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IMPROVING PARENTAL ENGAGEMENT FOR KINDERGARTEN READINESS:
AN IMPROVEMENT SCIENCE STUDY

A Dissertation Presented to the School of Leadership and Professional Studies
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment of the Requirements of the Degree of Doctor of Educational Leadership

By Sarah Wilson Johnson
May, 2024

IMPROVING PARENTAL ENGAGEMENT FOR
KINDERGARTEN READINESS: AN
IMPROVEMENT SCIENCE STUDY

Sarah Johnson

Date Recommended March 14, 2024

Janet Tassell Digitally signed by Janet Tassell
Date: 2024.04.01 08:44:38 -05'00'

Dr. Janet Tassell, Dissertation Chair

Lester Archer Digitally signed by Lester Archer
Date: 2024.04.01 09:11:32 -05'00'

Dr. Lester Archer

Tarbett, Leslee Digitally signed by Tarbett, Leslee
Date: 2024.04.01 09:45:22 -05'00'

Dr. Leslee Tarbett

Jennifer Hammonds

Interim Director of the Graduate School

Abstract

Every child deserves the opportunity to come to school ready to learn with the skills needed to take on the content in kindergarten. Students, who are not ready for kindergarten, have a higher chance of needing additional support services with academics and behavior (Fitzpatrick et al., 2020). In Kentucky, less than 50% of the kindergarten students were considered kindergarten ready based on the 2022 Kindergarten Readiness data (Kentucky Department of Education, 2023). In the district where this study took place, 43% of students were determined to be kindergarten ready (Kentucky Department of Education, 2023). Knowing the implications and long term impact of not being kindergarten ready, the district placed a priority on early education and kindergarten readiness by having preschool four days per week, a mobile preschool classroom, additional personnel, and more awareness of the importance of early education.

In the improvement science study, interventions focused on engaging parents in learning about strategies to help their child become kindergarten ready based on the root cause analysis and literature on kindergarten readiness. Parent seminars were conducted throughout the year to help parents understand the importance of being prepared for kindergarten and multiple strategies to use at home with their child. Materials were distributed at each parent seminar to help with kindergarten readiness. Translators were made available to help all parents understand the content. The participation increased as the interventions were revised to meet the needs of the parents. Kindergarten readiness scores improved throughout the interventions, although other factors contributed to the improvements. The findings in this study suggest there are strategies that can be implemented to improve parent participation in parent seminars, specifically focused on kindergarten readiness.

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Chapter One: Introduction

Introduction

Every student needs to have the best opportunity to learn and become a productive citizen. It is imperative every child be given the best chance possible to succeed. In the United States each year, around four million students enter kindergarten (United States Department of Education (USDE, 2015). Around 12 million children spend time in out-of-home settings before entering kindergarten (National Association for the Education of Young Children, 2011). According to the U.S. Department of Education, literacy skills at age five are predicted based on skills acquired at ages one and two (2015). According to brain research, 90% of the brain is developed by age five (Kentucky Governor's Office of Early Childhood, 2024). According to the Kentucky Governor's Office of Early Childhood (2024), children who have been involved in early education have a smaller chance of needing special education services, dropping out of school, and being retained in a grade level. Early education also provides an economic impact to the community as stated by the Kentucky Governor's Office of Early Education (2024).

Economists have found that high-quality early childhood education offers one of the highest returns of any public investment – more than \$7 for every dollar spent. Students from families at risk due to poverty are typically 12-14 months behind in language skills than their peers who have developed literacy skills (USDE, 2015). In 2012, 56% of preschool students in Kentucky were enrolled in a preschool setting (USDE, 2015).

To understand the impact of early education as compared to other settings, many states have begun assessing kindergarten readiness. The National Center for Education Statistics (2024) describes kindergarten readiness in the areas of academic readiness and self-regulation and attention. In Kentucky, kindergarten readiness means students are prepared with the necessary skills to be successful in school (Kentucky Department of Education, 2023). According to the

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Kentucky Department of Education (2023), there are five developmental areas for kindergarten readiness:

- Approaches to learning
- Health and physical well-being
- Language and communication development
- Social and emotional development
- Cognitive and general knowledge

In the United States, 29 states assess students for kindergarten readiness (Education Commission of the States, 2024). Kindergarten readiness has gained momentum after overcoming an initial negative connotation. Earlier thoughts suggested that assessing for kindergarten readiness would place students who were not deemed ready into alternative programs (National Association for the Education of Young Children, 2011). The narrative has changed from a negative view to using the assessment to inform instruction and learning for kindergarten students.

Many students begin kindergarten with deficits compared to their peers. These deficits last beyond kindergarten, impacting future achievement. According to the National Center for Education Statistics, 50% of all students in the United States are performing one grade level below or more in at least one content area (NCES, 2023). In Kentucky, 46% of students are considered ready to learn when they begin in kindergarten based on the 2022 Kindergarten Readiness data (Kentucky Department of Education, 2023). This percentage has fallen over the last five years. In 2018, 51.1% of students were considered kindergarten ready (Kentucky Department of Education, 2023). There were 51% of students kindergarten ready in 2019 and 53.1% in 2020 (Kentucky Department of Education, 2023). The percentage of students

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kindergarten ready decreased in 2021 to 44% in Kentucky and increased to 46% in 2022 (Kentucky Department of Education, 2023). This study focused on a school district in Kentucky, which was called Walker County Public Schools as a pseudonym, where kindergarten readiness was below 50%. A closer inspection at the county level found that the number of students kindergarten ready in Walker County Public Schools is lower than the state average. In 2022, 43% of students were determined to be kindergarten ready (Kentucky Department of Education, 2023). This number indicates a decline from previous years. In 2018, 49.4% of students in Walker County Public Schools were kindergarten ready. The percentage increased to 50.2% in 2019 (Kentucky Department of Education, 2023). Based on the data from the Kentucky Department of Education, 49.3% were determined to be kindergarten ready in 2020. The percentage decreased to 46% in 2021 for kindergarten readiness.

Walker County Public Schools has made kindergarten readiness a high priority in the district (Walker County Public Schools, 2024). The district has focused on early intervention through a mobile classroom, in early education through preschool, with kindergarten readiness in summer camps, in community partnerships, and a focus on early education awareness throughout the community.

In 2019, the district created a mobile learning classroom bus for its youngest community members (Little Learners Mobile Classroom, 2024). The bus is designed to serve students three to five years old. The bus is led by a community outreach coordinator who works to bridge the gap between parents, students, and the school system. The bus focuses on providing students and parents with early education skills through whole group literacy activities, gross motor development, and dramatic play. The mobile classroom uses blocks, a literacy library, art, and

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math to provide the students with hands-on learning experiences. The mobile classroom is grant-funded through a partnership with a local agency.

In 2022, the school district went from having preschool students come to school two days a week to coming to school four days a week. The extra preschool education is currently being funded through state preschool funds and Elementary and Secondary School Emergency Relief funds to help students gain early skills to be successful throughout life (Office of Elementary and Secondary Education, 2023). The district values early education by supporting the four days per week preschool program, which currently enrolls around 750 students.

The district partners with a local agency to fund KinderReady, a camp created by the Walker County Public School district, to rising kindergarten students the summer before they start kindergarten. This program kicked off in the summer of 2022 with 66 students, who were selected based on a kindergarten readiness screener. Students were given a pre-assessment with the Brigance assessment to determine areas of emphasis in the KinderReady camp (KY Department of Education, 2023). The KinderReady camp showed great promise with 77% leaving the program kindergarten ready or ready with enrichments as determined by the Brigance assessment. With the success, the district was able to apply for another grant to fund the 2023 KinderReady camp. The KinderReady camp was offered to 80 students in the summer of 2023 in two sessions. The first session had a consistent attendance rate of about 28 students per session. The second session had higher attendance, with approximately 40 students attending each session. Together the two sessions of students showed additional gains with an average of 12.25 points on the kindergarten screener. Overall, 71.5% of students tested kindergarten ready or ready with enrichments on the kindergarten readiness screener.

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In 2023, the district continued to grow in enrollment by a little over 300 students each year, making the total district enrollment over 18,000 students. With the growing enrollment, the district decided to partner with a local university and lease a building to hold additional preschool classrooms, instead of limiting the preschool opportunities for students in the district. The building currently houses seven preschool classrooms with approximately 140 preschool students. This academy is led by an assistant preschool director, which the district felt was needed to fully help operate the new academy for its youngest learners.

The district feels it is important to raise awareness about early education to the community as noted in the district's comprehensive district improvement plan (Walker County Public Schools, 2024). There is a great effort to increase parents' involvement in early education and kindergarten readiness. The preschool director has been on the local television station multiple times in the last year to share about kindergarten readiness and early childhood education with the community.

Increasing kindergarten readiness will require an entire community to prioritize the goal of improving early education. As the former elementary director and now assistant superintendent, I have been meeting with community leaders to determine how to increase early educational opportunities in our community. Several of the meetings are beginning to move the needle. One meeting focused on business leaders in the community who are working to increase early education and childcare for our community with all of the new growth in the area. Another meeting included a large representation of community leaders who lead organizations that involve children. The third meeting involved future early education partners with the district. The community will need a shared vision that brings multiple entities together to significantly increase kindergarten readiness in our district.

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Despite the district's efforts, the kindergarten readiness numbers are not currently where they need to be for the students in the community. The district numbers for kindergarten readiness show only 47% are kindergarten ready in 2023, which includes all kindergarten students in the district. The students involved in the KinderReady Camp were 71.5% kindergarten ready or ready with enrichments. The students involved in the district's preschool program in the 2022-2023 school year were 60% kindergarten ready or ready with enrichments. There is a need to increase early childhood education and kindergarten readiness skills in the students in the school district.

Studies have focused on the long-term impact of students not being ready for kindergarten. Fitzpatrick et al. (2020), conducted a study to evaluate kindergarten readiness with achievement in high school, along with health and social implications. The study was conducted on 966 students from Quebec. The researchers analyzed kindergarten readiness data with dropout rates, anxiety, engagement in school, substance abuse, and health (Fitzpatrick et al., 2020). Students were also evaluated for IQ, emotional distress, physical aggression, and parent involvement in kindergarten (Fitzpatrick et al., 2020). The findings indicate a link between kindergarten readiness and long-term success. The students who were identified as not being kindergarten ready based on math and literacy skills, engagement in school, and behavior showed an increase in dropout rates, anxiety, substance abuse, and overall health (Fitzpatrick et al., 2020). The study found early math skills to be the strongest predictor of dropout risk (Fitzpatrick et al., 2020). Fitzpatrick et al. stated, "At a time when youth obesity and mental health risks have increased, with the current study we provide timely evidence that early readiness for school sets the stage for population increases in well-being, health, and human capital formation" (2020, p. 5).

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Another study by Bettencourt et al. (2018) sought to understand the long-term impacts of non-readiness for kindergarten on retention, special education services, and suspensions and expulsions. Bettencourt et al. (2018) asked the following question: What is the relationship between social-behavioral readiness at kindergarten with retention, special education, and discipline referrals? The researchers used administrative data to do a secondary analysis to see the readiness information as well as the data beyond kindergarten (Bettencourt et al., 2018). The subjects in this study were 11,412 students who were age five in Baltimore City Public Schools, identified as not being ready for kindergarten based on social/emotional behaviors (Bettencourt et al., 2018). The findings indicate the importance of intervening with parents during the first five years of a student's life to help them best help their child (Bettencourt et al., 2018). Students who are not socially and behaviorally ready to start kindergarten have a higher chance of being impacted by retention, special education services, and behavioral concerns (Bettencourt et al., 2018). The challenge is to identify the best way to prepare students for kindergarten, so they come ready with social and behavioral skills. One critique is the limited ability to include all factors impacting retention, special education services, and discipline data.

Bettencourt et al. (2018) stated,

Our findings highlight the need for a comprehensive and sustainable strategy for (1) supporting parents and strengthening parenting skills during the earliest years, (2) providing professional development and mental health consultation to early childhood educators and staff working with children and families who are experiencing emotional and behavioral challenges, and (3) providing instructional experiences for all children aimed at strengthening their social-behavioral skills. (Bettencourt et al., p. 46)

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This study will focus on one of the findings of Bettencourt et al., which suggest parent involvement is needed to improve kindergarten readiness. This improvement science study will focus on the following question: How can we use improvement science to increase parent engagement in kindergarten readiness preparation for students in Walker County Public Schools during the 2023-24 school year?

Identification of the Problem

In Walker County Public Schools, less than half of the kindergarteners are testing ready for kindergarten. There are 54% of kindergarteners coming to school without the necessary skills to engage in learning in kindergarten. The immediate impact on kindergarten students is that part of the year is being spent on learning skills that were needed prior to kindergarten. Students not being ready for kindergarten can have long term impacts on their educational success and overall well-being (Fitzpatrick et al., 2020).

Purpose of the Study

The purpose of this study is to use improvement science as a methodological framework to examine how to improve kindergarten readiness for students entering kindergarten through parent involvement. Improvement science is focused on using a system to improve a high-leverage problem of practice (Perry et al., 2020). The purpose of an improvement science design study is to identify a problem based on data, to analyze the root cause of a problem, and to identify interventions to help solve the problem. When conducting improvement science research, one seeks to answer the four questions found below in Table 1 (Perry et al., 2020, p. 28).

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Table 1

Four Questions for Improvement Science

Question	Reason for the Question
What is hoped to be accomplished?	To specify, clarify, and contextualize a specific problem.
What changes would result in an improvement? What is the rationale for these?	To generate actionable changes based on the best reasoning and information available.
Why are changes thought to lead to improvement?	To provide a rationale as to why the chosen change ideas make sense.
How might one recognize if a change led to an improvement?	To develop a process by which data are examined and from this, draw valid and reasoned conclusions about improvements made or not.

In this improvement science study, the goal was to identify strategies that address the problem of practice of low achievement scores in kindergarten readiness. When highly effective strategies are identified as being impactful for change, then students will benefit from being prepared to take on the content and learning in kindergarten and beyond. The interventions were chosen based on research and root cause analysis. Once the interventions were applied, data was analyzed to look for change.

After completing a root cause analysis, it was found that with administrators, preschool teachers, and preschool consultants, parent involvement was an area of focus for helping students become more successful in kindergarten readiness and beyond in school and life. The first

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intervention, parent seminars, launched in June 2023, and aimed to teach parents how to engage their child in kindergarten readiness skill activities. Three parent seminars were conducted to help parents gain understanding of kindergarten readiness. The parent seminars were provided by the school district and a local agency to parents of students in the KinderReady camp. Each seminar included a variety of resources for parents to gain knowledge of kindergarten readiness. The seminars involved a presentation about the areas of kindergarten readiness. In Kentucky, the five areas included in kindergarten readiness are Health and Physical Well-Being, Social and Emotional Development, Language and Communication Development, Approaches to Learning, and General Knowledge and Mathematics. The Kentucky Department of Education provides specifics on each area below (Kentucky Department of Education, 2023, October).

Health and Physical Well-Being

My child:

- Eats a balanced diet
- Gets plenty of rest
- Receives regular medical and dental care
- Has had all necessary immunizations
- Can run, jump, climb, and does other activities that help develop large muscles and provide exercise
- Uses pencils, crayons, scissors, and paints and does other activities that help develop small muscles

Social and Emotional Development

My child:

- Follows simple rules and routines

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- Is able to express his or her own needs and wants
- Is curious and motivated to learn
- Is learning to explore and try new things
- Has opportunities to be with other children and is learning to play/share with others
- Is able to be away from parents/family without being upset
- Is able to work well alone
- Has the ability to focus and listen

Language, Math and General Knowledge

My child:

- Uses 5-6 word sentences
- Sings simple songs
- Recognizes and says simple rhymes
- Is learning to write her name and address
- Is learning to count and plays counting games
- Is learning to identify and name shapes and colors
- Has opportunities to listen to and make music and to dance
- Knows the difference between print and pictures
- Listens to stories read to them
- Has opportunities to notice similarities and differences
- Is encouraged to ask questions
- Has his television viewing monitored by an adult
- Understands simple concepts of time (night and day, today, yesterday, tomorrow)

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- Is learning to sort and classify objects

Each area of the seminars included activities parents can participate in with their children to develop early literacy skills, early numeracy skills, and fine and gross motor skills.

Demonstrations were conducted to show how to use resources provided which were kindergarten readiness kits, dice, flashcards, bug catchers, puzzles, and board games. Every child received a kindergarten readiness notebook that included activities for each day in the summer to develop literacy and numeracy skills. Stickers and sticker charts were given to each family to reward students for mastering kindergarten readiness skills such as counting, shapes, colors, sorting, classifying, and more.

The second intervention focused on increasing parent involvement in kindergarten readiness with parent seminars similar to the first intervention, but with several modifications (See Table 2). The first modification was the timing of the seminars. Parents who participated in the first intervention had provided feedback on timing, noting that they wished the seminars were conducted earlier than the summer before kindergarten. As a result, the second intervention focused on preparing parents two semesters before their child would attend kindergarten. A second modification was how the information was sent out to parents. The information about the seminars was sent in multiple forms from text messages to paper to emails to communication sites. The length of the seminars was also changed, moving from one parent seminar for each parent to offering three consecutive parent seminars for each parent to really develop a full understanding of kindergarten readiness. Translators were made available to parents, which were advertised on the communications sent to parents.

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Table 2

Details for Interventions One and Two

Intervention Details	Intervention One	Intervention Two
Timing of Intervention with Parents and Guardians of Kindergarten Students	<ul style="list-style-type: none"> ● One and two months before student started kindergarten <ul style="list-style-type: none"> ○ June 2023 in the AM ○ June 2023 in the PM ○ July 2023 in the AM 	<ul style="list-style-type: none"> ● Seven months before student starts kindergarten <ul style="list-style-type: none"> ○ November 2023 in the PM ○ November 2023 in the PM ○ December 2023 in the PM
Communication to Parents	<ul style="list-style-type: none"> ● Flier handed to all students in KinderReady Camp ● Text sent to parents and guardians 	<ul style="list-style-type: none"> ● Multiple fliers handed to all students in preschool ● Multiple text messages sent out to parents and guardians ● Email sent to parent and guardians
Details on Communication	<ul style="list-style-type: none"> ● What-Parent Seminars ● Who-Parents and Guardians ● When-Date and Time ● Where-Location 	<ul style="list-style-type: none"> ● What-Parent Seminars ● Who-Parents and Guardians ● When-Date and Time for all three seminars ● Where-Location ● Food Provided ● Door Prizes ● Gifts for each family ● On-site interpreters ● Pictures of materials being handed out to each family
Location	<ul style="list-style-type: none"> ● Location of KinderReady Camp in June ● Site located in the 	<ul style="list-style-type: none"> ● Location of the preschool academy in the middle of several individual school

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	middle of the district	districts for all three seminars
	<ul style="list-style-type: none"> ● Location of KinderReady Camp in July 	
Materials Provided to Families	<ul style="list-style-type: none"> ● Kindergarten Readiness Kits ● Playdough Recipe ● 10 Activities to do with your child ● Explanation of Kindergarten Readiness in Kentucky ● Kindergarten Readiness Book ● Board Games ● Bug Catchers ● Foam Dice 	<ul style="list-style-type: none"> ● Kindergarten Readiness Kits ● Playdough Recipe ● 10 Activities to do with your child ● Explanation of Kindergarten Readiness in Kentucky ● Kindergarten Readiness Book ● Foam Dice ● Children's Books ● Backpack ● School Supplies- crayons, pencils, paper, scissors, glue ● Playdough
Interpreters	None Provided	<ul style="list-style-type: none"> ● Interpreter for Spanish provided ● Interpreter for Burmese-Karen/Karenni provided ● Interpreter for Zomi provided ● Interpreter for Swahili provided

Research Question

This study focused on improving kindergarten readiness. The research question in this study was: How can we use improvement science to increase parent engagement in kindergarten readiness preparation for students in Walker County Public Schools during the 2023-24 school year?

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Equity of the Problem of Practice

Kindergarten readiness impacts all children. In the 2021-2022 school year, 44% of all students in Kentucky were determined kindergarten ready (Kentucky Department of Education, 2023). Within this group, 34% of students with an Individualized Education Program were identified as kindergarten ready (Kentucky Department of Education, 2023). The students whose native language is not English scored 25% kindergarten ready (Kentucky Department of Education, 2023). The Kentucky Department of Education reported 34% of students who are economically disadvantaged were determined as kindergarten ready. The overall percentage for Kentucky students is below 50%, but as these statistics show, specific groups score even lower. By teaching parents how to engage their children in early literacy and numeracy skills, they can help their child be ready for the challenges of kindergarten. Parents are a child's first teacher, so it is imperative they are equipped with the necessary tools to help their child succeed. Every child deserves to have the same opportunity upon entering school.

Equity not only focuses on the student, but the caregiver of the student. There are different generations getting students ready for kindergarten in 2023. With almost four million children living with grandparents, grandparents are raising their grandchildren and thinking about how to help them prepare for kindergarten (Pebley & Rudkin, 2000). One must think about the different generations. Generation Z, who grew up in the fast years of technology, are using technology to prepare their children for kindergarten (Turner, 2015). This study seeks to allow all students the opportunity to come to kindergarten prepared to learn.

Both the etic and emic perspectives can help develop interventions to increase parent involvement in kindergarten readiness (Danquah & Miller, 2007). The emic perspective is the view from the inside. It is the way one views the beliefs and values of the organization or group

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(Hennick et al., 2020). The etic perspective is what one views from the outside (Hennick et al., 2020). It is one's view of the culture and the point of view from looking in from afar, such as the researcher's perspective. It is easy to make assumptions based on a bias or personal experience. Analyzing both perspectives allows for different approaches to reach more parents, which will help provide them with the necessary tools to help their children become kindergarten ready.

Research Methods

This mini-study included a variety of research methods. It involved mixed methods with quantitative and qualitative data collection. The quantitative data was represented in kindergarten readiness data from the state and district. Surveys from kindergarten teachers, preschool teachers, preschool consultants, administrators, and school psychologists provided qualitative data. Other quantitative data came from parent surveys in both interventions and screening data. Qualitative data was represented with data from the open-ended questions in the surveys.

Conceptual Framework

The conceptual framework was built on the principles of improvement science and leadership models. These models were adaptive leadership, transformational leadership, and invisible leadership. The purpose of an improvement science study is to make improvements within a system. Adaptive leaders make changes and modifications to improve an area. They include others to help them get it right and make adjustments. Adaptive leadership can shape an organization towards a common goal. In this study, the goal is to improve student achievement through kindergarten readiness.

This particular improvement science research study focused on kindergarten readiness and improving kindergarten readiness through parental involvement. As Douglas MacArthur once said, "A true leader has the confidence to stand alone, the courage to make tough decisions,

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and the compassion to listen to the needs of others. He does not set out to be a leader, but becomes one by the equality of his actions and the integrity of his intent” (Pundzius, 2024). The intent of this study was to improve kindergarten readiness by helping all students in the district achieve more, gain confidence, and be equipped with the tools to do amazing things in life by equipping parents with the necessary tools to help their child with kindergarten readiness.

Transformational leadership relates to the research on early education. When Hickman (2016) discussed the Four I’s of leadership, they connected to current work. For example, one part of transformational leadership is intellectual stimulation where the leader encourages new ways of looking at ideas or problems and encourages innovation and creativity (Hickman, 2016). The early education work being done in the district right now reflects transformational leadership in a small way. Data and student achievement were analyzed in order to collaborate on how to improve student achievement while challenging the status quo. Transformational leaders can create a sense of urgency to be better than before, create a desire to have high ethical and moral values, and develop a will to put others before themselves (Bolden et al., 2003).

Leaders in education also need inspiration. Many educators are motivated by intrinsic work and need a leader who can make work meaningful and life changing. Hickman (2016) describes inspirational leaders as being those who can share a meaningful vision, who promote collective identity, and give confidence to those carrying out the vision. There is power in the communication of a vision to inspire others. The message must contain a shared vision where people want to be a part of carrying out the mission. In order to impact a student’s kindergarten readiness, one must believe in the power of early education. Data about early education and kindergarten readiness has been shared with administrators and teachers in the district. Collaborative efforts in making early education a priority are visible through administrator’s

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meetings, preschool meetings, board meetings, and professional learning communities. In the intervention, kindergarten readiness information, along with how it relates to long term success, was shared with parents. The goal was to help parents understand their role in kindergarten readiness and the importance of being ready for kindergarten. Educators must continue to think of ways to support confidence in others because parents and teachers have the gifts and skills to prepare students with foundational skills.

There is power in invisible leadership. Hickman (2016) stated that invisible leadership encompassed three aspects: “(1) A compelling and deeply held common purpose, (2) A readiness to use individual strengths in either leader or follower roles with or without visible recognition or personal ego and (3) A strong shared bond among participants pursuing the common purpose” (p. 171). Invisible leadership is not a leader who is always invisible but is instead someone who knows when to be in front and when to let others take the lead. There are times when invisible leadership is needed to help others gain leadership opportunities and to accomplish a goal. This study involved leaders using invisible and transformational leadership.

Significance of the Study

The significance of this study lies in its potential to alter our approaches to parent involvement regarding kindergarten readiness, potentially leading to greater student achievement. Parents are the first teachers in a child’s life, but the exposure to the importance of kindergarten readiness is limited to what the parents seek out on their own. Crucial brain development takes place before the age of five, impacting a child’s development. By providing parents with the necessary information and tools, parents can help their children before they enter formal education. Parents want their children coming to school prepared (Schmoker, 2006). It is often a matter of not knowing the expectations for kindergarten. Parents want the best for

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their child. The interventions used in this study helped prepare parents to understand the expectations of kindergarten. When reflecting on the ethical leadership it takes to care for students before they begin in kindergarten a question emerges: How can districts help students even before they enter kindergarten in the school system?

Limitations of the Study

The limitations to this study include the small sample size, lack of control or influence on outside factors impacting a child's development, and the understanding of the long-term impact of parent seminars and training on kindergarten readiness.

Definitions/Glossary of Terms

Brigance: Screener used to assess kindergarten readiness (KY Department of Education, 2023)

ESSER funds: Federal funds given to schools to offset the implications of COVID (Kentucky Department of Education, 2024).

Kindergarten Readiness: Each child enters school ready to engage in and benefit from early learning experiences that best promote the child's success (KY Department of Education, 2023)

Kentucky School Report Card: Data system used by Kentucky to house all of school and district data (KY Department of Education, 2023)

Parent Seminar: A parent training session devoted to equipping parents with information on how to improve kindergarten readiness

Walker County Public Schools: Due to confidentiality, this name is being used to represent the actual district used in this study.

Overview of Subsequent Chapters

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In the following chapters, improvement science will be evident through this mixed method design study (Hennick et al., 2020). Root causes will be identified through a root cause analysis. The first and second interventions will be explained to show the importance of the Plan-Do-Study-Act model to improve the problem of practice. Chapter four will show how the interventions impacted the essential question of the study. The final chapter will discuss the findings of the improvement science study targeting improving kindergarten readiness for the students in Walker County Public Schools.

Chapter Two: The Root Cause Analysis

This mixed method design study focused on the root causes of the deficits in kindergarten readiness skills for students starting kindergarten in a public school district in Kentucky (Hennick et al., 2020). The purpose of this chapter is to gain an understanding of the root causes of students not being prepared for kindergarten based on the state screener for kindergarten readiness. This chapter provides a review of possible root causes based on literature found by searching online databases, district, state, and national kindergarten readiness data, and online websites. The chapter also includes a mini-study designed to determine the root causes of deficiencies in kindergarten readiness based on a survey conducted with preschool teachers, assistants, administrators, and consultants. Based on the root causes, interventions are described in chapter two.

The literature review focused on the root causes of the low rates of kindergarten readiness. The literature review includes the following topics to help understand the root causes of the factors contributing to students not being ready for kindergarten: intervention strategies, influences in the home, state-funded preschool, literacy, community partners, cognitive and linguistic differences, attendance, early numeracy, and parental leadership. Eric (EBSCOHost) was used for the search engine as well as the Western Kentucky University online libraries. The search was limited to peer-reviewed articles in order to include only articles vetted by professionals in the field of expertise.

The date range was unlimited to allow for any peer-reviewed publications that might be of relevance to kindergarten readiness. The first search used kindergarten readiness as the foundation for the search. It brought up 271 peer reviewed articles. The articles contained information about root causes, future achievement, successful programs, and many other topics.

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The second search included early education and kindergarten readiness, which included 156 articles. When early education, kindergarten readiness, and root causes were searched, zero articles were found. Kindergarten readiness and root causes did not bring up any articles. Only one article was found when searching for kindergarten readiness and third grade scores. The search for third grade reading and kindergarten readiness only added an additional four articles. Three articles were located when the search contained lack of kindergarten readiness. The articles focused on discipline, special education, and family concerns. An article by Winter and Kelley (2008) was found which was an analysis of the last 40 years of research with kindergarten readiness. The research helped provide an understanding of the possible root causes and what has been effective throughout the years.

