emerged as teachers discussed how the standards allow them to determine where students are developmentally.

Upon further analysis of the second research question and the focus group questions that were asked to help answer the second research question, the theme of resources and the lack thereof was evident. Teachers noted how they were not provided with a variety of resources upon implementing CERDEP–only a handbook and standards. In regard to the question that asked about relevant opportunities, participants mentioned the funding aspect of CERDEP; however, it was noted that the funding has been inconsistent and that they no longer receive funding. An additional theme that emerged from that question was the requirement for professional development. In the past, funds were used to send teachers to conferences to receive their mandated 15 hours of professional development. Unfortunately, those funds are no longer available, but the 15 hours of professional development still remain a requirement. Utilizing the Literacy-Rich Classroom Environment Checklist to ensure they remained in compliance with the CERDEP framework was also mentioned. Teachers noted referencing the checklist often and using it as a resource to ensure they had a print-rich environment for their students.

Analyzing Research Question 3 and the focus group question related to the initial

training for CERDEP, all the teachers noted that there was little to no training received. The only training they noted receiving was for administering the PALS assessment. Furthermore, a variety of reoccurring themes surfaced during the discussions related to implementation problems and program efficiency. According to the teachers, parental engagement is an important aspect of CERDEP, and due to the lack of parental engagement and support in some areas, it is affecting the implementation of CERDEP. The teachers also discussed how the lack of funding is affecting the program's efficiency. A new theme that emerged was administrative support. Teachers discussed how the administrators in their buildings have been extremely supportive of their efforts in making sure they remain in compliance with the CERDEP framework. Additionally, implementing state-approved resources was also a common theme as teachers noted that the curriculum and assessment they use must be approved by the state to remain in compliance with CERDEP.

Upon further analysis of the fourth research question and the focus group questions that addressed the advantages of enrollment and the disadvantages of enrollment, common themes that emerged were kindergarten readiness, social/emotional development, early intervention, and funding. Teachers implied that being enrolled in CERDEP allows students to gain and build skills that will enable them to be successful in kindergarten. Understanding the idea of school and learning how to coexist with others in an academic environment was mentioned by several teachers. Furthermore, teachers also noted that CERDEP allows teachers to identify students who may have potential learning difficulties in the future as early intervention also emerged as a theme.

### *Themes With Kindergarten Teachers*

Several common themes were identified when analyzing the focus group discussion with the kindergarten teachers. Kindergarten focus group questions focused on the literacy achievement of students who have attended CERDEP as opposed to those who did not and the overall impact of CERDEP. Table 23 provides the overarching topics indicated by the kindergarten teachers.

**Table 23**

*Common Themes Identified From Focus Group Discussion With Kindergarten Teachers*

| CIPP evaluation questions | Focus group question topics | Themes |
|---|---|---|
| Research Question 4: What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product) | • Differences in literacy achievement<br>• Advantages of enrollment<br>• Disadvantages of enrollment | • Concepts of print<br>• Phonological awareness<br>• Phonics<br>• Kindergarten reading readiness |
| Research Question 5: To what extent does student participation in CERDEP impact kindergarten reading readiness? (product) | Overall impact of the program | Kindergarten readiness |

Upon further analysis, common themes that emerged during the kindergarten focus group session related to Research Question 4 were related to literacy skills. Concepts of print, phonological awareness, and phonics were all themes that were identified when discussing the differences in literacy achievement of students who attended CERDEP as opposed to those who did not and the advantages of enrollment in CERDEP. All the teachers discussed the skills that students entering kindergarten should have and how students who have attended CERDEP generally enter kindergarten

demonstrating a majority of the skills needed to be successful. The teachers did not note any disadvantages of the program and recommend it to all 4-year-olds who are eligible to attend. Another theme that emerged during this session was kindergarten reading readiness. According to the teachers, discussions related to Research Question 5 and the overall impact of the program were embedded in the notion that students who attend CERDEP are better prepared for the rigor of kindergarten.

**Summary**

This study utilized a mixed method approach to evaluate the impact of CERDEP on kindergarten reading readiness using Stufflebeam's (2003) CIPP model of program evaluation. Focus groups with prekindergarten and kindergarten teachers and data analysis of prekindergarten and kindergarten assessments were used to evaluate the program. Participants in the focus groups, who represented different schools throughout the district, discussed their incredibly detailed experiences with CERDEP. Several themes emerged as a result of this procedure. Participant responses were evaluated by conducting a thorough thematic analysis in which common themes were highlighted and supported by direct quotes from participants. Responses were also evaluated by a 75% agreement criterion. Furthermore, quantitative data were analyzed by conducting a series of paired *t* tests and one-sample *t* tests on assessment data to determine if there was a statistically significant difference between the given values for the assessments and students' actual scores. Literacy-Rich Classroom Environment Checklist data were also analyzed using descriptive statistics and a 75% agreement criterion. Table 24 displays the findings from this program evaluation.

**Table 24**

*Table of Findings*

| Research Question | Type of data to collect | Analysis procedures | Interpretation procedures and criteria | Findings |
|---|---|---|---|---|
| 1. To what extent does CERDEP align with the assessed needs? (context) | Qualitative | Thematic analysis | At least 75% of the participants would agree that the program goals met the assessed needs. | 100% of the participants agreed that CERDEP met the assessed needs. MET |
| 2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input) | Qualitative | Thematic analysis | At least 75% of the participants would agree that CERDEP's goals met the identified needs. | 80% of the participants agreed that CERDEP's goals met the identified needs. MET |
| 3. How closely does the program adhere to its initial design? (process) | Qualitative | Thematic analysis | At least 75% of the participants would agree CERDEP components were implemented with fidelity. | 64% of the participants agreed that CERDEP components were implemented with fidelity. NOT MET |
| | Quantitative | Descriptive statistics analysis | At least 75% of the prekindergarten classrooms observed implemented the components of the Literacy-Rich Classroom Environment Checklist. | 71% of the prekindergarten classrooms observed implemented the components of the Literacy-Rich Classroom Environment Checklist. NOT MET |
| 4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product) | Qualitative | Thematic analysis | Codes developed by themes are linked to raw data. | Concepts of print<br>Phonological Awareness<br>Phonics<br>Kindergarten reading readiness |
| | Quantitative | Paired *t* test with descriptive statistics for prekindergarten students at all four schools using fall 2021 and spring 2022 PALS data from the 2021-2022 school year. | The null hypothesis in this study for the district is that as a result of the implementation of CERDEP, there will not be a significant difference in the mean scores. | We rejected the null hypothesis and concluded that there is enough evidence to support the claim that the implementation of CERDEP affected student scores in all areas tested. |

