



Fall 12-15-2022

More Time to Play? A Study on Free-Play and its Effects on Behavior and Academics in School

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More Time to Play? A Study on Free-Play and its Effects on Behavior and Academics in School

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A Quantitative Research Methods Proposal

ED 696

Action Research

Master of Science in Curriculum and Instruction

Minnesota State University Moorhead

June 2022

ABSTRACT

Over the two-week study, the researcher collected data on how students' academic growth and social-emotional behaviors were affected between having free-play and academic work during independent time. To study two dependent variables, the researcher asked two research questions: Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (how do test scores change when students engage in free play versus independent academic work)? Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons? The participants of the study were 5- and 6-year-olds in the researcher's kindergarten class. An AB model was used to alter the independent variable week to week. During the A week, the students would have academic work to complete during independent time; during the B week, the students had free-play time. The participants were tested on their letters/sounds at the beginning and end of each week, and the number of times the researcher had to stop teaching to redirect a student or students was tally-marked on a table. The results of the study concluded that without social-emotional skills, students were not ready and able to learn.

Keywords: kindergarten

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CHAPTER 1

INTRODUCTION

Introduction

Educators are professionals with many responsibilities, some of which include planning, teaching, problem solving, grading, and communicating with parents. The responsibilities do not stop there and they are not simple, low stress responsibilities. Educators also often differentiate their lessons to meet their students' needs, sit on the floor to help children calm down after meltdowns, create games and activities to engage all students, and spend time worrying about state testing.

Teachers use state standards to know what academics to teach, but they do not have standards to teach non-academic skills such as social, emotional regulation, and communication skills. They help students learn skills that will be essential not only in the classroom but in life. One essential skill kids develop is how to work and play with peers. This skill needs to be practiced, not just taught. Students need time to play with others to be able to grow and develop social skills. They need time to choose their activities, they need space to use their imaginations, they need tools to be able to work with each other. Recess and free-play time are the times in a school day where students are allowed to make all decisions on their own. They choose who to play with, and what to play. There are still questions around if students are receiving enough of this time in their school days to ensure they are able to develop, grow, and learn.

Brief Literature Review

Aviles et al. (2006) and Pellegrini and Bjorklund (1997) stated that students need to have social-emotional development to be ready to learn at school. If students came to school less

developed than they should have been for their grade level, the student would typically have a much more difficult time paying attention, learning, and getting along with others (Aviles et al., 2006). Severe lack of development of social-emotional skills often led to incompleteness of high school and a more likely chance of being arrested within the first five years of being out of school (Aviles et al., 2006). Literature also stated that recess or free-play time was positively related to academic growth. Students' attention, and working memory improved after the break (Barros et al., 2009; Erwin et al., 2019; Pellegrini & Bjorklund, 1997).

Statement of the Problem

Teachers around the country have used many different classroom management styles and still dealt with intense student behaviors and worry about appropriate academic growth. The researcher worked at a very diverse school. Most of the students lived in underprivileged households. Guardians were working long hours and the children's opportunities for community activities were few and far between. The students came to school because it was a safe place for them to learn, build a community, and engage with others. Many of the students lacked emotional regulation skills because they did not have a role model showing them effective ways to regulate their emotions in their homes. They were also not receiving academic help at home. To be effective educators, the staff at the school had taken a large focus on figuring out factors it could control and factors that it could not control. Majority of a student's home-life was something the school could not control. Daily schedules and how professionals engaged with students were two factors the school could control. Because many of the students did not have ample opportunities to engage with peers outside of school, the researcher worried that the push for academics was outside students' social-emotional capacity. Without time to practice playing with peers and creating their individuality in schools, students would potentially be losing out on

a lot of learning. When students had more time to initiate their own learning, they would be more successful socially, emotionally, academically, and behaviorally.

Purpose of the Study

As a huge advocate for mental health in children and adults, the researcher had spent many hours thinking about how she could help students be successful in our ever-changing world. As a fairly new teacher, she had been learning and experiencing a few different daily schedules. The researcher was curious as to how the amount of free-play students had during their school day to interact with peers or partake in an activity of their own choice affected their social-emotional skills. Vygotsky (1987) stated in his theory that children learn through play. When the school systems take play time away from children to spend more time on academic lessons, they are taking away the opportunity to grow and learn in the most natural way. The study was conducted to test two dependent variables: academic growth and regulation during the school day. They were both connected to how much recess and/or free-play time students had during the school day.

Research Question(s)

- Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (how do test scores change when students engage in free play versus independent academic work)?
- Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons?

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

- Independent Variable: The amount of recess and free-play during a school day. Recess is time spent with free choice outside. Free-play is time in the classroom when students have non-academic choices.
- Dependent Variable A: Scores on students' letters and sounds assessments.
- Dependent Variable B: Students' attention during academic lessons. The variable was to record how many times the teacher needs to stop teaching to redirect students (verbal or nonverbal) who were off task or to help a student who needed emotional regulation.

Significance of the Study

The study conducted was important because it benefited the researcher's understanding of students' social-emotional development and how that affected their learning. The researcher learned how much time devoted to students as free-play is the most affective for academic success as well as long-term social-emotional development. Without this knowledge, teachers were unknowingly creating more problems in their classrooms and straining children's efforts to be able to use working memory which was needed to learn (Barros et al., 2009; Erwin et al., 2019; and Pellegrini & Bjorklund, 1997).

