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The Effects of One-on-One Interventions on Kindergarten Students.

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The Effects of One-on-One Interventions on Kindergarten Students

A Quantitative Research Methods Proposal

By

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ED 704

Quantitative Research Methods Doctoral Course

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Abstract

This 2023 study focuses on the impact that one-on-one interventions have on the academic achievement of kindergarten students. My focus is on whether one-on-one interventions play a significant role in the outcome of student scores on trimester achievement assessments, or if one-on-one interventions do not show success in student progress. Students will be assessed daily for 20 days on interventions in areas they are struggling with. The research took place in a Minnesota school, specifically five Kindergarten students who are in the same classroom. The data and results will follow.

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CHAPTER 1

INTRODUCTION

Introduction

It is well known that students in every grade are entering the classrooms with different ability levels. When students start Kindergarten, there can be difficulties directing instruction to the needs of all students. Most teachers work hard to adjust their teaching to meet the necessities of all students. For some young learners, learning in a whole group setting can be overwhelming and intimidating. Whole group learning can be fast paced for students who are struggling academically or do not know how to advocate for themselves. It has been shown that these at-risk students can benefit from one-on-one intervention time with their teacher or classroom paraprofessional. Providing learners with differentiated one on one support can hopefully lead to a better understanding of learning and higher assessment scores.

Brief Literature Review

There are many supports already created to help administer one on one interventions within classrooms. There was an abundance of research performed on different intervention systems to use with students. This research found that starting the school year off with baseline data is of utmost importance when tracking academic gains or struggles students might encounter. After gathering the academic data, goals should be set for each student. It is of great importance to understand that each student is entering the classroom with different academic abilities. When goals are established, differentiated interventions can begin. For instance, if a student were to know hardly any upper-case letters and score low on the incoming school year assessment it would be of great importance to set a specific academic goal for this student on the skill they are struggling with. A possible goal for a student only knowing a few letters at the start of the year, could be for the student to know at least 19 uppercase letters by time the first

trimester of the school year was completed. When a goal is in place for a student, the teacher can then assess the student later to see if progress has been made by the student.

When one, or a small group of students in a classroom is struggling to make academic progress on a specific skill, interventions can be held to help these students. In the upcoming literature review, a variety of online interventions were provided to students who needed individualized help on specific skills. As stated a start of the year assessment can be administered to all students to see where academic struggles lie within the classroom of students. Interventions can then be used as one on one time or small group time with students who are struggling on a skill. The intervention will focus in the specific academic skill to provide direction instruction to the student.

The classroom teacher should evaluate the incoming school year assessments that had taken place at the beginning of the school year. These beginning of the year assessments hold important academic information both individualized about students and as a reflection of the entire class. If the entire class is in need of further instruction the classroom teacher will need to evaluate teaching styles. When a whole class needs further academic instruction on specific skills, such as rhyming or letter recognition in Kindergarten, the teacher should adjust lesson plans and pacing to meet the needs of the class.

However, if there is only a few students or even just one student struggling with a specific skill it can be beneficial to differentiate instruction to that specific student or small group of students. An intervention on a specific skill can be put in place to help students gain understanding and academic ability. An intervention is a specific activity or skill that is done when a student is struggling. Interventions can be carried out in a variety of ways. Intervention types will be further discussed in the literature review in the upcoming chapter. Key words for this literature review include: kindergarten, baseline data, interventions, support, and student performance.

Statement of the Problem

It is of great importance that students achieve academic, social - emotional and physical development progress during the school year. Appendix I lists the Social-Emotional, Language and Literature, Math Concepts and Physical Development expectations for Kindergarten students for the spring trimester. These Kindergarten Benchmarks shown in Appendix I, state the expectation for a student to be considered passing or not passing specific Kindergarten skills. This research will focus on the academic outcomes of one-to-one interventions. The teacher or paraprofessional will carry out an intervention for 20 consecutive days in school learning days. When students enter Kindergarten, students are arriving with a variety of knowledge. While having a prior understanding and experience is helpful it can also cause hardship for teachers. Some entering Kindergarteners do not know basic school expectation's, such as how to stand in line quietly, listening when others are talking or how to share with others. Academic wise, some entering students do not know how to spell their name or even recognize their name on a locker. Other students entering the classroom have had experience in a classroom/school setting at a daycare or have attended preschool where there were social, emotional and academic expectations for the students. The wide range of ability and inability can lead to classroom struggles. This research will focus directly on the academic struggles within a kindergarten classroom. Overall, the wide range in academics in the Kindergarten classroom can lead to whole group instruction problems.

Purpose of the Study

The purpose of this study is to increase student ability on the specific academic skills the students struggle with. There are many Kindergarten students who enter the classroom with little to no academic knowledge. The lack of knowledge can lead to frustration for the student and the teacher. It is very important for teachers to meet students where they are at academically, not to expect students to come in with pervious knowledge. Providing students with a one on one opportunity to practice and

hopefully increase their ability on specific skills is important to me as a teacher, and likely important to all teachers. Teachers want to see significant growth within their students. Setting up interventions that target the exact skill students struggle with will likely increase their ability, gain their personal confidence and build a trusting bond between the teacher and student.

The objective of this study is to determine if one on one interventions for students will increase their ability on specific skills they struggle with. The goal for this study is to show that even a few minutes of one-on-one interventions everyday can increase student's academic abilities. It is the researchers goal that when students receive specialized support their confidence and understanding will increase on the specific skills they are going to work on.

Research Question(s)

What impact does one on one literacy interventions have on students' literacy achievement with students who are considered high-risk according to Response to Intervention Kindergarten Benchmarks?