(continued)

| Research Question | Type of data to collect | Analysis procedures | Interpretation procedures and criteria | Findings |
|---|---|---|---|---|
| 5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product) | Qualitative | Thematic analysis | Codes developed by themes are linked to raw data. | Kindergarten readiness |
| | Quantitative | 1 sample *t* test with descriptive statistics for kindergarten students at all four schools using fall KRA data from the 2022-2023 school year.<br><br>1 sample *t* test with descriptive statistics for kindergarten students at all four schools using fall MAP Reading data from the 2022-2023 school year. | The null hypothesis in this study for the district is that as a result of the implementation of CERDEP, there will not be a statistically significant increase in kindergarten reading readiness. | KRA:<br>We reject the null hypothesis and conclude that there is enough evidence to support the claim that as a result of CERDEP implementation, skills related to kindergarten reading readiness increased.<br><br>MAP Reading:<br>We fail to reject the null hypothesis and conclude there is not enough evidence to support the claim that as a result of CERDEP implementation, skills related to kindergarten reading readiness increased. |

Based on Table 24, the following common perspectives were identified after data analysis:

1. Prekindergarten teachers did not receive adequate training or a variety of materials for CERDEP; however, they received funding during the first couple of years of implementation.
2. Prekindergarten teachers found the emphasis on foundational literacy skills beneficial as students have the most deficits in that area.

3. Prekindergarten teachers utilized the Literacy-Rich Classroom Environment Checklist to ensure they remained in compliance with the CERDEP framework and its design.
4. Prekindergarten teachers reported that funding is the driving force behind program sustainability.
5. Kindergarten teachers noted that literacy skills such as communication, listening skills, letter identification, letter-sound correspondence, rhyming, sight word recognition, and name writing were the skills CERDEP students tend to have that non-CERDEP students do not.
6. Prekindergarten teachers and kindergarten teachers reported that enrollment in CERDEP is beneficial as it can serve as early intervention and get students prepared for the rigor of kindergarten.
7. The agreement criteria for CERDEP aligning with the assessed needs and the elements of CERDEP's goals corresponding to the identified needs were met.
8. The agreement criteria for the program adhering to its initial design were not met.
9. Scores from the fall 2021 administration and spring 2022 administration of the PALS assessment showed growth in all areas tested.
10. The mean difference between the pairs of measurements for name writing, beginning sound awareness, uppercase letter recognition, lowercase letter recognition, letter-sound correspondence, print awareness, nursery rhyme awareness, and rhyme awareness on PALS were significantly different after CERDEP implementation. We rejected the null hypothesis and concluded that

there was enough evidence to support the claim that the implementation of CERDEP affected student scores on PALS for each area tested.

11. Kindergarten fall MAP Reading data indicated that the given value mean was not significantly lower than students' actual mean scores. As a result, we failed to reject the null hypothesis and concluded that there was not enough evidence to support the claim that as a result of CERDEP implementation, skills related to kindergarten reading readiness increased.
12. Kindergarten fall KRA data indicated that the given value mean was significantly lower than students' actual mean scores. As a result, we rejected the null hypothesis and concluded that there was enough evidence to support the claim that as a result of CERDEP implementation, skills related to kindergarten reading readiness increased.

# Chapter 5: Discussion

Due to the strict goals of NCLB, a greater emphasis on reading readiness has been placed on educators, school districts, and kindergarten students. Reading readiness is the acquisition of pre-reading skills that are prerequisites for formal reading teaching in school. It is understood that the early childhood years are critical for the growth of literacy abilities that prepare young children for reading. Kindergarten students are expected to know and understand a number of literacy-related concepts before beginning formal reading instruction. Unfortunately, students enter kindergarten with varying degrees of reading readiness skills. As a result of reading readiness and academic achievement being directly correlated with student literacy levels upon entering school, academic achievement inequities in reading have been identified.

Public school districts around the country have implemented a variety of literacy programs and curriculums to overcome academic achievement inequities in reading. Among these programs is CERDEP, which was implemented in a small rural school district in South Carolina in 2014. While this program focuses heavily on enhancing students' literacy skills and preparing students for kindergarten, providing students and their families with a quality prekindergarten education is the primary goal of CERDEP (South Carolina Department of Education, 2021a).

This study sought to assess the impact of CERDEP on kindergarten literacy achievement by employing the CIPP evaluation model. Furthermore, this evaluation utilized program theory as it often emphasizes program information that is critical to determining a program’s efficacy; thus, the goal of this program evaluation was to assess CERDEP’s value as a literacy education program model for prekindergarten students.

The following questions guided the study:

1. To what extent does CERDEP align with the assessed needs? (context)
2. How closely do the elements of CERDEP's goals correspond to the identified needs? (input)
3. How closely does the program adhere to its initial design? (process)
4. What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program? (product)
5. To what extent does student participation in CERDEP impact kindergarten reading readiness? (product)

The data collected were provided to the necessary personnel to help guide future CERDEP initiatives in the district.

**Restatement of the Problem**

Early intervention in the form of a prekindergarten education can help prepare young learners for the rigor of kindergarten, more specifically, for the rigor of literacy instruction in kindergarten. Moreover, instructional practices in reading and programs implemented in prekindergarten can propel young children to gain the necessary skills needed to be not only ready for kindergarten but to excel in kindergarten. Prekindergarten programs require research, development, and implementation of innovative and effective reading instructional strategies (NRP, 2000; Torgerson et al., 2018). CERDEP was implemented in a small rural school district in South Carolina in 2014 to help address inequities in reading. Unfortunately, there was no research to be found on the effectiveness of CERDEP on kindergarten reading readiness; hence, the purpose of this study was to evaluate the effectiveness of CERDEP on kindergarten reading readiness in

a small rural school district in South Carolina. This program evaluation included gathering, evaluating, and interpreting both qualitative and quantitative data through focus group sessions with prekindergarten and kindergarten teachers and retrieving archived literacy data for prekindergarten and kindergarten students.

**Interpretation of Findings**

Chapter 4 provides a summary of the findings relative to each research question addressed in this program evaluation. Data were collected through a series of focus group sessions with prekindergarten and kindergarten teachers to fully understand students' reading deficits and strengths and the most effective components of the prekindergarten literacy curriculum. Archived literacy data from prekindergarten and kindergarten assessments were retrieved and analyzed to assess the extent to which participation in CERDEP impacted kindergarten reading readiness. Additionally, data collected from the Literacy-Rich Classroom Environment Checklist, which was completed by an education associate from the state department, were analyzed to help determine if the program was being implemented based on its initial design.