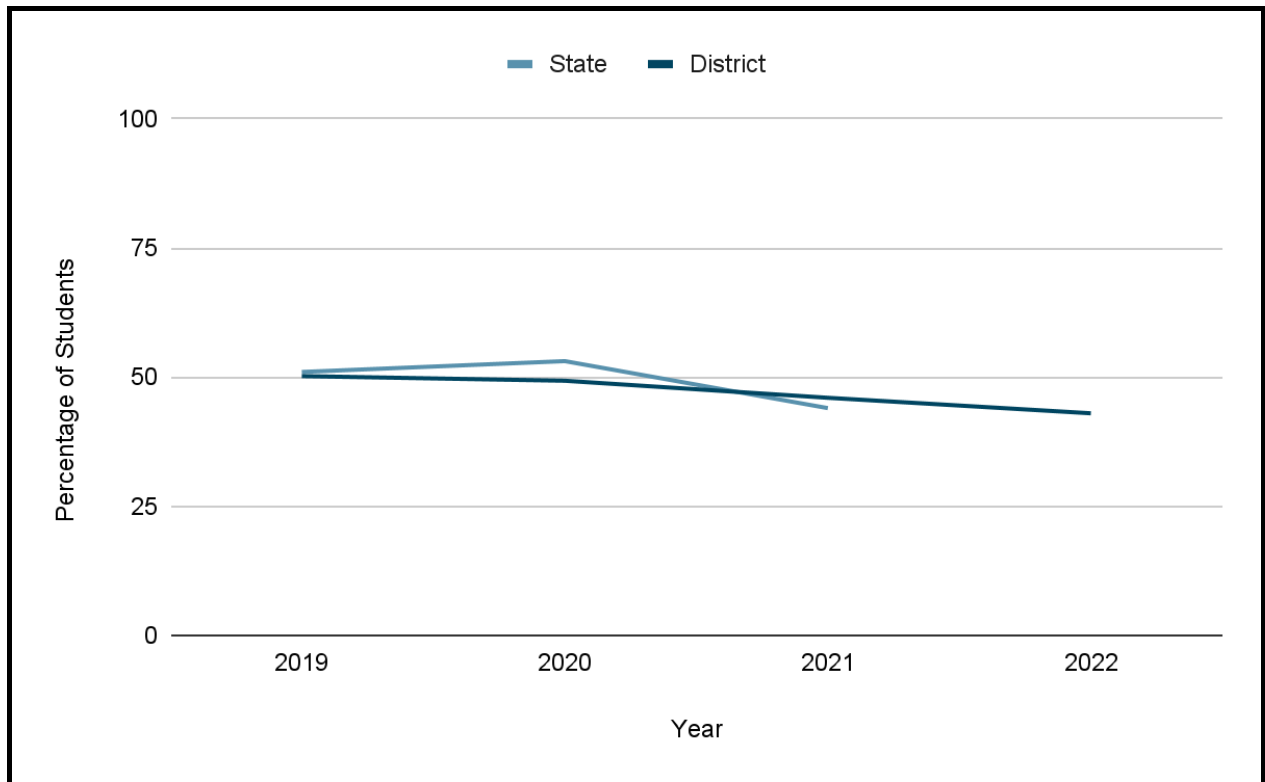
Review of the Root Causes Literature

Kindergarten readiness scores have declined in Kentucky since 2020, decreasing from 53.1% to 44% in 2021 based on the Kindergarten Readiness screener given to all entering kindergarten students found in the Kentucky School Report Card (Kentucky Department of Education, 2023). Figure 1 indicates the percentage of students who were determined kindergarten ready in Kentucky from 2019 to 2022 based on the kindergarten readiness screener, Brigance (Kentucky Department of Education, 2023). In a public school district in Kentucky, scores have continued to decline since 2019, going from 50.2% to 43% over four years (see Figure 1). The Covid-19 pandemic had an impact on early education and the opportunities preschool students typically have before entering kindergarten.

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Figure 1

Percentage of Students Kindergarten Ready in Kentucky



Note: The data comes from the Kentucky School Report Card (Kentucky Department of Education, 2023).

Researchers have studied the root cause of deficiencies in kindergarten readiness for many years. Bettencourt et al. (2018) investigated the impact of not entering kindergarten ready to learn due to social and behavioral factors related to poverty and childhood experiences (2018). The study used observations to study the students (Bettencourt et al., 2018). The researchers conducted 42,635 observations over four years. Data was gathered from the Baltimore City data systems to analyze readiness for school and success in fourth grade and beyond. The research focused on 11,412 five-year-old students from Baltimore City Public Schools, who were entering

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kindergarten. The study found that students who were not considered kindergarten ready had long term impacts in fourth grade with an increase in suspensions, retention, and supports through IEPs and 504s. Bettencourt et al. (2018) stated,

Our findings highlight how entering kindergarten behind in social-behavioral skills places children at significant risk for a cascade of negative outcomes. As expected, kindergarteners rated as not socially-behaviorally ready were significantly more likely to be retained in grade, receive services and supports through an IEP or 504 plan, and be suspended/expelled by the fifth year of school. (p. 43)

There is a sense of urgency in getting students ready for kindergarten before they enter kindergarten. There are long term impacts from students starting school without the necessary skills to be successful in kindergarten and beyond. Parents have a large impact on kindergarten readiness.

Miller et al. (2017) sought to discover the attributes for a child to be kindergarten ready by analyzing temperament, behavior, and cognitive items. The researchers used two measures for the readiness Q-sorts, which included a questionnaire and an observational measurement. Researchers used both the Children's Behavioral Questionnaire (Rothbart et al., 2001) and the Bayley Scales of Infant Development-Second Edition (Bayley, 1993) to assess disposition, skills, and behaviors of students (Miller et al., 2017). There were 29 teachers in this study who had taught at least one year of preschool to four-year-old students. The teachers found that there are multiple pathways that lead to kindergarten success. Students exhibit a variety of characteristics that lead to being ready for kindergarten. The study was limited due to students not being studied beyond preschool to see if the attributes contributed to longer term success. It was also limited

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because the teacher's temperament was not measured to see if the temperament impacted the analysis (Miller et al., 2017).

Parents' Role in Kindergarten Readiness

Studies have shown that parents play a key role in students being ready for kindergarten. A study by McIntyre et al. (2007) sought to determine parental and family concerns with the transition to kindergarten, environmental factors that impact kindergarten readiness, and needed transition activities for children. The Family Experiences and Involvement in Transition survey was used to ask parents or caregivers 57 questions on educational history, family needs, family involvement, and demographics (McIntyre et al., 2007). The study involved 132 parents or caregivers of children getting ready to transition to kindergarten in the Northeast. The students of the parents surveyed were involved in early educational settings such as universal, public funded, Head Start, private, and other settings. This study found parents want to be involved in their child's transition to kindergarten. It also showed that many parents lack knowledge of what is needed for a child to be considered ready for kindergarten. Parents also expressed concerns for behavioral and academic skills in their child. This study found that parents want to be involved in their child's transition to kindergarten (McIntyre et al., 2007) and that they want to know what is expected and needed. This shows there is a missed opportunity in getting information to parents to help students. McIntyre et al. (2007) stated, "The time is ripe to develop strong, collaborative family-school partnerships, both in early education and during the primary grades, to support kindergarten transition and the school years to come" (p. 87). This demonstrates the need to start early with parent engagement in education.

A study by Douglass et al. (2019) also examined the role parents and parent leaders play into preparing students to be kindergarten ready. Douglass et al. (2019) investigated the

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following research questions: What strategies did Parent Leaders use in their efforts to engage families? How did parent leadership influence families, neighborhoods, and the Parent Leaders themselves? The researchers used a qualitative single case study design, using data from Ready for K (Douglass et al., 2019). There were twenty-nine Parent Leaders from a northeast city in the United States involved in this study, primarily immigrant mothers. The study found the Parent Leaders became very engaged with the families in the community by building relationships. They changed the mindset in the community about parents becoming leaders and became leaders in the community. The families who were served described an increased awareness of school readiness and the advantages for their children's education. Communities and families can benefit from having leaders in their community who can educate and promote kindergarten readiness for children. Douglas et al. stated, "Parent leadership holds transformative potential, and demands a new era of research and innovation" (2019, p. 19). After analyzing many pieces of research, a Fishbone Diagram was developed to indicate the root causes found in the literature (Figure 3), found below.

Other studies have also examined the impact parents can have on kindergarten readiness. Weitland et al. (2017) conducted a study to examine whether parents increase the level of literacy activities and materials in the home right before the child is entering kindergarten. Weitland et al. (2017) asked the following question: Do parents place a higher emphasis on literacy and language development when their child is getting ready to begin kindergarten compared to others? The researchers conducted interviews with each family in the home to assess the level of literacy activities and materials used in the home in the fall and the spring (Weitland et al., 2017). The participants included 2,760 children and their parents in 16 states who participated in Head Start (Weitland et al., 2017). The findings suggest that parents do

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invest more time into developing literacy skills with literacy activities, but not materials, before the student enters kindergarten (Weitland et al., 2017). The results of this study may impact the resources given to parents before they enter kindergarten and on the timing of interventions used with parents (Weitland et al., 2017). A critique of this study is in the participant pool only having Head Start families, which might suggest the families are already involved in early interventions. Weitland et al. (2017) stated, “Our results suggest that one method for improving the efficacy and cost-effectiveness of parenting interventions in the preschool period may be to adjust *when* they are implemented. In particular, it may be especially efficacious to target and/or intensify efforts to improve parent–child learning activities in the months leading up to kindergarten, when low-income parents may be naturally increasing their investments in their children’s learning to ensure their children are ready for the language- and literacy-related demands of school” (p. 18).

Another study conducted by Mathis and Bierman (2015) examined the impact of a parent program to increase the literacy skills of the students by coming into the home and providing an intervention literacy program. Mathis and Bierman (2015) asked, “What is the impact of a Research-based Developmentally Informed parent [REDI-P] program on parent support and literacy skills of the child?” The methods used in this study involved cross-lagged structural equation models and follow-up analyses of literacy skills (Mathis & Bierman, 2015). The participants included 200 students from Pennsylvania who attended one of the 24 Head Start centers (Mathis & Bierman, 2015). The findings indicate children may gain literacy skills when the families are involved in a parent program in the home (Mathis & Bierman, 2015). The greatest gain with literacy may happen when the parents are very supportive. Helping students become kindergarten ready with literacy involves a commitment on the parents’ part to involve the child in literacy activities and be supportive of assistance. Mathis and Bierman (2015) stated,

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“Overall, the present findings suggest that providing low-income parents with a home learning curriculum and coaching them in evidence-based teaching strategies can be a useful way to expand the impact of early childhood classroom programming” (p. 96). This study indicated that home learning programs can be helpful in students being prepared for school.

A study by Lahaie (2008) researched the impact of parental involvement on kindergarten readiness of children of immigrants. The study by Lahaie (2008) examined the following question: Does parental involvement play a role in school readiness of children of immigrants? The researcher used a questionnaire to administer orally to parents on the phone that involved cognitive learning at home and outside of home and involvement in childcare or preschool (Lahaie, 2008). The participants in this study involved 13,078 children in the United States involved in the Early Childhood Longitudinal Study-Kindergarten Cohort of 1998-1999 (Lahaie, 2008). There were 2,678 children of immigrants as part of the study (Lahaie, 2008). The findings of the study indicate increases of math achievement and English proficiency of students with parental involvement (Lahaie, 2008). Policies and practices may need to be evaluated to see how to increase parent involvement in kindergarten readiness. Lahaie (2008) stated, “Also, more joint efforts by preschool teachers and parents to improve their home learning environment or involvement at preschool could help improve the school readiness of both immigrant and native born children” (p. 704). Finding ways to engage parents in kindergarten readiness is important to helping children become kindergarten ready.

Kindergarten Readiness Parental Involvement Programs

Many studies have examined programs to increase parental involvement in kindergarten readiness. One study by Cabell et al. (2019) studied the impact of text messages to parents on kindergarten readiness. The purpose of this study was to analyze the impact of a literacy design

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through text messaging on preschool students in a suburban public school. The study focused on children living in poverty and sought to answer two questions (Cabell et al., 2019). One question focused on the impact on literacy through text messages to parents about language and literacy strategies versus text messages about health and well-being for students of poverty (Cabell et al., 2019). The second question focused on whether or not beginning literacy skills of the students played a role in the impact of the text messages to parents (Cabell et al., 2019).

The researchers designated parents to receive text messages based on either language and literacy or health and well-being (Cabell et al., 2019). The participants in this study involved 177 parents and their children who were four years of age (Cabell et al., 2019). The students were involved in 13 preschool classrooms amongst seven schools, representing 174 families. The study found students, who started the year with a stronger skill base, benefited from the language/literacy program. The students, who started the year with a lower skill base, gained from the health and well-being program. Based on this study, the texts about health and well-being made a larger impact on student achievement on literacy skills versus the texts on language (Cabell et al., 2019). One limitation to this study is the size of the study with only 174 families. Cabell, et al. (2019) stated, “It is clear that more work is needed to identify optimal approaches, and it is likely that the best solutions will employ a combination of approaches to support the diverse needs of families” (p. 25). While texting may improve communication that impacts student achievement, it is important to look for a variety of ways to engage parents in kindergarten readiness.

Kindergarten achievement can be influenced in a positive way if students attend preschool. Parents or caregivers can also impact achievement with strategies at home. A study by Nelson included 14,880 children in kindergarten for home analysis (2005). An additional 10,307

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children in preschool were included for the preschool analysis (Nelson, 2005). The students came from across the United States representing a variety of areas and demographics. Data was analyzed from the Early Childhood Longitudinal Study-Kindergarten Cohort database (Nelson, 2005). Nelson (2005) used a stratified cluster sampling technique to include a variety of students from different backgrounds and then used two two-way MANOVAs to analyze data. The study involved three research questions. The first question sought to determine if learning activities at home would impact kindergarten achievement (Nelson, 2005). Another question looked at whether or not attendance in preschool impacted kindergarten achievement (Nelson, 2005). Nelson's third question investigated the interaction effects of home and preschool factors along with family risk factors on kindergarten achievement (2005).

This study found that math and reading achievement in kindergarten is impacted in a positive way by attendance in preschool (Nelson, 2005). It also found that the way students learn is impacted by home activities with families (Nelson, 2005). The study may have benefited from looking at the social emotional piece tied to student achievement, along with the cognitive and motivational aspects of achievement. Nelson (2005) stated, "As their children's first teachers, parents have more opportunities to model how to learn than teachers do. Thus, they have more influence in this area than teachers do. This is a key finding that emphasizes the importance of making parents aware of the influence they have on their children's learning and achievement in the early years" (p. 220). Parents play an important role in their child becoming kindergarten ready.

Poverty

Several studies have been conducted on the impacts of poverty. Seeley et al. (2023) sought to determine the answer to three questions. One question the study sought to determine

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was whether or not there were high-poverty high performing schools in the area of kindergarten readiness. If so, the researchers were looking at the characteristics of those schools. Last, the study was looking to compare these schools to average scores (Seeley et al., 2023).

The methodology used for the research was a cross-sectional analysis of 2018-2019 Oregon Kindergarten Assessment data. The researchers chose three covariables to account for regression such as size, locality, and charter status. The data in this study came from 41,005 kindergarteners from 704 schools within Oregon. The findings in the study revealed there were 23 high performing schools with greater than 75% of students considered to be economically disadvantaged. Students who identified as Hispanic/Latino made up 50% or more of the student population in five of the schools. Eleven of the schools had 50% or more of students who identified as white. The average for schools to be considered economically disadvantaged is below the state average in Oregon. The majority of high performing high poverty readiness scores were from small schools or charter schools. Despite statistics, there are schools with high poverty and high kindergarten readiness data. Seeley et al. (2023) stated, “These findings highlight that poverty is not always predictive of poor social-emotional skills or overall school readiness and exploration of family, school and community school readiness efforts is underway” (p. 360). This study provides an example of how to improve kindergarten readiness data.

Preschool Programs

While poverty may be a root cause, kindergarten readiness programs and/or preschool can increase the achievement of students in kindergarten no matter their socioeconomic status. One question investigated by Hover (2015) is whether or not there was a statistical difference in third-grade test scores of students who went to kindergarten at age five, versus those who went

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through the early kindergarten program, versus the students who were eligible for kindergarten based on age and started kindergarten, and finally as compared to students who did not start kindergarten or enroll in the kindergarten readiness program. The study used scores from the third-grade end-of-the-year benchmark performance test in reading and math to analyze a causal-comparative quantitative study. The study involved data from 910 students in a large suburban district in Tennessee. The students were kindergarteners and those who participated in the Kindergarten Readiness classes, and those students who were age ready for kindergarten, but did not attend. The students who were enrolled in the Kindergarten Readiness program outperformed the students who had summer birthdays, but enrolled in kindergarten, in reading and in math achievement. They also scored higher than the students with fall and spring birthdays in the area of math, but reading scores did not show a significant difference. Students benefited from a kindergarten readiness program before entering kindergarten. Hover (2015) stated, “The Kindergarten Readiness teachers and regular kindergarten teachers in the local school district attested that the students who were enrolled in Kindergarten Readiness Classes were often more prepared for kindergarten, because they were older and more mature; had longer attention spans; and were more familiar with school and classroom rules, routines and procedures” (p. 65).

A research study by Infurna and Montes (2020) focused on one question: Do children who attend two years of structured early childhood education programming (3-year-old and 4-year-old pre-k) demonstrate stronger academic skills than their peers who only attend one year of pre-k programming (4-year-old pre-k only)?

Infurna and Montes (2020) conducted a secondary data analysis on data from students enrolled in a full day program for three- and four-year-olds. The data in this study came from achievement data from 1,464 three- and four-year-olds from an urban school district in New

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York. The findings suggest there is evidence that attending a preschool program before entering kindergarten can increase kindergarten readiness. The students with less attendance did not score as high as the peers who attended on a regular basis. Based on this study, two years of preschool are more impactful than one year of preschool. The question is how do all students get access to two years of preschool. Infurna and Montes (2020) stated, “The effect is moderate, with our best estimate being a 37% increased likelihood of kindergarten readiness. As expected, partial EPK attendance had a weaker effect by about 6%” (p. 259).

Duncan et al. (2018) examined two research questions focused on self-regulation. The first question searched to find the impact of adding a self-regulation intervention to the B2K program (Duncan et al., 2018, p. 291). The second question examined the difference in growth between students in the B2K + RLPL program compared to the expected development of students during kindergarten (Duncan et al., 2018).

The researchers used a longitudinal study to analyze the data from three years of participants in the B2K program, a summer program for preschool students. The participants in this study were preschool children in Oregon who attended the summer program from 2013 to 2015. The children who participated in the summer program, which included the self-regulation intervention program, showed more growth in self-regulation than their peers who did not participate in the intervention program. The study did not find a difference in math and literacy achievement of the two groups at the conclusion of the program. The data did show growth in math and literacy achievement of the group with the intervention program when the students transitioned to kindergarten. The findings in the study show a self-regulation intervention program can enhance a student’s ability to better self-regulate when getting ready to enter kindergarten. Duncan et al. (2018) stated, “Policies and programs that target children without

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early childhood educational experiences prior to starting kindergarten may be able to greatly reduce the school readiness gaps and improve children's academic achievement" (p. 299).

Lee et al. (2018) stated,

Many European countries have perceived universal early child care and education to be an important avenue for all children to be ready for school, the fact that the United States has no program like this only calls for the need to provide quality preschool programs for all children and, particularly, so for children of immigrants due to many immigrant families possibly being constrained by lack of socioeconomic resources and preschool programs possibly being a way to overcome such barriers. (p. 202)

Lee et al. (2018) found associations between attending preschool and academic readiness.

The study found that academic readiness was strongest for students in a Pre-K program. The study also noted that reading readiness was higher the more the student attended the program versus being in a part time setting. Math skills were similar in the preschool group and at-home care. The study included 1,650 children of immigrants at kindergarten who were part of the Early Childhood Longitudinal Study-Birth Cohort (Lee et al., 2018). This research focused on three questions about preschool. The first question sought to find out whether attendance in preschool impacted academic readiness, focusing on children of immigrant mothers (Lee et al., 2018). The second question revolved around the types of preschools and whether attendance differed at each one (Lee et al., 2018). The third question examined the number of hours for preschool and academic readiness (Lee et al., 2018). In this study, students were assessed at nine months old, two years old, preschool and in kindergarten. The parents were interviewed at each age interval. Reading was assessed by using 60 items assessing various reading skills (Lee et al., 2018). Math was assessed by using 58 items to analyze math skills such as numeracy, number sense, etc. (Lee

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et al., 2018). A limitation of this study is the sample size and only analyzing data from children of immigrants. The study has implications for policy and funding due to the impact of preschool on children of immigrants.

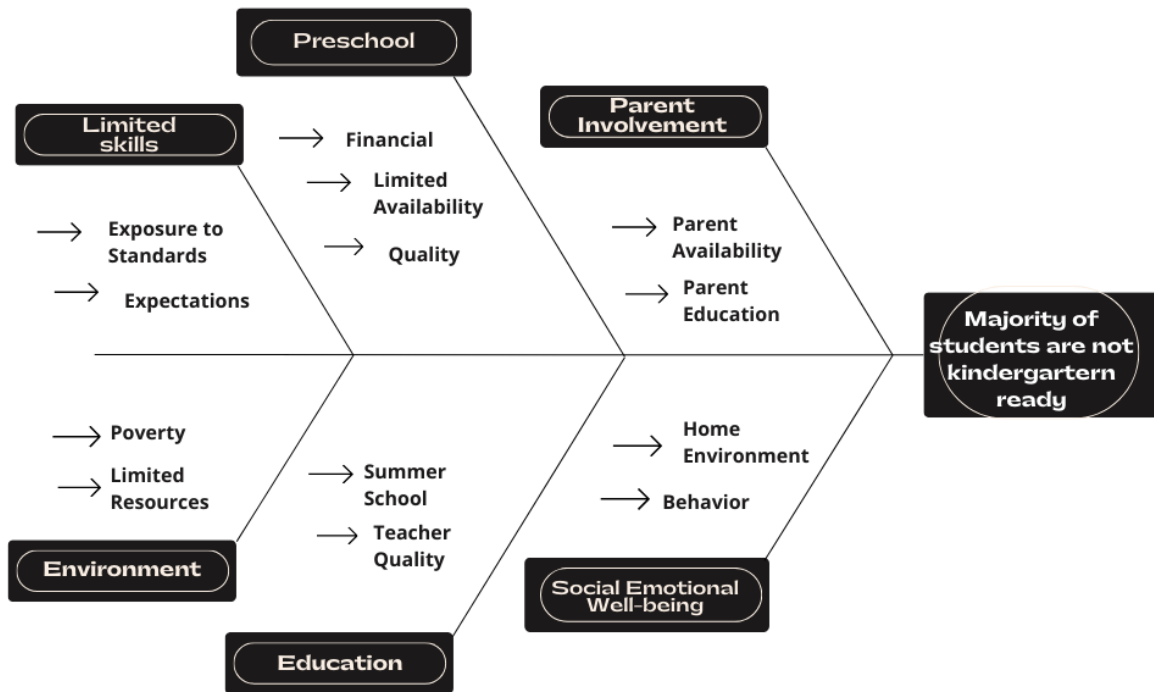
Summary

After reviewing literature, a root cause analysis was conducted with teachers, administrators, preschool consultants, speech therapists, and school psychologists in Walker County Public Schools via a kindergarten readiness survey to determine the root causes of deficiencies in kindergarten readiness. Figure 2 shows the themes that emerged out of the literature review.

Figure 2

Fishbone Diagram of Causes of Kindergarten Readiness

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Fishbone Diagram → Kindergarten Readiness-Literature Review

Methods

The mini-study was meant to determine the root causes of the deficits in kindergarten readiness scores in a public school district in Kentucky. The mini-study included quantitative and qualitative data from a survey focused on the perceptions of kindergarten readiness, the roles stakeholders play in kindergarten readiness, and the root causes completed by those involved in preschool about kindergarten readiness. The opportunity to participate in the mini-study was presented in an email to administrators and preschool staff. The participants had the opportunity to complete the survey at a setting of choice as determined in the IRB. The mini-study was a mixed methods research design which collected quantitative data from a number of the survey

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multiple choice questions and qualitative data from the open-ended questions (Hennick et al., 2020). The qualitative results were analyzed for common themes amongst the participants. Both sets of data were integrated by comparing the quantitative data and qualitative data together to form the best conclusions for the root cause analysis.

Research Question

What are the root causes of students not being kindergarten ready when entering school?

Research Design

The mixed methods concurrent design used quantitative and qualitative data based on data collected from a kindergarten readiness survey (Hennick et al., 2020). The quantitative data came from a kindergarten readiness survey given to preschool teachers, preschool assistants, administrators, and preschool consultants. The qualitative data also came from the same kindergarten readiness survey as the quantitative data but focuses on the open-ended questions.

Purpose

The purpose of this root cause analysis is to understand the root causes of the skill deficits in kindergarten readiness for students entering kindergarten. One of the goals is to identify possible root causes. As a result, one or more of the root causes can be addressed to increase a student's readiness skills for kindergarten. By surveying those who work with students every day in a preschool setting, a better understanding can be gained about the root causes of the deficits for kindergarten readiness.

Setting

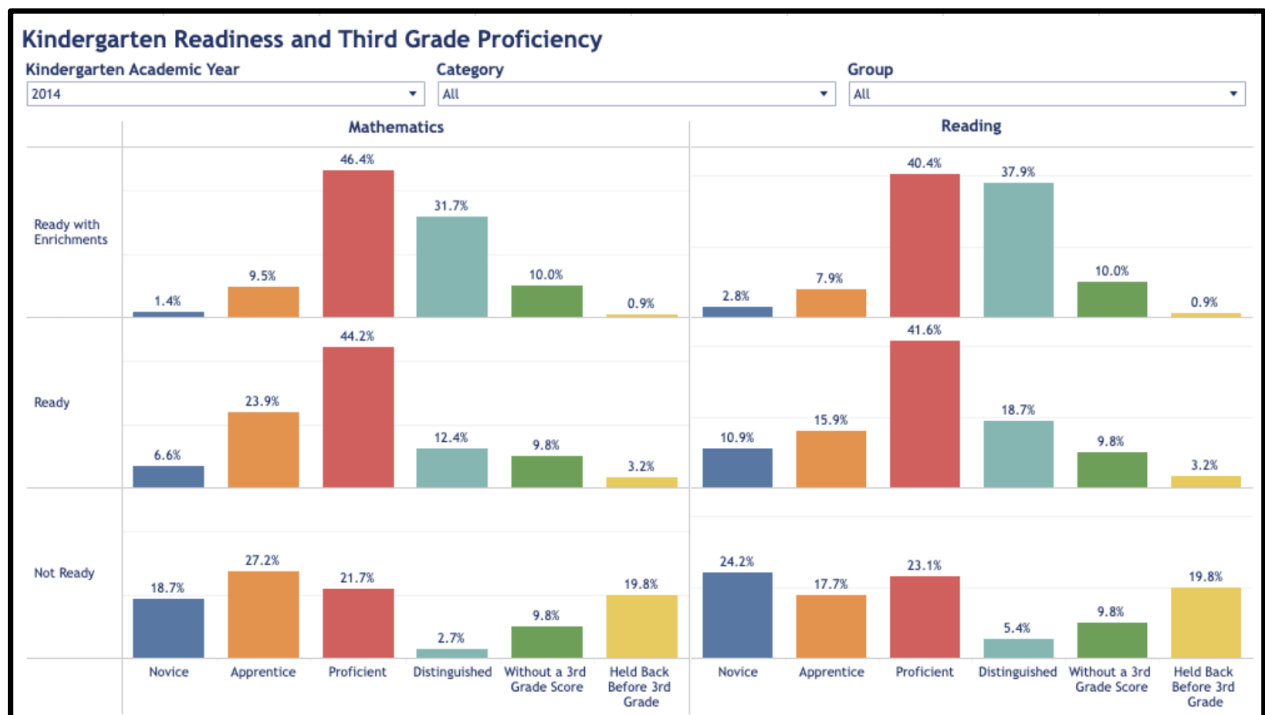
The setting of this study takes place in a public school district in Kentucky. The district has approximately 18,000 students, preschool through 12th grade, with over 102 languages spoken. During the study, the district had 840 preschool students that entered the school district for kindergarten. This is the district where the interventions occurred to address the deficits in

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kindergarten readiness. The goal of the study was to improve the readiness skills for the students in the district by engaging parents in kindergarten readiness. As more data from the Kentucky Department of Education shows the connection between kindergarten readiness and third grade reading proficiency (as seen in Figures 3-6 below), it is important to address ways to improve kindergarten readiness. The study began in the spring of the 2022-23 school year. As schools recover from the impact of COVID, students need more skills to be ready for kindergarten, as many of the students have had limited social interaction over the last three years. The kindergarten readiness scores across the district and state are lower than they have been in the past (as shown above in Table 1).