The study provided the researcher with insight on how her class learned best. When behaviors during lessons decreased because of the amount of choice time students had, the teacher was able to teach lessons more effectively (not stopping to redirect students then resuming the lesson). The more effective the lessons were, the better the students would learn.

Research Ethics

Permission and IRB Approval. In order 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 taken place (See Appendix E and F).

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 C) 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 (See Appendix D) (Rothstein & Johnson, 2014). Confidentiality will be protected through the use of 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 writing.

Limitations. Limitations of this study include:

- All students and classes are different. This study showed the effects of play-time for one specific class, not the general population of primary students. A study with a larger population would be able to give a greater idea of the effects of play-time in kindergarten classrooms.
- The short time frame of the study did not allow the researcher to study how the amount of recess and free-play time affected children's long-term social-emotional development. The researcher only looked at the immediate social-emotional concerns in the research. A longer study would have to be conducted to gather information on long-term growth.

Conclusions

In conclusion, this study was beneficial to both students and teachers. It eased teachers' stress about how much time students should spend working versus playing in primary grades, specifically kindergarten. The study helped students by benefitting their school environment and making alterations, when needed, in the schedule to enhance children's learning in accordance to their social-emotional development. The study was conducted for two weeks, one with recess/play-time during small group time and one with academic activities during small group lessons. The dependent variables being tested were academic growth and student need for adult support during social-emotional problems. Research stated that to be able to learn, students needed to have a certain development of social-emotional skills (Aviles et al., 2006; Pellegrini & Bjorklund, 1997). This study reenforced the research and added more to the conversation of recess/free play. As the study was being conducted, students were tested each week and the number of redirections the teacher made were documented by morning/afternoon each day. Confidentiality was be upheld throughout the entire process.

CHAPTER 2

LITERATURE REVIEW

Introduction

For years, educators have debated on the importance of recess during the school day. Many people may have also noticed that poor behaviors in classrooms were prominent in all schools, and because of the COVID-19 pandemic, young students were more likely to have underdeveloped social/emotional skills when entering school for the first time. The problem: students were lacking social/emotional skills to be successful in elementary schools was studied and the research was reviewed in this section. Underdeveloped social/emotional skills caused a variety of behaviors that take away from students' learning including physical aggression and lack of coping skills. The problem had to do with how students socialize with their peers. The researcher worked toward finding a solution to the problem by asking the following research question: how does the amount of recess/free play affect student behaviors in accordance with their social/emotional skills?

Social-Emotional Development Need in School

The question stated above: "Does the amount of free play/recess have an effect on students' social-emotional skills and behaviors during academic lessons?" provided the researcher a vast subject to study. Social-emotional development became a reoccurring topic in education because it became a more prominent factor in education since the COVID-19 pandemic started in 2020. Aviles et al. (2006) and Pellegrini and Bjorklund (1997) referenced that healthy social-emotional development was needed to be prepared for school. That meant: without social-emotional skills, students would not be not ready to learn. Parents, caregivers and teachers were responsible for students' social-emotional growth (Aviles et al., 2006; Gadaire et

al., 2021; Thümmeler et al., 2022; Zweers et al., 2021). When parents poorly modeled emotional regulation, kids were more likely to struggle with it (Thümmeler et al., 2022). In school, students have been expected to negotiate and function (Aviles et al., 2006). Problem solving, working with peers, regulating emotions, and building stamina are just a few examples of everyday skills that have been practiced in schools. Thümmeler et al. (2022), found that after watching a clip with a scary or stressful scenario, most typically developing 5-year-olds were able to distinguish what strategies would be helpful in regulating one's emotions during it. Some students did not come to school having that developmental growth. It has been essential that schools help students who are underdeveloped in social-emotional development because of the importance for long-term health and well-being (Ciman & Ofiesh, 2021; Gadarie et al., 2021; Pellegrini & Bjorklund, 1997; Pellegrini & Bohn-Gettler, 2013; Ridgers et al., 2012; Thümmeler et al., 2022). It was found that the more play time kindergarten students have there are more chances to practice social skills. A better education also leads to fewer psychological problems later in life (Andrade, 2019; Zweers et al., 2021).

Benefits of Social-Emotional Practice in School

Schools provide many services to students for social-emotional growth. They have been a place for students to experience and discuss their emotions (Beard, 2018; Thümmeler et al., 2022). Schools provide formal services such as counseling and informal services such as positive social interactions with peers and trusted adults (Aviles et al., 2006). When conflicts arise between students, teachers are there to help guide students or mediate social misunderstandings to come to an understanding and provide social-emotional strategies (Andrade, 2019; Ciman & Ofiesh, 2021; Thümmeler et al., 2022). Schools also have worked with parents/guardians to ensure each student is in the best fit place for him/her. Students with disabilities have sometimes been placed

in schools with peers similar to them; sometimes students with disabilities are able to function well enough in a general education setting. In a study conducted by Zweers et al. (2021), it was found that students with larger social-emotional and behavior problems (lack of regulating skills) tended to have less problems when they were included in the general education setting rather than a special education setting. Observing and interacting with their peers helped students learn skills of self-regulation and communication.