Qualitative data revealed that CERDEP met the assessed needs and that the program's goals are aligned with the identified needs. Quantitative data indicated that CERDEP implementation positively impacted prekindergarten students' scores on PALS. Quantitative data further revealed that CERDEP implementation significantly impacted skills related to kindergarten reading readiness as assessed on the KRA, but MAP Reading results indicated the opposite. An analysis of scores from Literacy-Rich Classroom Environment Checklists also highlighted the fact that despite teachers stating that they were implementing CERDEP based on its initial design, the checklist results

revealed that was an area of weakness. Tables presented in Chapter 4 display the common themes and information gleaned from both the focus group sessions and literacy data.

### *Context Evaluation*

The context evaluation analyzes an organization's needs and goals as well as its capacity to achieve those goals (Stufflebeam, 2003). In order to complete this analysis, a focus group session was held with prekindergarten teachers. Research Question 1 asked, "To what extent does CERDEP align with the assessed needs?" The criterion set for this question was at least 75% of the participants would agree that the program goals met the assessed needs.

Analyzing the focus group discussion data, it was noted that CERDEP is a program mandated by the state department. As such, focus group participants had to implement the program based on the state's legislation that required eligible school districts to provide a full-day program for at-risk 4-year-olds. Prekindergarten teachers highlighted the significance of the format of the early learning standards, the emphasis the program puts on foundational literacy skills, and the importance of parent engagement in the program.

Beard (2021) reported that there are discrepancies between the skills educators believe kindergarten students should bring to the classroom and the actual skills kindergarten students bring to the classroom; thus, some political leaders have advocated for universal prekindergarten for all children, not just at-risk children. These data aligned with the study's findings as CERDEP is a program that focuses on providing at-risk students with a high-quality education, ensuring that those who matriculate in the

program will be kindergarten ready.

Additionally, according to Sanabria et al. (2022), at-risk children tend to be those who are from low socioeconomic status homes, dual language learners, and children who have linguistic impairments. CERDEP is a program that focuses on providing high-quality instruction to at-risk 4-year-olds. During the focus time of this study, the school district had 4,833 students and a poverty rate of 78.2%. A vast majority of the students in the district were considered students in poverty and at risk; therefore, the district met the requirements set forth by the state department regarding the implementation of this program.

Poverty has a profound and enduring impact on a child's academic performance. The cognitive and literacy development of young children who grow up in poverty is challenged, as they frequently start school further behind their peers academically and socially than those who come from middle class households (Edelman, 2021). Beecher et al. (2017) asserted that early literacy skills should be intentionally developed for all children, especially those with disabilities and those who are considered at risk. Furthermore, it is critical for these skills to be developed in the preschool years (Beecher et al., 2017). Brown-King (2020) and Lee et al. (2018) also suggested that attendance in preschool has been demonstrated to improve children's readiness skills. These data align with the discussions from the focus group session as prekindergarten teachers elaborated on the program's emphasis on building students' literacy skills.

One of the participants noted how students tend to enter the program demonstrating little to no reading skills. She stated, "Every year I have students who are very low in both reading and math, but especially reading. I like that CERDEP really

focuses on the reading aspect." Another participant was a former kindergarten teacher for 25+ years and noted that the skills teachers are focusing on in the program are important for kindergarten readiness. She stated, "As a former kindergarten teacher, I can really appreciate the emphasis CERDEP puts on reading skills-letter recognition, letter sounds, rhyming, nursery rhymes, sight words, and understanding print concepts are so important for being kindergarten ready."

Essentially, 100% of the participants agreed that the CERDEP components correspond to the needs of their students.

***Input Evaluation***

The input evaluation analyzes issues regarding the methods and resources required to carry out the goals and objectives of the program (Stufflebeam, 2003). It also examines the contents of the curriculum. Research Question 2 asked, "How closely do the elements of CERDEP's goals correspond to the identified needs?" In order to conduct this analysis, a focus group session was held with prekindergarten teachers, and questions were asked related to relevant opportunities, resources provided, and implementation adhering to the CERDEP framework. The criterion set for this question was at least 75% of the participants would agree that CERDEP's goals met the identified needs.

Per state regulations, CERDEP was implemented in all schools in the study site school district in 2014. Each classroom in the district received the same resources at the same time. Focus group data revealed that teachers received inadequate resources to implement the program according to its goals. A handbook and the Good Start, Grow Smart Standards were the only tangible resources received upon implementing the program.

Moreover, these findings do not align with research regarding successful program implementation. The American Federation of Teachers (2022) highlighted the important components of program implementation: effective teaching materials, professional development opportunities, and school structures that promote and enable implementation. It is also imperative for teachers to use research-based strategies to evaluate the integrity of a program's materials; hence, the lack of resources provided indicates teachers had a difficult time implementing CERDEP according to its outlined goals.

Focus group data also revealed that funding was a significant aspect of CERDEP in the beginning; however, the inconsistency of receiving funds has impacted how the program is being implemented at each school. Prekindergarten teachers indicated that they were given the autonomy to decide what would be purchased and how the funds would be spent; however, those who were employed after the program was already implemented had to utilize the materials the previous teacher purchased. In turn, those teachers did not have the opportunity to evaluate the integrity of the materials based on CERDEP's goals. When a teacher inquired about future funding, it was explained that funding is now only available to new districts that are implementing CERDEP.

Professional development is another important component of successful program implementation. CERDEP teachers are required to obtain at least 15 hours of professional development on a variety of topics, including effective instructional strategies for at-risk learners each year. Focus group discussions among the prekindergarten teachers detailed how previous professional development opportunities through conferences were paid for by the school but are no longer available due to a lack of available funds. While funds

may not be available to cover the cost of those professional development opportunities, obtaining 15 hours is still a requirement to remain in compliance.

Currently, there are limited opportunities for teachers to attend conferences; however, teachers agreed that they were provided with multiple opportunities to support their learning. This requirement aligns with a study conducted by Van der Heijden et al. (2015) that reported that professional development opportunities and job resources are excellent predictors of work engagement which directly affects a teacher's personal growth and teaching abilities. Staff meetings, professional learning community meetings, and webinars are just a few of the ways teachers participate in ongoing professional learning. As such, effective professional development must be multifaceted as it can take place in a variety of settings (American Federation of Teachers, 2022).

Furthermore, one of CERDEP's goals is "to provide children and their families with quality preschool experiences necessary for school success" (South Carolina Department of Education, 2021a, p. 2). Data in regard to program implementation adhering to the CERDEP framework indicated that teachers utilized the Literacy-Rich Classroom Environment Checklist as a point of reference to ensure their classrooms were meeting the goals of CERDEP. This tool is used during annual evaluations completed by a member of the Early Learning and Literacy Department to evaluate the effectiveness of teachers' classrooms. Moreover, the checklist outlines the elements necessary to create a setting that stimulates students' language and literacy development. Teachers and state department personnel using this tool support the notion that children who are constantly exposed to literacy and have verbal abilities, phonological awareness, letter knowledge, and comprehension skills have minimal difficulty becoming ready to read (Toot, 2019).