Figure 3

Third Grade Proficiency and Kindergarten Readiness Scores for Current 8th Graders in the District

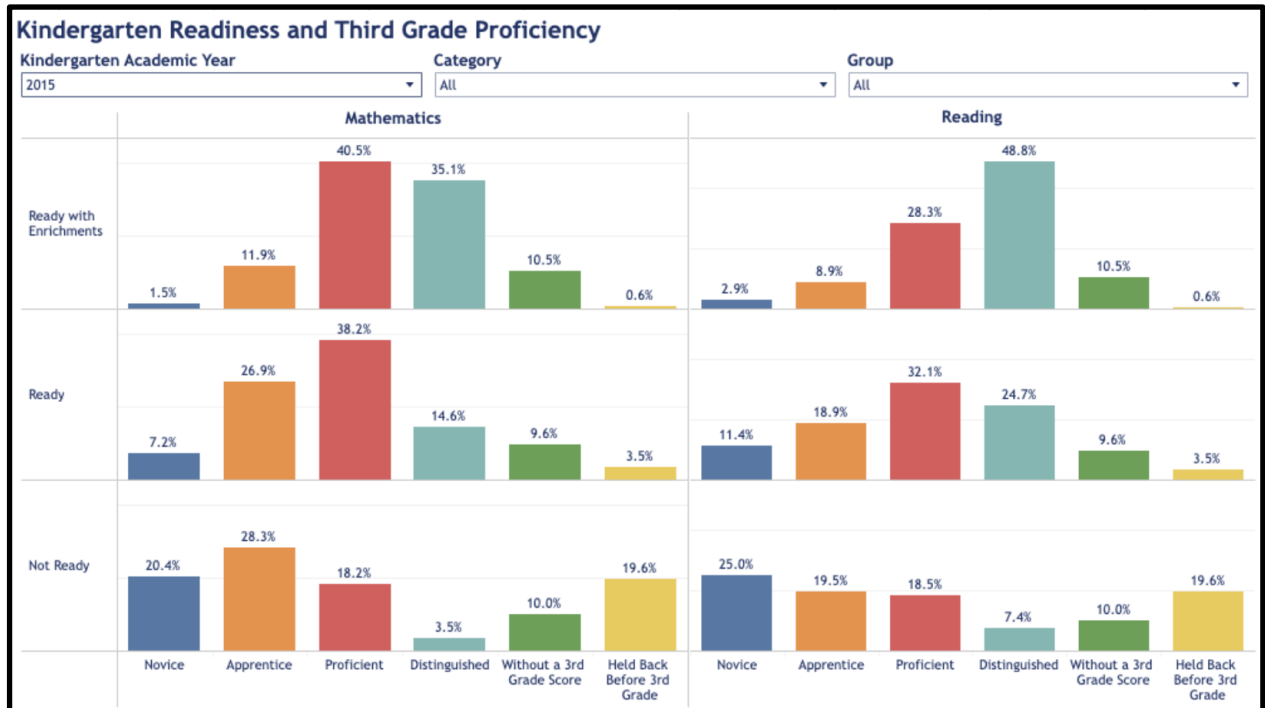


Note: This data is derived from data from the Kentucky Department of Education (2023).

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Figure 4

Third Grade Proficiency and Kindergarten Readiness Scores for Current 7th Graders in the District

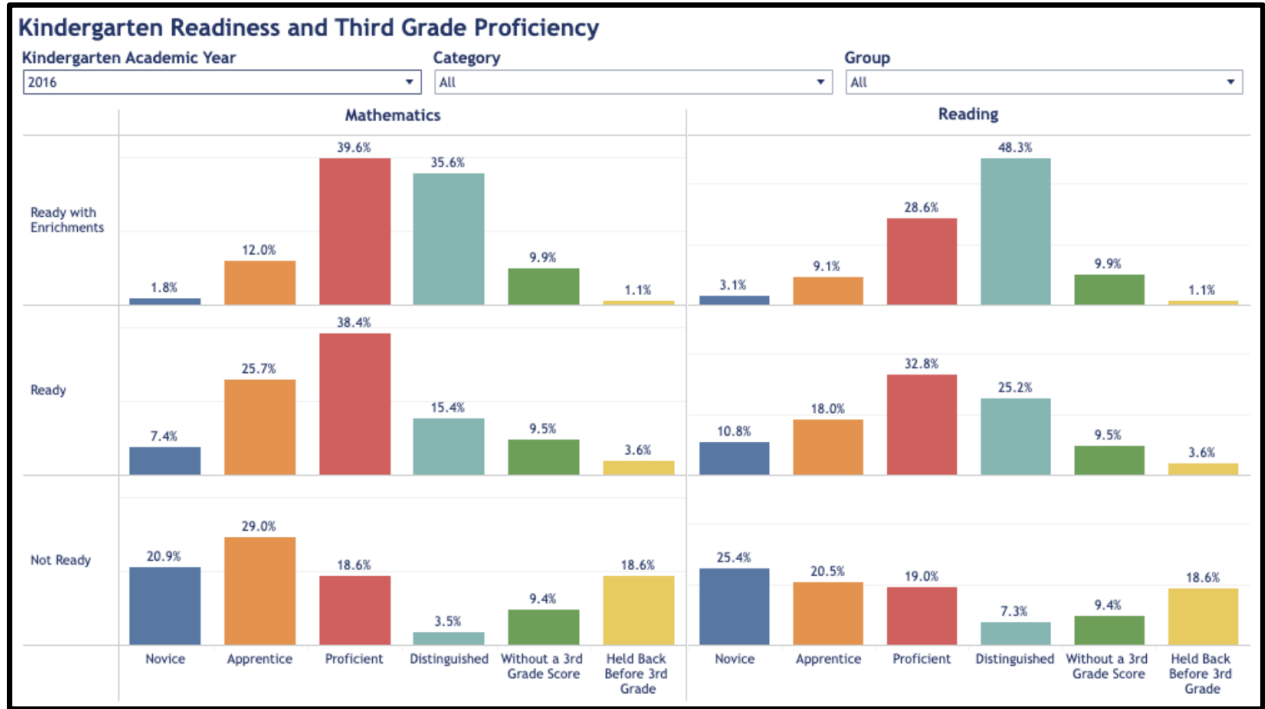


Note: This data is derived from data from the Kentucky Department of Education (2023).

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Figure 5

Third Grade Proficiency and Kindergarten Readiness Scores for Current 6th Graders in the District

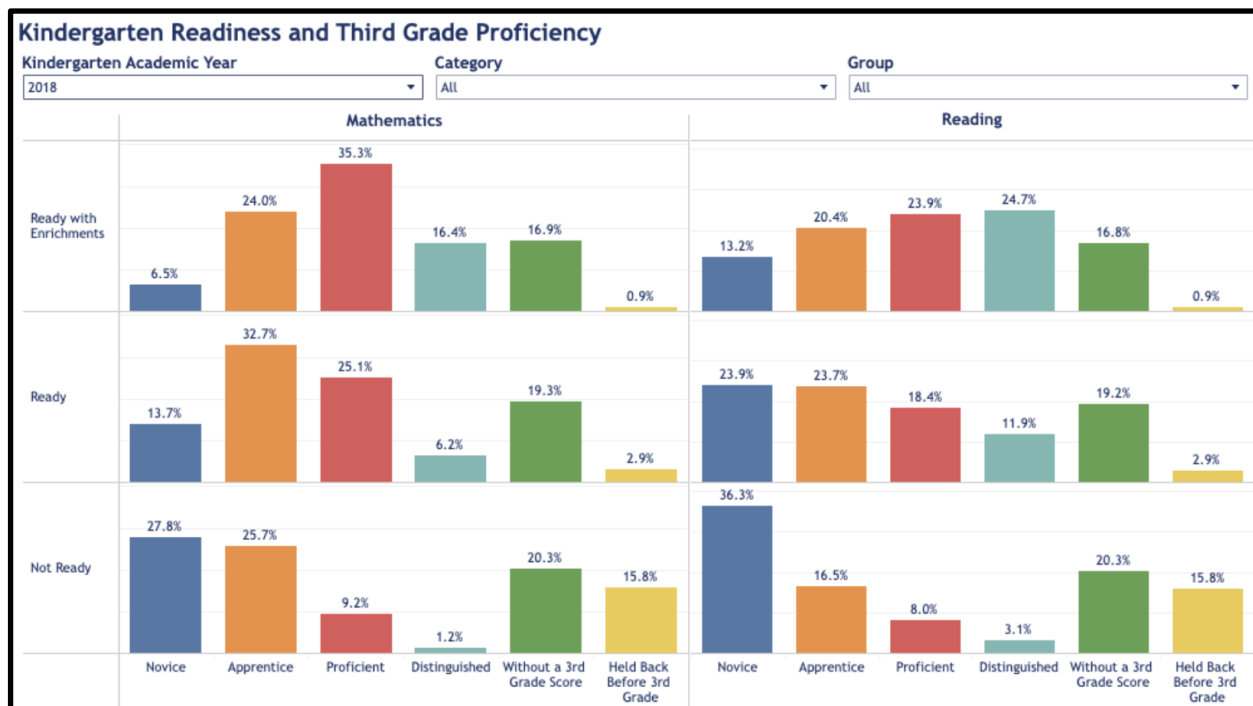


Note: This data is derived from data from the Kentucky Department of Education (2023).

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Figure 6

Third Grade Proficiency and Kindergarten Readiness Scores for Current 5th Graders in the District



Note: This data is derived from data from the Kentucky Department of Education (2023).

Participants

The participants in this study were employees from Walker County Public Schools in Kentucky. The participants ($N = 41$) were preschool teachers ($n = 25$), preschool assistants ($n = 8$) administrators ($n = 7$), and preschool consultants ($n = 1$), from Walker County Public Schools. For sampling, the participants were the same for the quantitative and qualitative data collection due to both being in the same survey. All the participants were employees of a public school district in Kentucky. They were purposefully chosen because of their roles in preparing students to be kindergarten ready.

Pre-existing Data Sources

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Pre-existing data from Walker County Public Schools were included with this study. Several pieces of data came from the data the Kentucky Department of Education provides to all stakeholders on the Kentucky School Report Card through the website (Kentucky Department of Education, 2023). The data were important because they showed the kindergarten readiness scores for the district and the state of Kentucky as seen in Table 1. The data also showed the difference in kindergarten readiness scores for students in different settings such as public preschool, childcare, and private settings (Kentucky Department of Education, 2023). Other points of data came from data the Kentucky Department of Education places into Infinite Campus for districts to use to analyze kindergarten readiness data with third grade proficiency from the state assessment for multiple years as seen in Figures 3-6. This data was vital to understanding the importance of kindergarten readiness because it showed the correlation between the kindergarten readiness scores and third grade achievement scores.

Data also came from a survey (see Appendix B) given to kindergarten teachers in Walker County Public Schools in February of 2023, which focused on skills needed to be kindergarten ready. The survey data were important to understanding what kindergarten teachers see as vital to a student's success in kindergarten. Tables 3-5 display the importance of each kindergarten development area based on the survey by 54 kindergarten teachers in Walker County Public Schools. The kindergarten teachers selected letter recognition ($n=23$) and printing first name ($n=19$) as the most important literacy skills. Rote counting ($n=23$) was selected as the most important numeracy skill. In the area of social/self-help skills, knowing personal information was selected by the kindergarten teachers as being most important.

Existing data from preschool Brigance data were also included because of the importance of seeing how students were finishing preschool compared to kindergarten readiness scores.

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Table 3

Data from Kindergarten Teachers for Importance of Literacy Skills

Literacy Skills Ranked from Most Important (1) to Least Important (10)										
Literacy Skills	1	2	3	4	5	6	7	8	9	10
Letter Recognition	23	13	5	4	1	3	2	3	0	0
Printing First Name	19	15	5	7	3	3	2	0	0	0
Letter/Sound Correspondence	1	14	19	9	9	0	0	2	0	0
Segmenting Syllables/ Words	4	1	2	6	10	8	9	14	0	0
Reciting the Alphabet	5	7	8	4	5	3	6	15	0	0
Rhyming	2	3	3	6	9	21	6	4	0	0
Isolating Beginning Sounds	0	1	2	7	5	10	19	9	0	0
Printing Upper/Lowercase Letters	0	0	10	11	12	5	9	6	0	0

Note: This data is derived from data from the survey given to kindergarten teachers in Walker County Public Schools.

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Table 4

Data from Kindergarten Teachers for Importance of Numeracy Skills

Numeracy Skills Ranked from Most Important (1) to Least Important (10)										
Numeracy Skills	1	2	3	4	5	6	7	8	9	10
Rote Counting	23	3	5	4	1	1	6	7	0	3
Recognizing Numerals	4	20	9	4	1	6	3	0	3	3
Counting 10 Objects	9	11	16	5	5	1	0	1	3	2
Sorting/Classifying	7	3	4	15	5	4	8	2	1	10
Identify 2D Shapes	3	7	1	9	10	8	6	2	4	2
Concept of Time	2	1	0	2	3	9	4	10	9	13
Subitizing up to 5	3	4	4	3	9	6	11	10	2	1
Creating Patterns	1	2	4	3	9	7	8	11	5	3
Understanding More/Less	0	2	5	4	5	8	3	6	12	8
Ordinal Numbers	1	0	5	4	5	3	4	4	14	13

Note: This data is derived from data from the survey given to kindergarten teachers in Walker County Public Schools.

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Table 5

Data from Kindergarten Teachers for Importance of Social/Self Help Skills

Social/Self-Help Skills Ranked from Most Important (1) to Least Important (10)										
Social/Self-Help Skills	1	2	3	4	5	6	7	8	9	10
Knowing Personal Information	17	11	5	5	5	10	0	0	0	0
Attending to a 15 min. task	11	13	8	5	8	8	0	0	0	0
Self-regulation	11	13	13	8	5	3	0	0	0	0
Putting on jacket, backpack, etc.	9	6	9	15	7	7	0	0	0	0
Follows 2-3 step direction	4	5	10	9	15	10	0	0	0	0
Taking turns/sharing materials	1	5	8	11	13	15	0	0	0	0

Note: This data is derived from data from the survey given to kindergarten teachers in Walker County Public Schools.

Instruments

A kindergarten readiness survey (see Appendix E) was developed, using the four areas of kindergarten readiness as developed by the Kentucky Department of Education (Kentucky Department of Education, 2023). The four developmental areas of kindergarten readiness used in the survey included cognition and general knowledge, social and emotional development, language and literacy, and physical well-being and motor development. The survey development was discussed with a preschool consultant in the district to check for reliability and validity.

Data Collection

The data were collected through a survey (see Appendix E) on a Google Form from March until May of 2023. The researcher sent the survey through email in March and April to

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administrators and preschool staff. Both qualitative and quantitative data were collected in the survey. On average the survey took approximately 15 minutes to complete for each respondent.

Quantitative Analysis Plan

Quantitative data was analyzed by finding summary statistics. The Google Form allowed for summary statistics to be accessed easily from the Google Form as well as the Google Sheet connected to the Google Form. The summary statistics included the role of the participants, years in education, perceptions towards kindergarten readiness, and priorities for improving kindergarten readiness.

Qualitative Analysis Plan

The qualitative data was analyzed by coding the data found in the same survey about kindergarten readiness where the quantitative data originated. I used the data to identify themes in the comments for additional root causes of kindergarten readiness. The coding was identified by using numbers and highlighting colors to see themes across the data. The language was analyzed for common patterns such as parents, assistants, curriculum, time, behavior, early education, preschool, social-emotional regulation, and parent involvement. The reliability of the coding is based on using best practices from Hennick et al. (2020). Triangulation was used in this study by referencing multiple research articles on kindergarten readiness and seeking knowledge by educators working in the field of kindergarten readiness.

Limitations

One limitation of this study was the participants are all associated with one public school system and not all childcare options for rising kindergarteners in the county. Another limitation was the participants all have experience with students who qualify for the preschool program in one public school district and not necessarily students in other preschool settings.

Results

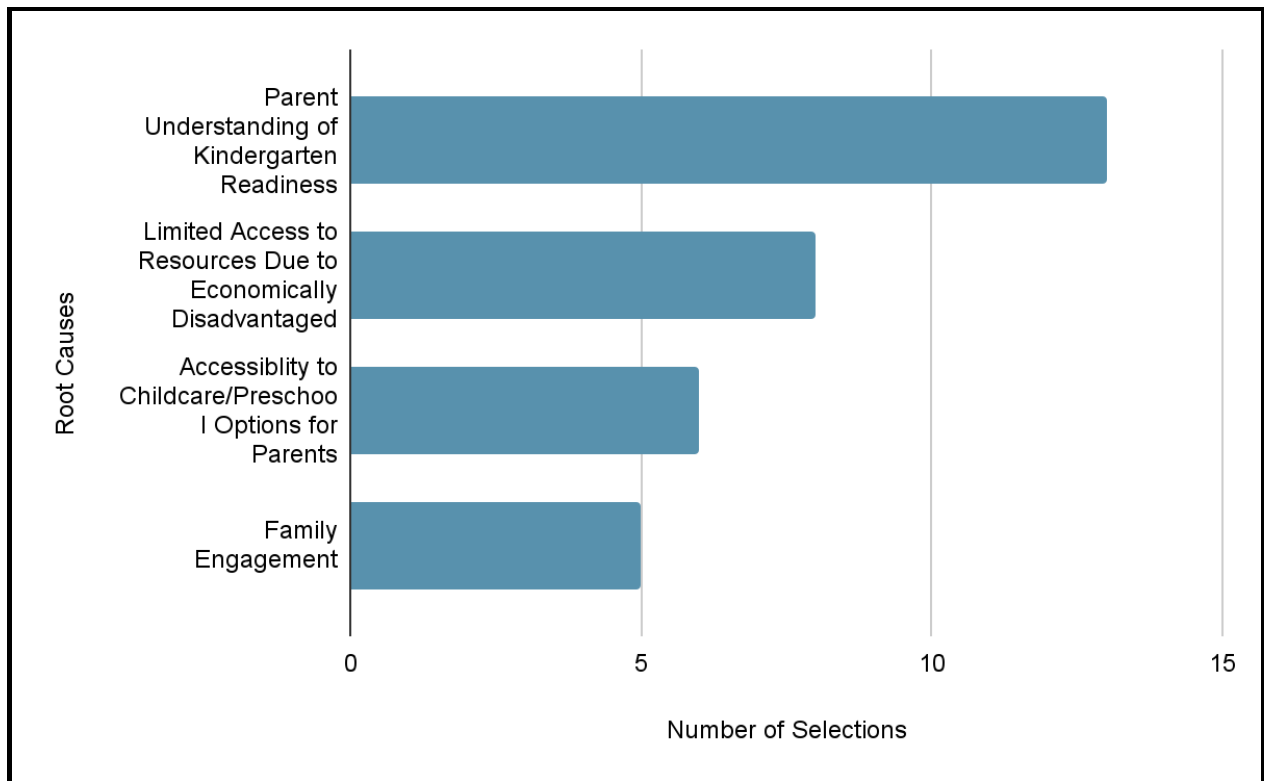
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The findings from this mini-study kindergarten readiness survey demonstrate the beliefs about kindergarten readiness from the lens of administrators and preschool staff. The majority of the participants indicated parents play the most vital role in kindergarten readiness (87.8% *strongly agree*). The school system and childcare were both selected as a vital role in kindergarten readiness with participants marking *strongly agree*, showing 51.2% *strongly agree* with the school system and 45% childcare. The percentage of participants (87.5%) either *agreed* or *strongly agreed* that educators have the training they need to help students with kindergarten readiness. The participants also felt the educators have the resources they need with 80.5% selecting *agree* or *strongly agree*. The top root causes selected by administrators and preschool staff indicated the majority feel parents are a key to being ready for kindergarten (Figure 7). The top root cause selected was “parent understanding of kindergarten readiness”, followed by “limited access to resources due to being economically disadvantaged.”

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Figure 7

Top Root Causes of Limited Kindergarten Readiness (N = 41)



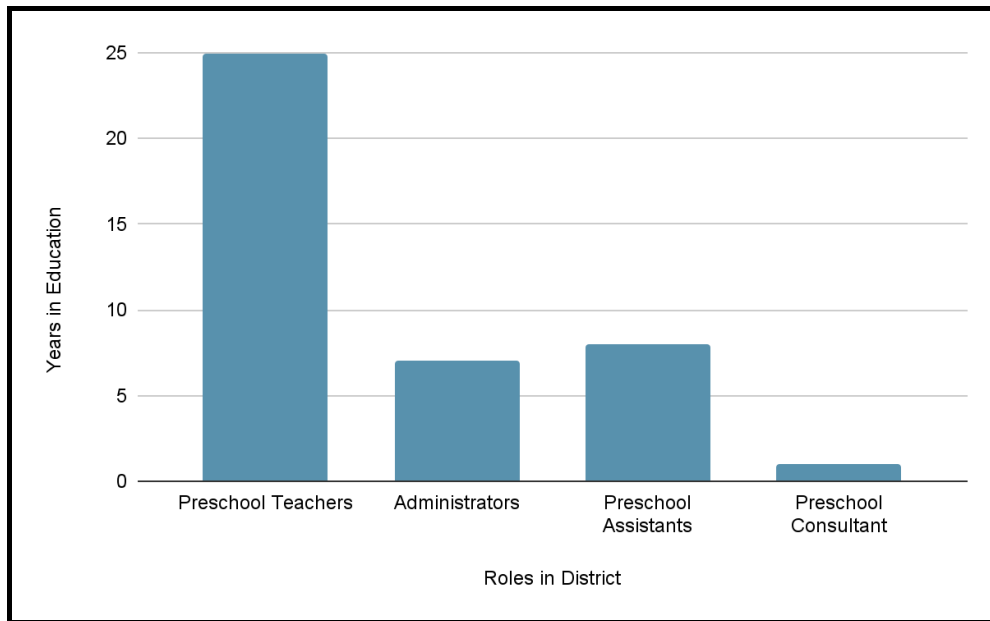
Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

The survey was given to administrators and preschool staff, resulting in 41 participants completing the survey for the mini-study. The majority of the participants were preschool teachers as seen in Figure 8. There were seven administrators who participated in the study. The years of experience vary amongst the groups as displayed in Figure 9.

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Figure 8

Roles of Participants in Study

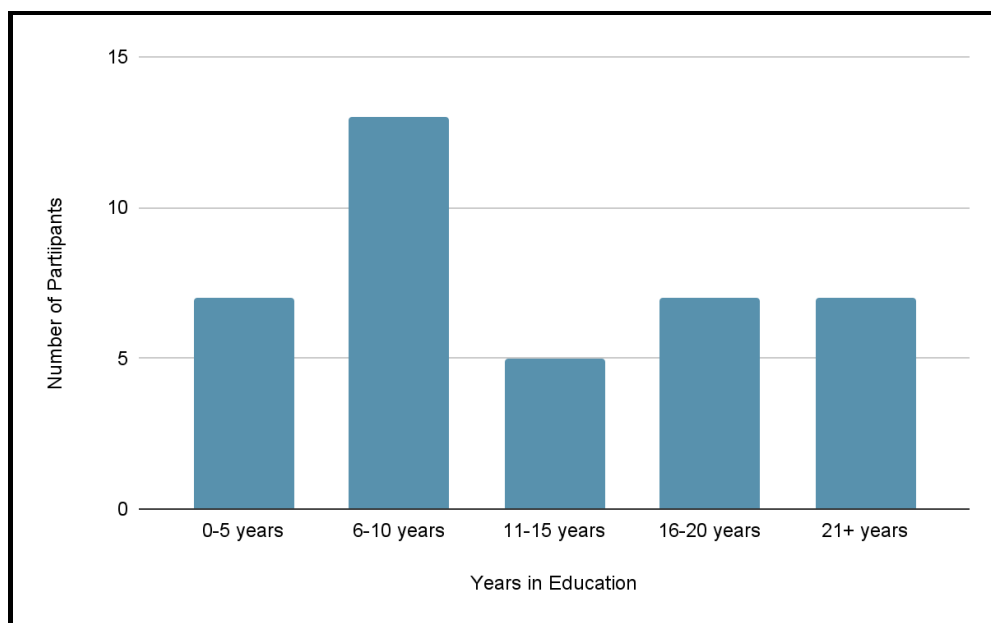


Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

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Figure 9

Years in Education for the Participants



Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

The majority of the survey participants have more than six years of experience in education. Another surprise is that 80% of the participants selected “social and emotional development” as *extremely significant* versus 39% who selected “cognition and general knowledge” as *extremely significant*.

The data indicates the beliefs about kindergarten readiness from the perspective of administrators and preschool staff. Table 6 shows how the participants indicated the significance of the skills needed for kindergarten readiness. These skills are the areas identified by the Kentucky Department of Education (2023) for kindergarten readiness categories. Each participant was asked to rank the significance of each category of kindergarten readiness. Social and emotional development was identified as the category for being extremely significant (80.5%). The participants indicated that cognition and general knowledge were extremely

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significant and very significant (95.1%). All participants indicated social and emotional development were extremely significant and very significant (100%). Language and literacy were selected as extremely significant and very significant by the majority of participants (80.5%).

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Table 6

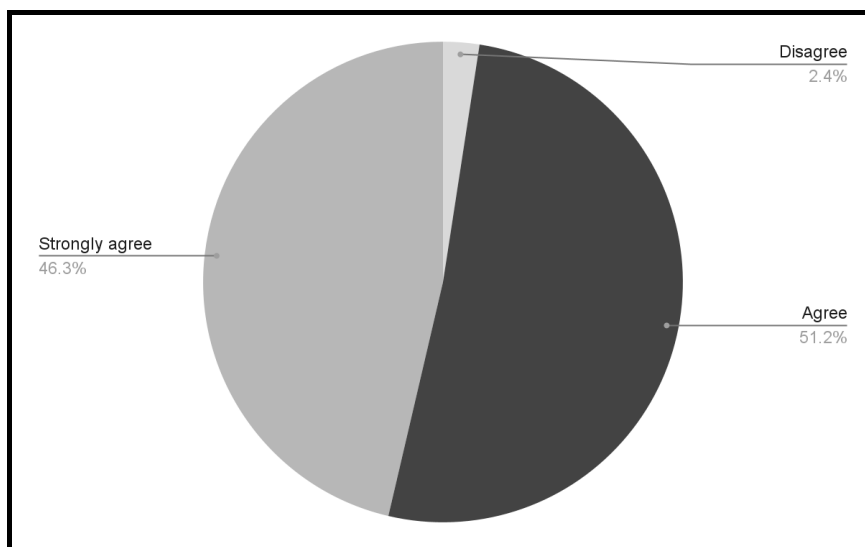
Significance of Skills Needed for Kindergarten Readiness

Skill	Extremely Significant	Very Significant	Slightly Significant
Cognition and General Knowledge	39%	56.1%	4.9%
Social and Emotional Development	80.5%	19.5%	0%
Language and Literacy	29.3%	51.2%	19.5%
Physical Well-Being and Motor Development	31.7%	58.5%	9.8%

Figures 10-12 demonstrate the role different entities play in the development of kindergarten readiness. The participants indicated the parents play the most vital role in preparing students for kindergarten.

Figure 10

The Role the School System Plays in Kindergarten Readiness

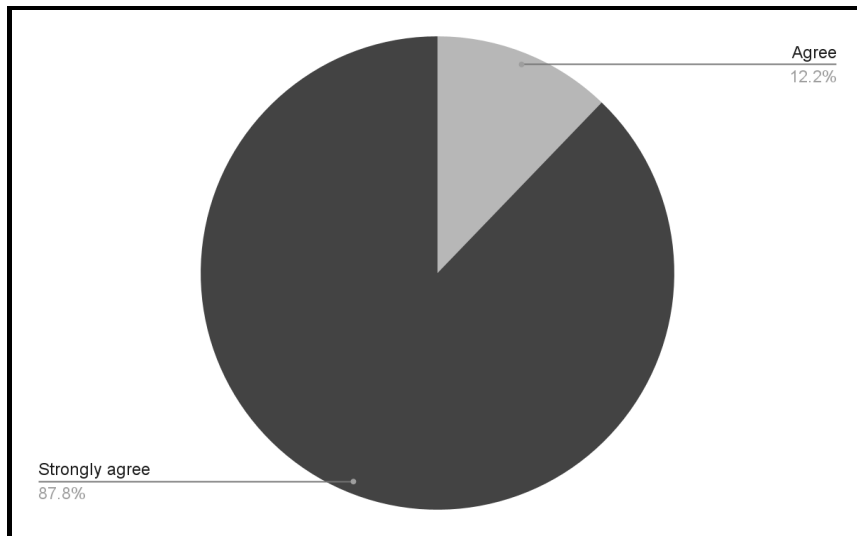


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Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

Figure 11

The Role Parents Play in Kindergarten Readiness

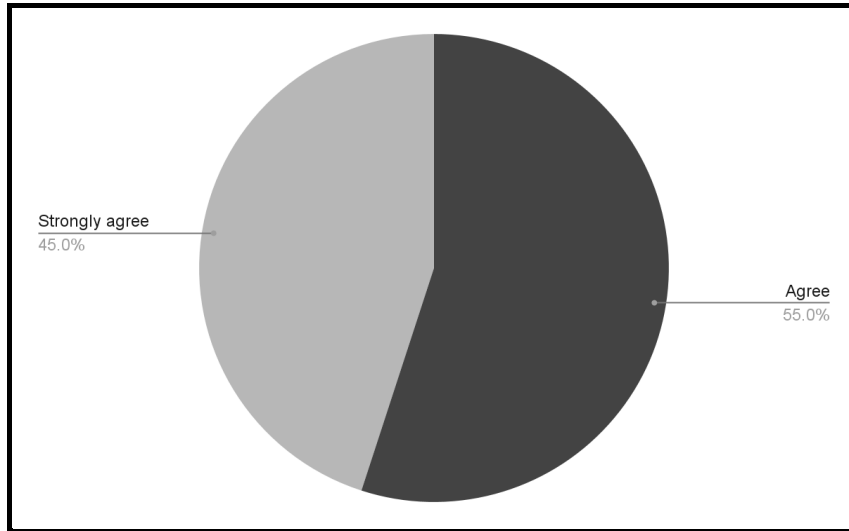


Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

Figure 12

The Role Childcare Plays in Kindergarten Readiness

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Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

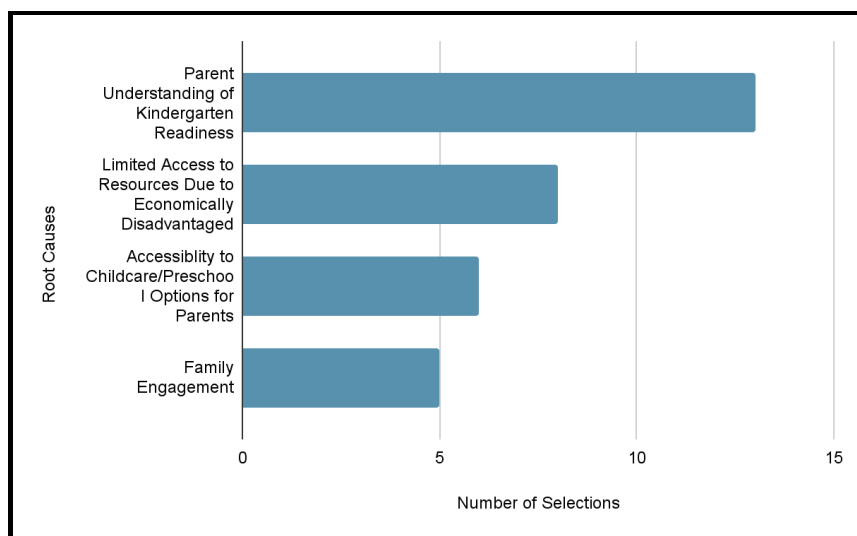
The participants did not indicate parents have the necessary information to prepare their children to be ready for kindergarten with 56.1% disagreeing that parents have what they need. Only 17.1% indicated that parents have the necessary information to help their child.