Social-Emotional Concerns

In another study, it was found that 22% of students with serious emotional disturbances (SED) were arrested before they left school, only 42% of youth with SED graduated high school, and 48% of youth with SED were arrested within five years of leaving school (Aviles et al., 2006). Aviles also stated that serious emotional disturbances were not a disability but a title over many different social-emotional problems: the inability to learn that cannot be explained by intellectual, sensory or health factors; the inability to build and/or maintain relationships with teachers or peers; inappropriate behaviors or feelings under “normal” circumstances; depression; and the tendency to develop physical symptoms or fears associated with personal or school problems. To help students develop their social-emotional skills, teachers had to work to have positive teacher/student relationships. These crucial relationships helped students adjust to their classrooms and school life as well as increase their academic performances (Aviles et al., 2006; Nemer et al., 2019; Zweers et al, 2021).

Recess and Behavior

There are plenty of studies that expressed recess or play breaks are important for students’ social-emotional development, but there was also a question about how recess or play

breaks affected student behavior and academic growth. To gather information about behavior in schools, a variety of studies were found and looked at. Nemer et al. (2019) conducted a study on teachers' attributions for challenging student behavior and came up with an important point: teachers' understandings of students' behavior affected how they reacted to it. When teachers knew the underlying factors of students' behaviors, it resulted in more compassion and understanding leading to teachers reacting more calmly while helping students grow and learn rather than punishing due to their behavior. The idea of teacher knowledge also was highlighted in a similar study by Gage et al. (2018). Students tended to be more engaged in instruction when teachers had better classroom management. Another study, conducted by Owens et al. (2018), indicated that there were more behaviors when teachers were very specific with their praise – for example saying *I like how you are sitting nicely* rather than *good job*. It was also noted that this type of acknowledgement from teachers meant they were aware of how students would commonly misbehave and how to proactively stop behaviors (Owens et al., 2018).

The relation between in-class behaviors and the amount of recess was actually not a positive one (Beard, 2018). One recess in the school day was typically shown to have the best effect on student behavior. Erwin et al. (2019) conducted a study on doubling recess in school (one 15-minute recess compared to two 15-minute recesses) and the results were that the number of discipline referrals increased when a school had two recesses. The quality of recess was also found to be a factor in behavior referrals. When the quality of recess was low, it actually increased behaviors in the classroom (Massey et al., 2021). The same study (and multiple others) showed that recess was also a time where bullying, victimization, and exclusion occurs (Ayda & Güneyli, 2018; Beard, 2018; Lodewyk et al., 2020; Massey et al., 2020; Massey et al., 2021).

Recess and Academic Growth

The connection between recess breaks and academic growth was the opposite of behavior referrals. Barros et al. (2009), Erwin et al. (2019), and Pellegrini and Bjorklund (1997) found that after a recess break, students' attention, and working memory improved. Even though Erwin's (2019) study showed two recesses increased student behaviors, it also indicated that two recesses improved students' math test scores. A study by Pyle et al. (2018) examined how literacy growth through play was developed. The conclusions were inconclusive because the study found there were difficulties for teachers in this area which included: less structured play was more difficult to plan, and implementing guided-play proved to be difficult. Another study conducted a few years later presented that informal play had a positive influence on communication and social-emotional development (Ciman & Ofiesh, 2021).

Theoretical Framework

Vygotsky's sociocultural theory viewed human development as a social process where children acquire problem-solving strategies through collaboration. School has been a common place for students to engage in that collaboration and strengthen their skills. In primary grades, children used pretend play to engage in social situations they were interested in. Without time to engage in choice activities, students were unable to develop essential self-regulation and social skills (Colliver & Veraksa, 2021).

Vygotsky's theory was crucial to understand for the study conducted. The researcher had to acknowledge the developmental process for kids' social-emotional skills to enhance how the study was created. To study the idea of free-play time, the researcher used Vygotsky's theory to create an independent variable. The alteration of the variable between free-play and academic work allowed the researcher to understand how Vygotsky's theory was an important theory on how students learn.

Research Questions

- Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (how do test scores change when students engage in free play versus independent academic work)?
- Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons?

Conclusions

Some key points noted in the literature were: school has been a place for students to engage in social-emotional development, recess and/or free play allow for students to practice social-emotional skills, behavior referrals have increased with more than one recess break during a school day, and academic growth has increased with more recess/free play breaks. These findings guided the researcher's thinking to ask why behaviors increased with more play breaks when students are practicing more social-emotional skills which should be helping them lessen behaviors in the classroom. The research was conducted to study students' academic growth compared to free-play time as well as student behaviors compared to free-play time. The study conducted was slightly different than previous studies because the researcher was comparing large blocks of free play with independent academic work. Past research found students faced bullying during recess blocks, but the current research study was completed to see if the shorter, more frequent blocks of free time change the behaviors of students during play and instruction time. The study, more thoroughly explained in the next chapter, impacted professional practices because it gave the audience the insight of a less widely used teaching schedule. The study allowed teachers of young students to contemplate altering how they plan their days filled with instruction and play.

CHAPTER 3

METHODS

Introduction

The typical age range for a kindergarten student varies between ages four and six years old. These students attend school, sometimes for the first time, to learn and interact with peers, which allow them to grow physically, emotionally and academically. They learn through play and with hands on activities (Vygotsky, 1987). The alphabet and beginning reading skills are taught during the kindergarten year as well as counting, number recognition, simple addition and subtraction as well as many other standards (Department of Education, 2022). Social-emotional skills are taught and practiced including teamwork, emotional awareness, and emotional regulation.

Students attend school for about 6-6.5 hours a day. It is during this time that students can learn with peers outside of their neighborhood and receive direct and explicit instruction and feedback from professionals. The research conducted was to gather information about how best to use the time spent in school.

