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EXPLORING THE EFFECTS OF RECESS ON ACADEMIC PERFORMANCE

by

Grace Elizabeth Grevenoged

Submitted to the Honors Program Committee

in partial fulfillment

of the requirements for University Honors Scholars

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2017

### Dedication

I would like to dedicate this thesis to my parents, who have always supported me and believed in me, no matter what I pursue.

### Acknowledgement

I want to acknowledge my advisors, Dr. Weaver and Dr. Miller, for working with me and encouraging me throughout this process.

## ABSTRACT

This paper seeks to explore the effects of recess on an elementary student's academic performance based on interviews completed with educational professionals. By answering the interview questions, these responses helped gauge the attitudes and perspectives these professionals have towards the inclusion of recess in their students' days. Recess is currently being left out of daily routine for sake of more instructional time in a classroom. This study seeks to add to the stance of students needing recess as a time of unstructured play, in which they can learn meaningful interactions that would otherwise be omitted from their learning.

Key words: Recess, Physical Education, Physical Activity

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## EXPLORING THE EFFECTS OF RECESS ON ACADEMIC PERFORMANCE

### Introduction

Recess. A lunch break during an eight hour work day. Leaving the kids with a babysitter to get away for a night out on the town. A nap in the afternoon because of an early morning. Taking time to quiet the mind between academic, physical, or mentally daunting tasks. These are all a break in the norm of the daily routine, one which can be long and monotonous if not taken in spurts. Recess is a time for students, especially in elementary, to take the necessary brain break for them to refocus attention. It is imperative that students receive this time of free play so they are able to cognitively develop and stay on task.

Recess, as defined by Jarrett, Maxwell, and Dickerson, is a “break in whatever one is doing, ‘a period of time away from the task at hand: an interlude, a change of pace’ (Jambor, 1994, p. 17)” (1998). By definition, all of the breaks mentioned above fit the description. Recess is a time of unstructured free play that is socially beneficial to all students. It is a time when they can interact with other students and do not have to function on a cognitively demanding level. A young student’s attention span does not last when they are constantly trying to focus their attention. Therefore teachers of young primary grades need to have something for their students to do at all times (Jambor, 1994). They are not capable of doing one thing for a long period of time because of their stage of development. When given breaks, students are able to refocus their attention instead of being distracted or fidgety (Jambor, 1994).

In this paper, it is shown, given evidence, that recess is necessary for elementary students to reach the highest level of academic achievement. When students are younger,

it is imperative that they take brain breaks from a time of rapid firing of the neurotransmitters. “Exercise increases the levels of neurotransmitters in certain areas of the brain; higher levels help maintain balance, affecting the ability to focus attention and control impulses (Ratey 2008)” (Reilly, Buskist, & Gross 2012). When students take breaks, they are given time to socialize and perhaps talk about things that eat away at their brains during classroom instruction. When students are not given these breaks, is detrimental to the learning process. When recess is not an option for students, they do not have time to fully express themselves. This also causes students to think of school as not being fun, prohibiting them from enjoying learning the content and thus taking their attention away from instruction.

Recess can also promote a healthy lifestyle for all students (Huberty, J. L., Siahpush, M., Beighle, A., Fuhrmeister, E., Silva, P., & Welk, G., 2011). In a day and age where obesity numbers are rapidly increasing, it is important to promote activity in the students’ lives. Recess is one of those areas where physical activity can be explored. The children are allowed to create their own games and use their imaginations to make things possible that were not before. “When given an opportunity to be active during recess, most children will willingly engage in meaningful amounts of PA (physical activity)” (Huberty et al, 2011). Teachers can also observe which students choose to not interact with peers or participate in physical activity. Not having time to socialize outside of class leads to more distractions in the classroom and off-task behavior.

The issue here is that of school systems or states taking recess out of the educational day at the elementary level. Administrators think that by doing this, they are providing more time for classroom instruction and therefore improving the test scores of



their districts. However, what was not thought of thoroughly is the fact that students are not given time in between subjects to allow their mind to breathe. In elementary classrooms, they move from one subject to the next. In some schools, students are given compartmentalized classes in which they have a group of teachers working together to teach them core subjects. Researchers have suggested physical education as an implementation strategy to replace recess. Herein lies the issue of free play versus structured play. Students need free play to allow for social interaction and development along with exercise. They are not being told what to do and thus have the freedom to choose, this may be the only time throughout their school day that this is an option.

The diagram (Shafer & Whitehouse, 2017, pp. 2) below shows what laws states currently have regarding recess and physical education. The green states show states that have required recess, one of which was the demographic for a teacher who was interviewed. The blue states have physical activity recommendations which means that some schools have to have a certain amount of physical activity on days when physical education is not a part of their schedule. The yellow states have laws stating the amount of physical activity (vigorousness specified) required for students per week. This could be in the form of physical education or time to be outside as part of the lunch schedule. The red states have legislation in the form of recommendations, not mandating it because of conflicts between districts when a state law was voted on.