Qualitative data collected and analyzed from the input evaluation indicated that 80% of the participants agreed that CERDEP's goals met the identified needs.

***Process Evaluation***

The process evaluation entails reviewing the methods and techniques by which a program has been implemented (Stufflebeam, 2003). Research Question 3 asked, "How closely does the program adhere to its initial design?" To conduct the qualitative analysis, a focus group session was held with prekindergarten teachers, and questions were asked related to initial training, implementation expectations, implementation problems, program efficiency, and program sustainability. To conduct the quantitative analysis, Literacy-Rich Classroom Environment Checklist data were collected and analyzed. The criterion set for this question was at least 75% of the participants would agree that CERDEP was implemented with fidelity.

In analyzing the qualitative data, participant responses revealed that in addition to the limited resources they received, there was also limited training. Training is an important aspect of implementation fidelity. Implementation fidelity measures how closely a program or intervention is delivered in accordance with its goals (Houchins et al., 2022). As a result, a lack of training can ultimately affect implementation fidelity. The teachers implied that using the checklist was a way to ensure they were meeting the program's goals; however, research indicated that without the proper training, one cannot truly determine if the program is being implemented as intended (IRIS Center, 2022).

Literacy-Rich Classroom Environment Checklist data were statistically analyzed to determine if elements of CERDEP were being implemented with fidelity. There was a discrepancy in data between prekindergarten teachers' responses and data reported on the

checklists in regard to implementing the components of the checklist. Eighty percent of the participants agreed that their classrooms followed the CERDEP framework based on the checklist; however, scores from the checklists indicated that 71% of the classrooms followed the CERDEP framework based on the checklist.

Conversely, findings related to implementation expectations aligned with the requirements mandated by the state department in regard to the curriculum implemented. The curriculum selected by CERDEP teachers in 2018 was among one of three that the state department described as suitable for the preschool classroom. World of Wonders supports kindergarten readiness by placing an emphasis on writing, speaking, listening comprehension, social/emotional skills, science, and social studies (McGraw-Hill Education, 2022b). Additionally, implementation of the World of Wonders curriculum is supported by a study that reported statistically significant gains on each of the Early Literacy Quick Assessments in prekindergarten students who had access to this specific curriculum (McGraw-Hill Education, 2022a). The Early Literacy Quick Assessments assesses alphabet knowledge, phonological awareness, print concepts, and vocabulary, which are all essential to building kindergarten reading readiness (Oliver, 2021; Piasta et al., 2018).

Findings further revealed that teachers did not report encountering any implementation problems. In fact, administrator support was a theme that emerged throughout the analysis. These findings align with data that assert that the design, implementation, and sustainability of an effective program include school structures that promote and enable implementation (American Federation of Teachers, 2022). Glickman et al. (2018) further asserted that leadership is in charge of allocating resources, giving

time, and maintaining the course. The allocation of resources is especially important as teachers noted that the inconsistency in funding is affecting program efficiency and will in turn affect the sustainability of the program.

Qualitative and quantitative data collected and analyzed from the process evaluation revealed that 64% of the participants agreed that CERDEP components were implemented with fidelity.

***Product Evaluation***

The product evaluation entails evaluating the merit, worth, relevance, and probity of a program's results (Stufflebeam, 2003). Qualitative and quantitative data were collected to examine Research Question 4, which asked, "What are the most significant gaps in student reading knowledge and skills among students who attend the CERDEP prekindergarten program?" To help answer Research Question 4, prekindergarten teachers reflected on the advantages and disadvantages of students being enrolled, and kindergarten teachers reflected on the differences in literacy achievement of students who attended CERDEP as opposed to students who did not and the literacy skills students possess upon entering kindergarten. Quantitative data for Research Question 4 included an analysis of fall 2021 and spring 2022 PALS data.

Findings from the prekindergarten focus group session indicated that enrollment in CERDEP equipped students with the necessary skills and tools needed to be kindergarten reading ready. Readiness skills include being familiar with letters and sounds, being prepared to learn how to read and write, age, and teacher expectations (Oliver, 2021; Piasta et al., 2018). Teachers noted how various components of the program help prepare students to be successful academically. For instance, the literacy

curriculum implemented aligns with research that identified skills such as letter and letter-sound knowledge, phonological awareness, and oral language abilities as precursors that can predict reading results (Elwer et al., 2015; Kilpatrick, 2017; Lepola et al., 2016; Suggate & Reese, 2018). The social/emotional component of the literacy curriculum is also supported by research data that notes how critically important it is to focus on the whole child for long-term literacy development (Pentimonti et al., 2021).

Further analysis revealed that early intervention was another focal point for the prekindergarten teachers. CERDEP places an emphasis on providing high-quality instruction to at-risk 4-year-olds. The program's focus on 4-year-olds aligns with the notion that the best time for interventions to improve children's adjustment to school and to prevent subsequent academic issues is in the preschool years (Balzacar, 2014).

The program structure is further supported by a study that indicated that educators can close the reading gap before students receive formal reading instruction and that targeted intervention groups can help students close the gap in early literacy development skills (Hilbert & Eis, 2014). Also, students who are at risk usually require intervention and support to help them succeed academically; thus, early detection and intervention are vital to the future success of struggling readers (Gilmore et al., 2018; Sanabria et al., 2022).

Moreover, it is imperative that students acquire reading readiness skills prior to entering kindergarten as reading readiness is correlated to reading ability (Seidenberg, 2017). The skills that are essential to reading success in kindergarten were discussed heavily in the kindergarten teacher focus group session. Skills such as concepts of print, phonological awareness, and phonics were mentioned. Research from NRP (2000)

supported kindergarten teachers' responses as their research noted that understanding letter correspondence, using letters and sounds to form words, manipulating sounds in words, and using methods to aid and enhance reading comprehension are all parts of the concept of being able to read. These findings also align with research that states that the best indicators of successful reading are early print knowledge and phonological awareness (Beecher et al., 2017; Pentimonti et al., 2021). Essentially, providing students access to these skills through a high-quality prekindergarten program allows students to be ready for the rigor of kindergarten literacy instruction.

General school readiness also emerged during the kindergarten teacher focus group session. Teachers noted how students who were once enrolled in the CERDEP program were better equipped for kindergarten and understood the classroom setting and routines. These findings correlate to the social/emotional component that the prekindergarten teachers discussed and to research that emphasizes nurturing the whole child. Exposure to social standards in the classroom and socializing with peers also have an impact on a child's ability with language (Oliver, 2021).