Definition of Variables. The following are the variables of this study:

Independent Variable: One-on-One Interventions: the aim is to provide direct one-on-one interventions on academic skills to students who struggle with specific Kindergarten Benchmark strands. If a student does not meet grade level expectation on a specific skill they will be provided with 20 days of one-on-one interventions for each skill they struggle with.

Dependent Variable: Kindergarten Benchmark Assessment Scores: the effect of the one-on-one interventions is that when students are assessed again on Kindergarten skills the student's academic performance will improve.

There will not be a control group used in this study.

Significance of the Study

The study being conducted will be of importance to show that one-on-one interventions can increase student academic knowledge before they are assessed again on the Kindergarten Benchmarks. This is important to the researcher as the researcher teaches Kindergarten and has students who do not meet the passing score on the Kindergarten benchmarks. The following study will find data and reveal findings on the importance of one-on-one interventions. By researching one-on-one interventions other researchers can learn about the findings from this study can carry out this type of intervention in their classrooms for students who are struggling. Overall, the hope is that one-on-one interventions will increase student's academic abilities and lead to better assessment scores.

Research Ethics

Permission and IRB Approval. To conduct this study, the researcher will seek MSUM's Institutional Review Board (IRB) approval to ensure the ethical conduct of research involving human subjects (Mills & Gay, 2019). Likewise, authorization to conduct this study will be seek from the school district where the research project will be take place (See Appendix X and X).

Informed Consent. Protection of human subjects participating in research will be assured. Participant minors will be informed of the purpose of the study via the Method of Assent (See Appendix X) that the researcher will read to participants before the beginning of the study. Participants will be aware that this study is conducted as part of the researcher's Master Degree Program and that it will benefit her teaching practice. Informed consent means that the parents of participants have been fully informed of the purpose and procedures of the study for which consent is sought and that parents understand and agree, in writing, to their child participating in the study (Rothstein & Johnson, 2014). Confidentiality will be protected using pseudonyms (e.g., Student 1) without the utilization of any

identifying information. The choice to participate or withdraw at any time will be outlined both, verbally and in

Limitations.

This study is not completely flawless or inclusive of all possible aspects. There are possible shortcomings throughout this study such as the lack of a control group and the sample size being a small number of students. The small group of students given the one-on-one interventions only received teacher directed interventions. Another limitation from the study was the number of students analyzed, only a few students all from the same classroom.

Conclusions

The goal of interventions is to increase student's academic abilities through a one-on-one setting. This task can be challenging when the limitation of time is kept in mind. An intervention will be provided to the student of 20 consecutive school days in hope to show growth. One-on-one interventions will be expected to increase student ability and knowledge before being assessed again on the Kindergarten Benchmarks. Chapter two provides an overview of the importance of collecting incoming data, different types of interventions available to the classroom teacher; technology and teacher structured interventions.

Appendix I

Kindergarten Benchmarks May Report Card (Revised September 2022)

Social-Emotional Development		
Skill	Red Yellow (-)	Green (+)
Shows care and respect for students and adults	Bossy, no give and take, not empathetic	Eye contact, listens to others when speaking, shows empathy.
Works well with others	Not a team player, plays alone, one sided	Invites others, shares, gets along
Practices self-control	Tantrums, can't keep body to self	Has control of one's body and mind
Follows teacher directions	Does not follow directions	Does follow directions
Participates in activities and discussions	Does not participate	Participates majority of the time
Uses time productively	Waiting, too fast/slow, needs teacher help	Quality work done in timely manner
Cares for materials and belongings	Chewing on materials, leaving items out, not caring for items	Takes care of materials and appropriately uses them
Demonstrates organizational skills	Messy table spot and locker, does not put things away, forget daily tasks	Cleans after one's self and keeps track of possessions

Language and Literature		
Skill	Red Yellow (-)	Green (+)
Actively seeks out books for enjoyment	Refuses to look at books Stays looking at a book, flipping through pictures	Looking at a book with enjoyment, has conversations about it
Tracks print left to right and top to bottom	No tracking, backwards Half the time	All the time
Constructs meaning from pictures	No conversation, randomness Labeling objects in the pictures	Tells what is happening, uses feelings
Predicts what will happen next using pictures and content for guides	Random On right track, not many details or lots of details but not on subject	Giving smart guesses based on the story
Identifies words that rhyme (auditorally/verbally) Teacher gives word and student has to produce rhyming word (bat, met, rug, pig, mop, pan)	0-4	5-6
Identifies the beginning, middle and end of a story (three sets of four pictures in a set)	0-2	3
Uses known sounds to create sound-spelled words (hat, sip, wet, mop, bug)	0-11	12-15
Reads sight words in context	0-2	3+
Identifies sight words (I, can, the, we, see, a, like)	0-35	36-40
Recognizes and prints first name	No	Yes
Recognizes and prints last name	No	Yes
Recognizes the 10 colors	0-9	10
Recognizes the 10 color words	0-9	10
Names uppercase letters	0-25	all
Names lowercase letters	0-25	all
Knows letter sounds	0-25	26 and above

