

THE EFFECTS OF RECESS

THE EFFECTS OF A RECESS PERIOD ON THE CLASSROOM BEHAVIOR ON 3RD  
GRADE STUDENTS

by

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CERTIFICATION OF PROJECT WORK

We, the undersigned, certify that this project entitled The effects of a recess period on the classroom behavior on 3rd grade students, by Rebecca J. Pasquale, Candidate for the Degree of Master of Science in Education, Curriculum and Instruction in Inclusive Setting is acceptable in form and content and demonstrates a satisfactory knowledge of the field covered by this project.

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## THE EFFECTS OF RECESS

### **Abstract**

The primary purpose of this study was to evaluate the effects of providing a recess period on the classroom behavior of 3rd grade students. There were 3 9 year old participants in this study: student 1 is a female who is currently enrolled in special education classes; student 2 is a female who has a high level of academic achievement; student 3 is a male at an average level for academic achievement. 8 Observations were completed in 20 minute intervals: 2 initial observations without recess, an observation before recess and then another observation after recess (completed twice), and then 2 final observations again without recess. Results varied for each participant on the amount they were on-task when recess not offered and the amount of time they were on-task before and after recess was implemented. The average amount of time all 3 participants were on-task on days without a provided recess was 39%; on days observations were completed both before and after recess, the average amount of time all 3 participants were on-task increased from 29% to 63%. These finding conclude that providing a recess period will increase the on-task classroom behaviors of 3rd grade students. Results also showed that the academic level of a student may have an effect on how the recess period affects his or her classroom behavior. Future research should be done to help validate this finding of whether or not academic level does affect how a recess period affects an individual's classroom behavior.

**Table of Contents**

Project Certification Page .....i

Abstract .....ii

Table of Contents .....iii

List of Tables and Figures .....iv

Chapter 1: Introduction .....1

Chapter 2: Literature Review .....7

Chapter 3: Methodology .....21

Chapter 4: Results .....29

Chapter 5: Discussion .....37

References .....44

Appendix .....48

**List of Tables and Figures**

Figure 1: Triple-Bar Graph of Student 1 .....32

Figure 2: Triple-Bar Graph of Student 2 .....33

Figure 3: Triple-Bar Graph of Student 3 .....34

Figure 4: Percentages of Student 1 .....35

Figure 5: Percentages of Student 2 .....35

Figure 6: Percentages of Student 3 .....35

Figure 7: Overall Percentages of Students 1-3 .....36

### Introduction

Due to the recent increase in school and teacher accountability, a need for an increase in school test scores, and new curriculums and standards that focus solely on cognitive performance, schools across the nation are reducing or even eliminating recess in public elementary schools (Pellegrini, 2002; Pellegrini 2005. Zygmunt-Fillwalk and Bilello (2005) state that “current research suggests that as many as 40% of school districts throughout the United States are reducing or deleting recess as they focus additional time and resources on teaching and learning” (p. 19). This issue could be because educators and other policy makers believe students will show better academic progress if they are provided with more instructional time (Waite-Stupiansky & Findlay, 2001; Pellegrini, 2009). The American School Health Association (2010) suggests that “recess serves as a necessary break from the rigors of concentrated, academic challenges in the classroom” (p. 518).

On the contrary, Pellegrini and Holmes (2006) raise an interesting point comparing Asian and American school-age children where American children are lagging far behind: “They found that Asian schools had longer school days and school years but also provided children with breaks every 50 minutes across the entire school day” (p. 49). Many other researchers have utilized the same argument about Japanese and Taiwanese schools implementing small breaks throughout academic lessons (Jarrett et al, 2001; Pellegrini et al, 1995; Jensen, 2000). Could Japan and Taiwan have the secret to academic success that the American schools are taking away from our elementary students?

A main argument for reducing or even eliminating recess from the school day is the concern about children’s safety during recess. (Nelson et al, 1995). Todd, Haugen, Anderson, & Spriggs (2002) suggest that. “fighting/aggression was the behavior leading most frequently to office discipline referrals resulting from events on the playground” (p. 47). This same argument

is used by many school districts that eliminate recess. A study completed by Lewis, Colvin, & Sugai (2000) suggest teaching students pre-corrective strategies such as constant review of playground and school rules along with providing active supervision during recess will reduce or even eliminate problem behaviors during recess. Results from this study showed that the pre-corrective intervention active supervision “reduced the overall rate of observed problem behavior during unstructured activities” (p. 118). This study shows that with simple pre-corrective strategies and proper supervision, fighting and other problem behaviors can be reduced on the playground which will eliminate the argument of recess not being safe enough.