Furthermore, findings from prekindergarten literacy achievement data aligned with focus group data and study results that indicated that syllables, rhymes, and phoneme awareness are equally important to reading readiness (Meira et al., 2019). Each respective skill is assessed on the PALS assessment. Further skills assessed were also noted in the study conducted by Piasta et al. (2018) in which it was determined that narrative skill abilities were correlated with skills such as letter knowledge, phonological awareness, language/syntactic awareness, concepts of print, and identifying letter sounds.

Kindergarten literacy assessment data were analyzed to answer Research

Question 5, which asked, “To what extent does student participation in CERDEP impact kindergarten reading readiness?” Based on the analysis, there was a discrepancy between what Hagen et al. (2022) found in the study regarding listening comprehension and young children’s language skills and what was found in this study. Results from Hagen et al.’s study implied that listening comprehension assessments can help determine the level of young children’s language skills; however, results from this study indicate that listening comprehension assessments may not be the best predictors of a child’s level of language skills. MAP Reading is a digital assessment administered on the computer where the students wear headphones and everything is read aloud to the child. The KRA is delivered by the teacher in a one-on-one format. MAP Reading data reported less than significant results, while the KRA data reported the opposite. Additional results from the quantitative analysis of kindergarten literacy achievement data aligned with results found in the study conducted by Mesa and Yeomans-Maldonado (2021) which indicated that oral language and word reading were the strongest predictors of reading comprehension.

**Overall Findings Analysis**

The CIPP evaluation model was used for this program evaluation. The goal of this program evaluation was aligned with the framework of this accountability-oriented evaluation paradigm. Daniel Stufflebeam created the CIPP model in 1966 to serve as a compulsory evaluation framework for federally sponsored projects in the United States (Stufflebeam, 2003). Furthermore, evaluation utilizing program theory emphasizes program information that is critical to determining a program's efficacy. The program theory will provide answers to research questions that assess the program's results, facilitate the gathering of data for additional study, and offer enduring values that

illustrate how well a program performs (Funnell & Rogers, 2011). The program theory in this program evaluation was based on the participants' anticipated literacy results both during and after enrollment in CERDEP. For the purpose of enhancing the validity and reliability of this program evaluation, these outcomes were assessed through the collection of qualitative and quantitative data.

CERDEP is a state-mandated program that was implemented in school districts across the state of South Carolina to address the inequities in literacy achievement. The study site school district implemented CERDEP in 2014. Qualitative data collected and analyzed through prekindergarten and kindergarten teacher focus group sessions, quantitative data retrieved and analyzed through Literacy-Rich Classroom Environment Checklist data, and literacy assessment data indicated whether the criterion for each question was met. Research Questions 1, 2, and 3 were measured using a 75% agreement criterion. Research Questions 4 and 5 were evaluated utilizing a $p$ value of $p$=.05 for statistical significance.

Prekindergarten teacher participants in this study revealed that CERDEP met the assessed needs and that the program's goals correspond to the identified needs. An analysis of qualitative data further revealed discrepancies in how teachers felt they were implementing the program in accordance with its initial design in comparison to what the quantitative results revealed. The discrepancies in results could be attributed to inadequate training and resources and depletion of funds.

Quantitative data also revealed that the implementation of CERDEP positively impacted prekindergarten students' scores in all areas assessed on PALS from fall to spring. Furthermore, an analysis of kindergarten literacy assessment scores revealed that

data from the KRA supports the claim that the implementation of CERDEP positively impacted skills related to kindergarten reading readiness; however, the kindergarten literacy assessment scores for MAP Reading do not support that claim. An analysis of Literacy-Rich Classroom Environment Checklist data further indicated that teachers were not fully implementing CERDEP in accordance with its initial design in the print and early writing domain. Though there were some discrepancies in data, qualitative and quantitative data indicated that overall, CERDEP has a significant impact on kindergarten reading readiness.

**Implications of Study**

Kindergarten readiness and reading readiness continue to be major concerns today. Research from this study demonstrated that prekindergarten programs can help prepare young children for academic success by helping them become ready for the rigors of school, more specifically, kindergarten literacy. While more states are beginning to offer universal prekindergarten, those programs can look very different. CERDEP is a prekindergarten program mandated by the state department that focuses on providing high-quality instruction to at-risk students who are primarily in low socioeconomic areas.

Consequently, this research study may have financial implications for the study site school district. The data presented and analyzed in this study can help the district make informed decisions as discussions surrounding inevitable budget cuts and instructional programming take place. While the district may view the costs associated with the program as a constraint, the program's successes may outweigh the costs, based on perceptions and statistical data.

Furthermore, as teachers consider best practices and what best meets the needs of

at-risk students, the teachers in the study site school district and other Title I schools may also be affected by this study's findings. The information found in this research study can help better inform academic practices as teachers can place an emphasis on some of the reading areas in which children showed the lowest performance. Furthermore, given the importance of teachers adhering to the Literacy-Rich Classroom Environment Checklist, the results from this research study can aid in better educating teachers about their classroom environments. This research study may also have an effect on teachers' perceptions of alternative prekindergarten programs that do not take place in a traditional school setting.

Additionally, as leaders consider the benefits of retaining CERDEP and implementing the program in other districts, this study may have significant implications for future CERDEP school districts. The effectiveness of the program and its components on kindergarten reading readiness can help leaders make more informed decisions, whether they are implementing a new prekindergarten program or CERDEP. For districts that do not have CERDEP, leaders can make better decisions when developing programs to meet the needs of their district by being aware of the various types of programs that are available and the specific elements that staff believe had a significant impact on student success. Moreover, as this study indicated a need for continued teacher professional development, it may also have an impact on districts' professional development strategies.

Prior to this study, there was no research on CERDEP and its impact on student literacy achievement in kindergarten. As school readiness continues to be a concern, it is imperative that schools implement programs similar to CERDEP that are supported by

research. This study demonstrated the efficacy of CERDEP, which was adopted in a Title I school district, and its overall success and beneficial effects on the reading proficiency of participating prekindergarten students. Because the data in the current study are historical at the time of publication, it aids in establishing baseline comparisons for future research using at-risk students.

Furthermore, the field of education has benefitted greatly from this study's contributions, particularly in the areas of early literacy instruction, CERDEP, and program evaluation research. Few studies have been conducted on CERDEP. This study contributes to the body of work on early literacy strategies that is supported by science. This study also makes a major contribution to the increasing body of research on reducing the achievement gap for at-risk students in reading and supports the body of research that is required for the expanding number of South Carolina schools that are using this program.