Math Concepts		
Skill	Red Yellow (-)	Green (+)
Recognizes, creates and extends patterns	No concept Just AB	AB, ABB, AAB
Sorts objects by shape, size, color, thickness	Sorts by 1-3 attributes	Sorts by 4 attributes
Demonstrates understanding of math concepts	Does Not Pass CEOs	Passes CEOs
Measures using non-standard units	Doesn't pass CEO	Passes CEO
Recognizes shapes	0-11	12-14
Given a number, identifies one more or one less	Doesn't pass CEO	Passes CEO
Adds number up to 10 using objects (4 sets)	0-3	4
Subtracts number up to 10 using objects (4 sets)	0-3	4
Identifies ordinal numbers	Doesn't Pass CEO	Passes CEO
Can rote count	0-99	100 and above
Counts objects	0-29 or not one to one	30 and above
Counting by 10's to 100	Can't do it	Can do it
Counting by 5's to 100	Can't do it	Can do it
Counts backwards	0-19	20
Recognizes numbers	0-99	100
Writes numbers	0-50	51-100

Physical Development		
Skill	Red (I) Yellow (x)	Green (+)
Demonstrates age appropriate large motor skills	Body control is difficult, bumping into others	No concern
Demonstrates age appropriate small motor skills	Not watching work, scribbles, paper rips instead of cuts Still coloring/writing or cutting out of the line	No concerns
Holds writing and cutting tools appropriately	Flipping hands, fist grasp, scissors upside down	3 point grasp, cutting with thumb on top

CHAPTER 2

LITERATURE REVIEW

Introduction

A problem that I often see in my Kindergarten classroom, especially at the start of the school year, is that the students enter with a wide range of ability. When the school year begins in my classroom students are all at different learning levels. Students entering Kindergarten need to only meet a few bare minimum requirements required of them by state. As stated by the Minnesota Department of Education:

Children are always learning and all children are ready to begin their formal schooling by age 5. There are no requirements or expectations about whether a child is ready, or not ready, to begin kindergarten. In Minnesota, kindergarten eligibility is based on age. It is not based on what your child knows and is able to do. (MDE, 2022, Kindergarten)

Some students can spell all the color words, other students cannot recognize their names when shown to them. Like all grade levels there is a learning gap within the classroom, however, I feel the starting point entering kindergarten holds one of the largest learning gaps within the Elementary School. As the school year progresses, this range can often widen or narrow as students are catching up to other students who came into the year knowing more have continued to make significant gains.

I have chosen to do my research on the impacts one-on-one interventions have for students' academic success. From my experience, students are intimidated and shy coming into their first year of learning at school. Many students will not comply to whole group instruction because they "cannot do it" or they "do not know how to" complete work, answer questions or work for themselves. It is important for students to feel comfortable and safe in the classroom setting. Providing a few minutes of one-on-one instruction to students will hopefully increase their

learning abilities, relationship with the teacher and comfort level in the classroom and overall tighten the learning gap within a classroom setting.

My research question is, “What impact does one-on-one literacy interventions have on students’ literacy achievement with students who are considered high-risk according to Response to Intervention Kindergarten Benchmarks?” The reason I am conducting this study is to show that a few minutes every single day of one-to-one instruction time with the teacher will have an overall positive impact on a student who was first considered high risk according to Kindergarten Benchmarks at the start of the year. It is my hope to show in this study there is great benefit to one-on-one interventions for students. The significance of this research will not only help my current classroom, but also my teaching in the future, and other teachers who face these problems.

Body of the Review

Context/Overview

Many pieces of literature were reviewed and analyzed to find information on the learning gap amongst students, online resources available and benefits of interventions. The information consists of an overview of each research theme, followed by a deeper understanding of the contents presented in the literature review.

When students enter they, all enter with different background knowledge and prior experiences. Kindergarteners enter the classroom with a variety of different leveled abilities. Like all grades, students in the classroom range from their ability level from one student to the next. It is a classroom teacher’s job to meet each student where they are at based on their ability and needs. The goal of early literacy instruction is for students to develop a strong foundation of reading, writing and oral language (Foorman, Herrera & Dombek, 2017). Students can develop their literacy foundation through a variety of methods based on the way the student learns. The researcher will be teaching whole group as well as small group instruction. However, this researcher will be focusing this study on providing direct

instruction to students who are placed in a one-on-one intervention setting. To teach students individually, the teacher can use the following strategies: varied multiple intelligence lessons, chunking, tiered assignments, differentiated instruction, and cooperative learning groups (Lopez & Schroeder, 2008). Lopez and Schroeder used a variety of grouping a teaching techniques during their research. These researchers worked to promote equity in the classroom, and did so by adjusting their teaching to meet the way students would learn best in their classrooms. Along with varieties of intervention approaches, activities can be used through curriculums, teacher made or technology based. The researcher has found various studies to support one to one interventions.

Theme 1: Assessing Students Starting Point.

Within a classroom, it is possible to have students at all learning levels. Gohman states, “Kindergarten students are a diverse group of children who have a wide variety of skills and abilities” (2021, p 2). Incoming Kindergarten students range from starting the school year as a 5-year-old or as a 6-year-old. Some students have had pre-school, day care experience or have been enrolled in extracurricular activities that involve interacting with kids their age and actively participating in basic academics such as writing their names, coloring, playing with others in stations. Some incoming students have had very limited experiences with peers their age and minimal academic exposure. Kids can come from home lives where they stay at home all day with a parent/guardian or attend a smaller daycare sight. Only children or students with absolutely no experience interacting with peers will enter the classroom with different experiences and at differing levels then students who have been around peers and academics (Gohman & Modrow).

When starting the school year, it is important to get academic baseline data on every student. This baseline data gives the teacher a starting point as to what each student knows coming into the academic year ahead (Lopez and Schroeder, 2008 & Goodson, Wolf, Bell, Turner and Finney, 2011). Incoming school assessments should occur very early, within the first few days of the school year to

give the teacher very accurate findings of what students know before classroom academics begin. While reviewing literature the researcher found a variety of incoming assessments that would be appropriate tools to assess students incoming knowledge. Some of them are described below.