Research Question(s)

- Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (how do test scores change when students engage in free play versus independent academic work)?
- Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons?

Research Design

The research design for this study was correlational. The researcher collected data on two dependent factors: student letter recognition and teacher redirection. The independent variable was how much free-play time students had during their school day.

Students received two outside (weather permitting) recesses daily. The independent variable was a measure only of how much free-play time students received beyond those daily recesses. During the morning literacy block and afternoon math block, the teacher conducted small groups for up to an hour each. For one week (A week), students were given academic work (focused on the large group learning target) to work on independently while the teacher pulled small groups to her table. The other week (B week), students were given the time while not in a small group with the teacher to have free-play in which they could choose from a selection of academic and non-academic activities/toys/games to engaged in. The week of academic activities and free-play time were placed in an AB order.

The study had two parts because there were two dependent variables being studied. Academically, the correlation was looked at weekly. Students were tested at the beginning of the week (which letters were being taught/had previously been taught) and at the end of the week. The number of letters known was documented. The researcher compared students' growth between the week with academic work and the week with free-play time. The second part of the study was to find a correlation between free-play time and social-emotional and behavioral regulation during academic lessons. The data was collected daily and averaged for each week. The teacher counted how many times she had to stop teaching to redirect a student either verbally or nonverbally.

Setting

The study took place in a public elementary school in a suburban city in the Midwest region of the United States. The population of the city was about 67,000 and was growing at a rate of 1.22% annually. The average household income was 93 thousand dollars and the poverty rate was 5.8%. The demographics of the town were 72.9% White, 10.1% Black or African American, 8.9% Asian, 5% Hispanic, and 3.1% two or more races. The town was known for its trees, and recreation areas. The population of the school was just under 600 students. The demographics of the school were 65% Black or African American, 20% White, 5% Hispanic, 5% Asian, and 5% two or more races. 15% of students who attended the school lived in poverty. The school had a focus on leadership and environmental science. Students were in classes ranging from 16 to 20 students.

Participants

The participants in the study were 60% male, 40% female, ranging from 5- to 6-years-old. The races of the participants were 40% White, 33% Hispanic, 24% Black or African American, and 3% two or more races. 60% of students received Free/Reduced lunches, and 40% of students came from a single-parent household. 1% of the participants were on Individualized Education Plans.

Sampling. The subjects of the study were chosen through convenience sampling. Convenience sampling was the type of sampling where members are easily accessible (Etikan et al., 2016). For the given study, the subjects were the students in the researcher's kindergarten classroom. The researcher used these students for the convenience of being with the students every day and the ability to test each student independently. The researcher also chose the

students in her kindergarten class because the study was to research the effects of free-play on academic and behavior growth; students from a higher grade level would not have been the correct population for the study.

Instrumentation

The instruments used in the research were letter assessments (see appendix A) and a table to collect tally marks of redirections the teacher made (see appendix B). The instruments were created by the researcher. Simple assessments of letters and sounds allowed for the teacher to assess all her students quickly at the beginning and end of each week. The assessment had the letters being taught during the week and letters that had been previously explicitly taught. The instrument had content validity: the letters on the assessment corresponded with the letters taught in the curriculum at the school where the study was held; construct validity: the assessment was a direct correct/incorrect assessment and the documentation was composed with numbers, not opinions. The same assessment was used for a pre- and post-test each week, but as the curriculum added letters, the assessment added letters each week. The data showed how many letters and sounds each student knew/learned. The data showed if there was a correlation, positive or negative, with the amount of free-play time students had during their school days.

The instrument created by the researcher for the collection of redirection data was a simple table to document how many times she had to stop teaching to redirect students verbally or non-verbally. The table was a simple, manageable way for a teacher to document her actions and use the data to decide if there is a correlation between the amount of free-play time to the number of off task behaviors or social-emotional disruptions. The instrument had content validity: the researcher had specific redirections that she could mark which she brainstormed with the help of other kindergarten teachers at her school; and construct validity: the table, with

explicit prompts of what could be counted as a redirection, allowed for numerical documentation. Both instruments used in the study allowed the researcher to test for correlations in the data.

Data Collection. Data was collected in two ways. The teacher (researcher) assessed students one-on-one with the quick letter and sound assessment. The teacher used flashcards at her table to assess each student. She documented what letters and sounds the student answered correctly. Then the researcher totaled how many correct answers each individual student had at the beginning and end of each week. The number of letter/sounds growth (from beginning of the week to the end of the week) was used to compare week to week.

To collect data on redirections, the teacher (researcher) tally marked how many times she stopped teaching to redirect or help a student with a social-emotional problem. She kept her table close to her while teacher or used a sticky-note to jot down redirections then would transfer the tally marks to the table in a timely manner. The researcher chose to collect data this way because it was an easy collection to take as she was teaching. The numerical data was easily used to compare daily differences as well as week to week.

Data Analysis. Quantitative data was gathered; therefore, the data was summarized in a numerical sense. The data found for students' letter recognition was summarized using the mean number of letter growth for students each week. The number of letters they knew at the end of the week minus the number of letters they knew at the beginning of the week. The mean was calculated with only the students' scores who attended school at least four days each week. The average scores were analyzed to see if the A week was higher, the B week was higher or if there was no trend.