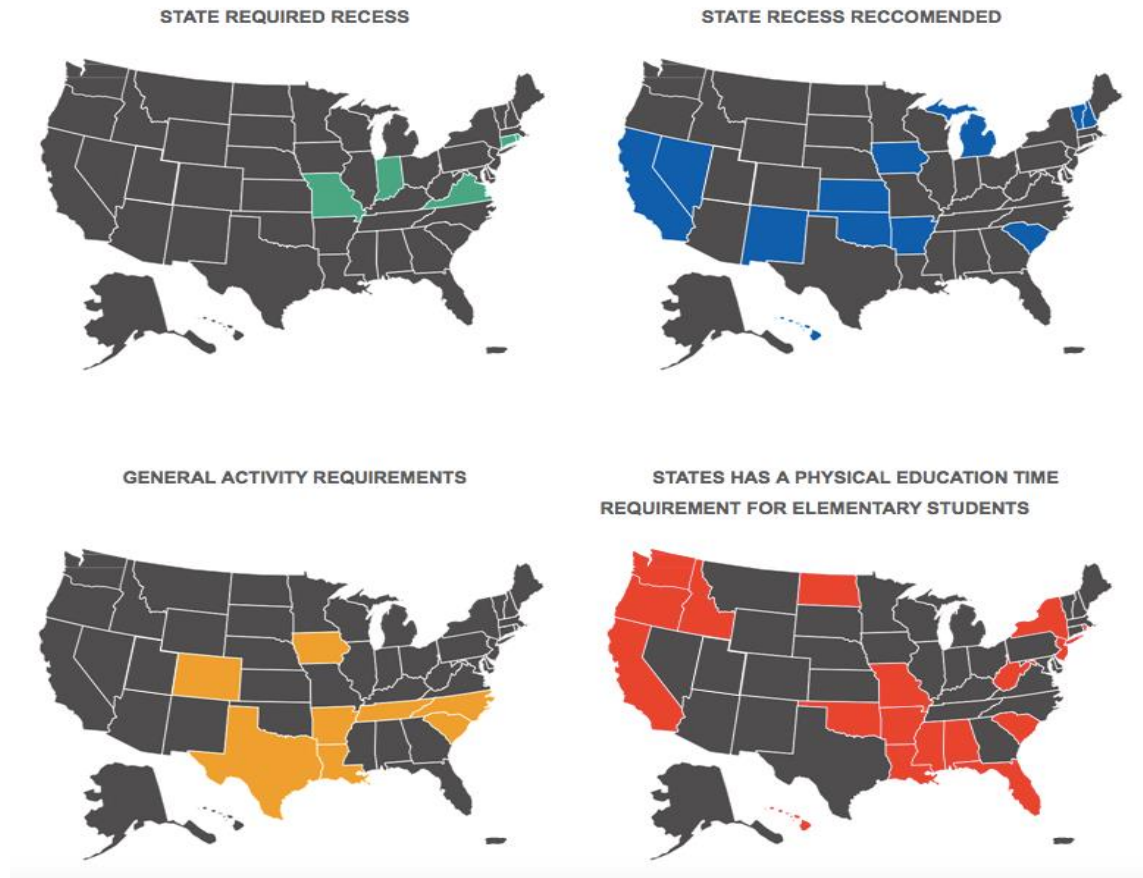


Figure 1.1 *Highlighted states showing different mandates on recess.*

It is beneficial that they “do the information” rather than only see or hear it (Armstrong, 2000; Gardner 1993). When recess is not an option, there are multiple ways that activity can be integrated into the daily routine. Physical education classes are seen as a good place to exert energy but are not a direct alternative for the issue at hand. In addition to the number of states requiring recess decreasing, the number of states requiring physical education is also on the decline. From 2012 to 2016, the amount of states requiring students to attend physical education class for a specified period of time decreased (Shape of the Nation, 2016, pp. 18). To promote healthy living, the teachers should then incorporate all types of movement into their classrooms. Doing the information, as noted above, is a great way for students to learn. When they are actively

engaged in the lesson, they learn by application and retain the knowledge easier. Think about something learned in a lecture, there is a teacher spewing loads of information at a student at a time. However, when the student is able to participate in the learning and be engaged in what they are learning, they are able to practice what they are being told rather than only listen. Memorizing information for a test is not the pride and joy of a teacher. However, she feels a job well done and proud of her students when they are able to recall what has been taught on a test.

Why is recess beneficial? Think of a daily routine without the breaks one would receive. Would the process be mundane or would the best work still be accomplished? Could an individual function with the same productivity as they do without breaks? Would there be more or less energy when it is time to go home at the end of the day? All of these questions lead into the subject of recess in elementary schools. Seeing as physical education is not an effective substitute, students are able to experience an unstructured form of recess and benefit from the interaction and cognitive processes taking place.

#### Research Questions

1. What effect does recess have on academic performance?
2. What role does recess take in your school?
3. How do teachers cope with not having those breaks in their days?
4. Is physical education a good alternative to recess?
5. What opinions do staff and administration have on the subject of recess?

## Literature Review

The literature review is a compilation of information already researched regarding the topic of recess. It is separated into four sections, based on the information found on the topic and information on the arguments against the topic. There is also a section recording the arguments that have tried to come at the topic from the stance of taking recess out of the elementary school day. These articles and documents show implementing time for recess produces better results than taking it away for more time for academic instruction.

The subject under review is that of recess. Administrators hope that getting rid of recess will improve the test scores of their districts. However, there may be a downfall of not allowing students, especially at the elementary age, to have brain breaks. Schools are trying to answer the disapproval of parents with providing physical education for the students. This should not and does not take the place of recess. Students benefit from a time of unstructured play during a day that is highly cognitively demanding. Currently, there are a great deal of schools doing away with recess in order to give students more instructional time in the classroom. In this review, current and past findings on the benefits of recess are stated, along with how recess is a better alternative than physical education. The researched information also shows some of the strategies that can be implemented in the classroom when recess may not be an option.

### Benefits of Recess and Physical Activity

Anthony Pellegrini conducted a study on Kindergarten students that allowed them a time of recess during the day. He found while conducting this study (2008) that the Kindergarten students had improved brain function when they were allowed time for free

play. The study, although focused on Kindergarten students, gives evidence that recess is crucial. It also examined the argument of having more class time and refutes it strongly. He gave evidence for the fact that as students become older, the amount of time of physical activity included in their day decreases immensely. As the amount of physical activity decreases, students brain functions decrease and therefore, they do not perform as well academically.

Turner, Chriqui, and Chaloupka (2013) examined the policies about recess put in place at the national level. They formed conclusions based on the facts that their data came to show. There was multiple evidence for keeping recess and play time in the schools because it was associated with strong school-level policies. It was found that state-level policies had little to do with the strength of the play or recess policies at the school-level. The surveys may have been left to interpretation but at the national level, leaving schools to interpret questions differently had to be expected. These surveys should lead to a policy making recess mandatory for student improvement.

There was a study done on the effect of recess on ADHD (Attention Deficit Hyperactive Disorder) versus non-ADHD students (2003). Ridgway, Northrup, Pellegrin, Larue, and Highshoe started with three ADHD students. They were immersed in groups of their peers without the disorder. They were placed in these groups to see how they would react when having recess during the day and not having it. This second grade study showed that students performed more appropriate behaviors when they had recess as opposed to not having recess. This also meant more appropriate behaviors lead to more time on task.