Fastbridge is a universal screener that is research-based and provides monitoring for academics and social-emotional behavior (SEB) with intervention recommendations. While SEB support is of importance, the researcher will be focusing on academic support for this study. A pre-assessment through Fastbridge can be used to gather baseline data on students. In one study, Fastbridge could provide the researcher with student specific interventions based off a student's pre-assessment scores (Folk, 2021). Folk, 2021 clearly identified which grade level standards students had not met based on the pre-assessment. Gathering information from Fastbridge allows teachers to know which students were considered high risk (Folk, 2021). Fastbridge is useful to provide concrete information as to what skills students needed to work on and what skills students have a solid understanding of. Having individualized information on each student's incoming knowledge will assist the researcher onto the next step, interventions.

The teacher should assess with accuracy and consistency amongst all students to ensure the teacher is starting with valid data. Once students have been assessed, the teacher should set obtainable goals early in the school year. These goals for individual students can then frame which one to one interventions are needed for students. These goals or interventions should be reviewed frequently, and updated when necessary (Lopez and Schroeder, 2008). A pre-assessment will give the teacher answers as to what students know. The pre-assessment should then be held on to and filed away for later review throughout the school year, as well as a resource in comparing end of the year post-test assessment data to.

Theme 2: Technology-Based Interventions.

Technology interventions can be engaging for learners. Study done by Radano, found that “that kindergarten students using iPads throughout the school year within reading centers made more progress on average than those using computers, multiple platforms, or no technology in reading centers (2018, p. iv). When using technology in the classroom the teacher needs to be sure to teach first how the technology works. Then allow students to practice using the technology before gathering data to see if the technology programs have improved student’s academic abilities. Technology interventions can give the teacher a large amount of data on how the student is performing. Up next the researcher will brief on a variety of technology-based interventions suitable for elementary student use.

Literacy interventions can be done using technology sources. Technology based learning can be done quickly and efficiently when completed online. When individualized student profiles are created on technology sites, students’ success and academic abilities can be adjusted and fixed to differentiate for student’s needs. “MobyMax's adaptive curriculum creates an individualized education plan for each student, allowing gifted students to progress as quickly as they like while simultaneously ensuring that remedial students get the extra instruction they need” (MobyMax, 2022, Differentiated Learning). Many online sources will fit the need of the user, like Moby Max. If a student is answering questions correctly, with accuracy over and over the computer program can adjust and prompt more of a challenge to the student. If a student is struggling on a given technology program, many programs are designed to fit the needs of the student and adjust to differentiate to that students’ higher risk needs.

While technology applications can be disliked by some teachers, some online programs can be a benefit to students. In the study conducted by Telesman, Konrad, Cartledge, Gardner and Council (2019), a computer program called Reading RACES (Relevant and Culturally Engaging Stories) was used to deliver culturally relevant passages for students to read (2019). Students first listened to a passage being read aloud through headphones and then after hearing the passage read to them, students read the passage back to the computer on their own. Reading RACES tested oral reading fluency when

students read back the passage aloud. This online intervention program also tested student's comprehension on the passages. The results from this study using this technology-based intervention, Reading RACES, showed that three of the five students showed over 200% increase in their reading fluency (2019, p.89). Overall findings from this study were that student's fluency increased more than expected with the support of the technology-based interventions. The goal of one-to-one interventions using technology was successful for these researchers.

Another technology-based intervention used to monitor student academic ability and success is the online program Moby Max. Moby Max allows the teacher to assign specific skills for students to work on. Math, Language, Foundational Reading and Science are just a few of the content specific areas this program offers. Glynn Willett, founder of online source, Moby Max, states "It is gratifying to be commended for our success in helping teachers easily find and fix learning gaps in all K-8 subjects" (MobyMax, 2017). The study done by Geiser-Norgaard (2021), examined the effectiveness of a teacher-led versus a technology-based reading interventions. The technology program used was Moby Max. In this study, the researcher compared achievements from student using Moby Max weekly and another group of students only receiving interventions from the teacher. Data found that students who were in the teacher-led reading intervention group had better results and more growth based on the end of the week assessments versus using the technology-based interventions via Moby Max. Overall, more growth was found from teacher instruction interventions. While this source was not as successful as the researcher had hoped, that does not rule out Moby Max as a useful source in one-to-one instruction differentiation and a useful intervention. Possibly Moby Max could be an alternative or enrichment intervention for teachers to utilize.

Theme 3: One to One Interventions.

One to one intervention can be administered in many ways. The goal of one-to-one interventions, any intervention for that matter, should always be student success. While whole group and small group activities will benefit, students learning, providing students with direct instruction from a teacher on a specific skill will hopefully increase their academic performance, confidence, and student's relationship with the teacher. Katz, Jaudon, Russell and Formby (2017) share examples of possible interventions to be used with students. In their study, they organized several interventions used by the students working in stations (1) using the computer, (2) working with one of the teachers doing guided reading of fiction, (3) working with one of the teachers doing guided reading of nonfiction, and (4) working independently and answering the questions at the end of the book. This study examined multiple types of interventions. Providing options and different styles of learning can benefit student's success in the classroom (2017, p.2).