The data collected on redirections was summarized in a similar way. The teacher (researcher) averaged the number of times she had to stop teaching each day to redirect a student verbally or nonverbally. She totaled the tally marks for each day and used those totals to find the weekly average. The averages of each week were compared and analyzed to find correlations between social-emotional behaviors and academic work/free-play time during independent time.

Research Questions and System Alignment.

Table 3.1.

Research Questions Alignment

Research Question	Variables	Design	Instrument	Validity & Reliability	Technique (e.g., interview)	Source
RQ1: How does free play and/or recess in schools affect students' capacity to learn (are test scores higher when students engage in free play versus independent academic work)?	The amount of free-play time students had during the school day. The growth students had on learning letters and sounds each week.	AB correlation design	Letter and sound assessments to collect data pre- and post-teaching.	The assessments used were the same at the beginning and end of each week. The assessments were also conducted at the same time of day. The assessments were only focused on letters and sounds to ensure the correct data was being gathered.	Assessment	Researcher created.
RQ2: What effect does the amount of free play/recess	The amount of free-play students	AB correlation design	A table used to tally mark how many	The table had clear guidance as to what	Table that the teacher filled in.	Researcher created.

<p>have on students' social/emotional skills and behaviors during academic lessons?</p>	<p>had during the school day. The number of redirections the teacher had to stop teaching to make for behavioral or social-emotional needs.</p>		<p>times the teacher stopped teaching to redirect or help a student.</p>	<p>could be considered to mark down as a redirection or stopping of teaching. The table was reliable because it was broken down by day so the researcher could study how many times the teacher had to stop teaching to ensure students were following expectations. The table was a simple tool for the researcher (teacher) to use throughout the two weeks of the study.</p>		

Procedures

Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (are test scores higher when students engage in free play versus independent academic work)?

On the first day of the study, the researcher (teacher) conducted a pre-assessment of letters and sounds for her students individually. This assessment was done in the morning before any lessons were taught and was conducted with flashcards of the letters of the alphabet. The data for each student was tracked on the assessment (see appendix A). For the week (A week), the teacher taught large group lessons each day based on the standards and curriculum that her school provided. She then assigned academic work for students to do while they had independent time during the small group lessons block each day. The academic work, including worksheets, academic games, independent reading etc., was developmentally appropriate and gave students practice on the skills they were learning in large group lessons. On Friday morning of week one, the researcher individually tested students again. The same flashcards were used (in random order) and data was collected on an identical assessment sheet.

The second week of the study (B week) was when the independent variable changed. The pre-assessment was administered in the same way at the same time as A with the same assessment (see appendix A). During the small group block of time, instead of academic work, students were given free-play time where they could choose what they wanted to do. Choices included academic games/choices such as reading, letter games, and a writing center, as well as non-academic choices such as blocks, dramatic play, arts and crafts, etc. Large group lessons were taught in the same manner to ensure there was only one independent variable. On Friday morning of week B, the post-assessment was conducted individually again. It was completed the same way, with flashcards in a randomized order and data was documented on an identical form as earlier in the week. At the end of week two, all the data was analyzed and trends were searched for.

Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons?

The procedures for research question two followed the same AB pattern as research question one. Prior to the study beginning, the researcher collaborated with her colleagues to create a list of redirections that would count toward tally-marking. She included that list just below the table she marked the redirections on (see appendix B). The list helped her keep consistency on what redirections she was counting. For the entirety of the study, the researcher kept the table near her so she would be able to mark down every time she had to redirect students for the specific reasons stated. She drew the tally marks as discretely as possible to avoid the action to become a trigger to students. At the end of the two weeks, the researcher analyzed the data and looked for trends between the A week and the B week.

Ethical Considerations

To protect the wellbeing of the students in the study, the researcher guaranteed that students' assessment scores were kept confidential and the marking of the redirections was kept off to the side to ensure students were not aware or left to feel singled out as she marked it down. Students were not withheld from all play-time during week A because they still were given two outdoor recesses.

Conclusions

In conclusion, this chapter laid out the study that was conducted. There were three variables: two dependent and one independent. The independent variable was the amount of free-play time students had during the school day. The two dependent variables were academic growth in letters and sounds, and the number of times the teacher had to stop teaching to redirect a student or help with a social-emotional or behavior problem. The researcher ensured students

were not harmed by the study or the gathering of data in any physical, social or emotional way. The study lasted two weeks with an AB template of changing the independent variable. The data collected was summarized numerically by computing averages weekly. The summarization helped the researcher find correlations between the independent variable and the dependent variables. In the next chapter, the results of the study will be summarized and explained.

CHAPTER 4

RESULTS

Purpose of the Study

The study was conducted to find the effects of different amounts of free play in primary level grades. Students were given a week of academic work during independent learning time and a week of free play during independent learning time. The researcher gathered data on academic growth as well as the number of redirections given to students while the teacher was teaching. The data was collected through individual assessments at the beginning and end of each week and a table with tally marks.

The study was focused on two research questions. Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (are test scores higher when students engage in free play versus independent academic work)? Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons?

Research Question 1: How does free play and/or recess in schools affect students' capacity to learn (are test scores higher when students engage in free play versus independent academic work)?

The data collected for research question 1 was students' knowledge of letter identification for capital and lowercase letters, and the most common sound each letter makes. Students were tested individually with standardized flashcards and the results were documented on an assessment sheet. Students' scores were then added to a table and the number of letter identifications/sounds students answered correctly were added together to create a class total.