A study done by Pellegrini and Bjorklund in 1997 examined Japanese classrooms and how they dealt with the issue of recess. Japanese students were given 10-15 minutes of recess for every 40-50 minutes of instruction. This improved their brain function because their abilities to focus for short, intense periods of time were put to use. They were cognitively better with distributed practice (focusing for short periods of time) as opposed to massed practice (focusing for longer periods of time). It was also found that social interaction is a big benefit of having this much time for physical activity. As a result of these increased amounts of break time, the students were achieving a much higher academic level.

A pilot study done by Huberty, Siapush, Beighle, Fuhrmeister, Silva and Welk (2011) evaluated the amount of vigorous physical activity done during the day. Students were asked to wear a heart rate monitor that tracked their heart rate. The study went to show that when the students were involved in structured physical activity, their willingness to participate went down. But when they were allowed to choose which activity they wanted to engage in, they were more likely to participate. Recess is an example of unstructured play that students are more likely to engage in as opposed to physical education or activity incorporated in the classroom. When they engage in this unstructured form of play, their minds are able to release what they may be learning in the classroom and focus more when they get back.

In 1993, Pellegrini, an expert in his field, conducted a study on the role of recess in schools. He examined the times of recess, the duration, and the amount of vigorous activity. He found that the more vigorous the activity during recess, the less likely the

students were to pay attention afterwards. However, the less intense the play, the probability of students paying attention after was greater.

In a 2008 study, the authors found that school related physical activity through any mode would not hinder academic achievement. Instead, at any age, it would increase their attachment to school, therefore improving grades and grade point averages. Trudeau and Shephard found instead that socioeconomic status (SES) had more to do with academic performance than their physical activity. Their conclusions included the fact of limiting physical activity would not enhance their academic achievement or increase their commitments to other school related activities.

An article sought to describe the mindset around choosing to be active during recess. The authors came up with the desire for recess being a result of not receiving everything they want during the school day. This is the one gratifying thing the students were able to experience, and it gave them pleasure. The child did not realize the motive behind his own behavior, because he had not reached the age of development. But the actions can be a result of the previous statement.

Sibley and Etnier (2003) summarized their findings to this statement: educators have suggested that movement, particularly in very young children, stimulates cognitive development. Their study was a literature review in itself, where it examined several studies and compiled the results into one document. The authors also recognized that elementary and middle school students benefited most from physical activity. They concluded with multiple reasons from their findings that supported students having movement during their school day to improve their academic performance.

An article published by the American Academy of Pediatrics (2013) focused on the specific reasons recess is beneficial to all students. Children need unstructured breaks as opposed to only a few minutes to transition, which is not enough for most. There was a running list of cognitive/academic benefits, social and emotional benefits, and physical benefits. The article mentioned the hesitation of parents to back up recess time for fear of the safety of their students, but it also refuted that argument with ways to accommodate those fears. The authors also took time to mention structured recess, but with it comes providing personnel to facilitate along with it possibly being promoted as a replacement for physical education.

Olga Jarrett, a member of the ERIC Development Team, wrote a literature review on the topic of recess in which she stated that people of all ages and fields need breaks, because they are considered essential for satisfaction and alertness (2002). She looked at what the research had said to lead her to the conclusion that recess is beneficial not only cognitively for the student, but it relates and is a positive experience for the whole student. The whole student referred to all aspects of life including physical, social, emotional, and cognitive. The author also mentions the results of spending one third of the school day in formal and less formal physical education, in art, and in music were increased fitness, improved attitudes, and slight improvements in test scores.

In a dissertation done by Timothy Moyer, he collected data from fourth and fifth grade teachers on the effects of recess. In his results, one of his interviewees stated that if they were allowed to make their own schedule, recess would definitely be a part of it. The author also included tables (115-116) summarizing what the teachers responded with and how they felt recess needed to be a part of the student's day even if for nothing more than



a time for social interaction. All perceptions of recess he recorded were positive. He ultimately discovered that while beneficial to students, recess also made the days more manageable for the teachers, especially when it came to behavior patterns.

The benefits of recess on classroom behavior are especially helpful when recess periods are provided directly before or after an academic lesson (Barros, Silver, & Stein, 2009; Fagerstrom & Mahoney, 2006; Pellegrini et al., 1995). This article sought to prove that recess is necessary in the primary school systems, provided empirical evidence. It cited multiple studies where the researchers found there to be improvements in test scores, even if they were slight. The article explained that by the late 1990s, 40% of school districts in the united states had reduced or eliminated recess time completely. This was due to the pressure to meet standards for the amount of passing scores on state tests.

Murray and Ramstetter (2013) wrote on the importance of recess in schools for the Council on School Health and how it should remain unstructured, contrary to emerging literature on the topic. Of course, there are interactions on the playground and games adults can help students work through, but learning to settle an argument is part of the socialization and process that takes place during recess. The study states “optimal cognitive processing in a child necessitates a period of interruption after a period of concentrated instruction.” According to this claim, which is based on studies, recess is necessary for students to be able to refocus their attention on schoolwork.

When recess is included in a school system, the timing is often a topic of dispute. Some would rather it come in the afternoon, when students need a break from the long, academically rigorous day, and others would rather have it in the morning, when students

could to burn energy right before lunch, as to eat more. Studies have shown that a higher student academic performance occurs when recess is scheduled before lunch (Getlinger et al, 1996, pp. 2). The USDA states that when recess is scheduled before lunch, students are able to burn off energy and have an opportunity to socialize, better preparing them to eat during lunch (2000, pp. 2).

An article in the Society of Health and Physical Educators (2016) provided statistics on a number of topics pertaining to physical education and physical activity requirements of states in the United States. There were many tables in the article, where only some states chose to give answers to the survey on the specific topic. One of the sections explored the amount of states that require recess (eight) and states that prohibit their school systems from withholding physical activity (ten) (pp. 20). Another topic addressed in this study was the amount of states that withhold physical activity as a punishment (13 of 49 states) (pp. 20). It also broke down the information about physical activity into state profiles, some of which contain requirements, facilities and equipment, substitutions, standards, and physical activity.