Five-year study done by Nistler (2022), which occurred during some of the COVID-19 pandemic, found academic achievement results using Multi-Tiered Systems of Supports (MTSS). MTSS is a new and upcoming intervention program that will soon replace many schools already intervention system known as RTI, Response to Intervention. According to Nistler, "MTSS as a framework for supporting students that struggle academically" (2022, p.99). Results did not appear right away within Nistler's study, but overall gains were made within Year Four and Year Five of using the intervention system. "MTSS is designed as a schoolwide system to meet individual student needs through intense and focused interventions and assessment measures. This system is an all-hands-on deck, all school support approach, in working together to meet the needs of students and best support them throughout their educational journey.

Theoretical Framework

The Theoretical Framework that best supports the variable of supporting one to one literacy interventions for students is Educational Equity Theory. Fowler and Brown (2018) dive deep into researching the educational side of Equity Theory in school settings, stating:

Equity theory is one framework that may conceptualize some of the underlying causes of the achievement gap. That is, these issues may not be clearly addressed when educators focus on data indicators that address academic performance solely. Rather, academic performance is the outcome of the student's ability to achieve equity restoration because of the perceived injustice of inputs and outcomes". (2018, p.19)

Providing differentiated instruction to students to meet each student where they are at is following this Theoretical Framework. The researcher will be using the Equity Theory to drive their action research.

Research Question(s)

What impact does one on one literacy interventions have on students' literacy achievement with students who are considered high-risk according to Response to Intervention Kindergarten Benchmarks?

Conclusions

Meeting students where they are at on their academic journey is of much importance. As stated by research, there is a wide variety of resources to pre-assess students at the beginning of the school year. The findings from the pre-assessment should not only drive the teacher's instruction but also show the instructor how large or small the achievement gap is within a group of students for the upcoming year. Providing students who are considered at risk or "low" according to Kindergarten Benchmark Standards, with one-on-one interventions will help them build literacy skills as well as consistency and confidence in their academic abilities. Interventions can be provided directly from teacher instruction or

through online based learning sites. The researcher provided a variety of studies that used different interventions with students to build success.

In the upcoming chapter, chapter 3, the importance for one-to-one interventions will be stated, along with the research question. Chapter 3 will be accompanied with a system alignment as well as a procedures time line. A framework of the research design, setting, participants and overall methods of the research will be covered.

CHAPTER 3

METHODS

Introduction

The study being conducted is to show the impact that one-on-one interventions have on student assessment scores. Interventions are of importance in the Kindergarten level because all students entering start with differing abilities. Not all students are performing at the same academic levels. The goal of this study is to show that when specific skill struggles are identified in students, differentiated interventions can improve student ability and understanding on academic skills through one-on-one interventions.

Research Question(s)

What impact does one on one literacy interventions have on students' literacy achievement with students who are considered high-risk according to Response to Intervention Kindergarten Benchmarks?

Research Design

Quasi-Experimental is the research design being used in this study. This study will show a cause and effect relationship between the dependent and independent variable. The Dependent Variable being, Kindergarten Benchmark Assessment Scores. The Independent Variable being the one-on-one academic

interventions provided to students who struggle based off the pre-assessment. A pretest (winter report card assessments) will be administered to each kindergarten student. This study will look specifically at which students do not meet the Kindergarten Benchmark Academic standards. The research design will either show a positive effect on student's assessments in the spring, after one-on-one interventions have been incorporated or assessment scores will not show growth after the interventions. A controlled group will not be used.

Setting

The study will take place in a Kindergarten classroom within a small Midwest elementary school. This Midwestern town is known for its crop production and annual corn carnival festival where people of all ages enjoy corn on the cob provided free of charge from local farmers. This Midwest town is proud of the elementary school, as parts of the building date back to the late 1800s.

The population of the K-4 elementary school is about 440 students inside the 2,300-population size town. According to the Minnesota Report card, 93% of students attending the elementary school are white, 3.2% (14 students) are Hispanic, and 2.7% of students are two or more races. 16% of students enrolled are equipped with Special Education services. A little over 15% receive Free/Reduced Lunch services.

Participants

The participants were low scoring kindergarteners (5 to 6 year olds) from the same Kindergarten classroom. The study assessed 5 kindergarten students, 60% of the participants were males (3 students) and 20% of the participants were females (2 students). Of the students participating none of these students were special education or English language learning students. 100%, all the students in the study were white. *Likely to change. *

Sampling.

The students selected to participate in this study were students who were considered to be at risk with a low score on the winter assessment, according to the Kindergarten Benchmarks for the school district. This is a purposive study because the students who were considered to be at risk were within the researcher's classroom. The study will take place within the Kindergarten classroom.

Instrumentation

Data collection recording pages have been created by the researcher and Kindergarten team to record the data from each day from the intervention. Each intervention has its own recording sheet to track the data collected daily when the intervention is carried out. The recording instrument was created by inserting a 14 row by 20 column table. There are 20 columns to account for the 20 days the intervention will take place, and 14 rows to record which of the first 13 letter sounds the student knows. There is also a space for the student's name to be recorded as well as which activities will be used within the 20 days to practice the specific skill. The first row (of the 14) is for the recorder to record the date that the intervention took place on. Appendix II shows that the recorder will record how many letter sounds the student knows each day of the first 13 letters. The recording sheet will help to track day to day on how many sounds the student knows. The recording sheet will help to show from day to day if the student consistently gets sounds incorrect or what progress is being made by the student. This recording intervention instrument aligns to the research question as in the objective being that the one-on-one interventions will either show growth or decline in the student's ability to perform on a specific academic skill.

Data Collection.