After analyzing the root causes selected by participants, several themes emerged from the data. Participants selected “parent understanding of kindergarten readiness” as the main cause of deficiencies in kindergarten readiness with 31.7% selecting this as the top root cause. The survey data also revealed a root cause as being “limited access to resources due to economically disadvantaged.” Two other root causes rose to the top of the data with “accessibility to childcare/preschool options for parents” and “family engagement.” The data is displayed in Figure 13.

Figure 13

Top Root Causes of Limited Kindergarten Readiness

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Note: This data is derived from data from the Kindergarten Readiness survey given to educators in Walker County Public Schools.

Qualitative Results

Administrators and preschool educators shared additional information through the root cause analysis survey in the open-ended question. Participants shared details about why they indicated parents are needed as partners for kindergarten readiness. Some of the participants indicated social and emotional wellness was a concern for becoming kindergarten ready. Others expressed the need to have curricular resources that best meet the needs of the students.

One participant stated, “I think parents need access to resources to work with their children at home. Parents are the child’s first teacher, and they deserve resources to help their children.” A preschool teacher participant focused on parent involvement by stating,

Parents must be involved and support the teaching/learning from the teacher. The students need to want to learn too. The teacher must be prepared each day to develop the lessons for their students' needs. I see it as a three-legged stool. All three are equally important--the student, the teacher and the parent!

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An administrator expressed, “I believe that parent involvement, the difference in significance placed on education between different cultures, and language barriers present real inequities for students becoming far behind their peers.”

The qualitative data uncovered additional root causes of kindergarten readiness. The qualitative data were coded with common themes. One additional root cause identified was not having enough assistance in the classroom. Some participants expressed concern for social emotional well-being. One participant in the survey stated,

Social-emotional skills are extremely significant in being kindergarten ready to help them know how to follow directions, expectations and routines/procedures throughout the school day. They need to know how to interact with both peers and adults in an appropriate way that can/should be modeled throughout the preschool day. We work on self-help/adaptive skills to help ensure their independence with tasks (putting on a vest, putting on their coat/zipping it, opening packages and beverages at mealtimes, etc.) I personally try to provide parents at home learning tips weekly based on things we may be working on in the classroom so they can continue practicing these skills at home.

Physical well being and motor skills are also extremely important for kindergarten readiness. These skills help them to move safely throughout their school day, work on body awareness and sense of space.

Out of the 41 participants, five described with more details the need to have parents involved and trained in kindergarten readiness. Four participants expressed the need to have a curriculum to better meet the needs of the students. Two participants shared that one kindergarten readiness assessment was not enough to determine kindergarten readiness. Another participant shared that students are being impacted by coming in and out at different times in the classroom.

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Both the quantitative and qualitative data pointed to parent involvement as being an important factor in preparing students for kindergarten readiness. The root cause identified as being the highest priority for kindergarten readiness in the quantitative data was parent involvement (*87.8% strongly agree*). The qualitative data indicated parent involvement as being a key factor in kindergarten readiness with five participants going into detail about parent involvement in the qualitative data.

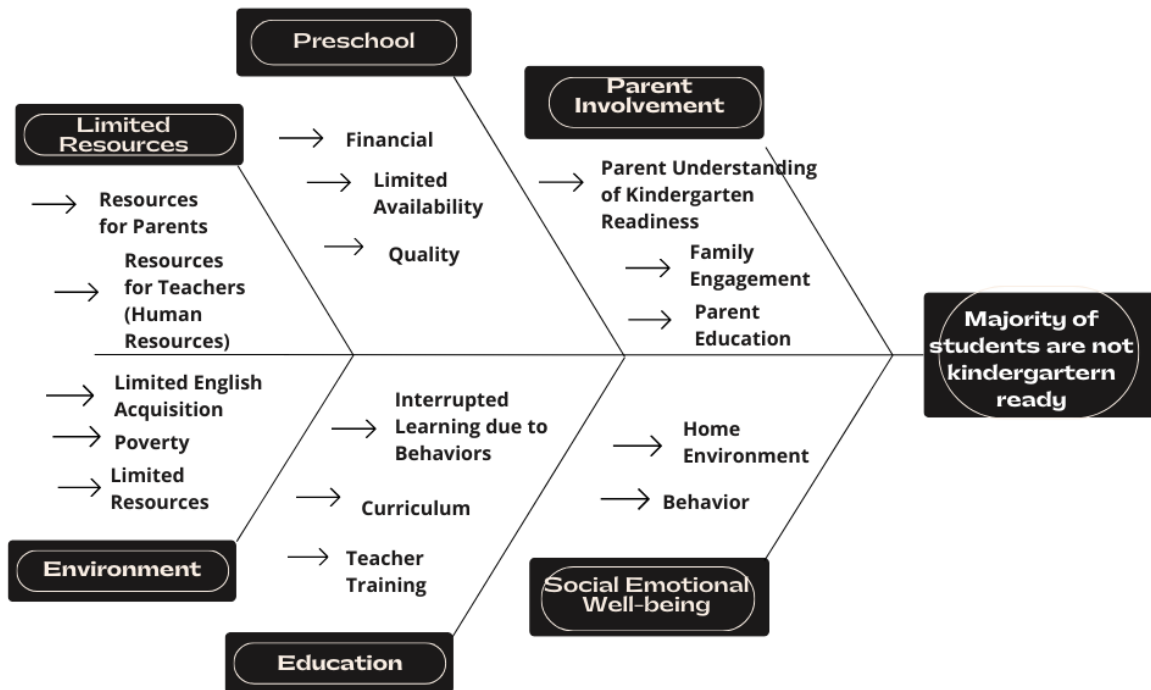
Discussion and Conclusions

The findings in the data suggest educators in this study believe parents play a key role in kindergarten readiness, yet many of them do not have access to the resources needed to help with kindergarten readiness. The results enabled planning for interventions that included opportunities to increase parent awareness of kindergarten readiness and resources to help with kindergarten readiness. The connections to the literature were strong, suggesting parents can make a difference in students being ready to start kindergarten as seen in studies throughout the literature (Douglass et al., McIntyre et al., 2007; 2019; Weitland et al., 2017).

The Fishbone Diagram below displays the additional root causes that were identified using the data from the root cause mini-study: interrupted learning due to behaviors that remove students from the instruction taking place in the classroom, additional assistance for teachers and students by having additional preschool assistants in the classroom to help students focus on learning, and parent understanding of the skills needed for kindergarten readiness (Figure 14). Overall, the mini-study helped to identify next steps with interventions. Based on the findings, the interventions to improve kindergarten readiness needed to focus on informing parents about kindergarten readiness and providing them with the tools necessary to help their child.

Figure 14

Fishbone Diagram of Kindergarten Readiness-Root Causes from Mini-Study



Fishbone Diagram → Kindergarten Readiness-Root Causes from Mini Study

Trustworthiness Techniques

To affirm the trustworthiness of this study, an outside reader checked the accuracy of the survey data with the coding completed on the data. There were not any differences in accuracy of the survey data.

The reliability of the coding is based on using best practices from Hennick et al. (2020). Thematic analysis was used to code the themes together (Hennick et al., 2020). Triangulation was used in this study by referencing multiple research articles on kindergarten readiness and seeking knowledge by an administrator working in the field of kindergarten readiness.

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Summary

The goal of the literature review and the root cause analysis was to find a way to increase kindergarten readiness using improvement science. The literature review focused on kindergarten readiness and how to grow kindergarten readiness with students. Bettencourt et al. (2018) found students who are not kindergarten ready due to social and behavioral factors may have long term impacts in fourth grade with suspensions, retention, and support services. Other studies focused on the impact of parental involvement on kindergarten readiness (Cabell, 2019; Douglass et al., 2019; Lahaie, 2008; McIntyre, 2007; Weitland et al., 2017). The literature review created a sense of urgency for helping students become kindergarten ready.

The root cause analysis identified parent involvement as being a key factor in improving kindergarten readiness based on the information from administrators, preschool teachers, preschool assistants, and school psychologists. The participants indicated parental involvement and parent understanding of kindergarten readiness could help increase achievement in kindergarten readiness.

Based on the literature review and root cause analysis, Intervention One focused on increasing parent involvement in kindergarten readiness. Intervention One involved providing parent seminars on kindergarten readiness to the parents of students in the KinderReady camp in the summer of 2023.

Chapter Three: First Intervention

What is the best intervention to support parents in helping their child become ready for kindergarten?

Introduction - Purpose of Chapter

After conducting a root cause analysis and finding a need for increased parent awareness of kindergarten readiness skills, an intervention involving parent seminars was implemented during two KinderReady Summer Camps with families. This was the second year KinderReady camp had been held in the district for students entering kindergarten, but the first year parent seminars were provided for the parents of the students in the camp. During the first intervention, parents were given a survey on their knowledge of the skills needed for kindergarten and what skills they would like more information on to help their child become kindergarten ready. Next, a parent seminar was offered for parents to gain an understanding of the skills necessary to begin kindergarten. Parents/guardians were asked if they would participate in a semi-structured interview on kindergarten readiness. Pre- and post-assessment data was analyzed for students who participated in the KinderReady Summer Camp. I used qualitative and quantitative data to analyze the effectiveness of the parent seminar intervention. The second intervention involved similar parent seminars as the first intervention with additional strategies to increase the effectiveness of parent seminars based on the data from the first intervention.

Setting/Context

The intervention took place in a school district of 18,000 students in Kentucky. The first intervention involved parents and students participating in the KinderReady camp in the summer of 2023. The students were representative of a variety of schools around the district. The students

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were all entering kindergarten in the fall of 2023. Figure 16: Plan - Do - Study - Act process shows how the intervention began with an essential question. Then, based on a root cause analysis and literature review, an intervention was developed to target the main root causes identified in the mini-study.

Goals

Based on the root cause analysis, the first intervention focused on parental involvement and getting parents involved in a parent seminar around kindergarten readiness, so they can begin learning about how to prepare their students to be kindergarten ready. The goal of the first intervention was to increase parent engagement in kindergarten readiness by increasing parent participation in kindergarten readiness, a parent's understanding of kindergarten readiness, and to increase kindergarten readiness for students.

Literature Review

The review of the literature highlights some studies that have examined effective interventions relating to kindergarten readiness. Studies were searched based on keywords: parent involvement, kindergarten readiness, achievement, kindergarten preparation, parent involvement in early education, early education strategies, KinderReady, preschool, preschool readiness, and kindergarten.

Several studies focused on how to increase parental involvement in kindergarten readiness. Some studies analyzed the impact of text messaging, parent education programs, and others training in the neighborhoods in which they reside. Slicker et al. (2021) examined the role parental involvement with activities in the home and expectations for school readiness plays connects to students being ready for kindergarten. The study analyzed 12,670 parent interviews

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from the Early Childhood Longitudinal Study Kindergarten (Slicker et al., 2021). The researchers studied three research questions (Slicker et al., 2021, p. 366). One question centered around how kindergarten parents would divide out into groups if they were based on engagement in home-learning and kindergarten expectations. A second question focused on the demographic characteristics of the students and family in each group (Slicker et al., 2021). A third question focused on determining if parent expectation and involvement profiles predict achievement in early reading and math (Slicker et al., 2021, p. 366).

The study found students have higher academic achievement in reading and mathematics when their parents have high expectations and provide high activities at home (Slicker et al., 2021). The findings also confirmed parents have high expectations for their children, but many may have limited access to activities due to time and financial constraints (Slicker et al., 2021).

Understanding the long-term impacts of kindergarten readiness, several studies have been conducted on interventions to help prepare students for kindergarten by involving their parents. A study by Marti et al. (2018) examined the benefits of parents participating in a program called Getting Ready for School (GRS) in New York City. The program involved parents being involved in school activities, working with children at home with skills learned in the activities and videos, and usage of electronic opportunities (Marti et al., 2018). The study involved 133 students and their parents engaged in a Head Start program (Marti et al., 2018). Researchers in this study sought to answer three questions (Marti et al., 2018, p. 3). Marti et al. sought to determine the percent of parental attendance, how much time was dedicated to home activities, and the usage rates of the digital material. Another question looked at what family characteristics are associated with parent involvement in the program. The third question focused on which

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indices of parent involvement predict children's school readiness outcomes following the intervention (Marti et al., 2018).

The Getting Ready for School program held events from October 2014 to June 2015. The programs included training in literacy skills, mathematical skills, and self-regulation skills (Marti et al., 2018). The findings indicate parent involvement equates to higher levels of kindergarten readiness for students from economically disadvantaged backgrounds (Marti et al., 2018).

Another study by Barnett et al. (2020) looked at the impact of parental involvement in relation to kindergarten readiness with 2250 students and their families involved in early childhood education settings. The study analyzed data from the Early Childhood Longitudinal Study (Barnett et al., 2020). Greater parent involvement was associated with school readiness, particularly within economically disadvantaged families (Barnett et al., 2020). Barnett et al. (2020) stated,

Collectively, these results support the value of encouraging parental engagement in home learning activities to promote school readiness, and the indirect but important role of the mesosystem, where ECE providers can influence school readiness by partnering with parents to increase engagement in children's learning. (p. 269)

Beliefs about kindergarten readiness are connected to kindergarten readiness achievement. It is important to help parents understand the value of the readiness skills before a student begins kindergarten. Puccioni et al. (2019) conducted a study on the beliefs regarding school readiness and the impact they have on the student's readiness level and social emotional regulation, similar to Barnett. This study analyzed data from the Early Childhood Longitudinal study from 2010-2011, which included input from teachers, assessments, and parent interviews

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(Puccioni et al., 2019). The participants included 13,399 students and their parents. The findings indicate a strong association between beliefs about school readiness and academic and behavioral outcomes (Puccioni et al., 2019).

Theory of Action

After analyzing the root cause analysis and searching through research in the field, the focus for the first intervention was on informing parents of future kindergarten students about the urgency around kindergarten readiness and providing tools and strategies to help their child become kindergarten ready. The audience for the intervention was the families of the students involved in the district's KinderReady camp in the summer of 2023. The parents and caregivers had already placed an emphasis on helping their child become kindergarten ready by placing them in a summer program designated to help them become ready for kindergarten. The theory of action predicted an increase in parent involvement relating to kindergarten readiness achievement for the students and an increase in the parent awareness and understanding of kindergarten readiness (Table 7).

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Table 7

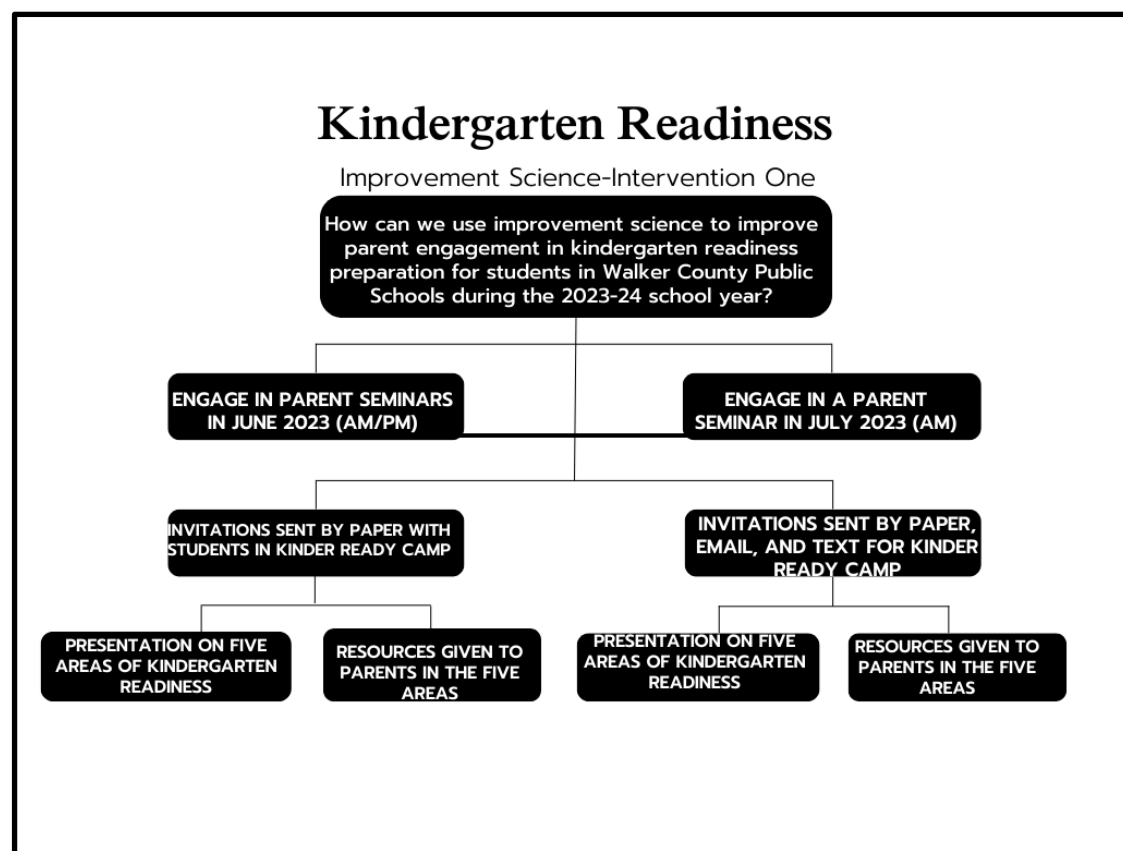
Theory of Action for Kindergarten Readiness Intervention One

If...	Then...
Parents and guardians are provided training on kindergarten readiness	Parents will be able to help their child prepare for kindergarten.
Parents are provided with materials on kindergarten readiness skills	Students will get additional help at home becoming kindergarten ready.
Parents understand the benefits of kindergarten readiness	Parents will make kindergarten readiness skills a priority in the home.
Parents are equipped with the necessary skills to help their child become kindergarten ready	Students will be kindergarten ready based on the kindergarten screener in Kentucky.

The Driver Diagram depicts the intervention design for Intervention One.

Figure 15

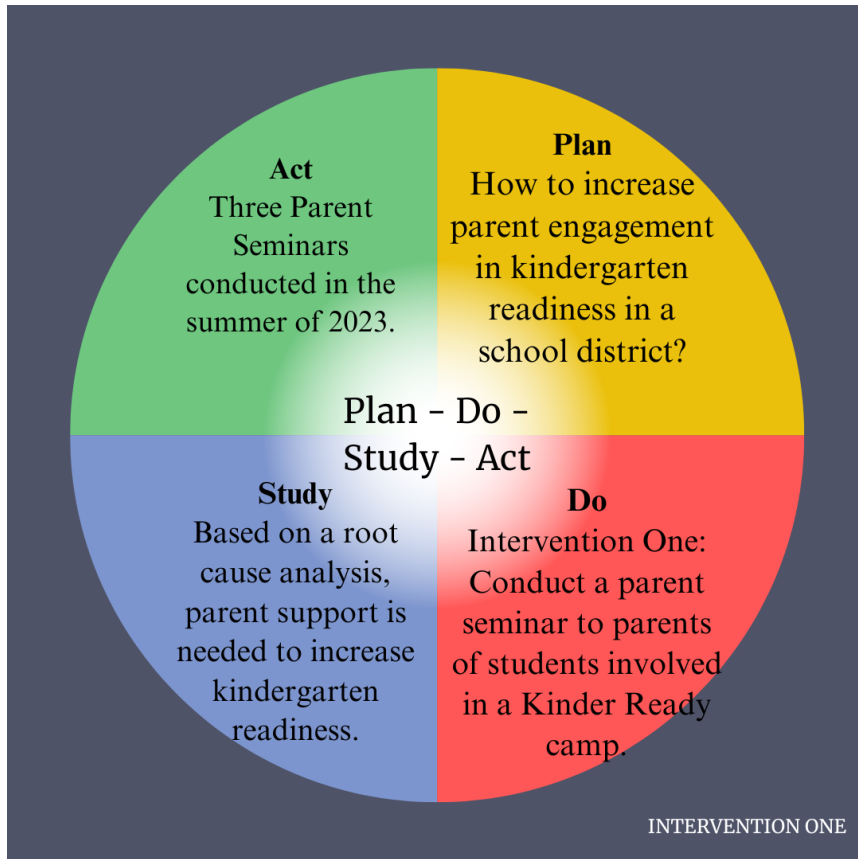
Driver Diagram for Kindergarten Readiness-Intervention One



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Figure 16

PDSA Model-Intervention One



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Description of Metrics

The metrics used in the first intervention cycle included attendance sheets from each parent seminar and an IRB-approved survey, using both Likert scales and open-ended questions. During the first intervention, attendance was counted during the parent seminars. The survey included an implied consent document to provide the participants with information about participation in the study. The survey asked for demographic information such as role and early education setting. Likert scale questions were included in the survey. The scale ranged from 1 (*strongly disagree*), 2 (*disagree*), 3 (*agree*) to 4 (*strongly agree*). Participants were asked to rate themselves on a scale of preparedness for helping their student get ready for kindergarten. Another Likert scale was used to seek information on whether parents have the necessary information to prepare their children for kindergarten readiness. Using the categories of kindergarten readiness from the Kentucky Department of Education (2023), information was sought using a Likert scale where the selections ranged from 1 (*not at all important*), 2 (*slightly important*), 3 (*very important*) to 4 (*extremely important*). An open-ended question asked participants to describe what they needed to help their child become kindergarten ready.

Research Design

Based on the information obtained through the root cause analysis and the literature review, an intervention was designed to increase parent involvement in kindergarten readiness in students placed in the KinderReady Camp in the summer of 2023 in Walker County Public Schools. Intervention One included hosting parent seminars for the parents of the students in the KinderReady camp. The design included analyzing pre- and post-Brigance data to identify if students had moved into scoring as kindergarten ready after the KinderReady camps. It also included analyzing the survey data from the parent survey for the quantitative and qualitative

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data. The open-ended questions in the parent survey provided an opportunity for specific feedback. One challenge of the design was holding parent seminars for parents of multilingual students without being able to provide on-site interpreters to assist them in understanding the information. A strength of the research design in Intervention One was analyzing the Brigance data to see if growth had been made with the students. Perry et al. (2020) explained a theory of improvement needs to be articulated to establish the goals of the study and the interventions. A theory of improvement helps to create the hypothesis for the improvement science study (Perry et al., 2020). Table 8 illustrates the theory of improvement for Intervention One.

Table 8

Theory of Improvement for Intervention One

Problem	Students entering kindergarten are scoring 46% kindergarten ready.
Intervention	Implementation of parent seminars will provide parents with strategies on how to help their child on kindergarten readiness skills
Primary Drivers	<ul style="list-style-type: none">● Preschool Team● District Team● Strategies for Parents in the Parent Seminars● KinderReady Camp● Materials for Parents
Theory of Improvement	Using improvement science, parent seminars will be implemented as evidenced by: <ul style="list-style-type: none">● Parent Survey Data (Quantitative)● Parent Survey Data (Qualitative)● Brigance Scores (Pre/Post)● Attendance at the Parent Seminar

Intervention One - June Parent Seminar

The Intervention One, a parent seminar, took place in June 2023. Invitations were sent through email and as paper copies to the students who participated in the Kinder readiness camp.

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The parent seminar took place at a school in the neighborhood where families are located to make it more convenient for parents.

Another parent seminar was offered at night to accommodate parents who were unable to attend during the day. The first parent seminar took place at a neighborhood school while the students were part of the KinderReady camp. The parents were invited into the school to learn how to help their child become kindergarten ready. During that seminar, 10 parents participated. The parents were given a survey through a QR code, as well as a paper copy, to see how much they knew about kindergarten readiness and how they wanted to grow and help their child become kindergarten ready. A couple of the parents were able to complete the survey with the English version. Unfortunately, there were not other versions in languages the parents spoke most fluently.

During the seminar, there was a slideshow to show parents the main areas of kindergarten readiness in the state of Kentucky. Each one was taught thoroughly to help explain to the parents what they could do to help their child become kindergarten ready. They learned about numeracy and what they could do at home to help their child become fluent in prerequisite skills for math such as counting from zero to five and subitizing, a skill where students can recognize the number of objects without counting them. Each parent left with large dice they could use to work with their child on how to subitize numbers and begin counting and adding numbers together. Parents were also given flashcards for numeracy to help students begin identifying numbers and identifying what it takes to become a number. To help increase fine motor skills, parents and children were given bug catchers to use to catch lightning bugs in the summer, as well as a recipe for homemade playdough. They can begin forming letters and numbers by using their hands with a playdough. During the seminar, parents were given a kindergarten readiness book their child

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could fill out each day during the summer before kindergarten to help them with literacy skills, numeracy skills and other skills needed to become kindergarten ready. During the slideshow, parents were also offered several pages of a list on how to help their child become kindergarten ready. Those lists were discussed and reviewed during the seminar. Parents and families were also given the opportunity to ask questions about kindergarten readiness and what is needed for a child to become kindergarten ready. Parents were also given stickers and sticker charts, so they could help their child track their progress on counting, letter recognition, and other activities.

The evening parent seminar had limited attendance. There were only two attendees: a parent and a child. It was a great opportunity to share one on one with the parent about kindergarten readiness. The parent was given the opportunity to complete the survey but chose not to complete it. The parent asked a lot of questions about how to use the dice to subitize and count. The parent also asked about the sets of flashcards that were in the bags given to each family and how to use those to help the child to become kindergarten ready. While the parent seminars were provided for those in attendance, they did not gain the attention of all 28 families in the KinderReady Camp.

During the parent seminar, parents were given kindergarten readiness kits, which included multiple activities to do with their child to gain kindergarten readiness skills. The full kit included counting bugs, shoelaces, dry erase board and marker, tangrams, a parent strategies book, and manipulatives to help prepare students to become ready to begin kindergarten.

Intervention One - July Parent Seminar

Due to the low attendance in the two previous parent seminar interventions, another parent seminar was developed as part of the second session of the KinderReady camp in July 2023. Parents of the students who were in the KinderReady camp in July were given advanced

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notice of when the parent seminar would take place through email and texts. The parent seminar took place inside the school during the KinderReady camp, which involved 40 students who were getting ready to start kindergarten. The parent seminar had 11 parents in attendance, as well as some younger siblings and older siblings. The kindergarten readiness parent seminar, which took place in the school where the 40 students who were enrolled in the KinderReady camp, was similar to the one that took place at the previous schools. A slideshow was used to go through the five areas of kindergarten readiness as identified by the Kentucky Department of Education. Each area was described in detail to the parents, and demonstrations were conducted with each area on how to improve those kindergarten readiness skills in that area. To help develop fine motor skills, the bug catchers, shoelaces, and counting bears were discussed and used to demonstrate with a student on how to use them to help others. The dice were used with a student to show when you roll them together, you can then begin to subitize and add one plus one.

Each family received a kit that included all the necessary tools to help develop kindergarten readiness in a student. Each family departed with a gift that included flashcards for numeracy and literacy, as well as large dice to get kids excited about subitizing. The parents were asked to complete the survey at the beginning and in the end if they wanted to be included as part of the study. Three parents completed the survey. Those results are represented in Figure 17. Several parents stayed after the kindergarten readiness parent seminar to ask questions. One parent asked about how to give speech services for their child. Another parent asked for additional behavior techniques to help when a student escalates and asked for some strategies to help that student deescalate. The parent wanted more information on how to help their child prepare for kindergarten and be ready in terms of behavior for the kindergarten classroom.