Tomar (2016) wrote an article which explored the constant rate of decrease of recess in schools across America. He addressed the issue of students sitting still for most of the school day and as a result, they were not learning. Instead they were constantly counting down the minutes until they were able to leave. The author had thoroughly researched the topic as well, which was reflected in his writing and citing of multiple authors. He mentioned a school in Fort Worth, Texas, which examined the policies of the school system in Finland, a country whose test scores are constantly on the rise while those in the U.S. are declining. Overall, the schools in Finland provide their students with

substantially more downtime over the course of the school day. The school in Texas took this into consideration and ended up tripling the time they had allotted for recess to equal one hour a day (broken up into four 15 minute increments). As a result, the students had pulled ahead academically, compared to their peers who were not receiving that amount of recess per day.

#### Physical Education as a Replacement for Recess

Jones (2005) reviewed curriculum to implement for a physical education class in elementary school. It was specific on which games and activities to play that are cognitively demanding during physical education. The author's intent was to improve critical thinking skills by implementing their program. They base their curriculum off of opinions of recess from the students themselves, preservice and in-service teachers, and the parents of the students. They believe it is a good replacement for recess because of the children still benefiting from the structured activity.

An article found many positive correlations between physical education and academic achievement. Of the 50 studies they surveyed, all either showed positive or no feedback, no studies showed a negative relationship between the two. This study was developed for the Centers for Disease Control and Prevention's (CDC) Division of Adolescent and School Health (DASH). The study also showed information on the inclusion of physical activity in the classroom and in recess.

Having strong state and district laws on physical education ensures students are allowed their full amount of physical activity during the week. However, the federal policies did not take strong action when it came to this topic. Using physical education as an alternative to recess resulted from not having the necessary staff to watch over it, as

most of the teachers would use this time for a planning period. Recess in particular allows the minority students who do not normally participate in school to do so as well. Slater et al (2011) also said that sometimes physical education time is sometimes substituted for recess time.

Is physical education really a good replacement for recess? The National Association for Sport and Physical Education says “No.” They tend to recommend the use of both during the school day because of the different roles they fill for a child’s needs. PE is more of a “sequential instructional program” while recess is an unstructured time where children “have choices, develop rules for play...and practice or use skills developed in physical education” (Council for Physical Education and Children, 2001).

Taking a look at the other side of the argument, “the replacement of physical education by recess threatens students’ instruction in and acquisition of new motor skills, exploration of sports and rules, and a concept of lifelong physical fitness” (The American Academy of Pediatrics, 185). There is a way to encourage recess, so it does not overtake the role of physical education in schools. There were many suggestions having to do with limiting the structure of recess so it does not interfere with physical education. However, recess and physical education are not, and will not be interchangeable according to this source.

Some schools look to structured recess as a substitution for physical education time. Murray and Ramstetter (2013) addressed the opening sentence with this statement: if recess assumes such a role, then, like physical education, it will need to be planned and directed to ensure that all children are participating in moderately vigorous physical activity. This is not a good idea since there is already a structured, planned time for

physical activity in a student's day or throughout his or her week. There is a tradeoff when schools start to structure recess more. It is thought that full participation is a price to pay for development of socialization skills and motor skills.

#### Strategies to Incorporate in the Classroom when Recess is not Allowed

As the amount of recess in schools is dwindling, so is the amount of physical activity of students in elementary schools. Reeves, Miller and Chavez (2016) looked at working with the physical education teacher in order to implement movement into the classroom. This way, the students were still developing cognitively while activities are put in place. In integrating these movements, the teachers and physical education teachers were hoping to promote healthy lifestyles outside of the school. Also mentioned is that play helped the students learn about themselves and it is beneficial to know how someone personally learns.

Brusseau and Hannon (2015) looked at more of the health risk side of not having physical activity incorporated into every day. Students require 60 minutes of physical activity every day and perform poorly in academics if those needs are not met. They wanted to create an atmosphere in schools where physical activity is incorporated into more than just physical education or recess. They wrote more about lifelong learning and promoting activity at a young age will carry into their older years. To do this, they gave strategies and activities to do with students in classrooms or schools that do not have physical activity as a part of their daily routines.

Hruska and Clancy (2008) put together a list of activities that teachers can use and refer to when needing to promote physical activity in the classroom. The activities divided into four categories provided diverse ways of exploring physical activity while

including academic standards. The authors provided a template of how to teach these standards and say that any activity they provided a description for is easy to plug into the template.

The Colorado Legacy Foundation (2016) found many different alternatives to in-classroom activities that can get students moving when they do not have recess time. They did not necessarily agree with not having physical activity during the day, seeing as most students are not getting the recommended amount, but there was an understanding that it is becoming less as time goes by. Most of the alternatives listed in the article have to do with incentives to get work done, such as time walking with a teacher at lunch time, or moving around the room, or extra social time with friends. These would be great, because they get the students moving around which will make them more attentive to their work.

Dinkel, Lee, and Schaffer conducted a study that looked at teachers who incorporated physical activity into their rooms as well as their attitudes towards it. They described why they implemented these breaks for their students as “I think it is important for children to get more physical activity”, “my student’s behavior improving when they incorporated them”, “my student’s test scores improving when they incorporated them”, and “my students are in a better mood when I incorporate them”. Of the 90.2% of teachers who incorporated physical activity into their classroom, 62.2% incorporated it five days a week and twice or more per day. These teachers mostly either learned about physical activity breaks from a peer teacher or were able to research them on their own. This is good information to show that students benefit from physical activity integrated into the classroom and teachers believe in it enough to implement it.

A study promoting brain breaks for students in the classroom found most teachers in Oregon's public school system to be concerned with the state of their students' physical health and a majority to think it is important. The authors surveyed teachers on their attitudes towards physical activity (PA) throughout the day, knowing that most of their schools did not meet the recommended amount for the day and the week. 90% of teachers reported their students having improved concentration due to amounts of PA during the day. Perera, Frei, Frei, and Bobe (2015) concluded that their five to seven-minute Brain Breaks DVD would be implemented in most public Oregon classrooms. Since increasing students' physical activity during the day increased their concentration, it will increase the amount of content they take in and retain to later access during exams.