Baseline data will be collected on each student as well as data from the interventions. Baseline data will be collected by assessing students based off the winter Kindergarten Benchmarks (see Appendix I). Students who fall in the red (high risk) category based off their assessment results will then be provided one-on-one interventions with the teacher to increase their ability on the given academic skill. Data will also be collected on the one-on-one interventions. A recording sheet on each academic skill will be kept for collecting data from each day the intervention is administered. After interventions have been carried out the researcher will look for growth/differences between the pretest (winter assessment) and the posttest (spring assessment).

Data Analysis.

Data from the study will be analyzed based off the differences from the pre-test to the post-test. Descriptive statistics will be used to analyze the data that is given after the research has been completed. Percentages of growth on specific academic skills will be found of each student from the study.

Research Question(s) and System Alignment. The table below (i.e., Table 3.1.) provides a description of the alignment between the study Research Question and the methods used in this study to ensure that all variables of study have been accounted for adequately.

Table 3.1.

Research Question(s) Alignment

Research Question	Variables	Design	Instrument	Validity & Reliability	Technique (e.g., interview)	Source

What impact does one on one literacy intervention have on students' literacy achievement with students who are considered high-risk according to Response to Intervention Kindergarten Benchmarks?	Independent Variable: One-on-One Interventions	Quasi-experimental	Pre-test (Kindergarten Benchmark Winter Assessment)	Chronical absence from students can affect scores on assessment	Assessment Interventions	Kindergarten n students Sample size: 5 students
	Dependent Variable: Kindergarten Benchmark Assessment Scores		One-on-one interventions Post-test (Kindergarten Benchmark Spring Assessment)	Interventions and leave gaps in intervention data collection, which can threaten the validity of the study.		

Procedures

A pretest will be administered to the entire Kindergarten class of 20 students. The assessment testing will take approximately one week, as each student is one-on-one individually assessed on each benchmark skill. Either the researcher or the classroom paraprofessional will collect results from each student on the pre-assessment.

The results from the assessment will be analyzed in comparison to the Kindergarten Benchmarks. The researcher will take the students score on each academic skill and compare that score to “pass” or “fail” according to the Kindergarten Benchmarks. These results will be used on the Term 2 report card for each student as well as drive the need for student one-on-one academic interventions.

Any student who does not “pass” or meet the Kindergarten Benchmark on a skill will receive one-on-one support to hopefully increase their understanding and ability on the academic skill.

A list of academic interventions for each skill will be created as well as which student needs to begin the one-on-one intervention for a given skill. Interventions will begin shortly after the pre-test scores are analyzed (less than a week’s time).

The intervention will be a short activity that works directly on a skill that the student is struggling with. For example, if a student does not understand rhyming words on the formal kindergarten assessment, a differentiated learning intervention on rhyming will be created by the researcher to administer to the student every day. Interventions will last a total of 20 consecutive school days. When students are pulled to work one-on-one they will work with the researcher or the classroom paraprofessional for 1-3 minutes in time total on each skill. Students will not miss out on a lot of whole group instruction, rather they are pulled during work time, read aloud and independent work time. The goal of the interventions done with students is to increase their academic levels on specific skills they previously struggled with by working one-on-one for only a few minutes daily.

After an intervention has been completed for 20 days the student will be assessed again at the end of the school year trimester, in time for grades on report cards. For this study, when the student finished the intervention, they will then be formally assessed on the Kindergarten Skill they just completed. One-on-one interventions are expected to then increase student achievement on the Kindergarten Benchmarks assessments. The researcher will use the post test data to further drive instruction in the classroom.

Ethical Considerations

Students partaking in this study are not at risk of harm physically or psychologically. The students in the study will have no change to their school routine. The wellbeing of the participants will always be greatly protected and considered during this study.

Conclusions

This study was of a quasi-experimental design and its intentions were to gather data on the use of one-on-one interventions in a Kindergarten classroom for students who are considered high risk according to Kindergarten Benchmarks. An explanation on how data will be gathered using a pretest and posttest to measure student data was explained. As well as a breakdown of what exactly the study will carry out as. In the upcoming chapter, chapter 4, the results from the performance of this study will be analyzed.

Appendix II

M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K
J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J	J
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Student Name:

Intervention: Identifying the first 13 letter sounds of the alphabet for 20 days

Activities used:

CHAPTER 4

METHODS

Data Analysis and Interpretation

The purpose of this study was to determine if one-on-one literacy academic interventions can help improve specific literacy skills for students who have previously struggled. Struggling students are not always successful in learning in whole group or small group settings. Learning and having instruction taught in whole group and small group styles can be a struggle for students who are not performing at grade level, academically. Students are assessed on literacy, math and social/emotional skills three times a year (fall, winter and spring). This tells the teacher and paraprofessionals where students need more support and instruction. The purpose of providing students who are performing below average in the classroom, with one-on-one intervention time will provide them with direct instruction on the academic skills they are struggling in.

Data Collection

This study explored the results of the use of one-on-one interventions within a kindergarten classroom. This study compares the 4 kindergarten students who were considered “below average/at risk” on specific literacy skills, after their winter kindergarten benchmark assessment. The students were placed on a consecutive in school 20-day intervention for each literacy skills they scored low on from the kindergarten benchmark assessment. Students worked one-on-one with the teacher for a few minutes each day to improve their academic ability on the literacy skill they struggled with. I collected data every day during the intervention time with the student between ___dates____. All participants were in the same kindergarten class. 2 students were female, and 2 students were males. The researcher used a purposive sample, the study was

One-on-one Interventions Action Research

comprised of students in their class. All the students attend the same elementary school. The researcher studied the effects one-on-one interventions had on the student's academic abilities after the 20 days of interventions.