Results

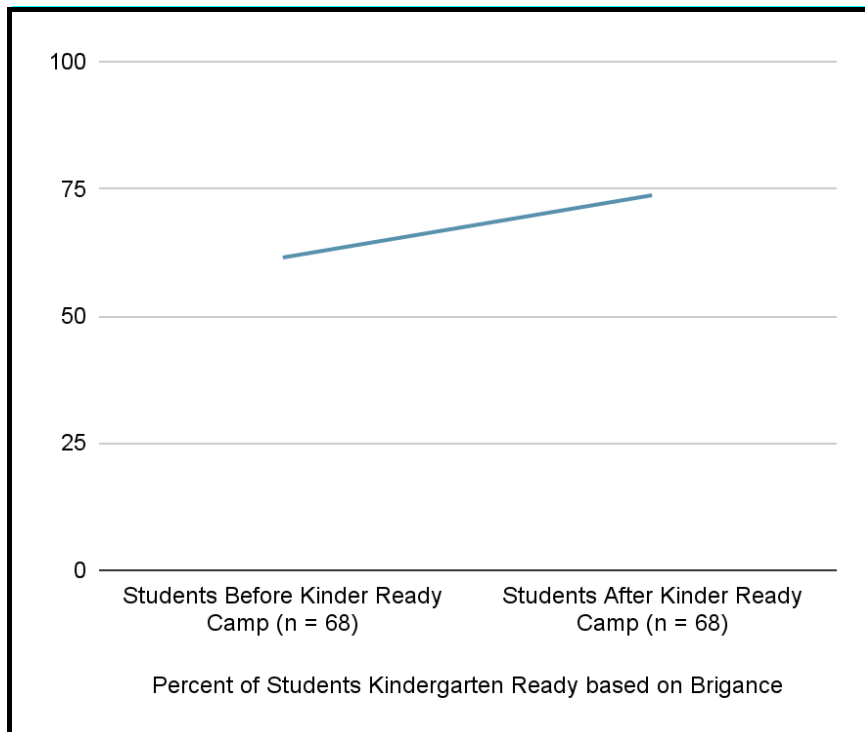
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Quantitative Results

At the end of the KinderReady camp and the three parent seminars, students were assessed using the Brigance assessment (Kentucky Department of Education, 2023). The Brigance assessment was given one-on-one to each student. Students who participated in two weeks of KinderReady camp showed a 12.25-point increase over the average for the kindergarten readiness assessment. At the beginning of the KinderReady camp in 2023, 61.5% ($n = 68$) were considered kindergarten ready. When the KinderReady camp ended, 71.5% ($n = 68$) of students were kindergarten ready or ready with enrichments (Figure 17). This percentage is higher than the 44% of students districtwide who were kindergarten ready in 2022 in the Walker County Public Schools (Kentucky Department of Education, 2023).

Figure 17

Kindergarten Readiness-KinderReady Camp Results



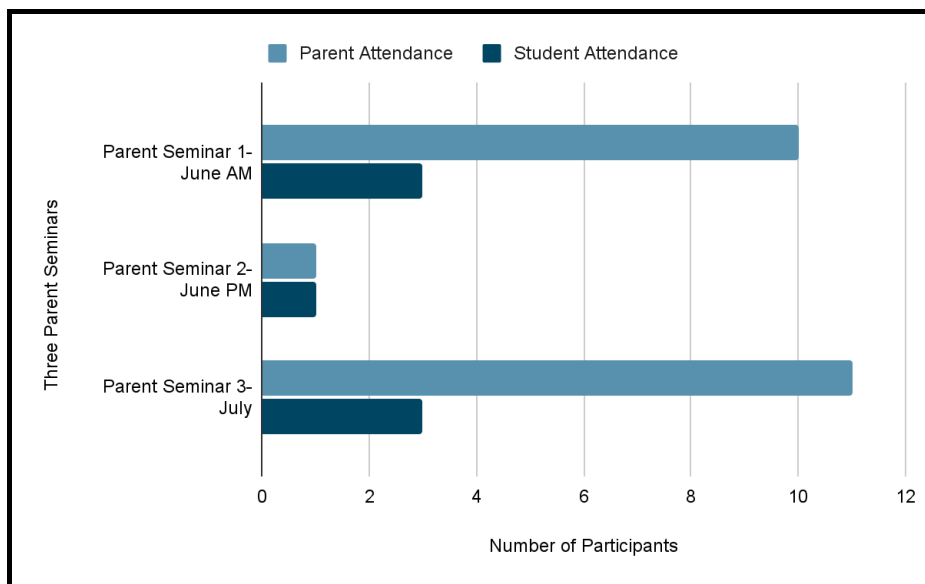
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Note: This data is derived from data from the Brigance given to students in Walker County Public Schools.

The parent surveys were analyzed for participation demographics, understanding of kindergarten readiness skills, and needs for the parents. Figure 18 displays the number of attendees and demographics of the participants who completed the survey.

Figure 18

Kindergarten Readiness-Parent Seminars (Intervention One)

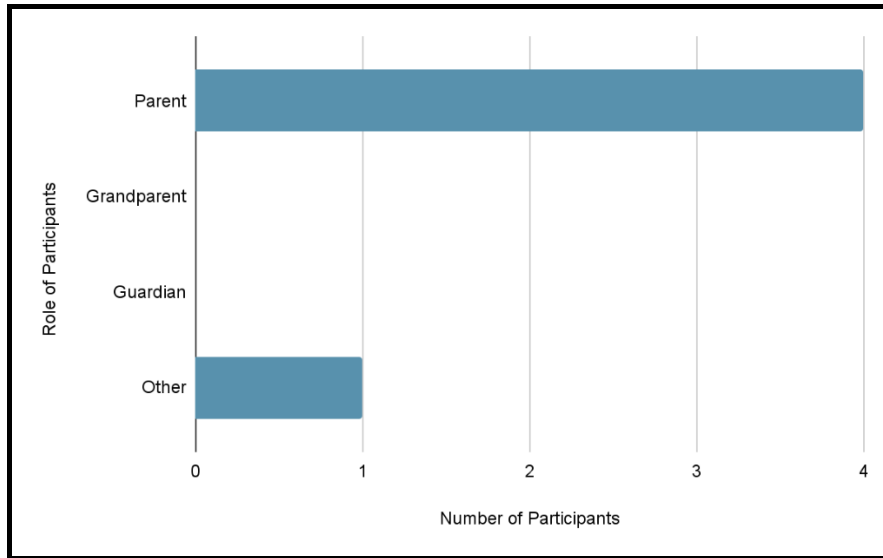


Note: This data is derived from the attendance taken at the parent seminars during Intervention One in Walker County Public Schools.

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Figure 19

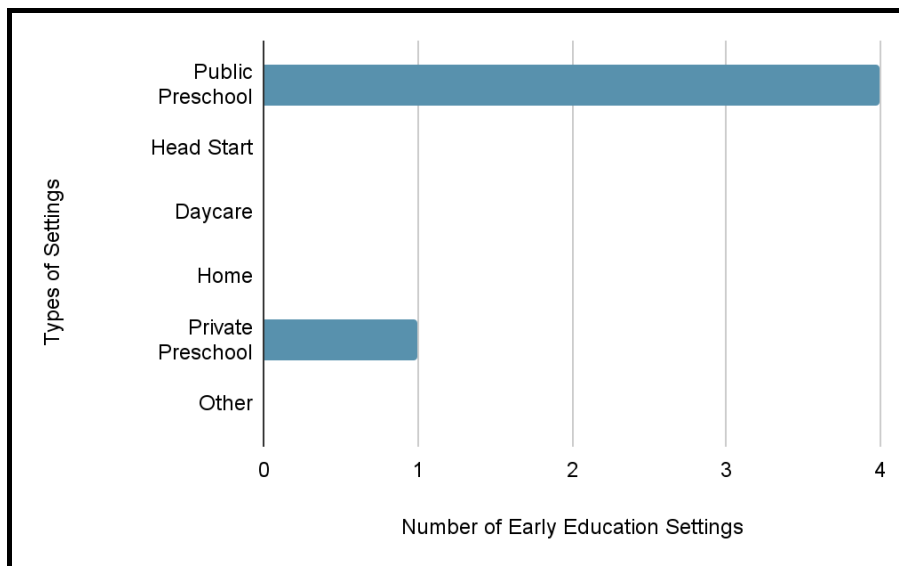
Parent Seminar Survey Participants – Intervention One



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

Figure 20

Early Education Settings of the Students



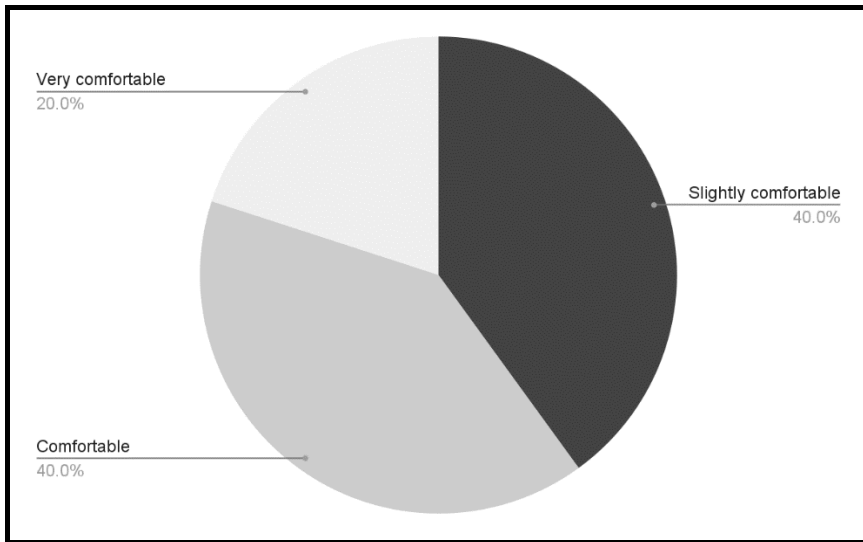
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Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

The surveys were analyzed to determine parents' understanding of kindergarten readiness and what parents needed to help their children become kindergarten ready. The findings can be found in Figure 21.

Figure 21

How Comfortable are Parents with Expectations of Kindergarten Readiness



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

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Table 9

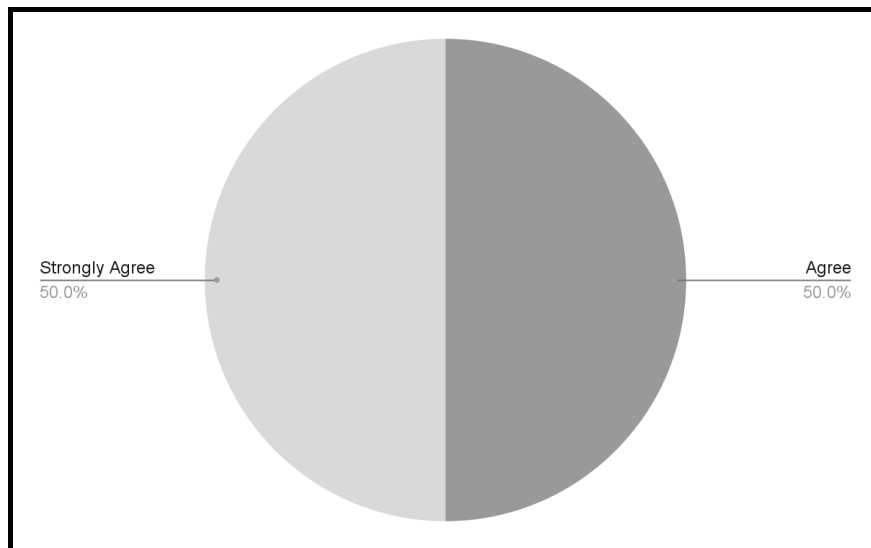
Importance of Kindergarten Readiness Skills

Importance of Kindergarten Readiness Skills	Extremely Important	Very Important	Slightly Important	Not at all Important
SKILL-Cognition and General Knowledge (shapes, colors, classification, number sense, etc.)	60%	40%	0%	0%
SKILL-Social and Emotional Development (relationships with peers, self-regulation, expressing emotions, etc.)	75%	25%	0%	0%
SKILL-Language and Literacy (letter recognition, rhyming, vocabulary, etc.)	75%	25%	0%	0%
SKILL-Physical Well-Being and Motor Development (fine/gross motor, physical health, etc.)	75%	25%	0%	0%

Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

Figure 22

Parents Have the Necessary Information to Prepare Child



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

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Qualitative Results

Parents were given the opportunity to complete an open-ended question on the parent survey about what they needed to help their child become kindergarten ready. One participant shared the need for emotional regulation by stating, “Help with his emotional regulation.” The other parents left the open-ended question blank. There were not any participants who volunteered to participate in the semi-structured interview. Participants asked during the parent seminar how to get their child registered for kindergarten. They asked about what paperwork to bring to the school. One participant asked about online registration for kindergarten. Many of the questions were around starting kindergarten.

Synthesis of Results

After analysis of the first intervention, several key details were noted, in particular, the participants in the parent seminars did not include more than 50% of the students involved in the KinderReady camp. The parent seminars in June included 39.2% ($n = 11$) of the parents in the first intervention in June. The parents who attended the third Kindergarten readiness parent seminar, equated to 27.5% ($n = 11$) of the student population in attendance at the camp. Many questions remain about why the attendance was so low. The seminars were offered at a variety of times during the day and at night to accommodate work schedules.

In reference to the research journal used to reflect on the steps of the study, one parent completed the open-ended question (Appendix I). I was able to stay after the parent seminar and share strategies to help the child with emotional regulation. I gave the parent several ideas of how to use a timer, sticker charts, and other techniques. Another parent stayed after the parent seminar to ask how to accelerate her child. Her child was able to read fluently and wanted to make sure she was challenged in kindergarten. I encouraged her to reach out to the curriculum

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coordinator, who is the gifted coordinator, to ask about the Primary Talent Pool. The Primary Talent Pool is a program for kindergarten through third grade students who exemplify gifted qualities.

In reflecting on the parent seminars in June and July, questions arose about how to improve the next intervention. Is there a language barrier keeping parents from understanding what the parent seminar can offer? Do the parents of English Learners feel comfortable coming into a setting without interpreters? Do parents have the strategies and confidence to help be a child's first teacher? What motivates parents to come to parent engagement sessions?

Limitations

There were several limitations to Intervention One. First, the timing of the interventions may have impacted attendance at the seminars, although they were held during the day and night. The timing of the interventions occurred a month before the students started kindergarten. Parents who were multilingual did not have access to the instruction due to it only being provided in English. The qualitative data was limited because only one parent completed the open-ended question. After analyzing the attendance of parents, the limited parent surveys, and the data from the kindergarten readiness camp, a second intervention was needed to increase the productivity of a parent seminar focused on kindergarten readiness.

Challenges and Recommendations for the Next Intervention Cycle

The second intervention to address parent involvement and kindergarten readiness started in October 2023 (Tables 10-11). The intervention for the parent seminar included modifications from the first intervention period. Communication was sent out to all parents involved in the preschool academy in Walker County Public Schools district. The communication included

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information about translators being on site to help with the language barrier. The second intervention took place the fall semester before a child will start kindergarten in the fall of the next school year. In other words, the first intervention occurred in the summer of 2023 for students entering kindergarten in fall 2023, while the second intervention took place in fall 2023 for students who will enter kindergarten in fall of 2024. The change in the timing for Intervention Two occurred due to parent feedback from Intervention One. After hearing parents in Intervention One discuss kindergarten readiness and what is needed to help a student become kindergarten ready, it was established that parents need a lot more time than the summer before kindergarten begins to help a child become kindergarten ready.

The second intervention included three parent seminars held over a three-month time span. The parents were placed into groups based on their previous knowledge of kindergarten readiness. To individualize each group, the preschool team specialized in literacy, numeracy, social-emotional development, and fine/gross motor skills. Parents were asked to complete the survey at the first session which was translated in multiple languages and with translators available on-site to help parents understand. The information collected was used to tailor the next two sessions in the parent seminar for kindergarten readiness. The second intervention not only included three sessions, but families were provided with dinner, so there was not a barrier with the session being around dinner time. The first two sessions dinner was funded through a grant that is focused on improving kindergarten readiness in the Walker County Public School district. The dinner for the third session was funded through a local donor.

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Table 10

Summary of the Timeline for Interventions - Intervention One - June

Date	Intervention One -June	Methods
June 12, 2023	<ul style="list-style-type: none"> ● Contacted families for participation in the needs assessment survey. ● Informed parents and guardians about the upcoming Kindergarten Readiness Seminar. 	<p><u>Kindergarten Readiness Parent Survey</u></p> <p><u>Communication to Parents/Guardians</u></p>
June 12-30, 2023	<ul style="list-style-type: none"> ● KinderReady Camp for future kindergarten students. 	
June 12-16, 2023	<ul style="list-style-type: none"> ● Conducted the Kindergarten Readiness Seminar during the week of June 12, 2023 in the morning and the evening for parents/guardians. 	<p>The seminar included information on the key concepts to be kindergarten ready and resources to help students become kindergarten ready.</p>
June 12-16, 2023	<ul style="list-style-type: none"> ● Parents completed the kindergarten readiness survey. 	
June 24-30, 2023	<ul style="list-style-type: none"> ● Analyzed the survey results. 	
July 1, 2023	<ul style="list-style-type: none"> ● Analyzed the Brigance data (pre/post) from the students in the KinderReady Camp. ● Analyzed the data collected from the open-ended survey question. 	<p>Quantitative data from the Brigance.</p>

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Table 11

Summary of the Timeline for Interventions - Intervention One - July

July 2-9, 2023	Intervention One -July	
July 9, 2023	<ul style="list-style-type: none"> ● Contacted families for participation in the needs assessment survey. ● Informed parents and guardians about the upcoming Kindergarten Readiness Seminar. 	<p><u>Kindergarten Readiness Parent Survey</u></p> <p><u>Communication to Parents/Guardians</u></p>
July 10-28, 2023	<ul style="list-style-type: none"> ● KinderReady Camp for future kindergarten students. 	
July 10-14, 2023	<ul style="list-style-type: none"> ● Conducted the Kindergarten Readiness Seminar during the week of July 10, 2023 in the morning and the evening for parents/guardians. 	<p>The seminar included information on the key concepts to be kindergarten ready and resources to help students become kindergarten ready.</p>
July 10-14, 2023	<ul style="list-style-type: none"> ● Parents completed the kindergarten readiness survey. 	
July 22-28, 2023	<ul style="list-style-type: none"> ● Analyzed the survey results. ● Analyzed the data collected from the open-ended survey question. 	
July 29, 2023	<ul style="list-style-type: none"> ● Analyzed the Brigance data (pre/post) from the students in the KinderReady Camp. 	<p>Quantitative data from the Brigance was analyzed.</p> <p>Qualitative data was analyzed from the surveys.</p>
Fall 2023	<ul style="list-style-type: none"> ● Shared information about the Kindergarten Readiness Seminar for parents and guardians 	

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to all 15 elementary
schools in the district.

Chapter Four: Second Intervention

Using the improvement science model to frame the project means that with each intervention comes an opportunity to improve. As a result, Intervention One offered the study important takeaways that were used to modify and improve Intervention Two.

Once the root cause analysis led to a focus on improving kindergarten readiness strategies for parents, the first intervention began. Intervention One involved parent seminars geared towards parents and guardians of students in the KinderReady camp in the summer of 2023. The parent seminars involved bringing parents together during the day and/or night to offer strategies and materials on helping their child become kindergarten ready.

The first and second parent seminars were offered in June at the location of the KinderReady camp and a location near several neighborhoods in the Walker County Public School district. A third parent seminar was offered in July for the parents of the students in the KinderReady camp. With minimal participation rates in the first three parent seminars in the summer of 2023, a second intervention with modifications was needed to see if additional strategies would impact parent engagement and attendance at the parent seminars for kindergarten readiness.

Setting and Context

The setting for the second intervention continued in the same school district in Kentucky as Intervention One. The school district was made up of almost 19,000 students and 3,000 employees. The district contained a total of 30 schools and programs. One in four students were multilingual and represented over 90 countries around the world. The second intervention involved parents and guardians of students enrolled in the preschool program in the district, which has around 770 students.

Goals

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The goal of the second intervention continued from the first intervention, which was to find ways to increase parent engagement with kindergarten readiness among the students in the Walker County Public School district to increase kindergarten readiness for students. Both interventions involved increasing parent involvement in helping students become kindergarten ready. The first intervention provided a foundation for the second intervention. The first intervention involved hosting parent seminars in multiple locations during a variety of times in the summer of 2023. The goal of the second intervention was to improve the parent seminars by increasing parent attendance and engaging parents in learning about kindergarten readiness by removing language barriers and creating a more personalized learning environment.

Literature Review

When planning the second intervention, additional research was sought to improve the parent seminars and kindergarten readiness in students. Several studies guided the development of the second intervention by providing insight in strategies from previous research on improving kindergarten readiness for students. One study discussed the impact of having four parent seminars to help parents learn the tools needed to be kindergarten ready (Alade et al., 2023). Another study involved training teachers, providing strategies and homework for parents to do at home, and creating homework for students (Webster-Stratton et al., 2008). A third study by Bierman et al. (2019) focused on literacy and social-emotional strategies for parents to use at home. The focus of a study by Williams (2016) was to use interpreters to help parents gain access to educational information for their children. These studies helped focus the second intervention.

Parent Training

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A study by Alade et al. (2023) evaluated an intervention program to support parents in engaging in kindergarten readiness. The study involved 43 parents who were involved in a four-week intervention program to increase understanding of kindergarten readiness. Parents received an electronic tablet for their child if they attended all four sessions (Alade et al., 2023). The study focused on the attitudes and norms towards kindergarten readiness after participating in the program (Alade et al., 2023). Participants were given a reaction time task and a Qualtrics survey at the beginning of the program and at the end of the program (Alade et al., 2023). The findings suggest the program had a positive impact on beliefs about kindergarten readiness. The open-ended responses indicated the parents learned strategies to help their child become kindergarten ready and gained confidence in helping their child (Alade et al., 2023).

Parent Involvement at Home

Another study by Webster-Stratton et al. (2008) focused on evaluating the effectiveness of a program used with preschool and elementary students that focused on school readiness, including emotional self-regulation, social skills, and parent involvement over four consecutive years. The program used with the students included four days of teacher training, curriculum for the students and parents, strategies for the teachers and parents, and homework for the students. The study involved 120 classrooms from Head Starts in Seattle and 14 elementary schools (Webster-Stratton et al., 2008). Each school served at-risk students based on economically disadvantaged populations. The parents were invited to participate in the study with 86% participation in the Head Start programs and 77% participation with the elementary parents (Webster-Stratton et al., 2008).

To measure the impact of parent involvement, the researchers used a teacher-parent questionnaire called INVOLVE-T. The questionnaire measured the extent to which teachers

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bonded with parents, parental involvement in education, and parental involvement with the school and teacher (Webster-Stratton et al., 2008). Parents also completed a survey on their thoughts about the curriculum, the importance of the homework, and how much the program was discussed with their child throughout the year.

The observations of the teachers indicated an improvement with the techniques used in classroom management. The observations of the students also indicated an improvement in behavior and self-regulation for both groups of students (Webster-Stratton et al., 2008). The teachers in the intervention group reported improvements in parent bonding, but the teachers did not report an improvement in parent involvement with activities at the school or with the school (Webster-Stratton et al., 2008). Webster-Stratton et al stated,

Because this intervention was not directly offered to the parents, this might suggest that further studies include an intervention for parents in how to be involved in their children's education and work with the teachers. Since parent involvement and ability to work collaboratively with the teachers has been shown to be an important predictor of children's school success, it is important to understand how to promote parental involvement, (pp. 484-485)

The studies from Webster-Stratton et al. (2008) and Alade et al. (2023) suggest that improving kindergarten readiness requires parents to be involved in the learning process. The study from Webster-Stratton et al. (2008) involved parents receiving in-person training and leaving with a tablet to use with their child. The study by Alade et al (2023) suggested parents need more than homework sent home to fully understand what is needed to prepare for kindergarten readiness. Both of these studies guided the second intervention. The second

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intervention involved two months of in-person parent seminars with different materials given at each parent seminar and individualized sessions at each parent seminar.

Longitudinal Data of Parent Trainings

Bierman et al. (2019) looked at the longitudinal data of the benefits of a parent program for kindergarten readiness and the impact four years later. This study used a Research-based Developmentally Informed (REDI) Parent Program to train parents on how to help their child with academics and social-emotional development (Bierman et al., 2019). The 200 participants were from Head Start programs. Students were given the Promoting Alternative Thinking Strategies Curriculum, while the parents were provided with activities to engage in literacy and social-emotional skills (Bierman et al., 2019). The parent program involved ten home visits the semester before kindergarten and six in the first semester of kindergarten.

For three additional years, the students were followed with parent assessments at three intervals with one in preschool, one in kindergarten, and one in third grade (Bierman et al., 2019). In third grade, teachers and parents completed ratings and students were assessed for academics and social-emotional well-being. The findings indicated positive gains in using the REDI program with the kindergarten students and parents (Bierman et al., 2019). The results also showed continued success in third grade with academic success, improvement with parenting stress, and social competence (Bierman et al., 2019).

The impact of this study influenced the timing of the second intervention with parent training taking place several months before the students entered kindergarten (Bierman et al., 2019). Based on the previous experience with the summer parent seminars and the findings in the literature, it became clear that more time was needed to train parents with strategies to prepare their children for kindergarten.

Interpreters for Parents

Williams (2016) researched the impact interpreters made on providing access to educational information for parents of multilingual students. Williams interviewed sixty-eight parents who were first generation immigrants (Williams, 2016). After interviewing students and parents, the findings indicated a correlation between a parents’ fluency in English and the amount of involvement in the education achievement (Williams, 2016). The findings also indicated interpreters were a strong predictor of parent involvement in a child’s education (Williams, 2016). This study confirmed the need to have interpreters onsite of the parent seminars to help parents access information about kindergarten readiness.

Theory of Action

The theory of action was developed to strengthen the second intervention cycle from the first intervention cycle by adding additional layers to the parent seminars. The additional layers included a variety of materials, individualized parent seminars to meet the needs of the parents, interpreters, dinner for the families, and better communication regarding the importance and benefits of attending the parent seminars.

Table 12

Theory of Action for Kindergarten Readiness for Intervention Two

If...	Then...
Parents and guardians are provided training on kindergarten readiness	Parents will be able to help their child prepare for kindergarten.
Parents are provided with materials on kindergarten readiness skills	Students will get additional help at home becoming kindergarten ready.
Parents understand the benefits of kindergarten readiness	Parents will make kindergarten readiness skills a priority in the home.
Parents are equipped with the necessary skills to help their child become kindergarten ready	Students will be kindergarten ready based on the kindergarten screener in Kentucky.
If translators are provided to interpret the information around kindergarten readiness	Parents will be equipped with strategies to help their children.
If parents and guardians are provided dinner	Parents will be able to focus on getting to the

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	parent seminars and not focus on providing food for their children.
If parents know each of the three parent seminars will provide different strategies	Parents will be more likely to attend all three sessions and receive additional training on kindergarten readiness.
If parents are given advance notice by placing all three dates on each invitation	Parents will be able to plan for the parent seminars.
If parents are given the strategies to help their child become kindergarten ready	Students will be better equipped with the skills needed to be kindergarten ready.

The theory of action was designed to look at each layer of the intervention to see how to best engage parents in kindergarten readiness.

PDSA (Plan/Do/Study/Act) Procedures

The Plan-Do-Study-Act (PDSA) inquiry model served as a guide in developing the second intervention. In the Plan phase of the second intervention, the participation rates and feedback were analyzed based on the attendance and the survey data from the first intervention. Research was examined to see themes or ideas for increasing parent engagement in kindergarten readiness. The literature from previous studies provided insight on engaging parents in kindergarten readiness through parenting programs, homework, and parent training.

In the Do phase of the Plan-Do-Study-Act model, the parent seminars were planned to meet the needs of the parents. Communication was developed to include the parent seminar dates and times, descriptions with images of the materials, information about the interpreters, and details about the dinner for families. Interpreters were organized to be present at each parent seminar. Kindergarten readiness kits, backpacks, school supplies, play dough, and children's books were ordered to give to each family.

During the Study phase of the Plan-Do-Study-Act model, the second intervention cycle was revised to better meet the needs of the parents. Parent seminars were prepared based on the feedback during the qualitative phase of the first intervention. One parent asked for help with

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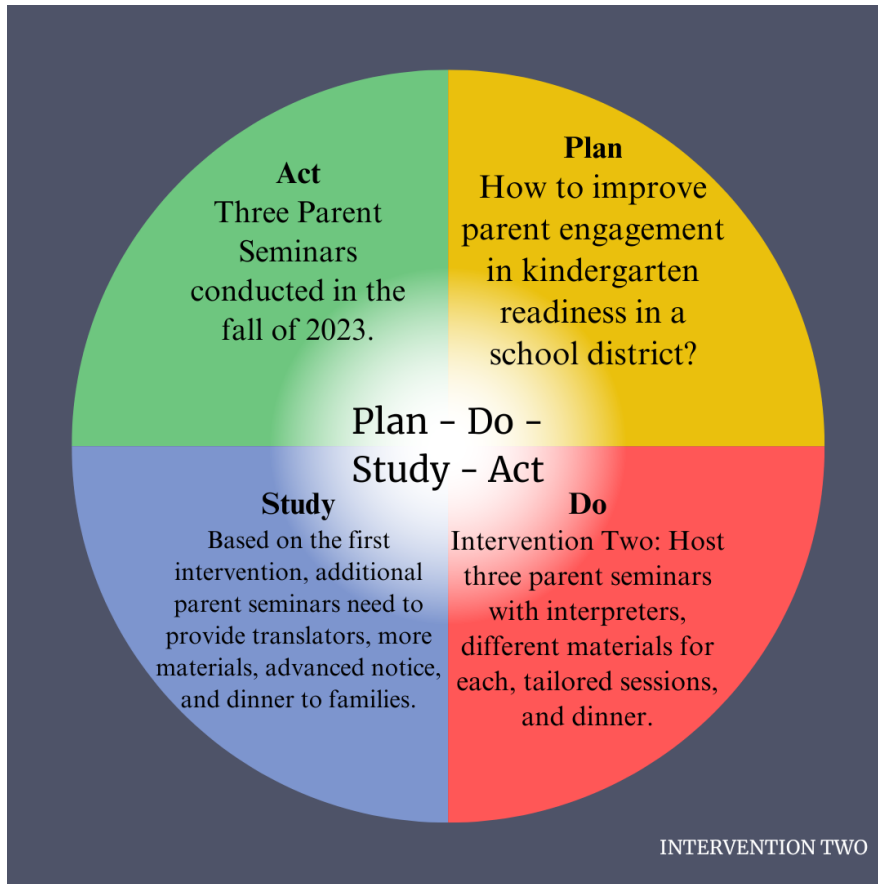
emotional regulation, therefore, seminar material included strategies for emotional regulation. Preschool teachers were invited to be a part of the parent seminars to provide parents with tailored sessions based on their needs. During the first intervention, many parents were unable to access the training materials and strategies due to language barriers. In the study phase, translators were scheduled to participate in each parent seminar. To increase participation, communication was developed to promote all three parent seminars in the fall through email, paper, texting, and communication tools used by the preschool teachers. In order to provide parents with a variety of materials in each session, the materials needed were discussed with the preschool assistant director and the preschool consultants to provide the best materials to prepare for kindergarten readiness.