“It is commonly accepted by educators that young children learn best by moving and through active experience.” The authors of this article looked at 118 studies and were interested in the amount of information given to the meta-analysis (comparisons made between different physical education curriculums or the dependent variable was not cognitive performance). It also mentioned that a strong correlation has yet to be discovered, hence the reason for the meta-analytic review.

A review of literature was done by two students at Loughborough University. They reviewed many articles linking physical activity to different aspects of mental health. Without recess, a reason for reduced learning time was negative behaviors. The two who conducted this review came to the conclusion that integrating physical activity in the school system may help young people learn better and reduce the likelihood of negative classroom behaviours (Biddle & Asare, 2011, pp. 13). Improving physical

activity in the classroom will decrease the amount of negative behavior outbreaks, therefore keeping students engaged in content.

TAKE10 is an activity based curriculum, which teachers could apply to their daily routine to increase the amount of physical activity in the classroom. It combined academic instruction with 10 minutes of physical activity breaks to get kids moving without sacrificing time dedicated to academic learning (ILSI Research Foundation, 2015). The program engages students in movement while reinforcing specific academic objectives in math, reading, language arts, science, social studies, and nutrition and health. According to the brochure, after implementation of these strategies, schools experienced academic success by improving standardized test scores by six percent after student participation and improved grades for special needs students.

There was a guide written by the NBA FIT team (2015), that is a guide for teachers to use in their classrooms. It is mapped out like a lesson plan, showing materials, articles, an objective, extensions, and an overview of the actual activity. Attached to the document were stretches and activities that take two minutes. The teachers set a “shot clock” for the students to follow and they do the stretches or activities as directed. This is a good way of getting the students moving because of integrating a sport and something they see every day.

When it comes to inclement weather or mixed up schedules, teachers were always tempted to take away recess time. However, Ms. Martin had figured a system that works for her classroom to have recess, or activity throughout class. Activities during the day allowed students to unwind after long periods of intense work and focus (Healthy Schools Campaign, 2016). The article explored different ways this teacher incorporated



movement throughout her lessons and in different content areas. She even added that “numerous teachers and administrators have stopped and joined us!” while walking by and seeing the activity in her room. This is a great tool to include in lessons when recess is not present and students are starting to fidget and lose focus during a lesson.

There has been much research done on the effects of physical activity in the classroom and its benefits pertaining to students. This study in particular briefly reviewed published scientific articles that examine how physical activity and fitness may help school-aged children maximize their academic performance (Active Living Research, 2015, pp. 1-5). After thoroughly looking through multiple sources for information, the article concluded with the thought that regular participation in physical activity and higher levels of physical fitness have been linked to improved academic performance and brain functions, such as attention span and memory. The scans taken of students’ brains showing neural activity indicated this exact fact. When their neural activity increased, students have an easier time sitting still and paying attention in class. But, this only comes with breaks during rigorous instruction for physical activity.

### Conflicting Arguments

Anthony Pelligrini, who is considered an expert on the subject of recess, has written multiple articles in favor of it. However, in his article entitled *The Recess Debate: A Disjuncture between Educational Policy and Scientific Research*, he explored the opposite side of the argument. He looked at why educational professionals voted against having recess and found two main reasons for the argument against: wasting valuable time and learning aggression in the form of bullying (2008, pp. 182). He mentioned in the article that a professional named Mr. Canada was proud of the fact that recess was

eliminated from their entire school system, therefore, improving test scores. But there was no concrete evidence that this happened. In fact, the opposite was true, seeing as students were deprived of a break for such a long period of time.

In the same article as the paragraph previous, Mr. Pelligrini also stated that physical education is not a good alternative for recess, contrary to popular belief. He used information from the Council on Physical Education for Children, which is an organization of physical education teachers. The council clearly denounced the idea of replacing recess with physical education (pp. 183). Their reasoning was that physical education, like other disciplines, had rigorous demands on children and adolescents so as to stretch their skills. So this cannot rightfully be represented as a brain break.

The second argument from the article was about children learning aggression through recess and the bullying rates going up. The author's challenge against this dispute was that kids get bullied in other areas of the school as well, anywhere with little or no adult supervision (pp. 183). Of the behaviors observed, physical and verbal aggression account for less than two percent of the total (Pellegrini 1995; Smith & Connolly 1980). The key was to have adult supervision present, so students are less apt to start an argument or physical act of aggression towards another student. Recess is a time when students are interacting and have opportunities to work out how they are feeling. They learn how to cooperate and compromise (pp. 183) with other students without using aggression.

### Conclusion

In conclusion, theories and studies have proved the fact that recess should still be a factor in today's elementary educational system. While physical education is a good

place for schools to provide physical activity, it is not a direct alternative to recess.

Students benefit from structured play and from unstructured play. However, the firing of their neurotransmitters is moving the fastest when they are engaging in activities where they are allowed to use their imaginations. When young students are allowed to explore, they are using a different part of the brain that does not get exercised during academia.

## Methodology

The methodology chapter of this study discusses the information surrounding the topic of recess. This qualitative study broadly introduces the interviewed participants as well as the design of the research and hypothetical answers to the five interview questions. The design of the research seeks to answer any questions having to do with how the interviews were conducted, information obtained, and how the researcher received permission from the International Review Board to conduct her research.

The purpose of this study is to evaluate the importance of recess as it applies to the elementary school student and teacher's day. The topic deals with current disputes within the school systems and is being argued over, as presented in the literature review. "Since 1990, 40 percent of the nation's 16,000 school districts have either modified, deleted, or are considering deleting recess from the daily elementary school schedule due to increased pressure from numerous sources to improve achievement (American Association for the Child's Right to Play, 2004)" (Patte, 2005). Through interviews, the results will attempt to show that recess is a crucial component to an elementary student's academic success. Teachers have multiple views on the subjects because they are the ones in constant contact with the students during the day. However, for the use of variety, administrators were also interviewed for different perspectives.