**Recommendations Based on the Research**

The purpose of this study was to evaluate the effectiveness of CERDEP on kindergarten reading readiness in a small rural school district in South Carolina. This study also investigated the impact of CERDEP implementation and program fidelity on student literacy outcomes. Qualitative data collected and analyzed through a series of focus group questions revealed several matters that should be addressed.

Participants revealed that they have not received funding in years, which in turn affects the availability of resources in the classroom. As a result, it is recommended that the district implement a plan that provides training on how teachers can maximize the resources they have available through resource planning and alternative funding options.

This would help with the depletion of funds and would help teachers acquire more resources.

Lack of training was another theme that emerged during the study. Consequently, it is recommended that the district implement an annual training plan that includes training on program implementation, curriculum implementation, and usage of the Literacy-Rich Classroom Environment Checklist. This annual training would not only address the lack of training but would also provide teachers with opportunities to receive professional development hours to fulfill their annual requirements. Furthermore, there was a discrepancy in data in regard to how teachers felt they were implementing CERDEP in accordance with its initial design and the results of the Literacy-Rich Classroom Environment Checklist. Providing teachers with annual training on how to utilize that document as a resource would ensure all classrooms are implementing the program correctly. Additionally, the annual training plan would account for any staffing transitions as new teachers need to have adequate training as well.

Furthermore, teachers revealed that they must receive 15 hours of professional development annually to remain in compliance with CERDEP. Teachers once had the opportunity to attend conferences that were funded by the district to receive hours; however, that funding is no longer available. As a result, it is recommended that the district implement a professional development plan in which it provides teachers with opportunities to fulfill their 15-hour requirement through staff meetings, district CERDEP trainings, vertical articulation meetings, grade-level meetings, and professional learning community meetings.

PALS and KRA data revealed that CERDEP had a statistically significant impact

on kindergarten reading readiness, while MAP Reading data indicated less than significant results; thus, it is recommended that the district implements vertical articulation planning meetings with prekindergarten teachers and kindergarten teachers across the district. During these meetings, kindergarten teachers can share the MAP Learning Continuum with the prekindergarten teachers, and they can discuss the skills and concepts assessed within each RIT band.

Although there were minor discrepancies in data, qualitative and quantitative results indicated that CERDEP had a positive impact on kindergarten reading readiness. As a result, program sustainability is important. While CERDEP is a state-mandated program, data indicated that it would be beneficial for the district to continue implementing the program in its prekindergarten classrooms.

**Recommendations for Future Research**

Using Stufflebeam's (2003) CIPP model, this mixed methods research study sought to assess the impact of CERDEP on kindergarten reading readiness. Qualitative data were collected through focus group sessions with prekindergarten and kindergarten teachers, while quantitative data were collected from Literacy-Rich Classroom Environment Checklist data and prekindergarten and kindergarten literacy achievement data. Additional topics of study were identified as the data were analyzed.

One area for future study would be to complete a longitudinal study to track the reading achievement of the students from this study to their third-grade year. Fall and spring literacy achievement data on MAP Reading from kindergarten to third grade could be analyzed to determine if the students who were enrolled in CERDEP are reading on grade level by the third grade.

Another area for future study would be the evaluation of CERDEP on kindergarten reading readiness in a larger school district. The current study takes place in a small district; therefore, it is only representative of a sample of prekindergarten students who were enrolled in the program. Using a larger population would create more data for the researcher to use to either support or refute the data presented in this study.

An additional area for future study would be the evaluation of CERDEP on kindergarten reading readiness versus alternative preschool programs. CERDEP could be compared to private preschool programs or other public preschool programs. Location, student eligibility requirements, curriculum implemented, and teacher requirements would be a few of the topics expected to be compared and discussed. A research study comparing CERDEP students to non-CERDEP students within the same district could also be conducted.

**Conclusion**

A convergent mixed methods approach employing Stufflebeam's (2003) CIPP evaluation model was used to evaluate the impact of CERDEP on kindergarten reading readiness in a rural school district in South Carolina. The findings in this research study aligned with a number of literature reviews discussed in Chapter 2 regarding early literacy instruction, kindergarten reading readiness, literacy curriculum design, and program implementation. According to qualitative data collected and analyzed through focus group sessions, prekindergarten and kindergarten teachers revealed that the implementation of CERDEP met the assessed needs and identified needs of their students. Prekindergarten teachers highlighted CERDEP's emphasis on building foundational literacy skills, early intervention, and administrative support.

Prekindergarten teachers also indicated that they implemented CERDEP based on its initial design; however, Literacy-Rich Classroom Environment Checklist data indicated that teachers were not implementing the program based on its initial design. As such, the lack of training, lack of resources, and depletion of funds were highlighted as those factors affecting implementation fidelity. Kindergarten teachers further emphasized how CERDEP positively impacted kindergarten readiness and reading readiness skills, which was also supported by literacy achievement data on the KRA. Conversely, MAP Reading data did not show that CERDEP had a positive impact on kindergarten reading readiness skills. In regard to implications for future improvement, the district should offer annual CERDEP training, provide opportunities for professional learning, educate teachers on how to secure funding through alternative funding avenues, and provide time for vertical articulation meetings. Essentially, qualitative and quantitative data revealed that overall, CERDEP had a positive and significant impact on kindergarten reading readiness as it relates to the students in the study site school district.

All early childhood educators should be interested in the findings of this research, particularly those who work with students who are considered at risk. The program's evaluation revealed that students' reading skills improved after CERDEP was implemented. The results of the current research further demonstrate that the program has a promising effect on students' kindergarten reading readiness in high-poverty schools. This study should strengthen the field of education and encourage further investigation with suggestions to contribute to a body of knowledge, particularly in bridging the achievement gap in reading.

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# Appendix A

## Literacy-Rich Classroom Environment Checklist

# Literacy-Rich Classroom Environments

## Learning Centers

**___ Separate book reading area that is organized, welcoming and has soft, comfortable materials**

**____Listening center in good working order**

**____ Separate organized writing center**

## General Writing/Reading Materials

**____ Alphabet on child's level**

**____ Word cards with familiar words and names**

**____ Alphabet templates, stencils, and/or stamps**

**____ Availability of a variety of writing papers** (goal of 3 different types)

**____ Availability of a variety of writing tools** (goal of 3 different types)

**____Alphabet puzzles**

**____ Puzzles with words**

**____ Writing tools and materials in dramatic play and blocks** (goal of 3)

**____ Props to prompt children's writing in dramatic play and blocks**

## Writing Displays

**____Variety of teacher dictation on display** (goal of 6 different experiences)

**____ Charts about class discussions and big books** (goal of 6)

**____ Variety of children's writing on display** (goal of 6 experiences)

## Books

**___Books with a range of difficulty**

**___Nonfiction books available**

**___Books available on the current theme** (goal of 7)

**___# of books accessible to children in classroom** (goal of 30)

**___ Books in other centers** (goal of 4 in each center)

**Science #____**

**Dramatic Play #____**

**Blocks #_____**

**Other centers:**

**Art #____**

**Writing #____**

**Other #____**

*Use this checklist weekly to assure that your literacy environment is well stocked.*

*Adapted from the 2002 edition of the ELLCO*

# Appendix B

## Prekindergarten Focus Group Questions

1. How long have you taught in the CERDEP program?

2. What did the initial training for CERDEP entail?

3. What relevant opportunities (e.g. funding opportunities, administrative support, professional development) exist for CERDEP?