Notice on Table 1, the class knew 160 capital letters, 156 lowercase letters, and 157 letter sounds on the first day of the study (Week A pretest). At the end of week A, students correctly identified 178 capital letters, 173 lowercase letters, and 174 letter sounds. The numbers slightly decreased after students had a weekend break. The Week B pretest resulted in 175 capital letters, 167 lowercase letters, and 173 letter sounds known. At the end of week B, students knew 180 capital letters, 172 lowercase letters, and 177 letter sounds.

Table 1

Correct Letters and Sounds

Measure	Week A pretest	Week A post test	Week B pretest	Week B post test
Capital letters	160	178	175	180
Lowercase letters	156	173	167	172
Letter sounds	157	174	173	177

The data collected from Table 1 was used to create Table 2. Table 2 documented how much growth was shown in both weeks of the study. The number of capital letters students identified at the beginning of week A was subtracted from the number of letters identified at the end of week A and similarly for all the results for the other categories/week B from Table 1. Table 2 shows in week A students knew 18 more capital letters at the end of the week than the beginning of the week. They knew 17 more lowercase letters, and 17 more letter sounds. Week B shows that students knew 5 more capital letters at the end of the week than they knew at the beginning of the week; similarly, 5 more lowercase letters and 4 more letter sounds.

Table 2*Letters and Sounds Growth*

Measure	Week A	Week B
Capital letters	18	5
Lowercase letters	17	5
Letter sounds	17	4

The results of the data collected for research question 1 were significantly different than what literature stated. Growth of letter identification and letter sounds was higher in week A, the week with academic work during independent learning time, than week B, the week with free play during independent learning time. Literature stated that students' math scores increased when given more play time in the school day (Erwin et al., 2019). There were multiple factors that potentially had an effect on the results of the students' growth. Ideally, the study would have two identical academic weeks with the same schedules to lessen outside factors affecting student achievement. Week A was a "normal" week, there were no drills, extra students in the class or other factors that could have affected the teachers' lessons. Week B had multiple outside factors. In week B, the school had an unexpected security drill during the class's literacy block. The drill took away academic teaching time and dysregulated three students. The teacher then could not teach small groups after the drill because she needed to help those students get back to emotional regulation. A different day in week B, the teacher had to take on four students from another kindergarten class because of a substitute teacher shortage. The addition of those students created the need for the teacher to spend more time explaining routines and procedures to the class. Thus, less academic teaching in whole and small groups. On the final day of week B, when the post assessment was given to each student, a few students were acting loud and unsafe in the

classroom. The behaviors forced the teacher to stop assessing and manage students. Some assessments were not given until the afternoon, and some were given while the classroom noise level was loud and distracting. Those factors could have affected how students performed on their post assessments.

A problem encountered with the data collection tool was that when students mastered all 26 letters/sounds they were unable to show more growth. The tool had a limit that restricted students who showed mastery at the end of week A.

Research Question 2: What effect does the amount of free play/recess have on students' social/emotional skills and behaviors during academic lessons?

The results of research question 2 showed that when students were given more play time during their school day, the number of redirections that the teacher had to make decreased. The data was shown in Table 3. There were 11 more redirections made by the teacher in week A than week B.

Table 3

Redirections

Measure	Week A	Week B
Redirections	54	43

The same factors that effected data in research question 1 could have also affected data for research question 2. Students during week A were needing basic redirections such as “turn off your voice,” and “keep your hands to yourself.” During week B, the teacher had to help students focus by guiding students to the rug, helping them off the table, and calling/waiting for support when the classroom was unsafe. The security drill and the extra students could have caused students to become more dysregulated which caused the need for longer time needed for

redirections and less teaching time. Those factors not only affected students' emotions; they lessened the amount of time teaching. That time could be a reason that the number of redirections was less.

The table used to collect data for research question 2, see appendix B, was difficult for the researcher to utilize while teaching. When she had to move about the room to support students, she would have to make a mental note to mark down a redirection and add a tally mark later. She could have missed or accidentally added a redirection on the table. A clicker that the teacher could have held in her pocket or clipped to her lanyard could have helped her count the number of redirections more accurately.

Conclusions

The results of the study conducted coincided with some literature. Aviles et al. (2006) and Pellegrini and Bjorklund (1997) referenced that healthy social-emotional development was needed to be prepared for school. That meant: without social-emotional skills, students would not be not ready to learn. Week B proved that when students were socially or emotionally unable to work through a change in the schedule or routine, their academic growth was less. Although the expectation of the study was to see more academic growth in week B, students showed a larger number of letters and sounds learned in week A.

CHAPTER 5

IMPLICATIONS FOR PRACTICE

Action Plan

The study conducted for this research provided the researcher with a new point of view. Students needed time to play, get their energy out, and socialize with their peers. Students also needed high quality, direct instruction. Free play could be fun and engaging for students but it also required students to follow high expectations while playing. Some expectations included voice levels, staying in one area or being safe when moving from place to place, and trying to solve social problems independently. Without expectations in place and being practiced, students required just as much support from their teacher as when they had academic work.

One way the researcher used this study to alter her teaching practices was implementing academic games or play based academic activities for students to do while she worked with small groups. By using activities that were both fun and academic, students were more on task and the expectations were easier to implement and follow. Students have been playing letter matching games, alphabet puzzles, write the room activities, play-do letter or word building, and more.