Due to low test scores, elementary schools are choosing to do away with recess as a part of a daily routine. Students are facing a lack of physical activity and stimulation because of the prevalence of this occurrence. The decline in the amount of time spent on the playground is heavily associated with more time for academic learning. But does this

really promote academic achievement? This study will explore the wealth of knowledge from experiences of education professionals.

First, approval was sought and granted by the IRB board for this thesis. The researcher interviewed teachers and/or principals on how their students perform in the general education classroom. I will need to take assessment data from multiple schools, considering some have recess and some do not. It is ideal that the opinions come from teachers who have made the transition from having recess daily, to maybe a few times a week or not at all. The experience of the reduced time is ideal for opinions because of real-world application.

### Participants

The researcher interviewed five educational professionals to gather data on their opinions on recess and its effect on academic performance. These professionals range from school administrators, Exceptional Student Education teachers, and regular education classroom teachers. The participants were asked a series of five questions and were allowed to respond with their opinion on the matter. Each of the participants were sent the interview questions ahead of time and were able to think of responses prior to the interview.

These particular participants were chosen based on their knowledge and experience of expertise in the field of education. Each participant has attained at least a Bachelor's degree. They were chosen from a variety of school systems and states so the information they give is not focused on a domain-specific area. Each professional came as highly recommended when it came to the present topic. Some were fairly

knowledgeable on the subject while others were proved to have done their own research rather than just observing what was happening in the work place.

The participants in this study were teaching professionals who have been in the field for at least ten years or more. Four of the participants work in the state of Florida and one works in Indiana. The five participants who were asked were the ones who interviewed. The interviewees consisted of three elementary school principals and two teachers, one at the secondary exceptional student education level and one in the elementary level. Each participant knew the interview was voluntary and their names would not be disclosed in the information.

### Research Design

This study utilizes qualitative data in order to express information regarding the topic of the role recess played in an academic school day. The researcher conducted interviews with current educational professionals. The study includes interviews of five professionals in the field of education and their opinions regarding the topic of recess. The study sought to understand the different roles of recess within different school systems and states. These results will be analyzed for further discussion in chapter five.

Data was evaluated to exemplify how the recess time has affected students' academic performance. Using the data and sources, I evaluated how students best respond to instruction when the opportunity for recess is not given. This provided me ideas as to how teachers may still improve academic performance when recess is taken out of their school day. These strategies helped the students develop cognitively, stay engaged in learning, and keep the cognitive development process moving forward. I am advocating for recess and its implementation or reimplementation into the elementary school system.

Recess is an essential part of the school day that is being taken away for more instructional time. Does this really improve test scores?

Matched against the research completed for the literature review, the data helped to determine the effectiveness of recess in an elementary student's academic school day. It sought to evaluate whether or not the students are more attentive and are able to accomplish more tasks during the day. Recess is a vital part of a student's development and the data will seek to prove this statement. Questions were asked and evaluated from the stance of recess having an important role in a student's academic success.

The researcher traveled to the interviewee's school and will conduct the interview one-on-one. She will present the questions in a way that does not suggest bias or what position she is taking on the subject. The interviews were conducted via phone, email, and face to face. The participants gave as much or as little information as they deemed necessary to thoroughly answer the research questions presented. The interviewer recorded the interviews for further examination of the answers or to reflect on and make sure she has the correct information.

### Research Questions

Research Question 1: What effect does recess have on academic performance?

Hypothesis RQ1: Recess has a positive correlation with academic performance. Since recess is a break that is different from the rest, the results when it is a part of the day will also differ. When students are allowed to take a brain break, their focus in the next portion of the content is enhanced and the learning objectives are achieved.

Research Question 2: What role does recess take in your school?

Hypothesis RQ2: Recess is a part of our elementary experience, however, it is not used every day. All teachers are allotted two thirty-minute periods or less, depending on the grade level, a week for recess where students are engaged in free play on a playground. Teachers can also take extra time with their students outdoors if they choose but this is not recommended and is strongly discouraged.

Research Question 3: How do teachers cope with not having those breaks (for recess) in their days?

Hypothesis RQ3: Teachers integrate activity throughout their days and subjects. Whether it is allowing students to have brain breaks or having them be physically active during instructional practices, teachers are allowing students to explore activity. They have different media they can access through which they will take a period of a couple of minutes and let their students dance or watch a video.

Research Question 4: Is physical education a good alternative to recess?

Hypothesis RQ4: Physical education, while it allows the students activity, is not a good alternative to recess. The students' minds are still academically engaged so it does not allow for the stimulation to stop. However, this is becoming more prominent in schools because of the time already being scheduled in.

Research Question 5: What opinions do staff and administration have on the subject of recess?

Hypothesis RQ5: Although it is not entirely up to the staff and administration what happens during the day, they would much rather have recess worked into the day. It allows students the time to be physically active while engaging in important social and



developmental skills. Plus, it gives teachers a small break in their day to recover or simply take a break themselves.

### Variables

The variables in this study include that the responses from the participants were left entirely up to their opinion. Another would be that the participants were from different school systems and different states so this affects their responses to Research Question number 2. All of the participants had differing levels of knowledge on the subject and experience in the field of education when it came to the evaluation of the depth of the answers to the research questions. The researcher may add to the answers to make them sound like academic sentences. The answers from some of the educational professionals may have been rushed and they were not able to answer the question as thoroughly as the researcher would have liked.

## Data Analysis

Chapter four contains the research questions along with the responses of each interviewee. The participants were each asked the same five questions to which they were able to give their own, opinion-based answer to. The questions were not asked in a way as to sway the opinion of the interviewee, but rather to receive an honest answer as to what they thought. Their professional responses to the questions were recorded and are represented below.

Research Question 1: What effect does recess have on academic performance?

Response P1: Having recess is a time for students to refocus their attention. It is particularly important for those students with Attention Deficit Hyperactive Disorder (ADHD) and the executive functioning students. It improves their academics overall and I have especially found that silent reading directly following recess helps to calm their bodies down from the activity they just have experienced.

Response P2: Recess has a positive effect on the students because it is a time for them to run around after lunch and burn off some of the energy they just took in. Often you will find that students struggle when they come back from lunch, but this way they are able to settle down and refocus.