In the fall of 2023, the Act phase of the Plan-Do-Study-Act model was implemented based on what was learned through the root cause analysis, literature review, and the first intervention. Participants came to each parent seminar in the fall of 2023 (Figure 23).

Figure 23

PDSA Model for Intervention Two

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Description of Metrics

The metrics utilized in the second intervention cycle included attendance sheets from each parent seminar and an IRB-approved survey, using both Likert scales and open-ended questions. Achievement data was also gathered for pre and post information on kindergarten readiness from the fall of 2023 in a Google sheet. During each parent seminar, a volunteer collected the names of the parents, names of the students, and information on previous attendance in the parent seminars. The survey included an implied consent document to provide the participants with information about participation in the study. The survey asked for demographic information such as role and early education setting. Likert scale questions were included in the survey. The scale ranged from 1 (*strongly disagree*), 2 (*disagree*), 3 (*agree*) to 4

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(*strongly agree*). Participants were asked to rate themselves on a scale of preparedness for kindergarten readiness to gain an understanding of how parents felt about their ability to prepare their child for kindergarten. Another Likert scale was used to seek information on whether or not parents have the necessary information to prepare their children for kindergarten readiness. Using the categories of kindergarten readiness from the Kentucky Department of Education (2023), information was sought using a Likert scale where the selections ranged from 1 (*not at all important*), 2 (*slightly important*), 3 (*very important*) to 4 (*extremely important*). An open-ended question asked participants to describe what they needed to help their child become kindergarten ready.

Research Design

Based on the first intervention and the literature review, changes were made to the second intervention to improve parent engagement in kindergarten readiness. The research for the second intervention continued in Walker County Public Schools with parents of students entering kindergarten in the fall of 2024. The theory of improvement was modified from the first theory of improvement based on the results from the first intervention (See Table 13).

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Table 13

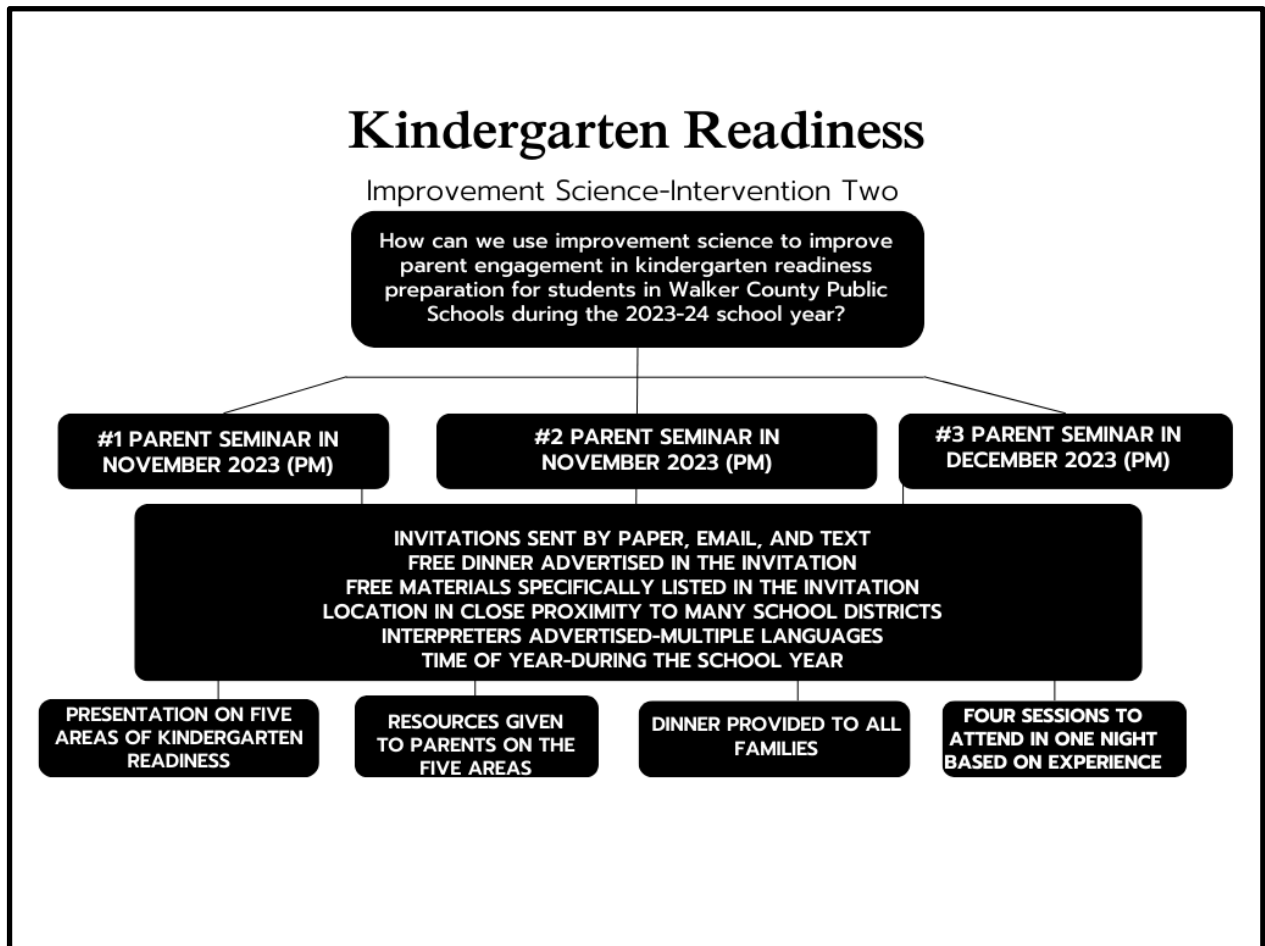
Theory of Improvement for Intervention Two

Problem	Students entering kindergarten are scoring 46% kindergarten ready.
Intervention	Implementation of parent seminars will provide parents with strategies on how to help their child on kindergarten readiness skills to impact student achievement
Primary Drivers	<ul style="list-style-type: none"> ● Preschool Team (Preschool consultants and teachers) ● District Team (Assistant Superintendent, Elementary Director, and Assistant Preschool Director) ● Strategies for Parents in the Parent Seminars <ul style="list-style-type: none"> ○ Three sessions based on parent needs ● Communication ● Materials for Parents-Kindergarten Readiness Kits, Backpacks filled with School Supplies, Literature, Kindergarten Readiness books
Theory of Improvement	<p>Using improvement science, parent seminars will be implemented as evidenced by:</p> <ul style="list-style-type: none"> ● Parent Survey Data (Quantitative) ● Parent Survey Data (Qualitative) ● Attendance at the Parent Seminar ● Achievement Data

A Driver Diagram organized the ideas and provided a visual map for the second intervention (Perry et al., 2020). The Driver Diagram below provides an overview of the second intervention used to increase parent engagement in kindergarten readiness in students in Walker County Public Schools (See Figure 24).

Figure 24

Driver Diagram for Intervention Two



Research Question

The research question: How can we use improvement science to increase the levels of parent engagement in kindergarten readiness preparation for students in Walker County Public Schools during the 2023-24 school year?

Goals/Purpose

The ultimate goal of the second intervention was to use improvement science to improve parent engagement in kindergarten readiness preparation by using parent seminars to educate

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parents on how to help their children become kindergarten ready. The changes from the first intervention can ultimately improve kindergarten readiness achievement for students.

Methods

The methods in this study for Intervention Two included the kindergarten readiness survey, participation rates in the kindergarten readiness parent seminars, and the achievement growth scores from fall to winter 2023 (See Table 14). The quantitative part of the study was looking at attendance in the parent seminars through sign-in sheets, parents' understanding of kindergarten readiness in the parent survey, needs parents identified to strengthen their knowledge of kindergarten readiness in the parent survey, and the achievement data. The qualitative data was sourced from open-ended questions in the parents' survey. Deductive coding was used to identify what additional support parents needed to help their child become kindergarten ready, which was used to drive each parent seminar in the fall.

Table 14

Summary of Intervention Two - Fall of 2023

Intervention Details	Intervention Two
Timing of Intervention with Parents and Guardians of Kindergarten Students	<ul style="list-style-type: none">● Seven months before student starts kindergarten<ul style="list-style-type: none">○ November 2023 in the PM○ November 2023 in the PM○ December 2023 in the PM
Communication to Parents	<ul style="list-style-type: none">● Multiple fliers handed to all students in preschool● Multiple text messages sent to parents and guardians● Email sent to parent and guardians
Details on Communication	<ul style="list-style-type: none">● What-Parent Seminars● Who-Parents and Guardians● When-Date and Time for all three seminars● Where-Location● Food Provided● Door Prizes

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	<ul style="list-style-type: none">● Gifts for each family● On-site interpreters● Pictures of materials being handed out to each family
Location	<ul style="list-style-type: none">● Location of the preschool academy in the middle of several individual school districts for all three seminars
Materials Provided to Families	<ul style="list-style-type: none">● Kindergarten Readiness Kits● Playdough Recipe● 10 Activities to do with your child● Explanation of Kindergarten Readiness in Kentucky● Kindergarten Readiness Book● Foam Dice● Children's Books● Backpack● School Supplies-crayons, pencils, paper, scissors, glue● Playdough
Interpreters	<ul style="list-style-type: none">● Interpreter for Spanish provided● Interpreter for Burmese-Karen/Karenni provided● Interpreter for Zomi provided● Interpreter for Swahili provided
Data Sources	<ul style="list-style-type: none">● Parent Survey Data (Quantitative)● Parent Survey Data (Qualitative)● Attendance at the Parent Seminar● Achievement Data

Ethical Considerations

Several ethical considerations were involved in planning the second intervention. During the first intervention, there were families who were unable to fully engage in the parent seminar because an interpreter was not available to help the parents understand the strategies being discussed or the survey for feedback. Due to this limitation, the second intervention involved having interpreters at each of the parent seminars who represented a variety of languages such as Spanish, Karen, Karenni, Zomi, and Swahili. Another ethical consideration was acknowledging the parent seminars were taking place during dinner time, so to accommodate nutritional needs

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of the families, dinner was provided at each of the parent seminars for the second intervention. The menu choices were also selected based on nutritional needs and preferences due to health or religious purposes. A third ethical consideration was understanding the individual needs of the parents and caregivers. Each parent seminar offered a variety of sessions, so the learning needs of the parents were tailored to those who had attended a previous seminar. Confidentiality was always maintained by keeping the surveys anonymous on one computer.

Procedures

The second intervention involved three parent seminars in the Walker County Public School district with parents of preschool students who will be entering kindergarten in the fall of 2024. I met with the assistant preschool director and the preschool consultants to create parent seminars that included multiple sessions to meet the individual needs of the parents.

Communication was created to send home to parents through paper copies, email, and text. The communication included the date and time of the three parent seminars, the topic, dinner details, specific materials that would be given out, interpreter information, and location. Images were included of the materials being handed out to each family. The communication was sent out multiple times over the course of the three parent seminars.

For each parent seminar, preschool teachers from around the district came to assist. Student volunteers came to help with registration, work with the students who attended the parent seminars, and assist with the dinner. Parents were given door prize numbers as they entered and a specific schedule to meet their individualized needs. As the parents were waiting for the parent seminars to begin, they were able to eat dinner.

During the parent seminars, parents were asked if they wanted to participate in the kindergarten readiness survey to give feedback on perceptions of kindergarten readiness and

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their needs. For each parent seminar, sessions were offered on how to effectively use the materials in the kindergarten readiness kits, engage in literacy, numeracy, social and emotional skills, and fine and gross motor skills. The parents rotated through the different sessions in each parent seminar. They were able to attend three to four sessions, depending on their needs.

Preschool teachers in the district helped lead three of the sessions.

Data on the district kindergarten readiness was shared at each parent seminar. Research information was also shared on the impact of kindergarten readiness on future achievement. The kindergarten readiness framework from the Kentucky Department of Education was also shared during the parent seminars. The surveys were analyzed after the parent seminars ended in December of 2023. The achievement data from the fall to winter were analyzed to evaluate the amount of the growth between the two assessments for kindergarten readiness.

Instruments

One instrument used in the second intervention with the parent seminar was the IRB approved kindergarten readiness parent survey. The data were collected through paper surveys and input into a Google Form to manage the data. The survey included the areas of kindergarten readiness from the Kentucky Department of Education (2023). The assistant preschool director evaluated the survey for accuracy. She found the categories of the kindergarten readiness skills matched the skills from the Kentucky Department of Education (2023).

Kindergarten readiness achievement was evaluated using the Teaching Strategies Gold assessments, which measures standards for kindergarten readiness such as cognitive, numeracy, language, literacy, social-emotional, and physical development (Teaching Strategies Gold, 2024). Teaching Strategies Gold was a way to progress monitor kindergarten readiness before the Brigance assessment was to be given in late spring of 2024.

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For qualitative data, the researcher was the instrument in coding and connecting themes together based on the information in the open-ended questions.

Limitations

There were several limitations to this second intervention. One limitation was participants were from one school district in Kentucky. Another limitation was that several factors go into increasing kindergarten readiness from parents to preschool programs to outside factors. The impact of the parent seminars and materials may be one piece of impact with kindergarten readiness, but the preschool teachers and parents are impacting students each day. There should have been a post parent survey to evaluate the effectiveness of the parent seminars. This would have been an indicator of improvement for parent seminars.

Language may have impacted the learning during the parent seminars. The district represents approximately 102 languages, so there were not interpreters representing every language.

Serving as an administrator in the school district presented as a limitation to this study. The position held might have influenced the feedback received on the root cause analysis or the parent survey. Efforts were made to explain the purpose of conducting the study and how it might lead to improvements in kindergarten readiness for our students.

Parents following through with the strategies at home was a limitation. While parents were provided materials and strategies to use at home, knowing the implementation of the strategies was limited.

Results

Quantitative Results

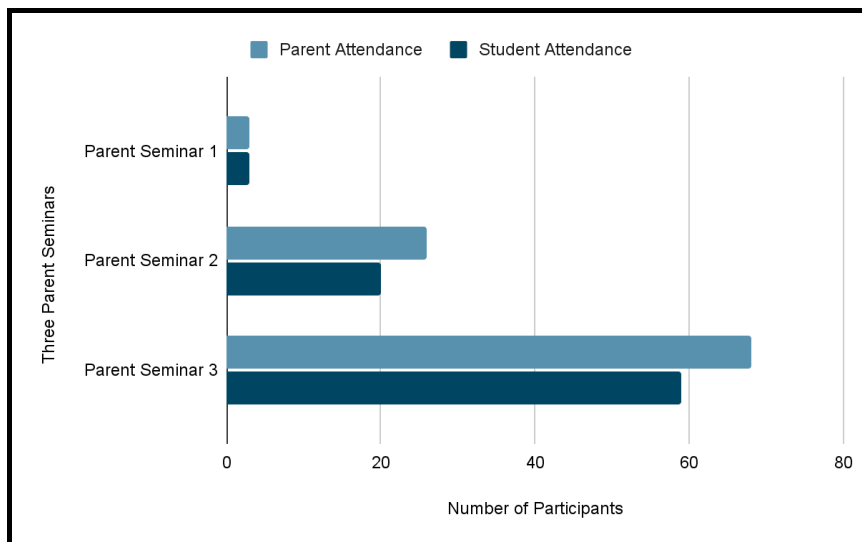
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The quantitative data came from the participation numbers in the parent seminars, Kindergarten Readiness Parent Survey completed by the parents at the parent seminar night, and achievement growth data from preschool students. Two of the pieces of data were collected at each parent seminar. The third piece data from student achievement came from the assessment given to students in the fall and winter of 2023 (Teaching Strategies Gold, 2024).

The attendance was collected through a parent sign-in when the parents entered the building. Translators were available to assist with check-in. During the first parent seminar for Intervention Two, six parents and children attended the parent seminar. The number increased to 46 for the second parent seminar in the second intervention. The third parent seminar had the highest participation with 127 parents and children. Figure 25 displays the attendance at each of the parent seminars.

Figure 25

Attendance at Intervention Two Parent Seminars



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

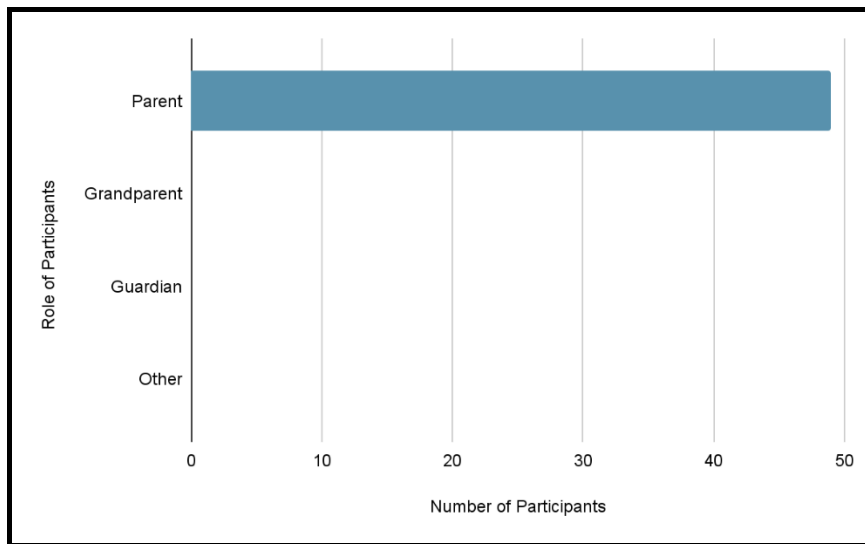
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With each parent seminar, attendance more than doubled. The assistant preschool director, who has been in the preschool department for more than 15 years, said the third parent seminar was the largest participation she had ever seen in a parent night for preschool.

Another piece of data came from the Kindergarten Readiness Survey given to parents during the parent seminars. There were 49 parents represented in the survey from the parent seminars in the fall of 2023 (Figure 26).

Figure 26

Parent Seminar Survey Participants for Intervention Two



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

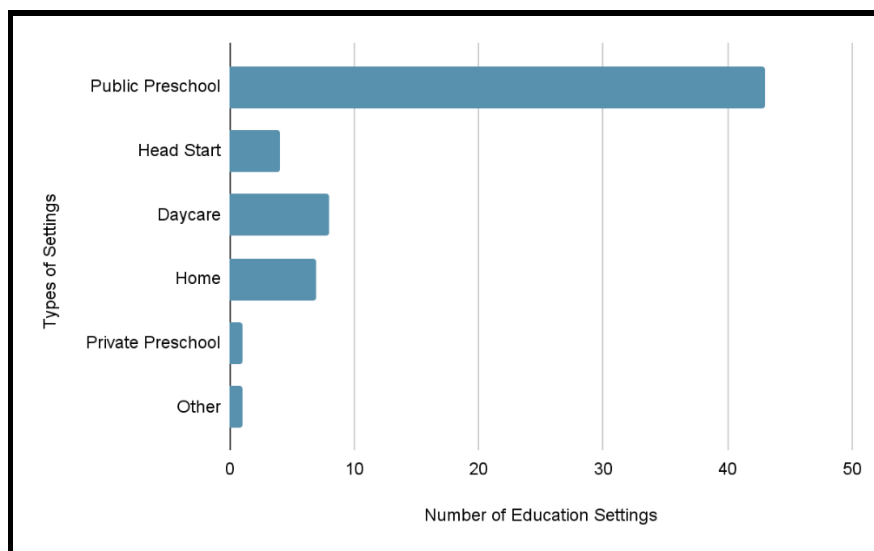
The data from the second intervention indicated the majority of the parents had students in the public preschool program in the school district with 43 parents indicating their child was in the public preschool program (Figure 27). There were eight parents who indicated their child was in a daycare setting for their early education program. This data indicates a need to also get the

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communication out to families who are not in the public preschool setting because all parents need access to help their child with kindergarten readiness.

Figure 27

Early Education Settings of the Students



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

Parents indicated the importance of the kindergarten readiness areas from the Kentucky Department of Education Kindergarten Readiness Framework (2023). The participants who completed the survey indicated language and literacy still were extremely important (49%). Participants also indicated social and emotional development as important with 95.9% selecting the category as extremely important or very important. This was similar to what was identified in the root cause analysis by preschool teachers, administrators, and preschool consultants. Each category of kindergarten readiness was seen as important by the participants: cognition and general knowledge (100%), social and emotional development (95.9%), language and literacy (92.9%), and physical well-being and motor development (95.8%).

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Table 15

Importance of Kindergarten Readiness Skills

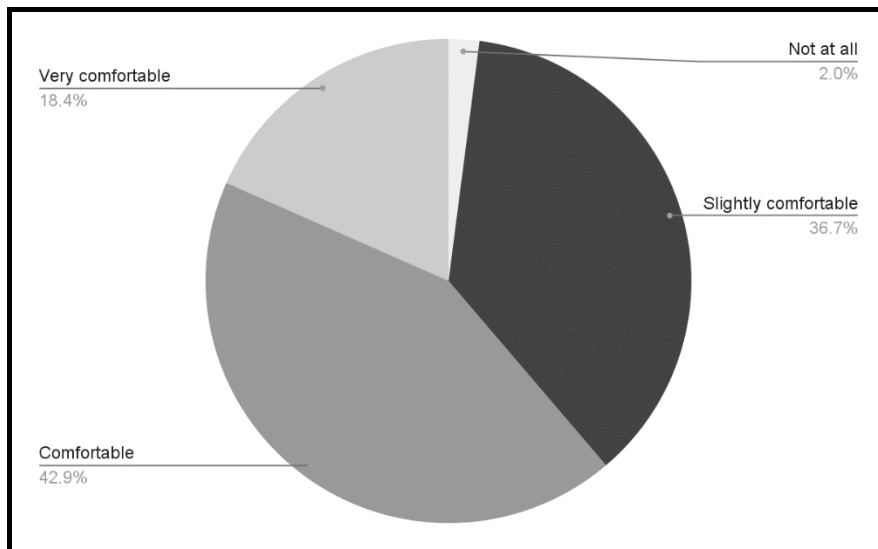
Kindergarten Readiness Skill	Extremely Important	Very Important	Slightly Important	Not at all Important
SKILL-Cognition and General Knowledge (shapes, colors, classification, number sense, etc.)	44.9%	56.1%	0%	0%
SKILL-Social and Emotional Development (relationships with peers, self-regulation, expressing emotions, etc.)	46.9%	49%	4.1%	0%
SKILL-Language and Literacy (letter recognition, rhyming, vocabulary, etc.)	49%	42.9%	8.2%	0%
SKILL-Physical Well-Being and Motor Development (fine/gross motor, physical health, etc.)	43.8%	52.1%	4.2%	0%

When participants were asked about knowing the expectations for kindergarten readiness a limited number indicated they felt very comfortable (18.2%). Fewer than 50% indicated that they felt comfortable with knowing the expectations for kindergarten readiness (42.9%). Almost 40% of participants indicated that they were slightly comfortable or not all comfortable with knowing the expectations of kindergarten readiness (38.7%). (See Figure 28).

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Figure 28

Knowing Expectations of Kindergarten Readiness



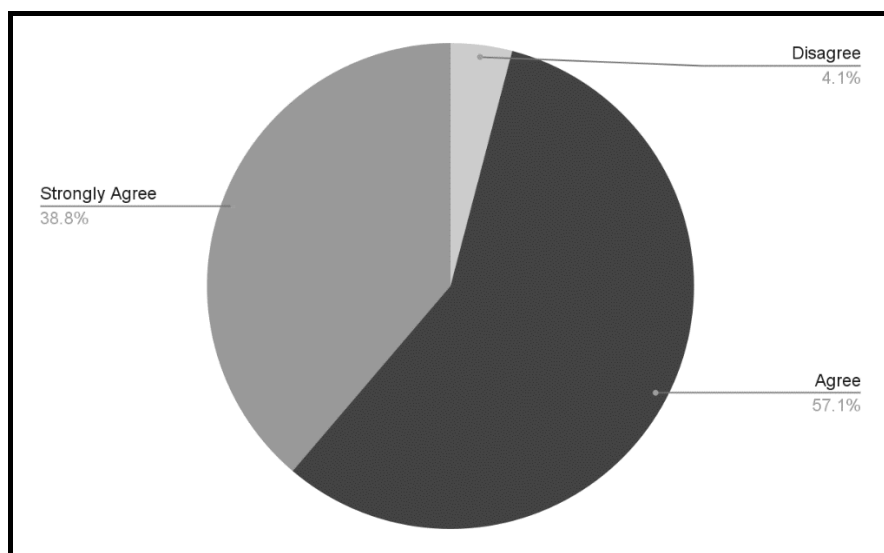
Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

Participants in the survey were asked to rate a Likert scale on having the necessary information to prepare their child to be ready for kindergarten (Figure 29). In the 49 surveys from Intervention Two, 38.8% indicated they strongly agree parents have the necessary information to prepare their child to be ready for kindergarten. The majority indicated they agree that parents have the necessary knowledge to prepare their child for kindergarten (47.1%). Only 4.1% indicated they did not feel prepared with information to help their child become kindergarten ready.

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Figure 29

Necessary Information to Prepare Their Child



Note: This data is derived from data from the Kindergarten Readiness survey given to parents and guardians in Walker County Public Schools.

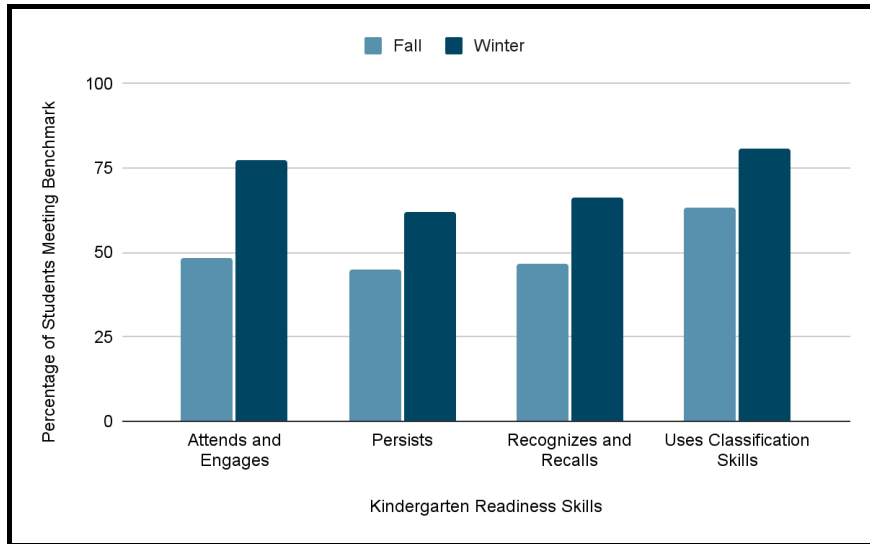
In Intervention One, achievement data came from the Brigance assessment, which assesses the five areas of kindergarten readiness identified by the Kentucky Department of Education (2023). For Intervention Two, achievement data came from a similar kindergarten readiness assessment, which assesses kindergarten readiness throughout the year called Teaching Strategies Gold because the Brigance is not given until late spring before the summer break. (Teaching Strategies Gold, 2024). Teaching Strategies Gold measures kindergarten readiness for the five areas identified by the Kentucky Department of Education (2023).

All areas of kindergarten readiness showed an increase from the fall assessment to the winter assessment. The percent of students meeting benchmark increased in all five main areas and all individual areas as seen in Figures 30-35. The parent seminars were a piece of the fall semester, but the preschool teachers and parents were involved daily with the students.