Another way the study impacted the researcher was that it showed her the importance of teaching social-emotional skills. Not only were the kindergarteners in her class showing the need to learn how to be at school, they needed to learn how to have a conversation with peers, how to walk away from a situation they were becoming frustrated with, how to use tools or talk with others to calm down when emotional. The teacher immediately started using a social-emotional curriculum with her students.

The last way the study impacted the researcher was the realization that when students are not ready to learn, the information that is being taught to them will not be processed and learned. If a child was not emotionally ready to come to the table for a small group lesson, the teacher needed to understand that becoming regulated was more important than the academics because without the regulation, the academics would not be understood.

Plan for Sharing

The researcher's plan to disseminate the results of her study will start with her oral defense. She will share the results with two faculty members of the university she attends. She then will share her results with her teammates at her school. To share the study with the public, the researcher will submit the study to RED.

REFERENCES

- Andrade, C. (2019). Benefits of play for the social and emotional development of children in kindergarten.
- Aviles, A. M., Anderson, T. R., & Davila, E. R. (2006). Child and adolescent social-emotional development within the context of school. *Child and Adolescent Mental Health, 11*(1), 32-39.
- Ayda, N. K., & Güneşli, A. (2018). “Recess” in the Eyes of Primary School Students: Cyprus Case. *Sustainability, 10*(2), 355.
- Barros, R. M., Silver, E. J., & Stein, R. E. (2009). School recess and group classroom behavior. *Pediatrics, 123*(2), 431-436.
- Beard, V. (2018). A study of the purpose and value of recess in elementary schools as perceived by teachers and administrators.
- Ciman, S., & Ofiesh, E. (2021). Learning Through Play in the Elementary Classroom (Doctoral dissertation).
- Colliver, Y., & Veraksa, N. (2021). Vygotsky’s contributions to understandings of emotional development through early childhood play. *Early Child Development and Care, 191*(7-8), 1026–1040. <https://doi.org/10.1080/03004430.2021.1887166>
- Department of Education, M. (2022). *Academic Standards*. Academic standards (K-12). Retrieved July 23, 2022, from <https://education.mn.gov/mde/dse/stds/>

- Erwin, H., Fedewa, A., Wilson, J., & Ahn, S. (2019). The Effect of Doubling the Amount of Recess on Elementary Student Disciplinary Referrals and Achievement Over Time. *Journal of Research in Childhood Education, 33*(4), 592-609.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics, 5*(1), 1-4.
- Gadaire, A. P., Armstrong, L. M., Cook, J. R., Kilmer, R. P., Larson, J. C., Simmons, C. J., ... & Babb, M. J. (2021). A data-guided approach to supporting students' social-emotional development in pre-k. *American Journal of Orthopsychiatry, 91*(2), 193.
- Gage, N. A., Scott, T., Hirn, R., & MacSuga-Gage, A. S. (2018). The relationship between teachers' implementation of classroom management practices and student behavior in elementary school. *Behavioral disorders, 43*(2), 302-315.
- Lodewyk, K., McNamara, L., & Walker, M. (2020). Victimization, Physical Activity, and Affective Outcomes During Recess in Students With and Without Disabilities. *Alberta Journal of Educational Research, 66*(1).
- Massey, W., Neilson, L., & Salas, J. (2020). A critical examination of school-based recess: what do the children think? *Qualitative Research in Sport, Exercise and Health, 12*(5), 749-763.
- Massey, W. V., Thalken, J., Szarabajko, A., Neilson, L., & Geldhof, J. (2021). Recess quality and social and behavioral health in elementary school students. *Journal of School Health, 91*(9), 730-740.

- Nemer, S. L., Sutherland, K. S., Chow, J. C., & Kunemund, R. L. (2019). A systematic literature review identifying dimensions of teacher attributions for challenging student behavior. *Education and Treatment of Children, 42*(4), 557-578.
- Owens, J. S., Holdaway, A. S., Smith, J., Evans, S. W., Himawan, L. K., Coles, E. K., ... & Dawson, A. E. (2018). Rates of common classroom behavior management strategies and their associations with challenging student behavior in elementary school. *Journal of Emotional and Behavioral Disorders, 26*(3), 156-169.
- Pellegrini, A. D., & Bjorklund, D. F. (1997). The role of recess in children's cognitive performance. *Educational Psychologist, 32*(1), 35-40.
- Pellegrini, A. D., & Bohn-Gettler, C. M. (2013). The benefits of recess in primary school. *Scholarpedia, 8*(2), 30448.
- Pyle, A., Poliszczuk, D., & Danniels, E. (2018). The challenges of promoting literacy integration within a play-based learning kindergarten program: Teacher perspectives and implementation. *Journal of research in childhood education, 32*(2), 219-233.
- Ridgers, N. D., Salmon, J., Parrish, A. M., Stanley, R. M., & Okely, A. D. (2012). Physical activity during school recess: a systematic review. *American journal of preventive medicine, 43*(3), 320-328.
- Thümmler, R., Engel, E. M., & Bartz, J. (2022). Strengthening Emotional Development and

Emotion Regulation in Childhood—As a Key Task in Early Childhood

Education. *International Journal of Environmental Research and Public Health*, 19(7), 3978.

Vygotsky, L. S. (1987). *The collected works of LS Vygotsky: Problems of the theory and history of psychology* (Vol. 3). Springer Science & Business Media.