Research Question

The research question is:

What impact does one on one literacy interventions have on students' literacy achievement with students who are considered high-risk according to Response to Intervention Kindergarten Benchmarks?

Figure 4.1

Rhyming intervention scores

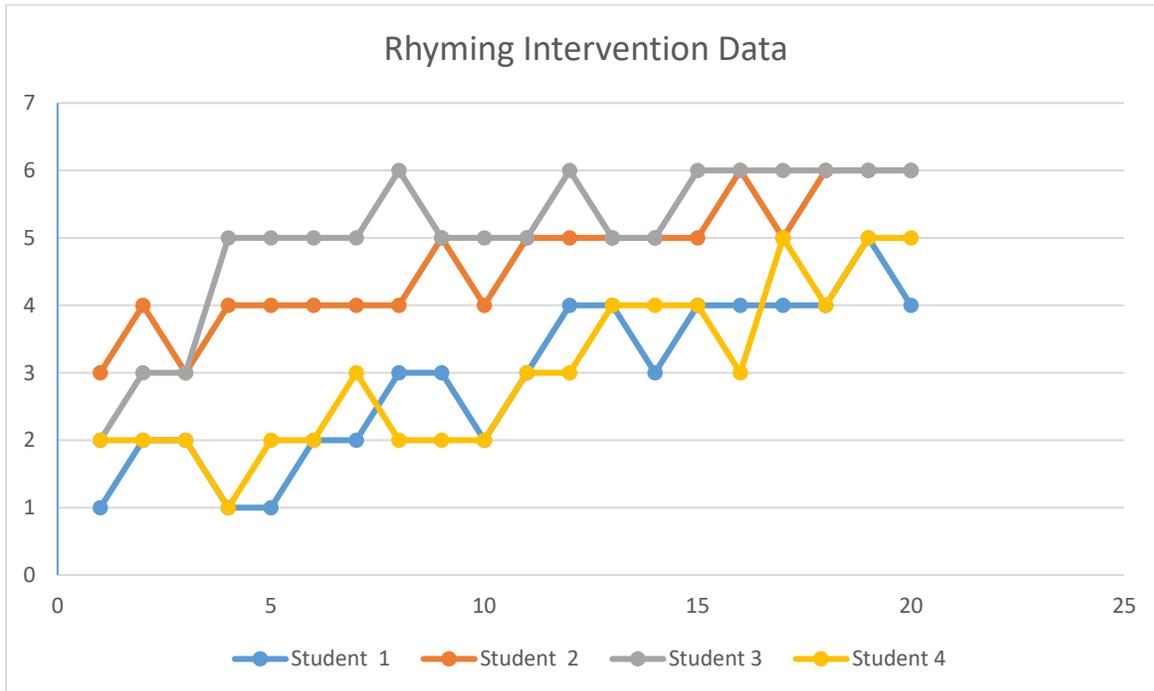


Figure 4.2

Rhyming Kindergarten Benchmark for March Report Card

Language and Literature		
Skill	Red	Green (+)
	Yellow (-)	
Identifies words that rhyme (auditorally/verbally)	0-2	5-6
Teacher gives words and student has to identify rhyming word (see list)	3-4	

Data Analysis

Baseline Data

Lopez and Schroeder, 2008 & Goodson, Wolf, Bell, Turner and Finney, 2011 agree that taking incoming data on students is important, as all students entering the class room have differing abilities. At the start of the year, in the fall, students were assessed on many literacy, mathematic as well as social emotional skills. Students are assessed again in the winter, as well as the spring. I have taken baseline data from the winter assessment (administered in late February and into early March) to drive my research. I did not know what to expect for incoming data or results of the study, as kindergarten students have a wide range of academic ability. As shown in figure 4.2 students are assessed on different skills. Students are assessed on Social Emotional Development, Language and Literature, Math Concepts and Physical Development Skills. My research has narrowed in on Language and Literature, specifically student’s ability to rhyme.

High-risk Students

In figure 4.1, the data shows that 4 students were assessed on 6 rhyming questions. According to figure 4.2, a student to be considered “at grade level” or in the “green”, they needed to answer at least 5 out of the 6 questions correct. The four students did not answer at least 5 rhyming questions correct, therefore, these four students were not considered to be at

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grade level. Rather these students are “at risk” in the red and yellow non-passing zone for rhyming in literacy.

One-on-one Literacy Interventions

These four students were not answering rhyming questions at grade level standard. Right away these four students were put on a Rhyming intervention. For 20 consecutive, in person school days, these students were pulled for 1-3 minutes to complete intervention assistance on rhyming. One at a time the student came to work with me at my table. The intervention started with a quick game. A variety of games were used to keep students engaged and motivated to keep up with the intervention. One example of a rhyming intervention game was matching pictures. For example, a student would pick up a picture of a cat and match that picture with bat because they were a rhyming match. One other rhyming intervention game played was rhyming bingo. After the student played a rhyming game for a few minutes they were quickly and informally assessed on 6 rhyming questions. I gave the students a set of 3 words, such as “cat, hat, mop” and the student needed to report back to me which 2 out of the 3 rhymed. In figure 4.1 each student’s data was tracked on how many correct pairs of rhyming words they identified.

Students’ Literacy Achievement

My study showed that using one-on-one interventions for 20 days did increase student’s academic ability to rhyme. Having the repetition of playing rhyming games and being informally assessed help all the students increase their knowledge and ability. In figure 4.1 students show a gradual increase of correctly answered questions over the 20-day period. Students ended with answering at least 5 of the 6 rhyming questions correct which would then place them in the green, “passing” category according to Kindergarten Benchmark Assessments, figure 4.2.