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Figure 30

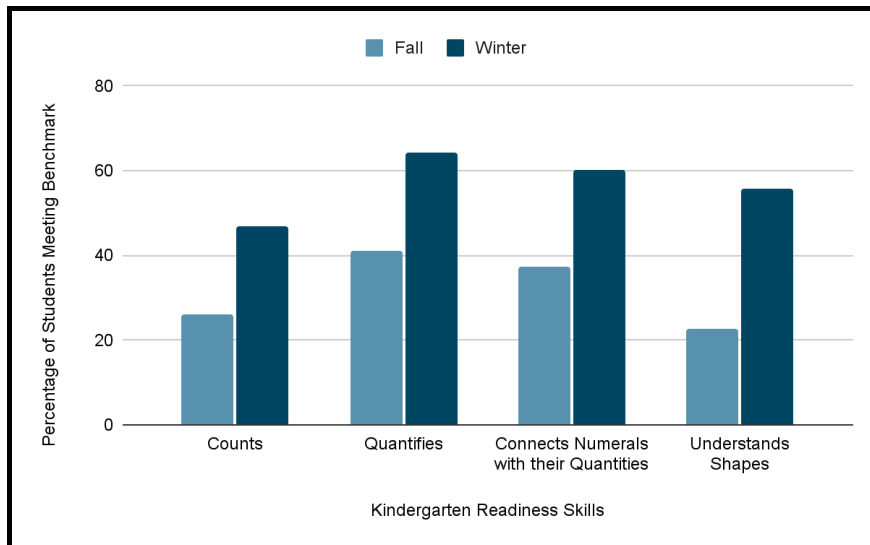
Cognitive-Percent of Growth for Preschool Students from Fall to Winter 2023



Note: This data is derived from the Teaching Strategies Gold from the Walker County Public Schools.

Figure 31

Numeracy-Percent of Growth for Preschool Students from Fall to Winter 2023

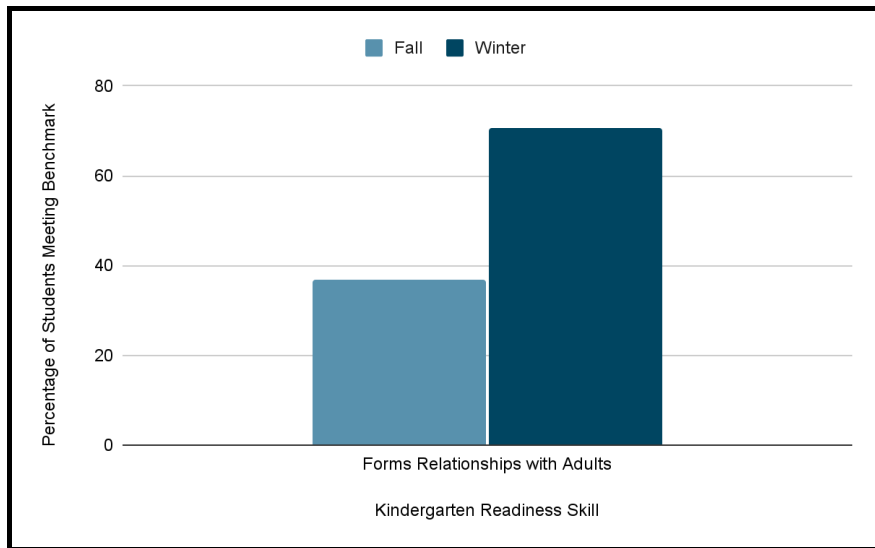


KINDERGARTEN READINESS

Note: This data is derived from the Teaching Strategies Gold from the Walker County Public Schools.

Figure 32

Social-Emotional-Percent of Growth for Preschool Students from Fall to Winter 2023

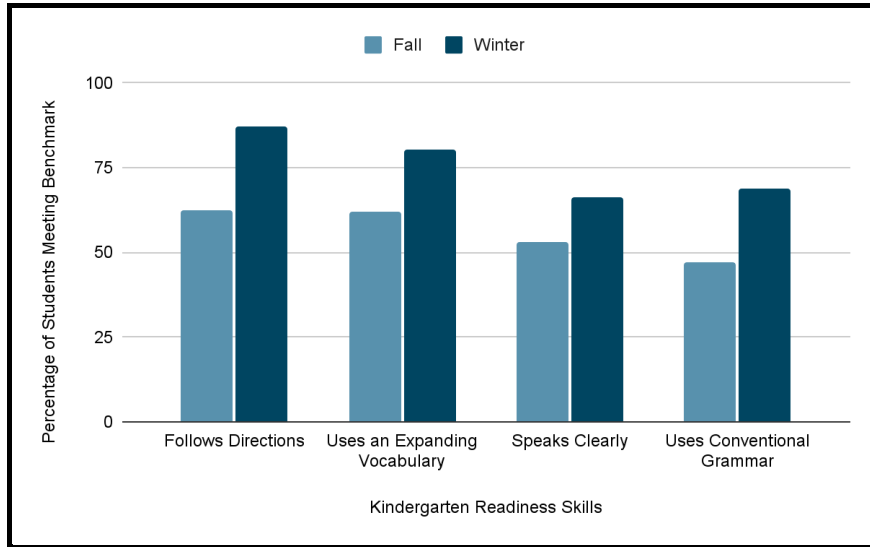


Note: This data is derived from the Teaching Strategies Gold from the Walker County Public Schools.

Figure 33

Language-Percent of Growth for Preschool Students from Fall to Winter 2023

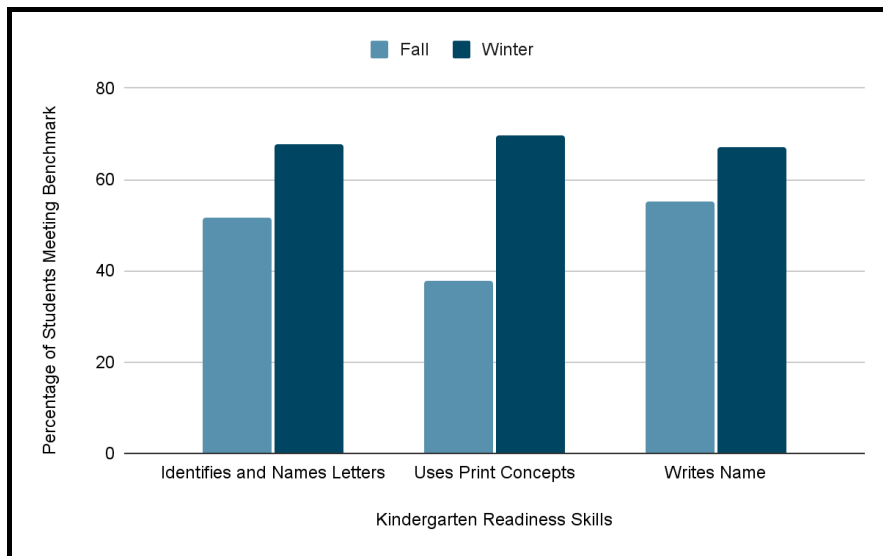
KINDERGARTEN READINESS



Note: This data is derived from the Teaching Strategies Gold from the Walker County Public Schools.

Figure 34

Literacy-Percent of Growth for Preschool Students from Fall to Winter 2023

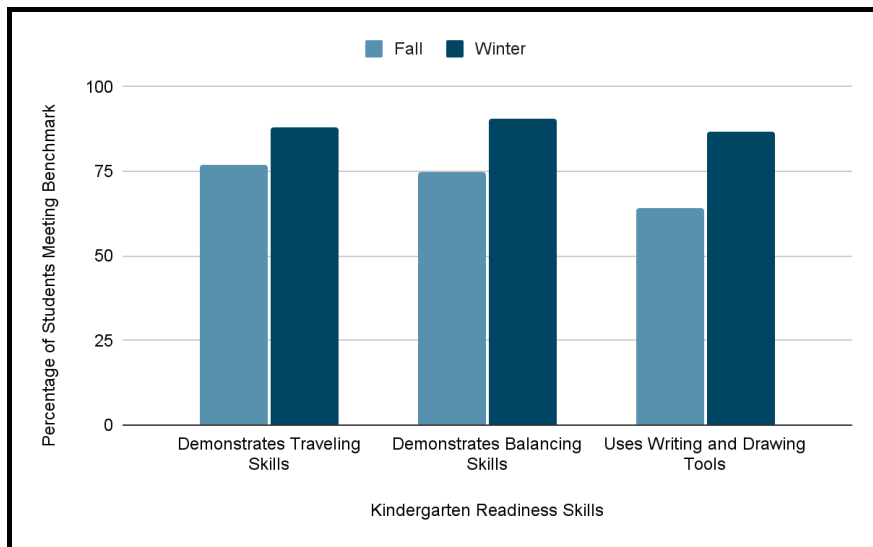


Note: This data is derived from the Teaching Strategies Gold from the Walker County Public Schools.

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Figure 35

Physical Development-Percent of Growth for Preschool Students from Fall to Winter 2023



Note: This data is derived from the Teaching Strategies Gold from the Walker County Public Schools.

Qualitative

During the qualitative phase of the study in the second intervention, participants expressed what they needed to help their child become ready through the open-ended question in the survey, which contributed to each parent seminar held after a previous parent seminar.

Participants expressed the following needs:

- I can teach my child writing and spelling
- I just want my child to learn and get ready for where she needs to be
- Knowing their daily routine and expectations ahead of time to properly prepare for the next year
- Learning his social skill during the school and his day
- Learning, spelling, writing

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- Mainly reading and writing. Social skills and getting along with others
- Needs help with reading and writing
- Practice more on recognizing shapes and learn the alphabet
- Practice with numbers
- Social
- Speech
- Speech
- Teach my child what she needs to know
- Teach them. What they going to do at school
- Tips for emotional regulation
- Writing their name and being able to identify letters and numbers

Coding

The information obtained from the qualitative open-ended question on the survey was coded by using colored pencils to identify codes, which then led to the emerging themes.

Numbers were used to mark each statement to identify codes across the data (Table 16).

Table 16

Qualitative Coding and Themes

Needs	Frequency	Theme	Quotes
Writing, spelling, reading, learning the alphabet, identifying letters	6	Literacy Skills	<ul style="list-style-type: none"> ● Needs help with reading and writing ● Writing their name and being able to identify letters and numbers ● Learning, spelling, writing ● Mainly reading and writing
Social-emotional Regulation	4	Social-emotional Regulation	<ul style="list-style-type: none"> ● Learning his social skill during the school and his day ● Tips for emotional regulation ● Social

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Identifying shapes and numbers	3	Numeracy	<ul style="list-style-type: none">● Practice with numbers● Practice more on recognizing shapes and learn the alphabet
Daily Routines	3	Daily Routines	<ul style="list-style-type: none">● Knowing their daily routine and expectations ahead of time to properly prepare for the next year● Teach them. What they going to do at school● I just want my child to learn and get ready for where she needs to be
Speech	2	Speech	<ul style="list-style-type: none">● Speech● Speech

Themes Identified

Several themes around kindergarten readiness emerged from the data collected in the survey. One theme that was exposed from the data was parents wanted additional help with literacy skills. Social emotional regulation was another theme identified in the data that parents identified as being an area of need for additional assistance to become kindergarten ready. Other themes included daily routine and speech. The themes helped create the individual sessions in the second and third parent seminars. For example, social-emotional regulation was mentioned in Interventions One and Two. In the third parent seminar of Intervention Two, one of the preschool teachers focused on strategies for social-emotional regulation. Sticker charts were given out as a strategy for helping with social-emotional regulation. The district will use the themes to guide future parent communication and parent seminars.

Description with Evidence

Six participants noted they needed additional help with literacy strategies such as reading, writing, and spelling. Participants also indicated they needed additional help with teaching the alphabet and letter recognition. Social-emotional regulation was another theme expressed four times in the data. Social skills were an area identified as a need for learning strategies. These

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findings connected to the study by Bettencourt et al. (2018) where the impact of social-emotional behaviors was found to have an impact on the learning that was able to take place in kindergarten. The study found that students, who were not considered kindergarten ready, had higher suspensions, retentions, and needed support through individualized educational plans (Bettencourt et al., 2018). Three participants indicated they needed additional support for helping their children know the expectations for the daily routine each day.

Triangulation

The data gathered in the qualitative phase of the study relates to the information seen in the literature review and in both interventions. A participant in the first intervention indicated additional assistance with social-emotional regulation was needed through the open-ended question on the survey. Two other participants indicated they needed additional assistance with social-emotional regulation through the parent seminar in July. During the fall parent seminars, four participants indicated they needed support for social-emotional help. Bettencourt et al. (2018) findings suggest that students who are not kindergarten ready due to social and behavioral concerns are at risk for an increase in suspensions, retention, and more support through individualized educational plans. Participants in this study indicated in Interventions One and Two assistance was needed in social and emotional development. The achievement data from Teaching Strategies Gold revealed social-emotional development was one of the lowest areas of kindergarten readiness in the fall with approximately 37% meeting benchmark. The percent meeting benchmark moved to approximately 71% meeting benchmark in the winter assessment.

Knowing kindergarten readiness scores were around 46% in the district, parents were given materials to assist with literacy such as reading, writing, and spelling. The data supported the need for these materials based on the participants asking for help with literacy. Six

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participants indicated in the open-ended question additional support with literacy. Several studies in the literature review found the importance of literacy support in becoming kindergarten ready (Cabell et al., 2019; Lahaie, 2008; Mathis & Bierman, 2015; Weitland et al., 2017).

Trustworthiness

To affirm the validity of this study, an outside member checked the accuracy of the survey data with the coding completed on the data. The reliability of the coding is based on using best practices from Hennick et al. (2020). Triangulation was used in this study by referencing multiple research articles on kindergarten readiness and seeking knowledge by an administrator working in the field of kindergarten readiness.

Challenges and Conclusions

Challenges around the second intervention involved trying to determine the best way to engage parents in kindergarten readiness. Discussions included text messages, written materials, and videos, but ultimately it was determined the in-person sessions were the best route to go for engaging parents. With parent participation increasing from two in the second parent seminar of the first intervention to over 120 in the third parent seminar of the second intervention, the engagement was dramatically increased from the first intervention to the second intervention.

Chapter Five: Conclusion and Recommendations

Improvement science is focused on using a system to improve a high-leverage problem of practice (Perry et al., 2020). The Kindergarten Readiness study used improvement science to impact parent engagement in kindergarten readiness as noted in the reflective journal outlining the steps from the beginning of the study throughout the implementation of Interventions One and Two (Appendix I). The study focused on increasing parent engagement with kindergarten readiness with parents of preschool students in the school district. The study took place in a public school district where kindergarten readiness was a priority. The district had recently moved from offering preschool twice a week to four times per week. A mobile early education bus went out multiple days per week into neighborhoods to work with children from birth to five-years old to increase early learning and kindergarten readiness. In 2023, the district hired an assistant preschool director to assist the director in improving early education. The past two summers the district held KinderReady camps to provide students an opportunity to learn the skills needed to be kindergarten ready.

The district prioritized kindergarten readiness for the students and the community because they knew research indicated a link between kindergarten readiness and future academic success (Bettencourt, 2018). Fitzpatrick et al. (2020) found a link by analyzing kindergarten readiness with dropout rates, anxiety, substance abuse, and overall health (Fitzpatrick et al., 2020). Bettencourt et al. (2018) also found not being kindergarten ready increased the chances for retention, special education services, and behavioral concerns after analyzing data of 11,412 students. Bierman et al. (2019) studied the short-term and long-term impacts of a parenting program used to engage in literacy and social-emotional skills for their children. The findings indicated positive gains in using the REDI program with the kindergarten students and parents (Bierman et al., 2019). The results from the study also showed continued success in third grade

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with academic success, improvement with parenting stress, and social competence (Bierman et al., 2019). These three studies are evidence that involving parents can impact kindergarten readiness achievement for students.

A change in parent participation took place from the first intervention to the second intervention. The four questions being answered for improvement science helped drive the study (Table 17). The goal to be accomplished was to determine what strategies were necessary to increase parent engagement in kindergarten readiness. Previous research studies indicated an improvement in kindergarten readiness skills occurred when parents were engaged in their child's learning, therefore, changes in parent engagement may have an impact on kindergarten readiness. McIntyre et al. (2007) conducted a study with 132 parents of students getting ready to enter kindergarten. This study found parents want to be involved in preparing their children for kindergarten. The findings also indicated a need to explain to parents what is needed to be prepared for kindergarten, which was what this study focused on. They expressed concerns for academic and behavioral skills, much like the parents in this study expressed (McIntyre et al., 2007). Douglass et al. (2019) focused on conducting a qualitative study of 29 parents involved in a Parent Leaders initiative where parents became involved in helping those in their communities understand the importance of kindergarten readiness (Douglass et al., 2019). Douglass et al. (2019) found parents can make an impact in improving early education for their children. Nelson (2005) studied 14,880 children in kindergarten to find out if learning activities in the home impacted achievement in kindergarten. The findings indicated students' learning is impacted by home activities with families.

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Table 17

Four Questions for Improvement Science

Question	Reason for the Question	Kindergarten Readiness Mini-study
What is hoped to be accomplished?	To specify, clarify, and contextualize a specific problem.	To determine what strategies are necessary to increase parent engagement in kindergarten readiness
What changes would result in an improvement? What is the rationale for these?	To generate actionable changes based on the best reasoning and information available.	Parents involved in parent seminars where strategies are taught and materials are given If parents attend parent seminars on kindergarten readiness, they will be equipped with helping their child become kindergarten ready
Why are changes thought to lead to improvement?	To provide a rationale as to why the chosen change ideas make sense.	Previous research studies indicate when parents get involved in kindergarten readiness strategies, kindergarten readiness achievement increases
How might one recognize if a change led to an improvement?	To develop a process by which data are examined and from this, draw valid and reasoned conclusions about improvements made or not.	Improvement will be recognized when attendance is increased in parent seminars, the number of completed surveys increases, and student achievement increases

The change in parent engagement through participation in the parent seminars indicated an improvement in parent engagement (Table 18). The participants increased from 29 in Intervention One to 179 in Intervention Two in the parent seminars. The survey participation moved from five parents completing the survey in Intervention One to 49 completing the survey in Intervention Two. This increase in participation led to an increase in engagement in understanding kindergarten readiness.

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Table 18

Participation in Interventions One and Two

Participation in Kindergarten Readiness	Participants in the Parent Seminars	Participants in the Parent Surveys
Intervention One	29	5
Intervention Two	179	49

Achievement in kindergarten readiness measures also increased from the fall assessment to the winter assessment in the areas of kindergarten readiness. Student achievement grew in cognitive development, language, literacy, numeracy, social-emotional development, and physical development as seen in Table 19.

Table 19

Kindergarten Readiness Achievement based on Teaching Strategies Gold Standards

Percentage of Students Meeting Benchmarks for Kindergarten Readiness	Fall	Winter
Attends and Engages	48.3	77.51
Persists	44.89	61.97
Recognizes and Recalls	46.68	66.16
Uses Classification Skills	63.37	80.73
Follows Directions	62.47	87.27
Uses an Expanding Vocabulary	61.95	80.41
Speaks Clearly	52.96	66.17
Uses Conventional Grammar	47.22	68.63
Identifies and Names Letters	51.71	67.85
Uses Print Concepts	37.88	69.69
Writes Names	55.11	67.18
Counts	25.94	46.90
Quantifies	40.94	64.33
Counts Numerals with their Quantities	37.17	60.17
Understands Shapes	22.80	55.78
Demonstrates Traveling Skills	77.06	87.94
Demonstrates Balancing	74.61	90.46

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Skills		
Uses Writing and Drawing Tools	64.10	86.60
Forms Relationships with Adults	36.98	70.69

Discussion of Intervention One Results

During Intervention One, three parent seminars were conducted with parents in the KinderReady camp. There were 68 students involved in the KinderReady camp during the summer of 2023. Parents were invited to participate in a one-hour parent seminar on kindergarten readiness. The parent seminars involved 22 parents and seven children from the three parent seminars in the summer of 2023. Parents in the first two parent seminars were interested in learning how to enroll and making sure everything was ready for their child to start kindergarten due to the parent seminars being offered a month before school was starting for their child. Translators were not present on site, so the language barrier posed limitations in what was communicated about kindergarten readiness. Demonstrations using the materials were conducted to provide visual support and to help with the language barrier, but interpreters were needed.

The third parent seminar during the summer of 2023 involved more parent participation than each of the other two sessions. The third session was a one-hour session during the KinderReady camp. Many of the kindergarten readiness strategies were demonstrated during the seminar through hands-on materials. Parents asked questions during the parent seminar, as well as after the parent seminar. Parents asked questions about speech services, emotional regulation, gifted services, and what to expect in kindergarten. Based on the survey, 50% of parents felt they had the necessary skills to prepare their child for kindergarten readiness, while only 20% felt very comfortable about knowing the expectations for kindergarten readiness. While eleven

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parents attended the parent seminar, they only represented 11 out of the 40 students who were in KinderReady camp.

Weitland et al. (2017) studied how to engage parents in kindergarten readiness. They found the timing of engaging parents in kindergarten readiness is important. Weitland et al. (2017) suggested effort be increased in the months leading up to kindergarten to get parents involved in helping their child prepare for kindergarten. The timing of the parent seminars in Intervention One may have been too late to help parents prepare because it only allowed them a month to work with their child before kindergarten started. This study impacted the timing of Intervention Two (Weitland et al., 2017). It was necessary to start the engagement in kindergarten readiness in the months leading up to kindergarten.

Achievement data from the Brigance showed an increase in kindergarten readiness for students involved in the KinderReady camps. Students who participated in two weeks of KinderReady camp showed a 12.25 point increase as the average for the kindergarten readiness assessment. At the beginning of the KinderReady camps in 2023, 61.5% ($n = 68$) were considered kindergarten ready. At the end of the KinderReady camps, 71.5% ($n = 68$) of students were kindergarten ready or ready with enrichments (Table 14). In 2022, 44% of the students enrolled in Walker County Public Schools were considered kindergarten ready (Kentucky Department of Education, 2023).

Discussion of Intervention Two Results

Changes were seen in Intervention Two with parent participation numbers and the number of participants who completed the survey and answered the open-ended question on the survey. The revisions to the first intervention may have impacted parent engagement and participation. The timing of the parent seminars was altered to allow parents to have more time

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to work with their child on kindergarten readiness. The timing of Intervention One did not allow much time for the parents to help their child with the skills needed to be kindergarten ready, therefore, Intervention Two took place in fall before the students would start kindergarten in the following year.

Interpreters were provided in five languages to help parents understand the information being presented in the parent seminars, which were advertised in the communication that went home multiple times by paper, text, emails, and classroom communication sites. A study by Williams (2016) found interpreters were a key component in giving parents access to their child's education. Fifty parents of multilingual students were interviewed and asked about the importance of having interpreters present (Williams, 2016). The findings indicated parents want to be involved in their child's education, but need interpreters to bridge the gap (Williams, 2016). During this window of time where interpreters were helping increase parent engagement in kindergarten readiness, the district sought out information about changing the pay scale for the interpreters. The board of education increased the hourly rate for interpreters in January of 2024. Many parents would not have had access to the strategies without the interpreters onsite during the parent seminars.

Different materials were given at each parent seminar to help parents have a variety of resources at home, but also to help increase their interest in coming to all three parent seminars to access literacy materials. The materials included kindergarten readiness kits, children's books, a backpack, and school supplies. Literacy materials were a focus in the materials that were given to families. Six participants indicated additional support was needed in the open-ended question for literacy strategies. Mathis and Bierman (2015) found the greatest gain in literacy may happen when parents are involved with instruction. Literacy was a focus in both interventions. In

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Intervention One, an increase was seen in the Brigance scores from 61.5% kindergarten ready to 71.5% kindergarten ready after KinderReady camp and the three parent seminars. The kindergarten readiness kits and the children's books provided literacy materials for the parents to use in the home with their children, which supported the findings by Mathis and Bierman (2015). The quantitative data supported the work from Mathis and Bierman (2015), suggesting if parents were provided literacy materials and training in strategies, then achievement would increase.

Multiple sessions were offered in each parent seminar, so parents were able to gain information about kindergarten readiness based on their needs. There was a session tailored to teaching how to use the kindergarten readiness kit, one session focused on literacy activities, and another session on fine/gross motor skills and social emotional skills, and the fourth on numeracy. Lahaie (2008) studied 13,078 children, of which 2,678 were children of immigrants. The study found increases in English proficiency and math achievement when parents were involved in the learning process (Lahaie, 2008). In Intervention Two, it was essential to provide more tailored sessions within the parent seminars to address literacy and numeracy skills. In the second and third parent seminars of the fall semester, parents were given a detailed schedule of three of the four sessions based on their participation in the previous parent seminars.

As Intervention Two progressed, parent participation increased from six in the first session to 46 in the second session to 127 in the third session, according to the parents that signed in. One parent completed the open-ended question in the first intervention, with 17 answering the question in Intervention Two. In Intervention One, five parents completed the survey, while 49 completed it in Intervention Two. The goal of this study was to find ways to increase parent engagement in kindergarten readiness. The outcomes suggest parent engagement in kindergarten readiness was increased by the participation numbers, but more efforts are

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needed to know understand how to keep parental engagement ongoing in the homes of the students.

Achievement data from the kindergarten readiness assessments showed an increase in all areas of kindergarten readiness. Students grew in cognitive development, literacy, language, numeracy, social-emotional development, and physical development. Each area showed a gain of over 10% from the fall, with many areas growing more than 20-30%. Many factors influence student achievement in a semester, but the parent seminars may have provided a piece of influence in the achievement.

Adaptive Leadership

The theory of action helped drive the results in Intervention Two. Adaptive leadership contributed to the theory of action. McManus et al. (2018) explained adaptive leadership as having the right people come together to tackle challenges. Adaptive leadership requires an understanding of others' thoughts and feelings, an emotional intelligence. The discussion around kindergarten readiness has been a priority in the district for several years. There was an understanding that people felt a sense of urgency around helping students become kindergarten ready. Instead of choosing to do nothing, look to authority to solve the concerns around kindergarten readiness, or avoid the data and research surrounding kindergarten readiness, the district made significant moves to impact kindergarten readiness. This study is a piece of moving the needle in parent engagement in kindergarten readiness.

Kindergarten readiness scores were below 50% in the district and state. The district had been having conversations around kindergarten readiness with all administrators and directors in the accreditation process, allowing for dialogue around organizational justice. Leaders had a voice in the recommendations for increasing kindergarten readiness.

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The first step in improving kindergarten readiness was to get on the balcony and see a different aspect of kindergarten readiness (McManus et al., 2018). By doing the root cause analysis, it allowed for a bigger view to be seen. Through the lens of adaptive leadership, the problem of practice was identified, “How can we use improvement science to improve parent engagement in kindergarten readiness preparation for students in Walker County Public Schools during the 2023-24 school year?”

Leaders from across the district mobilized together to develop a plan for improving parent engagement in kindergarten readiness by hosting parent seminars on kindergarten readiness. After the first intervention, it would have been easy to feel distress and give up because of the low participation rates in Intervention One. Adaptive leaders keep moving forward even when challenges arise. In this study, improvement science led to changes in the intervention, which led to changes in parent engagement and possibly student achievement.

Implications and Next Steps

The district will continue to work towards improving kindergarten readiness for students in the community. Early education is a top priority because the district understands the connection between early education and academic achievement (Bettencourt et al., 2018; Fitzpatrick et al., 2020). Kindergarten Readiness parent seminars have changed the district’s approach to parent involvement. The strategies used in the study will be used to continue to foster parent engagement. The study demonstrated how important it is to have interpreters available for families. It also demonstrated the need to advertise the materials that will be given out and the importance of demonstrating how to use the materials.

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The next step is to interview parents on what specifically made the parent seminars a success. Many parents requested to have more parent seminars in the spring semester. District leadership met to discuss how to continue with the parent seminars in the spring.

Equity Implications

This study impacted equity at the core from interpreters to materials provided to location. Being in a district that is 63% economically disadvantaged with over 100 languages, efforts have to be made to provide equitable access. During the first intervention, interpreters were not provided for the parent seminars. Many parents could not understand the strategies that were being taught. Interpreters were made available for the second intervention and the attendance went from 11 to approximately 129. When the leadership in the district were discussing the salary table for interpreters, information was shared about the assistance that was given in the Kindergarten Readiness parent seminars. The interpreters provided explanations for the families and helped guide them through the night. The board of education was able to provide a significant increase in salary for interpreters.

Both interventions took place in the community where the KinderReady Camp was taking place and near where many of the families lived to help with transportation. The first intervention also was offered during the day and night to accommodate schedules. Dinner was provided during the three parent seminars in the fall to help with having a nutritional meal for the families. A lot of materials were given to families to help them have the materials needed to work with their child on kindergarten readiness skills. Families were given children's books, kindergarten readiness kits, playdough, and backpacks filled with school supplies such as crayons, pencils, a dry erase board, markers, and handwriting materials.

Limitations

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The limitations of this study included several pieces of information. First, this study was limited to one district in Kentucky with parents or guardians of preschool students. Second, the number of participants was less than 500 participants. Another limitation was in the communication. The district, where the study took place, has over 100 languages spoken. The interpreters provided translation for five of the top languages in the district, but not all. The participants or participation may have been limited by the researcher working in the school district.

The data collected has limitations. With parents taking only one parent survey, the ability to make generalizations about the data was limited. A pre- and post-parent survey would have provided information on whether or not the study improved the knowledge and preparedness of kindergarten readiness for parents.

Recommendations

Several recommendations come from this study for practitioners. Based on comparing the attendance in the summer versus fall seminars, the study demonstrates that parent seminars for kindergarten readiness may be more successful in terms of attendance and engagement when they take place earlier than a month before kindergarten begins. Attendance increased when the parent seminars were provided in the fall semester of preschool before preschool students started kindergarten in the next school year (Weitland et al., 2017).

Another recommendation is to have interpreters available in this school district or any school district where families of multilingual students exist. The participation increased significantly from the first intervention without interpreters to the second intervention with interpreters. The interpreters provided a service that engaged multilingual parents in ways not accessible before this intervention.