4. What were the expectations for implementation in the classroom?

5. What resources were you provided when implementing the program?

6. How closely do the CERDEP components correspond to the needs of your students?

7. How closely does implementation adhere to the CERDEP framework?

8. What implementation problems have been encountered?

9. Is the program running efficiently? Why or why not?

10. Do you see or note any advantages for students being enrolled in CERDEP? Give examples.

11. Do you see or note any disadvantages for students being enrolled in CERDEP? Give examples.

12. How sustainable is the program?

13. What would you change and what would you keep about CERDEP?

14. Is there anything we didn't discuss that you would like to add?

# Appendix C

## Kindergarten Focus Group Questions

1. How long have you been a kindergarten teacher?

2. What differences (if any) in literacy achievement have you noticed in students that attend CERDEP as opposed to those who do not?

*Possible probing questions:* *Describe the skills your kindergarten students who have been enrolled in CERDEP need the most help with.*

*Describe the literacy skills kindergarten students who have been enrolled in CERDEP come into the classroom with.*

3. Do you see or note any advantages for students being enrolled in CERDEP? Give examples.

4. Do you see or note any disadvantages for students being enrolled in CERDEP? Give examples.

5. What overall impacts of the program have been observed?

6. Is there anything we didn't discuss that you would like to add?

# Appendix D

## Recruitment Email to Prekindergarten Teachers

Good Afternoon Teachers,

My name is Brittnay White and I am a former [redacted] prekindergarten teacher. I currently serve as the Instructional Technology Coach [redacted] k COLT and am a doctoral candidate at Gardner-Webb University. My research study is a program evaluation of the Child Early Reading Development and Education Program (CERDEP) and its effect on kindergarten reading readiness.

I am reaching out to you because you are currently a prekindergarten teacher in [redacted] who have had students who participated in CERDEP. As a result, you are being asked to participate in a focus group interview about CERDEP expectations, CERDEP implementation, the advantages and disadvantages of being enrolled in CERDEP, and student literacy achievement. I would like to meet with you and several other prekindergarten teachers from the district virtually to discuss CERDEP and its overall impact on students' literacy achievement. The session should last approximately one hour.

Please note that participation in this study is voluntary. There will be no penalties for declining to participate. Also, discussions during our meeting will remain confidential and will not be shared with anyone. If you are willing to participate, please sign electronically below and provide me with your availability for the week of _____ and _____. I look forward to hearing from you soon.

_____

**Signature** **Date**

Sincerely,

Brittnay White
Doctoral Candidate
Gardner-Webb University
Email:XXX

# Appendix E

## Recruitment Email to Kindergarten Teachers

Good Afternoon Teachers,

My name is Brittnay White and I am a former [redacted] prekindergarten teacher. I currently serve as the Instructional Technology Coach [redacted] k COLT and am a doctoral candidate at Gardner-Webb University. My research study is a program evaluation of the Child Early Reading Development and Education Program (CERDEP) and its effect on kindergarten reading readiness.

I am reaching out to you because you are currently a kindergarten teacher in [redacted] who have had students who participated in CERDEP. As a result, you are being asked to participate in a focus group interview about the literacy component of CERDEP and its impact on gaining or strengthening students' literacy skills and differences you have observed in students who attended CERDEP and those who did not. I would like to meet with you and several other kindergarten teachers from the district **virtually** to discuss CERDEP and its overall impact on students' literacy achievement. The session should last approximately one hour.

Please note that participation in this study is voluntary. There will be no penalties for declining to participate. Also, discussions during our meeting will remain confidential and will not be shared with anyone. If you are willing to participate, please sign electronically below and provide me with your availability for the week of _____ and _____. I look forward to hearing from you soon.

_____

**Signature** **Date**

Sincerely,

Brittnay White
Doctoral Candidate
Gardner-Webb University
Email: XXXX

# Appendix F

## Informed Consent Letter for Prekindergarten Teachers

To Whom It May Concern,

You are being asked to participate in an evaluation study.

The purpose of this study is to evaluate the impact of the Child Early Reading Development and Education Program (CERDEP) and its effect on kindergarten reading readiness. This will offer data about the effectiveness of CERDEP. No specific information about you, your school, or the school district will be revealed. If a direct quote from the focus group is utilized, the term "Educator" with a corresponding numeral will be used.

Information regarding requirements, available resources, implementation, and effects of the Child Early Reading Development and Education Program (CERDEP) on student literacy achievement will be collected from you through a focus group. The focus group discussion will take approximately 60 minutes and will begin with questions about your experiences with training, implementation, and the program's effect on students' literacy achievement.

Please do not hesitate to ask questions about the study before participating, during, or after the study has concluded. This study poses minimal risks. Information risks such as loss of privacy or breach of confidentiality are potential risks. To minimize these risks, responses will not be shared with anyone, and all documents and recordings will remain in a secured directory on my computer. Most importantly, the evaluation results will not in any way include your name or any identifiable information. Please note that this focus group is confidential and anything stated in the focus group should not be shared or discussed with anyone in any other setting.

Additionally, our professional relationship could be a conflict of interest in this study. To minimize this, I will remain transparent and honest by sharing the study's findings with you. It is important that during the focus group session, you also remain transparent and honest. Participation in this study is voluntary. There are no penalties for declining to participate. If you join the focus group session, but later determine that you are no longer interested, you may withdraw your participation by leaving the focus group session at any time. Your responses will not be included in the findings. The findings of this study will add to a body of knowledge that could influence curriculum decisions for schools in the future that have demographics comparable to those in this study.

Please sign below to indicate your decision to take part in this study and initial to consent to audiotaping and recording for the purpose of transcription. You are signing it with full knowledge of the nature and purpose of the procedures. You will be provided with a copy of this form to keep for your records.

Signature_____ Date _____

_____By initialing, you agree that I may record the focus group discussion for the purpose of transcribing. Only I will have access to the recording and your name or any other identifying information will not be associated with the recording.