Recommendations for Future Research

The researcher understands that the results of action research are relative only to the setting in which it took place, which is a limitation of the generalizability of the study. The next steps to further research on one-on-one interventions will be to perform another study on a different skill, such as reading sight words in context or rote counting. Another step to solidify results would be to expand the population of students to those in other kindergarten classes taught by other teachers, as well as other school districts. There would be more concrete conclusions if the studies kept showing the same results. If the researcher were to do this study again, she would start the study at the beginning of the academic school year. The researcher would take the incoming knowledge of students, place them on corresponding interventions where they need support and prepare for further research.

Conclusion

The study followed anticipated results suggested by related literature. Certainly, student results and outcomes were unknown. The literature had strong positive findings on one-on-one interventions with early learners. One-on-one interventions were founded to improve student performance, and this study found that students had successful impact from the repetitive intervention time. The literature suggested that students' academic performance would increase which was consistent with the findings from this study.

CHAPTER 5

IMPLICATIONS FOR PRACTICE

Action Plan

After carrying out this research, one-on-one interventions do have a successful impact on students' academic success. Looking first at the Kindergarten Benchmark Scores, and then at the progress students made because of one-on-one intervention time, students scores and ability gradually increase after 20 day of repeated practice. The researcher believes that allowing students to have individualized time to work directly with an instructor student's success and confidence will increase. Students seemed to have deeper levels of understanding when they repeatedly worked on the same academic skill. Students who struggle with specific academic skills do benefit from working one-on-one with an instructor to improve their understanding. Giving students repeated instruction helps them over and over to make connections and build their knowledge.

The researcher plans to continue using one-on-one interventions in the classroom. The first hour of the school day the classroom Kindergarten paraprofessional will pull students one at a time to work for a few minutes on the exact skill they struggled on from the Kindergarten Benchmark Assessment. The interventions students will be on will be based off the Kindergarten Benchmark scores. Any student not "passing" a literacy or mathematic skills will be placed on an intervention. The intervention time will be continued to only be between 2-5 minutes. The data will also continue to be tracked for 20 days.

Plan for Sharing

One-on-one Interventions Action Research

Because the researcher works in an elementary setting where collaboration and professional learning communities are valued, she will be sharing the information and data from this process with her colleagues. While the Kindergarten grade level does all use common interventions, working together to have more similarities than differences within our interventions will be more successful for the next year's first grade teachers. School wide a common system of interventions and data recording information would be impactful to our school.

REFERENCES

- Folk, Brittany, "Effects of Small Group Math Interventions for Math Achievement" (2021). Dissertations, Theses, and Projects. 620.
- Foorman, B., Herrera, S., Dombek, J., Schatschneider, C., & Petscher, Y. (2017). The relative effectiveness of two approaches to early literacy intervention in grades K–2 (REL 2017–251). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southeast. Retrieved from <http://ies.ed.gov/ncee/edlabs>.
- Fowler, D. J., & Brown, K. (2018). Data-Driven Decisions: Using Equity Theory to Highlight Implications for Underserved Students.
- Geiser-Norgaard, Shelby, "The Effectiveness of Teacher-led versus Technology-Based Reading Interventions" (2021). *Dissertations, Theses, and Projects*. 615.
- Gohman, Toni, "Kindergarten Teachers' Perceptions about the Language and Literacy Skills of Their Students" (2021). Dissertations, Theses, and Projects. 507.
- Goodson, B., Wolf, A., Bell, S., Turner, H., & Finney, P. B. (2010). The Effectiveness of a Program to Accelerate Vocabulary Development in Kindergarten (VOCAB). *Kindergarten Final Evaluation Report*.
- Katz, Anne Ph.D.; Jaudon, Deborah; Russell, Danielle; and Formby, Jennifer, "Literacy-Based Action Research: Strategies for Improving Student Achievement" (2018). National Youth-At-Risk Conference Savannah. 118.
- Learn Without Limits. (2022). *Fix learning gaps*. MobyMax. Retrieved October 18, 2022, from <https://www.mobymax.com/curriculum/overview>
- Lopez, D. M., & Schroeder, L. (2008). Designing Strategies That Meet the Variety of Learning Styles of Students.
- MobyMax Named SIIA Education Technology CODiE Award Finalist For Best PreK/Early Childhood Learning Solution And Best Cloud-Based Solution. (2017).
- Nistler, Sonia, "A PROGRAM EVALUATION OF THE MULTI-TIERED SYSTEM OF SUPPORTS (MTSS) AND ITS ROLE IN SUPPORTING STUDENTS' READING AND MATH PERFORMANCE DURING THE COVID-19 PANDEMIC" (2022). Dissertations, Theses, and Projects. 721.
- Services, E. L. (2022). Kindergarten. Retrieved October 18, 2022, from <https://education.mn.gov/mde/fam/k/#:~:text=Children%20are%20eligible%20to%20be,sc reening%20through%20their%20school%20district>

Telesman, A. O., Konrad, M., Cartledge, G., Gardner, R., & Council, M. (2019). Preventing Reading Failure for First-Grade Students in an Urban School. *The Journal of Special Education*, 53(2), 85–95. <https://doi.org/10.1177/0022466918806494>

Https://Press.mobymax.com. Retrieved 2022, from <https://press.mobymax.com/mobymax-named-siia-education-technology-codie-award-finalist-for-best-prek/early-childhood-learning-solution-and-best-cloud-based-solution>.