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If materials are going to be given out to families, this researcher recommends including visuals of the materials in communications inviting parents to attend. The materials need to be differentiated at each seminar with materials that can be easily accessible to parents. In this study, kindergarten readiness kits, children's books, backpacks, and school supplies were given out at each of the three parent seminars. During the parent seminars, demonstrations are needed to show parents how to engage with their children using the materials.

Leadership Implications of the Study

After reflecting on the improvement science study, transformational leadership could be seen in a small fraction of the study through inspiration. This study inspired and challenged the status quo for parent engagement in kindergarten readiness. Burns and Bass are two of the leaders in transformational leadership with the four components focusing on influence, inspiration, intellectual stimulation, and individualized consideration (Hickman, 2016, p. 90). Inspiration through transformational leadership was demonstrated throughout this study as seen in the reflective journal and the parent seminars (Appendix I). Transformational leadership inspires others to achieve goals (McManus et al., 2018). This study was inspired by transformational leadership working to achieve goals beyond what was expected. The transformational model this study reflected was the work on inspiring a shared vision by Kouzes and Posner (McManus et al., 2018).

During this study, district leadership was involved from the beginning. The assistant superintendent, preschool director, assistant preschool director, and preschool consultants assisted with the planning of the kindergarten readiness parent seminars. They were also all present during the parent seminars to assist with the implementation of the kindergarten

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readiness parent seminars, which inspired others to join in the work as demonstrated in all of the participation by teachers, preschool assistants, and parents.

Parent nights have been held for many years in the district, yet the preschool consultants and preschool leadership wanted to challenge the normal process to achieve change (McManus et al., 2018). They made sure different materials were made available for parents during each seminar in the second intervention. During preschool meetings, teachers were inspired to help with the parent seminars. District leadership, the preschool director, the assistant preschool director, preschool consultants, and teachers celebrated the increase in parent engagement during the study. Each night the parent participation grew in attendance. Parents asked more questions as the parent seminars continued through the semester.

Like Kouzes and Posner in transformational leadership (McManus et al., 2018), the district wanted to celebrate the parent engagement in the parent seminars. The impact of the KinderReady camp and the Kindergarten Readiness parent seminars were celebrated at the December board meeting in the district. The data was shared with board members, the superintendent, administrators, media, and the community. Transformational leadership could be seen through the inspiration to engage parents in a different way to produce increased results in student achievement. While it will take more than a semester to transform a community around parent engagement and kindergarten readiness, others have been inspired to revise parent engagement strategies to increase parent involvement. In the future, interviews will need to be conducted with parents to determine what individualized strategies are needed to engage parents in a way that leads to an impact on kindergarten readiness achievement.

Recommendations and Implications for Researchers

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If a researcher is interested in pursuing this topic further, it is recommended to collect more specific data on what parents found to be successful in the parent seminars. While the district is currently preparing kindergarten readiness parent seminars for the spring semester with the data collected in this study, additional data through interviews may help the parent seminars improve with specific strategies. Studying the long-term effects of student achievement when the students start kindergarten and beyond would be recommended (Fitzpatrick et al., 2020; Bettencourt et al., 2018). Can there be a correlation between parents receiving training on kindergarten readiness and kindergarten readiness scores?

Another recommendation for moving forward for researchers is to use the strategies used in Interventions One and Two of this study of improvement science. Having interpreters was a key strategy for the study. Interpreters were able to equip multilingual parents with the information during the parent seminars. Kindergarten readiness materials are essential to providing parents and guardians with the tools to help their children in kindergarten readiness. Tailoring specific parent sessions within the parent seminars provides individualized instruction needed to meet the needs of parents.

Final Conclusions

Parent engagement in kindergarten readiness increased by using improvement science in this study. Student achievement in kindergarten readiness increased during the summer and the fall semester where the interventions took place. The problem of practice was derived from kindergarten readiness scores being below 50% in the district and the understanding of the future implications if students do not come to school kindergarten ready. The district where the study was conducted prioritizes early education and preparing students for kindergarten. After seeking

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input from administrators, preschool consultants, and preschool teachers, the root cause indicated a need for parents to receive strategies to help their child become kindergarten ready.

Two interventions were implemented in the district. Both interventions involved parent seminars on kindergarten readiness. The data from this study indicated a change in parent engagement in kindergarten readiness parent seminars when the following strategies were used:

- Advanced communication in four formats (paper, email, text, and class communication sites)
- Interpreters on site during each parent seminar
- Materials tailored to each parent seminar
- Dinner provided for families during the parent seminars
- Individualized sessions based on previous experiences in the parent seminars
- Kindergarten readiness materials given to families at each session

The first step in helping students arrive at school better prepared is to actively engage parents in understanding the strategies and skills necessary for kindergarten readiness. With 90% of the brain being developed by age 5 (Kentucky Governor's Office of Early Childhood, 2024), it is vital to equip parents with the most effective strategies to use with their child. In reflecting on the data from the National Center for Education Statistics, where 50% of all students in the United States are performing one grade level below or more in at least one content area, there is a great sense of urgency to help strengthen early education (NCES, 2023). The next important step is following up with the parents to see what is needed after the parent seminars. In this school district, additional parent seminars are scheduled for the spring semester to help give parents a strong foundation in understanding how to help their child become kindergarten ready.

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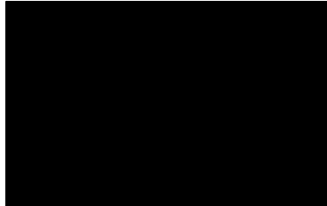
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Appendix A

District Permission Letter



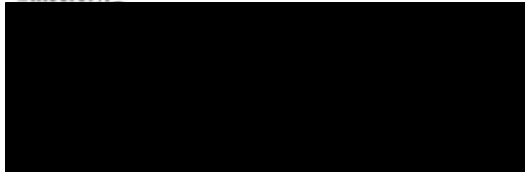
March 11, 2023

To Whom It May Concern,

I hope this letter finds you well. Sarah Johnson, Elementary Director in [REDACTED] Public Schools, is applying for approval for a research study about kindergarten readiness. Currently, 46% of students in [REDACTED] Public Schools come to school kindergarten ready. Ms. Johnson is striving to identify the root cause of the deficits in kindergarten readiness skills in [REDACTED] by giving a survey to teachers and district staff. Participating in this survey is voluntary and data will be kept confidential. After root causes are identified, she will work to implement interventions to address the root cause(s) of the deficits in kindergarten readiness skills.

I fully support the implementation of the research study. I hope the data found in the research will give insight on how to improve kindergarten readiness in [REDACTED] Public Schools. If you have any questions, please feel free to reach me at [REDACTED]

Sincerely,



Appendix B

Kindergarten Readiness Skills Survey

Kindergarten Readiness Skills

From the following list of skills/concepts addressed by KY Early Childhood Standards, please help us identify those that are most important for kindergarteners at the beginning of the school year.

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Please rank the following literacy skills from most to least important for beginning kindergarteners with 1 being most important.

*

	1	2	3	4	5	6	7	8
Letter Recognition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printing First Name	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Letter/Sound Correspondence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Segmenting Syllables/Words	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reciting the Alphabet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rhyming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Isolating Beginning Sounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printing Upper/Lowercase Letters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Please rank the following math skills from most to least important for beginning * kindergarteners with 1 being most important.

	1	2	3	4	5	6	7	8
Rote Counting to 20+	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognizing Numerals to 20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counting at least 10 objects in 1:1 correspondence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sorting/Classifying object by at least one attribute	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identifying Basic 2D Shapes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding Concepts of Time including Days/Week and Months/Year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quantifying (subitizing) up to 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognizing/Creating Patterns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding More/Less	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding Ordinal Numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

KINDERGARTEN READINESS

Please rank the following social/self-help skills from most to least important for beginning kindergarteners with 1 being most important. *

	1	2	3	4	5	6
Knowing personal information (name, birthday, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending to a 15 minute task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-regulation (ability to calm themselves when upset)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Putting on jacket, backpack, etc independently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Following 2-3 step directions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking turns/sharing materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other skills not listed above that you feel are important for beginning kindergarteners?

Your answer

Appendix C

IRB for Root Cause Analysis Study



INSTITUTIONAL REVIEW BOARD
OFFICE OF RESEARCH INTEGRITY

DATE: March 21, 2023
TO: Sarah Johnson
FROM: Western Kentucky University (WKU) IRB
PROJECT TITLE: [2032970-1] Kindergarten Readiness
REFERENCE #: IRB# 23-264
SUBMISSION TYPE: New Project
ACTION: APPROVED
APPROVAL DATE: March 21, 2023
REVIEW TYPE: Exempt Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by an implied consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a MINIMAL RISK project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Robin Pyles at (270) 745-3360 or Robin.Pyles@wku.edu. Please include your project title and reference number in all correspondence with this committee.

KINDERGARTEN READINESS

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Western Kentucky University (WKU) IRB's records.

Appendix D

IRB for Interventions

IMPLIED CONSENT DOCUMENT



Project Title: Kindergarten Readiness

Investigator: Sarah Johnson, [REDACTED]

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you agree to participate in this project.

You must be 18 years old or older to participate in this research study.

In this document, I will explain in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may email any questions you have to help you understand the project.

If you then decide to participate in the project, please click the button below to give your consent and continue to the survey. Please print this page if you would like to keep a copy of this form.

1. **Nature and Purpose of the Project:** The purpose of this study is to identify the root causes of the lack of kindergarten readiness in students in Warren County Public Schools in Kentucky.
2. **Explanation of Procedures:** You are asked to complete a survey regarding kindergarten readiness. The survey should take approximately 15 minutes to complete.
3. **Discomfort and Risks:** There are no known risks to participating in this study.
4. **Benefits:** The benefit to participating in this study is the long-term impact on early education for the school district.
5. **Confidentiality:** The data will be collected anonymously from participants. Records will be viewed, stored, and maintained in private, secure files only accessible by the P.I. and advising faculty for a minimum of three years following the study.
6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Robin Fyles, Human Protections Administrator
TELEPHONE: (270) 745-3360

KINDERGARTEN READINESS

IMPLIED CONSENT DOCUMENT



Project Title: Kindergarten Readiness

Investigator: Sarah Johnson, [REDACTED]

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you agree to participate in this project.

You must be 18 years old or older to participate in this research study.

In this document, I will explain in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may email any questions you have to help you understand the project.

If you then decide to participate in the project, please click the button below to give your consent and continue to the survey. Please print this page if you would like to keep a copy of this form.

1. **Nature and Purpose of the Project:** The purpose of this study is to identify the root causes of the lack of kindergarten readiness in students in Warren County Public Schools in Kentucky.
2. **Explanation of Procedures:** You are asked to complete a survey regarding kindergarten readiness. The survey should take approximately 15 minutes to complete.
3. **Discomfort and Risks:** There are no known risks to participating in this study.
4. **Benefits:** The benefit to participating in this study is the long-term impact on early education for the school district.
5. **Confidentiality:** The data will be collected anonymously from participants. Records will be viewed, stored, and maintained in private, secure files only accessible by the P.I. and advising faculty for a minimum of three years following the study.
6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.

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THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Robin Pyles, Human Protections Administrator
TELEPHONE: (270) 745-3360

KINDERGARTEN READINESS



INSTITUTIONAL REVIEW BOARD
OFFICE OF RESEARCH INTEGRITY

DATE: March 21, 2023
TO: Sarah Johnson
FROM: Western Kentucky University (WKU) IRB
PROJECT TITLE: [2032970-1] Kindergarten Readiness
REFERENCE #: IRB# 23-264
SUBMISSION TYPE: New Project
ACTION: APPROVED
APPROVAL DATE: March 21, 2023
REVIEW TYPE: Exempt Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by an implied consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a MINIMAL RISK project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Robin Pyles at (270) 745-3360 or Robin.Pyles@wku.edu. Please include your project title and reference number in all correspondence with this committee.

KINDERGARTEN READINESS

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Western Kentucky University (WKU) IRIS's records.

KINDERGARTEN READINESS

Implied Consent-Please read the document below before beginning the survey.

IMPLIED CONSENT DOCUMENT



Project Title: Kindergarten Readiness

Investigator: Sarah Johnson, [REDACTED]

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you agree to participate in this project.

You must be 18 years old or older to participate in this research study.

In this document, I will explain in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may email any questions you have to help you understand the project.

If you then decide to participate in the project, please click the button below to give your consent and continue to the survey. Please print this page if you would like to keep a copy of this form.

1. **Nature and Purpose of the Project:** The purpose of this study is to identify the root causes of the lack of kindergarten readiness in students in Warren County Public Schools in Kentucky.
2. **Explanation of Procedures:** You are asked to complete a survey regarding kindergarten readiness. The survey should take approximately 15 minutes to complete.
3. **Discomfort and Risks:** There are no known risks to participating in this study.
4. **Benefits:** The benefit to participating in this study is the long-term impact on early education for the school district.
5. **Confidentiality:** The data will be collected anonymously from participants. Records will be viewed, stored, and maintained in private, secure files only accessible by the P.I. and advising faculty for a minimum of three years following the study.
6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Robin Pyles, Human Protections Administrator
TELEPHONE: (270) 745-3360

Appendix E

Kindergarten Readiness Root Cause Survey



Kindergarten Readiness

[Redacted] [Switch account](#)



Not shared

Which of the following best describes your role?

- Preschool Teacher
- Preschool Assistant
- Administrator
- Preschool Consultant/Specialist
- School Psychologist
- Preschool Speech Therapist

KINDERGARTEN READINESS

Perceptions of Kindergarten Readiness

Please indicate the significance of each kinder ready skill below.

Please select the significance of the kindergarten readiness skill below from not significant at all to extremely significant. SKILL-Cognition and General Knowledge (shapes, colors, classification, number sense, etc.)

- not at all significant
- slightly significant
- very significant
- extremely significant

Please select the significance of the kindergarten readiness skill below from not significant at all to extremely significant. SKILL-Social and Emotional Development (relationships with peers, self-regulation, expressing emotions, etc.)

- not at all significant
- slightly significant
- very significant
- extremely significant

KINDERGARTEN READINESS

Please select the significance of the kindergarten readiness skill below from not significant at all to extremely significant. SKILL-Language and Literacy (letter recognition, rhyming, vocabulary, etc.)

- not at all significant
 - slightly significant
 - very significant
 - extremely significant
-

Please select the significance of the kindergarten readiness skill below from not significant at all to extremely significant. SKILL-Physical Well-Being and Motor Development (fine/gross motor, physical health, etc.)

- not at all significant
 - slightly significant
 - very significant
 - extremely significant
-

If you selected a kindergarten readiness skill as being extremely significant, please describe why you think this skill is of such importance.

Your answer

Parents have the necessary information to prepare their child to be ready for kindergarten.

- strongly disagree
 - disagree
 - agree
 - strongly agree
-

KINDERGARTEN READINESS

Root Causes

In [REDACTED] 46% of the students come to kindergarten ready to learn based on the kindergarten screening assessment. Please rank the root causes for a student not being kindergarten ready. You will need to scroll over to the left to see 11 root causes. Please select one rank order for each root cause.

Please rank the root causes from 1st (the top root cause) to 11th (the root cause with least impact).

	Parent understanding of kindergarten readiness	Teacher training on kindergarten readiness	Resources for the teachers	Resources for the parents	Limited access to resources due to economically disadvantaged	Limited English acquisition
1st	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3rd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

KINDERGARTEN READINESS

Please rank the root causes from 1st (the top root cause) to 11th (the root cause with least impact).

	Accessibility to Childcare/preschool options for parents	Cost of childcare/preschool programs	Parent preference for childcare	Family Engagement	Referral Process
1st	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3rd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11th	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

KINDERGARTEN READINESS

Please share anything about kindergarten readiness you feel is important for improving kindergarten readiness or a root cause that was not identified above.

Your answer

If you are in the education field, please indicate the years of experience as an educator, including administration.

Your answer

Please indicate the years of experience as an administrator.

Your answer

Appendix F

Communication for Needs Assessment Survey

Communication for Needs Assessment Survey and for Reflective Survey

Kindergarten Readiness: Needs Assessment Survey Script

Good morning. As you know, a large focus in our district is strengthening kindergarten readiness for our students. We have worked hard in this effort with KinderReady Academy, parent awareness through social media and TV interview, making preschool four days per week, but our work is not done. Last year 46% of our students were KinderReady for the school year. In order to know how to best serve parents in helping students become kindergarten ready, I will share a survey with you on kindergarten readiness. If you are interested in participating in the study, please complete the survey. The data will be collected anonymously and confidentially. There are no known risks to participating in this study. The long term benefit of this study is to improve kindergarten readiness for your child and the students in .

Appendix G

Kindergarten Readiness Survey

Kindergarten Readiness-Parent Seminar Survey

Kindergarten Readiness-Parent Seminar

Implied Consent-Please read the document below before beginning the survey.

IMPLIED/INFORMED CONSENT DOCUMENT

Project Title: Kindergarten Readiness

Investigator: (Sarah Johnson)

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

You must be 18 years old or older to participate in this research study.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please continue with the survey. Your continuation implies your consent.

1. **Nature and Purpose of the Project:** The goal of the kindergarten readiness project is to improve kindergarten readiness for students entering kindergarten. The purpose of the interventions is to identify the best ways to inform and train parents on the skills needed to be kindergarten ready.
2. **Explanation of Procedures:** The investigator will conduct parent seminars to help parents learn how to best help their child be kindergarten ready. The investigator will give a parent/guardian survey to determine the specific needs for the parents and guardians in [REDACTED]. The survey results will be used to prioritize each parent seminar. The same survey will be given to the parents at the end of KinderReady camp and the parent seminar to evaluate the effectiveness of each intervention. In the survey, parents will be invited to participate in a semi-structured interview. The kindergarten assessment scores will also be used and evaluated.
3. **Discomfort and Risks:** There are no known risks to participating in this study.
4. **Benefits:** The benefit to participating in this study is the long-term impact on early education for students and the school district.
5. **Confidentiality:** The data will be secured on my computer that others do not have access to at any time. The data will be collected anonymously from individuals and maintained for a minimum of three years.
6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any

KINDERGARTEN READINESS

future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Continuation with this survey implies your consent. [IF ONLINE SURVEY ONLY]

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD

Robin Pyles, Human Protections Administrator

TELEPHONE: (270) 745-3360

KINDERGARTEN READINESS

1. Which of the following best describes your role?

Mark only one oval.

- Parent
 Grandparent
 Guardian
 Other

2. Please select the setting that best describes your child's early educational background.

Check all that apply.

- Public Preschool
 Head Start
 Daycare
 Home
 Private Preschool
 Other

3. How comfortable do you feel in knowing the expectations for your child to be ready for kindergarten?

Check all that apply.

- Not at all comfortable
 Slightly comfortable
 Comfortable
 Very comfortable

Perceptions of Kindergarten Readiness

KINDERGARTEN READINESS

4. Please select the importance of the kindergarten readiness skill below from not important at all to extremely important. SKILL-Cognition and General Knowledge (shapes, colors, classification, number sense, etc.)

Mark only one oval.

- not at all important
 slightly important
 very important
 extremely important

5. Please select the importance of the kindergarten readiness skill below from not important at all to extremely important. SKILL-Social and Emotional Development (relationships with peers, self-regulation, expressing emotions, etc.)

Mark only one oval.

- not at all important
 slightly important
 very important
 extremely important

6. Please select the importance of the kindergarten readiness skill below from not important at all to extremely important. SKILL-Language and Literacy (letter recognition, rhyming, vocabulary, etc.)

Mark only one oval.

- not at all important
 slightly important
 very important
 extremely important

KINDERGARTEN READINESS

7. Please select the importance of the kindergarten readiness skill below from not important at all to extremely important. SKILL-Physical Well-Being and Motor Development (fine/gross motor, physical health, etc.)

Mark only one oval.

- not at all important
- slightly important
- very important
- extremely important

Kindergarten Readiness Needs

The areas listed below can be found on the Kentucky Department of Education's website at <https://education.ky.gov/specialed/earlylearning/Pages/schlrdndfn.aspx>.

8. Parents have the necessary information to prepare their child to be ready for kindergarten.

Mark only one oval.

- strongly disagree
- disagree
- agree
- strongly agree

KINDERGARTEN READINESS

9. Which of the following areas do you want additional information on to help your child become kindergarten ready? SKILL-Physical Well-Being and Motor Development (fine/gross motor, physical health, etc.)

Check all that apply.

- Eats a balanced diet
- Gets plenty of rest
- Receives regular medical and dental care
- Has had all necessary immunizations
- Can run, jump, climb, and does other activities that help develop large muscles and provide exercise
- Uses pencils, crayons, scissors, and paints and does other activities that help develop small muscles

10. Which of the following areas do you want additional information on to help your child become kindergarten ready? SKILL-Social and Emotional Development (relationships with peers, self-regulation, expressing emotions, etc.)

Check all that apply.

- Follows simple rules and routines
- Is able to express his or her own needs and wants
- Is curious and motivated to learn
- Is learning to explore and try new things
- Has opportunities to be with other children and is learning to play/share with others
- Is able to be away from parents/family without being upset
- Is able to work well alone
- Has the ability to focus and listen

KINDERGARTEN READINESS

11. Which of the following areas do you want additional information on to help your child become kindergarten ready? SKILL-Cognition and General Knowledge (shapes, colors, classification, number sense, etc.)

Check all that apply.

- Is learning to count and plays counting games
- Is learning to identify and name shapes and colors
- Has opportunities to notice similarities and differences
- Understands simple concepts of time (night and day, today, yesterday, tomorrow)
- Is learning to sort and classify objects

12. Which of the following areas do you want additional information on to help your child become kindergarten ready? SKILL-Language and Literacy (letter recognition, rhyming, vocabulary, etc.)

Check all that apply.

- Uses 5-6 word sentences
- Sings simple songs
- Recognizes and says simple rhymes
- Is learning to write her name and address
- Has opportunities to listen to and make music and to dance
- Knows the difference between print and pictures
- Listens to stories read to them
- Is encouraged to ask questions

13. Please describe what you need to help your child become kindergarten ready.

KINDERGARTEN READINESS

14. While this survey is anonymous, if you would be willing to be interviewed about kindergarten readiness, please include your name and phone number. Thank you.

This content is neither created nor endorsed by Google.

Google Forms

Appendix H

Timeline for Interventions

Timeline for Interventions

Date	Intervention One	Methods
June 12, 2023	<ul style="list-style-type: none"> ● Contact families for participation in the needs assessment survey ● Inform parents and guardians about the upcoming Kindergarten Readiness Seminar 	Kindergarten Readiness Parent Survey Communication to Parents/Guardians
June 12-30, 2023	<ul style="list-style-type: none"> ● Conduct KinderReady Camp for future kindergarten students 	
June 12-16, 2023	<ul style="list-style-type: none"> ● Conduct the Kindergarten Readiness Seminar during the week of June 12, 2023 in the morning and the evening for parents/guardians 	The seminar will include information on the key concepts to be kindergarten ready and resources to help students become kindergarten ready.
June 19-23, 2023	<ul style="list-style-type: none"> ● Send out a survey to see the effectiveness of the seminar (intervention) 	<u>Kindergarten Readiness Post Seminar Survey</u>
June 24-30, 2023	<ul style="list-style-type: none"> ● Analyze the survey results ● Interview five to eight parents/guardians on Kindergarten Readiness 	<u>Semi-structured Interview</u>
July 1, 2023	<ul style="list-style-type: none"> ● Analyze the Brigance 	Quantitative data from the

KINDERGARTEN READINESS

	<p>data (pre/post) from the students in the KinderReady Camp</p> <ul style="list-style-type: none"> Analyze the data collected from the interviews 	<p>Brigance will be analyzed.</p> <p>Qualitative data will be analyzed from the interviews.</p>
July 2-9, 2023	Intervention Two (Develop adjustments based on data)	
July 9, 2023	<ul style="list-style-type: none"> Contact families for participation in the needs assessment survey Inform parents and guardians about the upcoming Kindergarten Readiness Seminar 	<p><u>Kindergarten Readiness Parent Survey</u></p> <p><u>Communication to Parents/Guardians</u></p>
July 10-28, 2023	<ul style="list-style-type: none"> Conduct KinderReady Camp for future kindergarten students 	
July 10-14, 2023	<ul style="list-style-type: none"> Conduct the Kindergarten Readiness Seminar during the week of July 10, 2023 in the morning and the evening for parents/guardians (Seminar may change slightly depending on results from Intervention One) 	<p>The seminar will include information on the key concepts to be kindergarten ready and resources to help students become kindergarten ready.</p>
July 17-21, 2023	<ul style="list-style-type: none"> Send out a survey to see the effectiveness of the seminar (intervention) 	<p><u>Kindergarten Readiness Post Seminar Survey</u></p>
July 22-28, 2023	<ul style="list-style-type: none"> Analyze the survey results Interview five to eight parents/guardians on Kindergarten 	<p><u>Semi-structured Interview</u></p>

KINDERGARTEN READINESS

	Readiness	
July 29, 2023	<ul style="list-style-type: none"> ● Analyze the Brigance data (pre/post) from the students in the KinderReady Camp ● Analyze the data collected from the interviews 	<p>Quantitative data from the Brigance will be analyzed.</p> <p>Qualitative data will be analyzed from the interviews.</p>
July 30-August 2, 2023	Share information about the Kindergarten Readiness Seminar for parents and guardians to all 15 elementary schools in the district	

Appendix I

Reflective Journal for Kindergarten Readiness Survey

Reflective Journal of the Mini-study on Kindergarten Readiness

January-March 2023

- District priority-improving kindergarten readiness for students
 - Four days per week preschool from two days per week
 - Mobile Classroom
 - Preschool assistant director
 - KinderReady camps
 - Grants to support kindergarten readiness
- A strong desire to improve kindergarten readiness to get it above 50% kindergarten ready in the school district due to understanding the long-term implications of kindergarten readiness
- Worked with the preschool consultants on ideas of how to make the kindergarten readiness achievement stronger in the district
- Researched studies that had been done on kindergarten readiness, parent involvement in kindergarten readiness, increasing achievement in kindergarten readiness, and how to engage parents in helping their child with the skills needed to be kindergarten ready
- Developed a mini-study with the research committee through the IRB process to conduct a root cause analysis by giving a survey to administrators, preschool teachers, preschool assistants, and school psychologists
- The root cause analysis survey involved quantitative and qualitative data
- Analyzed the survey from the kindergarten teachers reporting the priorities for the skills of kindergarten readiness

KINDERGARTEN READINESS

- Identified parent involvement as being a root cause
- Worked through the Plan-Do-Study-Act process to develop a plan

March 2023-June 2023

- Researched more studies that had been done on kindergarten readiness, parent involvement in kindergarten readiness, increasing achievement in kindergarten readiness, and how to engage parents in helping their child with the skills needed to be kindergarten ready
- Analyzed the results of the root cause analysis
- Coded the needs and developed themes from the qualitative data
- Worked with the preschool consultants to develop an intervention to target parent engagement in kindergarten readiness
- Worked with the research committee to develop an IRB for Intervention One
- Focused on the parents of the students in the KinderReady camps in June and July of 2023
- Worked through the Plan-Do-Study-Act process to develop a plan

June 2023-July 2023

- Sent out parent communication about the parent seminars
- Implemented three kindergarten readiness parent seminars
- Handed out materials for families to take home-kindergarten readiness kits, bug catchers, board games, foam dice, flash cards, daily kindergarten readiness activity book, information on kindergarten readiness
- Demonstrated strategies to do with students
- Use a slideshow to communicate about kindergarten readiness

KINDERGARTEN READINESS

- Attendance/participation was a low percentage of the parents involved in the KinderReady camp
- Some parents had limited access to the information to a language barrier
- Two of the parent seminars were held during the day which may have impacted the attendance
- Dinner was not provided during the evening seminar

August 2023

- Reflected on how to increase parent engagement in kindergarten readiness due to the low attendance in the parent seminars in the summer of 2023
- Analyzed the results from the quantitative and the qualitative data from Intervention One
- Met with the preschool consultants on how to grow kindergarten readiness
- Researched additional studies to grow kindergarten readiness achievement in a school district
- Researched how to get parents more involved with kindergarten readiness
- Worked through the Plan-Do-Study-Act process to develop a plan
- Used transformational leadership to improve Intervention Two (McManus et al., 2018)
 - Modeling the way
 - Inspiring a shared vision
 - Challenging the process to achieve change
 - Enabling others to act, and
 - Encouraging the heart through recognition and celebration

September 2023-October 2023

KINDERGARTEN READINESS

- Achievement assessment given to students from Teaching Strategies Gold to assess kindergarten readiness benchmarks
- Developed Intervention Two with better processes for engaging students
- Received IRB approval for the next intervention
- Individualized parent sessions in the parent seminars
- Invited preschool teachers to help lead the parent sessions
- Materials were ordered for each session
- Interpreters were requested and arranged for five common languages in the district
- Dinner arranged for each parent seminar

November 2023-December 2023

- Implemented Intervention Two
- Three parent seminars to engage parents in kindergarten readiness
- Achievement assessment given to students from Teaching Strategies Gold to assess kindergarten readiness benchmarks

January 2024-Present

- Analyzed the results from the quantitative and the qualitative data from Intervention Two
- Met with the district leadership and preschool team to reflect on the outcomes of Intervention Two
- Discussed how to make the parent seminars better in the spring to engage parents

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Name: Johnson, Sarah

Email (to receive future readership statistics): sarah.johnson@warren.kyschools.us

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