**Confidentiality Statement**

The focus group session is a confidential setting. It should be noted that anything stated during our discussion is considered confidential and should not be discussed in any other setting. Please initial below to indicate your willingness to uphold this confidentiality statement.

_____ By initialing, you agree to uphold the following confidentiality statement: **Anything stated during the focus group discussion is considered confidential and I will not share or discuss any responses in any other setting**.

# Appendix G

## Informed Consent Letter for Kindergarten Teachers

To Whom It May Concern,

You are being asked to participate in an evaluation study.

The purpose of this study is to evaluate the impact of the Child Early Reading Development and Education Program (CERDEP) and its effect on kindergarten reading readiness. This will offer data about the effectiveness of CERDEP. No specific information about you, your school, or the school district will be revealed. If a direct quote from the focus group is utilized, a pseudonym will also be used.

Information regarding requirements, available resources, implementation, and effects of the Child Early Reading Development and Education Program (CERDEP) on student literacy achievement will be collected from you through a focus group. The focus group discussion will take approximately 60 minutes and will begin with questions about your experiences here in the district as an early childhood educator and the literacy achievement of students who were enrolled in CERDEP versus those who were not.

Please do not hesitate to ask questions about the study before participating, during, or after the study has concluded. This study poses minimal risks. Information risks such as loss of privacy or breach of confidentiality are potential risks. To minimize these risks, responses will not be shared with anyone, and all documents and recordings will remain in a secured directory on my computer. Most importantly, the evaluation results will not in any way include your name or any identifiable information. Please note that this focus group is confidential and anything stated in the focus group should not be shared with anyone discussed with anyone in any other setting.

Additionally, our professional relationship could be a conflict of interest in this study. To minimize this, I will remain transparent and honest by sharing the study's findings with you. It is important that during the focus group session, you also remain transparent and honest. Participation in this study is voluntary. There are no penalties for declining to participate. If you join the focus group session, but later determine that you are no longer interested, you may withdraw your participation by leaving the focus group session at any time. Your responses will not be included in the findings. The findings of this study will add to a body of knowledge that could influence curriculum decisions for schools in the future that have demographics comparable to those in this study.

Please sign below to indicate your decision to take part in this study and initial to consent to audiotaping and recording for the purpose of transcription. You are signing it with full knowledge of the nature and purpose of the procedures. You will be provided with a copy of this form to keep for your records.

Signature_____ Date _____

_____By initialing, you agree that I may record the focus group discussion for the purpose of transcribing. Only I will have access to the recording and your name or any other identifying information will not be associated with the recording.

**Confidentiality Statement**

This focus group session is a confidential setting. It should be noted that anything stated during our discussion is considered confidential and should not be discussed in any other setting. Please initial below to indicate your willingness to uphold this confidentiality statement.

_____ By initialing, you agree to uphold the following confidentiality statement: **Anything stated during the focus group discussion is considered confidential and I will not share or discuss any responses in any other setting**.

# Appendix H

## Letter of Request for Literacy-Rich Classroom Environment Checklist Data

Date: December 2022

To: [redacted]

Attention: [redacted]

Attached is a copy of my approved dissertation proposal and IRB approval from Gardner-Webb University.

My research study is a program evaluation of the Child Early Reading Development and Education Program (CERDEP) and its effect on kindergarten reading readiness. The purpose of this study is to assess CERDEP using questions that focus on gathering both qualitative and quantitative data.

I am requesting a data file that includes Prekindergarten Literacy-Rich Classroom Environment Checklist data and forms from the 2021-2022 school year from [redacted]. Furthermore, I am requesting that teacher names, classroom numbers, and school name to not be included in the data file.

These data will be used to answer one of my research questions-how closely does the program adhere to its initial design? Consequently, these data will be statistically analyzed to determine if the original goals and design of CERDEP are being met and implemented in the classroom. The specific school and school district will not be identified in the study and the data provided will be kept strictly confidential. To ensure anonymity of teachers, this will not be shared with anyone, and teachers will not be identified by name or classroom number. Furthermore, all data files will be kept in a password protected folder on my computer. All records will be destroyed after the completion of this research study. If you would like a copy of my completed study, please reach out to me via email and I will provide you with a copy.

If you have any questions, please let me know, I would be glad to provide further clarification.

Sincerely,

Brittnay White
Doctoral Candidate
Gardner-Webb University
Email: XXXX

# Appendix I

## Letter of Request for Literacy Assessment Data

Date: December 2022

To: [redacted]

Attention: [redacted]

Attached is a copy of my approved dissertation proposal and IRB approval from Gardner-Webb University.

My research study is a program evaluation of the Child Early Reading Development and Education Program (CERDEP) and its effect on kindergarten reading readiness. The purpose of this study is to assess CERDEP using questions that focus on gathering both qualitative and quantitative data.

I am requesting a data file that includes Fall and Spring Prekindergarten PALS Data from the 2021-2022 school year from [redacted]. Additionally, I am requesting a data file that includes Kindergarten KRA (Fall) and (Fall) MAP Reading Data from the 2022-2023 school year from [redacted]. Furthermore, I am requesting that student names, birthdates, gender, and student identification numbers to not be included in the data file.

These data will be used to answer one of my research questions- to what extent does student participation in CERDEP impact kindergarten reading readiness? Consequently, these data will be statistically analyzed to determine if student enrollment in CERDEP affects kindergarten reading readiness. The specific school and school district will not be identified in the study and the data provided will be kept strictly confidential. To ensure anonymity of students, student data will not be shared with anyone, and students will not be identified by name, birthdate, or identification number. Furthermore, all data files will be kept in a password protected folder on my computer. All records will be destroyed after the completion of this research study. If you would like a copy of my completed study, please reach out to me via email and I will provide you with a copy.

If you have any questions, please let me know, I would be glad to provide further clarification.

Sincerely,

Brittnay White
Doctoral Candidate
Gardner-Webb University
Email: XXXX

# Appendix J

## Scoring Detailed Literacy Checklist

| ELLCO Scoring | |
|---|---|
| **Section I. Classroom Structure** | Organization of the Classroom = 4<br>Contents of the Classroom = 4<br>Classroom Management = 3 |
| **Subtotal** | 11.00 * |
| **Section II: Curriculum** | Approaches to Curriculum = 3 |
| **Subtotal** | 3.00 * |
| **Section III. The Language Environment** | Efforts to Build Vocabulary = 3 |
| **Subtotal** | 3.00 * |
| **Section IV. Books and Book Reading** | Organization of Book Area = 3<br>Characteristics of Books = 4<br>Books for Learning = 4<br>Quality of Book Reading = 4 |
| **Subtotal** | 15.00 * |
| **Section V. Print and Early Writing** | Early Writing Environment = 2 * |