Response P3: Having the body movements at recess gets the brain activated and ready to learn. It is very important to academics for this reason. Through recess, social behaviors are enhanced and it helps the students to settle and be ready to learn. It is ultimately an exercise for the brain, it jogs the brain, which calms all other nerves that may have been eating at the student's brain before.

Response P4: Family of Christ School feels recess is an important part of a student's day. Being able to have "free play" during students' school day aids in their ability to be more attentive and able to focus better during the instructional time. Students also have the ability to recover with transitions quicker when a break is introduced.

Response P5: This is something that is very hard to measure. It could improve academics because it is a motivational tool for some kids. Some teachers have made the mistake of tying school work to recess, but it is still motivational for most. We have seen test scores go up due to more recess and the motivation it gives students.

Research Question 2: What role does recess take in your school?

Response P1: The school I used to work in was a K-8 school and all grades had recess. Kindergarten through fifth grade received 15 minutes of recess in the morning and 40 minutes in the afternoon. The sixth through eighth graders had an afternoon recess for 15 minutes, more as a time to release pent up energy. In my current school, however, recess comes in the form of physical education and is structured. I believe recess should be free play. The students could be making up their own games, doing what they like, enjoying being outside or maybe sitting and drawing a picture. Not all of them make recess the same experience but this is why it is so important.

Response P2: The students are given 25 minutes for lunch/recess. It is their choice as to whether they would like to go outside and be on the playground or stay inside. The teacher may choose to take the kids, but this is time away from academics and is not encouraged.

Response P3: Recess definitely takes a backseat to academics. When I was in school and when I first started teaching, students had three recess breaks in their day, now we only

have one. I try to incorporate two times of recess during my day, one in the morning and one in the afternoon. I take my students out on my own and give them goals. Most of the time their job would be to run around the track and some of them even got up to a mile. This gives them a goal as well as exercise and it boosts their confidence in themselves. It is good to build up their confidence in other areas and help them know that they are capable of doing anything.

Response P4: Because we feel the true value of recess our students all have (Kindergarten – 8<sup>th</sup>) allotted recess time during the school day. The younger the student, the more recess time they receive. For example, Kindergarten receives 45 minutes a day and 8<sup>th</sup> grade receives about 20 minutes a day.

Response P5: Grades Kindergarten through third grade receive 20 minutes of recess every day. Recess is an opportunity for free play and kids can do whatever they want, even if they do not want to play at all, it is their decision. Grades four and five receive 20-25 minutes on days they do not have Physical Education.

Research Question 3: How do (or would) teachers cope with not having a break for recess in their day?

Response P1: When teachers do not have these breaks, they tend to use more interactive, technologically based lessons. Recess is a time to enjoy but I have seen that my students cannot handle it if it is not structured enough.

Response P2: Since our school is compartmentalized, the teachers think of the time when the students are switching classes as all of the brain break that they will need to transition. In a self-contained classroom, you do not get these intervals of time when the

students are not doing anything academic. The teachers can choose to do brain breaks in their classrooms, but it is not common.

Response P3: Physical education is good, but it is more of a structured time for games and exercise. There is something to be said for the social interactions that happen on the playground. It is a time where students are allowed to use their imaginations and play and chase each other. Teachers can also see during this time who likes to play by themselves, or who is not included. I do not think PE is ever something that needs to be taken away, and that there is a need for it and recess in the day. The main thing is that kids need to play, they are not robots.

Response P4: N/A

Response P5: Teachers work through the day fine without recess. They use tools such as gonoodle and snack time as a source for brain breaks throughout the day.

Research Question 4: Is physical education a good alternative to recess?

Response P1: I think physical education, especially in the setting I am in now, is a good alternative to recess. Personally, it is not something I like to take away from students, but if I do it is for the duration of the week. This is a consequence that I allowed my students to come up with and so if it happens to them, they feel responsible for their actions. For students with ADHD, the last thing you want to do is take away their recess (in this case physical education) because you are ultimately hurting that student and the teacher and it will cause negative outbursts to become more frequent.

Response P2: At our school, teachers are required to take the students to physical education at least three days a week, and it is mandated that the students receive 150 minutes of PE per week. I think we should do recess every day for a little bit less time

and lose recess as an alternative. Now there is the issue of free play versus organized play, but the students enjoy PE and their structured play.

Response P3: Most teachers now would use the computer. I see this in the school every day. However, I try not to use as much technology with my students. I keep up to date with the things I need to know, but pretty soon all these kids will know is a screen in front of their face and not know how to communicate without one. Some teachers use gonoodle, which is a site with dances and interactive videos for students. I do not think it is the same thing as taking the kids outside and having them get fresh air.

Response P4: At Family of Christ, we offer recess daily and Physical Education with a coach twice per week.

Response P5: I do not believe physical education is a good alternative because it is a structured class. Recess is a student-selected time where they can make up their own games, rules and rule changes, along with problem solving. It teaches them more skills, most importantly, life skills.

Research Question 5: What opinions do staff and administration have on the subject of recess?

Response P1: In my current school, if recess is structured play, we are all for it. The students cannot handle unstructured play for long periods of time and should not be expected to. If they do need a break during class, they work towards doing something fun, such as playing on the computer or going into the sensory room.

Response P2: Referring to our PE program, this is a great time when the physical education teachers actually take time to teach. It is good for the students to be constantly

learning, even in PE. Especially when the teacher integrates math or reading concepts in ways that help the students with real-world applications.

Response P3: Everyone agrees that recess is important, however, a different wave is coming in. There is the pressure of society and competition between schools for test scores and levels that it is forgotten that ultimately these are kids. They are not made to be able to do all of the things that are required of them these days. Even doctors are now saying that kids need stress relief more than ever. The test score growth pressure is also put on teachers and this is what often forces them to give so much attention to academics.

Response P4: I have never had a teacher complain about the students having too much recess time. I only have heard comments from them if they had to forgo recess due to a schedule change or a rainy day. They also see the significant impact it has on their students.

Response P5: Well, my school did not have recess before I came to the school. In general, teachers become stressed because it is time away from academics but most teachers at my school like the implementation of it. As a result, the number of kids going to the clinic during these times has increased exponentially. We have more cases than we have ever experienced. Free play means more kids get hurt, either by slipping and falling or running into someone else.