Zweers, I., de Schoot, R. A. V., Tick, N. T., Depaoli, S., Clifton, J. P., de Castro, B. O., &

Bijstra, J. O. (2021). Social–emotional development of students with social–emotional and behavioral difficulties in inclusive regular and exclusive special education. *International Journal of Behavioral Development*, 45(1), 59-68.

APPENDIX A

LETTER RECOGNITION AND SOUND ASSESSMENT

Student name: _____

Week A B: Pre-test Post-test

Capital: known _____

A B C D E F G H I J K
L M N O P Q R S T U V W
X Y Z

Lowercase: known _____

A B C D E F G H I J K
L M N O P Q R S T U V W
X Y Z

Sounds: known _____

A B C D E F G H I J K
L M N O P Q R S T U V W
X Y Z

APPENDIX B
TABLE FOR REDIRECTION DOCUMENTATION

<h1 style="margin: 0;">Redirections</h1>					
Week:	Monday	Tuesday	Wednesday	Thursday	Friday
1					
2					

Tally when:

- Teacher stops instruction to redirect a student verbally
- Teacher stops instruction to redirect a student nonverbally
- Teacher stops instruction to help students solve a social dilemma
- Teacher stops instruction to help a student regulate his/her emotions
- Teacher stops instruction to help stop a behavior problem
- Teacher stops instruction to call for assistance with a social-emotional or behavior problem

APPENDIX C
METHOD OF ASSENT

Researcher will tell her students:

I am in school, just like you, to learn. My school is a little different than what our learning looks like here, but in the next couple weeks I am going to do some research (like a scientist)! I am going to see how your brains learn when our schedule is a little bit different. One week I am going to give you some work to do while I call you over to my table to do small groups and the next week I am going to let you have choice time while I call you to my table. Then I am going to compare what letters you knew before and after each week and how many times I had to stop teaching to help you and see which week helped our class learn better. I am doing this to help me graduate from my Master's Program.

APPENDIX D

LETTER OF INFORMED CONSENT

Dear Parent/Guardian:

I am a graduate student at Minnesota State University Moorhead. I am working towards a Master's degree in Curriculum and Instruction. As part of my work, I want to increase my skill and understanding about recess/free-play in primary grades. Specifically, I want to understand more about the amount of choice time students have and their academic and social-emotional growth. My goal is to improve my skills in teaching. I expect that this will help your child/the student in my class to be able to develop social skills and learn academics better than with less free play time. The research has been approved by the Institutional Review Board. The review number is 1983861.

Students will have both choice time and academic stations in addition to small group instruction with their teacher. I will be gathering data to see how students retained the content learned in lessons and how many redirections I had to make during lessons.

This will involve keeping track of letters/sounds identification and the number of times I have to help students return their attention during a lesson. I will use this information to write a final paper that I am required to do as part of my degree. I will protect your child's identity and privacy by keeping all the information confidential; no names will be used. Please note, your child can choose not to participate at any time without any consequences.

If you have any questions about my plans, please contact me, Emily Edland, by e-mail emily.edland@district196.org or by phone (651) 683-6970 ext. 25206. You are also welcome to contact my professor, Kathy Brock Enger at Kathy.enger@mnstate.edu and/or the graduate studies office at MSUM at 218-477-2134 or graduate@mnstate.edu. If you agree that your child can take part in my project, please return a signed copy of this form to me as soon as possible. You may keep the other copy for future reference. Thank you in advance for your cooperation! I am very excited about the potential of "How Much Free Play" to improve students' social-emotional and academic growth.

I give my permission for my child _____ to participate in the How Much Free Play project.

Date: _____

Parent/Guardian Signature: _____

Please print your name on this line: _____

APPENDIX E
SCHOOL DISTRICT AUTHORIZATION



Dr. Cathy Kindem
Principal

4350 Johnny Cake Ridge Road
Eagan, MN 55122
P: 651-683-6970
F: 651-683-6873
www.district196.org/or

November 3, 2022

To Whom It May Concern:

Emily Edland's research project related to increasing her skill and understanding about recess/free-play in primary grades has successfully completed the Rosemount-Apple Valley-Eagan School District request to conduct research process. She has approval to move forward with her study.

Sincerely,

Cathy Kindem, Ed.D.



One District. Infinite Possibilities.

Rosemount-Apple Valley-Eagan Public Schools • DISTRICT196.ORG

APPENDIX F

IRB APPROVAL

Institutional Review Board



DATE: November 14, 2022

TO: Kathy Enger, Principal Investigator
Emily Edland, Co-investigator

FROM: Dr. Robert Nava, Chair
Minnesota State University Moorhead IRB

ACTION: APPROVED

PROJECT TITLE: [1983861-1] More Time to Play? A Study on Free-Play and its Effects on Behavior and Academics in School

SUBMISSION TYPE: New Project

APPROVAL DATE: November 14, 2022

EXPIRATION DATE:

REVIEW TYPE: Exempt Review

Thank you for your submission of New Project materials for this project. The Minnesota State University Moorhead 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 a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee 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 the Minnesota State University Moorhead IRB. 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 the Minnesota State University Moorhead IRB.

This project has been determined to be a project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of .

- 1 -

Generated on IRBNet

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 the [Minnesota State University Moorhead IRB](#). Please include your project title and reference number in all correspondence with this committee.

This letter has been issued in accordance with all applicable regulations, and a copy is retained within Minnesota State University Moorhead's records.