### Conclusion

The results of this study were in favor of recess. Although the results were not unanimous on every question, it was interesting to have the professional input and see what their years of experience had led them to believe. One professional was interviewed via phone, and it was hard to write as fast as she spoke. One interviewee sent her answers

via email, and she was asked to explain further than she had originally. The other three were interviewed in person and the researcher was able to clarify any other questions they may have pertaining to the research topic.



## Conclusion and Recommendations

### Implications

The results of the study show teachers and administrators are in unanimous favor of recess. However, they are scared of the time it does take away from academics and other complications such as injuries that may result from having it every day. Whether it was a teacher or principal giving a response, they agree that as long as it is done in an effective way, recess should always be a part of the school day. Recess is beneficial to students in the form of social interactions and learning skills to help them with interpersonal communication.

Recess is helpful to the student in allowing for a time for them to release pent up energy or to “blow off steam.” When the time is followed by a quiet reading block or silent work, it is beneficial to students and the amount of focus they give to their work. Teachers have to watch how their students are playing to save them from injury and make sure they are playing appropriately. If they do this, there will be less incidents with students going to the clinic, which also takes away from time on instruction in the classroom.

It is also a recent topic within the school systems to reinstate daily recess for elementary students in the state of Florida. They are talking about implementing daily recess in the public schools in shorter spurts of time. In August, 2017, the Florida Department of Education reinstated recess for 100 minutes per week (20 consecutive minutes daily) (Wilder & Palelis, 2017, pp. 4). The interviews were conducted before recess was put back into the daily routine, but the professionals interviewed voted in favor of this happening.

In Indiana, students are required to have a number of minutes of physical activity per week and this may include recess. Currently, it is left up to the jurisdiction of “governing body of each school corporation” to make the rules pertaining to physical activity, recess, and physical education (SHAPE America, 2016, pp. 56). Indiana is mentioned because it is the state in which one professional held a current position. The school system there allowed students recess time based on age and were allowed at different points of the day, usually before lunch. They were allowed to take more, if the teacher so chose. It is not common, but the professional interviewed chose to take more recess time if it was felt that the students needed it.

#### Limitations

Although it was found that professionals prefer to have recess as a part of the daily routine, there are a few limits to the data that was collected. Four out of the five interviewees were from the same state, so it is possible that other teachers and administrators have different views based on the laws mandated in their state. Of the participants, some were well-educated on the topic of recess as an international issue rather than only a local issue as it pertained to them. The participants had differing levels of experience within the field of education ranging from six to 20+ years. They also did not all have the same level of educational degrees.

#### Recommendations for Future Research

Future research should include looking at qualitative data as well as quantitative. Professionals conduct studies based on recess and its effect on test scores. Numbers would help solidify what teachers see on an everyday basis. It would be beneficial to spend time in a classroom and collect data from students. Asking opinions of

professionals is one thing, but to see it in action is another. Seeing students and their abilities based on the differing amount of physical activity they receive during the day gives proof of what teachers and principals (and now administrators) are saying about the need for recess during the day.

Take a deeper look at how recess impacts students on the Exceptional Student Education spectrum. Recess for these students is much different and there are many needs a teacher has to take in to consideration. It is true that all students benefit, it is a matter of how the break time is approached and what the students can handle. There was one teacher from this area interviewed, but it would be beneficial to have more information regarding these students. Results from these teachers and other professionals could be extremely different rather than from regular education teachers.

Looking at how recess can help students cognitively develop would be a great topic to explore more. It could be taken from a stance of socializing, and different interactions seen on the playground versus in the classroom. An observer can learn a lot about a student by simply watching them in a setting where they can choose whom or what to focus their attentions on. It would be interesting to see if students lagged behind their peers if they did not have this time of social interaction during the day.

A recommendation would be to include more interviews on a wide variety of school systems in different states. Since these interviews were only focused on three school systems in two different states, there is limited information gathered from the professionals. It would benefit the researcher to broaden the districts and types of professionals interviewed (teachers, administrators, state policy makers). This would aid in the amount and quality of information given when answering research questions.

Along with interviewing a wider range of professionals, more interview questions could be included. The questions posed in this research were broad, so as to allow the participant to truly reply with the position they took towards the question. As the research questions were written, they were short and not as to the point as they could have been. If more, narrow focused questions were given, it would ensure a deeper quality of answer, and this would lead to more quality answers given as results.

Explore how recess or “brain breaks” work with secondary students. No matter the age, there is not a person who can focus exponentially on schoolwork. It would be interesting to see how secondary teachers schedule in time for their students to explore and do something different in their rigorous schedules. Teachers of all students have to plan for breaks, especially those who have 90-minute class periods. Examining how those teachers keep the attention of their students would give information that could also perhaps help at the primary level when students do not have recess.

### Conclusion

It is important for all students to receive a break of some sort for free play during the school day. Teachers do not often realize even the structured play they schedule for their students could be strenuous and exhausting. The immaturity of children’s nervous systems and their lack of experiences render them unable to perform higher level cognitive tasks with the same efficiency as older children and adults, and directly influence their educability (Pellegrini & Holmes, 2006, pp. 38). Recess is a time students enjoy, where they are able to spend time with their friends that they may not otherwise receive. It is a time when they can take their own freedoms, make up their own rules, and do what they truly want to do with that time.

Reflecting on the interview questions and answers, it was found that students look forward to this time and benefit from having it. It was agreed that physical education is more of a structured time for students to play by rules and that only if given more time during the week would it be a good replacement for recess. The participants often referred to technology as a tool that teachers are now using to replace the time the students are not getting outdoors. However, they see greater results from recess.

Every professional interviewed also saw recess from a different view. There is a new pressure being put on teachers to have high performing students. The standardized test scores determine the effectiveness of the teacher and they are expected to keep improving every year. With this new thought in the mind of every teacher, it diminishes the time they are willing to spend out of the classroom with their students. While the time away from academics may improve the students' focus, teachers want their students to know the information more than they are willing to try something different. Sure, recess comes with another set of issues from injuries to students not getting along, but the benefits far outweigh the disadvantages.

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