Within the past two decades, researchers have begun focusing on the need for recess in schools (Pellegrini and Smith, 1993; Pellegrini and Bjorklund, 1997; Ridgway et al, 2003; Harper et al, 2008; Barros et al, 2013). These researchers provide many reasons for the need of recess throughout the academic school day. One reason for the need of recess is based around health concerns, especially obesity (Pan et al, 2011; Brown et al, 2009). The American Academy of Pediatrics (2013) suggest that. “even minor movement during recess counter-balances sedentary time at school and at home and helps the child achieve the recommended 60 minutes of moderate to vigorous activity per day which can help lower risk of obesity” (p. 184). Other health concerns can also be seen from students who are sitting for an extended period of time. For instance, Jensen (2000) states. “the typical student who sits much of the day runs the following risks: poor breathing, strained spinal column and lower back nerves, poor eyesight, and overall body fatigue” (p. 35). If the constant sitting of a student causes an overall body fatigue, how can educators expect students to stay attentive and process new information throughout the academic school day? Studies have also shown that physical fitness and staying

active throughout the day in general has a strong connection to academic achievement (Castelli et al, 2007); this could be a connection to why Asian schools perform better on academics.

Another reason for the need of recess throughout the school day is for the building of social and developmental skills, especially for young children. For instance, Pellegrini and Blatchford (2002) state that. “in addition to its apparent academic benefit, recess is extremely valuable to social development. Recess may be one of the few times during the school day when children can interact with peers on their own terms and learn and practice important social skills” (p. 2). Pellegrini and Smith (1998) discuss the theorists of Piaget and Vygotsky who both suggest that play will help children develop and learn specific skills needed for successful functioning into adulthood. Researchers have also found that providing young children with recess will be beneficial developmentally because it offers the experience of cooperating with peers, building close relationships, and solving problems (Pellegrini & Holmes, 2006; Pellegrini, 2009; Harper et al, 2008; Hyndman et al, 2012). A specific study completed by the Robert Wood Johnson Foundation (2010) surveyed 1,951 principals and vice principals throughout the country on education and school climate; the results of this extensive survey found that “recess benefits child development in important, non-academic ways as well” (p. 7). For example, the study concluded that 96% of principals found recess have a positive impact on social development and 97% of principals believe recess has a positive impact on the general well-being of a student. Many studies also brought up the idea that students may not have the opportunity to roam neighborhoods and have free time after school due to factors such as demographics, busy schedules, or parents not being home to supervise the children outdoors (Barros et al, 2009; Pellegrini & Blatchford, 2002; Zygmunt-Fillwalk & Bilello, 2005; Hyndman et al, 2012;

Pellegrini and Holmes, 2006). Waite-Stupiansky and Findlay (2001) suggest that recess is also needed for the academic purpose:

...younger children need a more pronounced change in activity before they are ready to focus on another cognitive task. Pellegrini and Bjorklund (1996) asserted that school learning would be more effective if children are afforded opportunities to engage in non-focused, non-intellectual activities, such as recess periods occurring throughout the day (p. 18).

In other words, students, especially young children, need breaks throughout the day in order to perform to the best of their ability in the classroom.

A third reason as to why recess is needed throughout the academic school day is because researchers have found that providing small breaks, such as recess, will help improve the cognitive performance of students (Jarrett, 2002; Pellegrini et al 1995; Ramstetter et al, 2010; Dills et al, 2010; Pellegrini & Smith, 1993; Pellegrini & Bjorklund, 1997). The cognitive performance of students is closely related to the amount of attention a student provides to a specific academic task. Pellegrini and Bohn (2005) discussed the following information from a study in East Asia: “Anecdotal evidence from East Asia (Stevenson & Lee, 1990) suggest that children’s attention to class work is maximized when instructional periods are relatively short and followed by breaks” (p. 15). Pellegrini and Bohn (2005) then went on to discuss the following evidence for which attention and cognitive performance are closely related:

“Attention is a direct and relatively easy-to-measure index of children’s motivation for, and engagement in, their school work. Attention to classroom tasks, such as reading, in turn, is also related to more general and distal indicators of cognitive performance, such as reading achievement” (p. 15).

Dills, Morgan, and Rotthoff (2011) completed a study on recess and the elementary school student outcomes. The researchers measured the effects of recess on test scores of elementary students in grades kindergarten through 5th. There were two specific findings from this study: “active time during the school day reduces the class time available for academic learning but these breaks may improve classroom behavior, increasing young students’ comprehension” (p. 897).

This leads directly into the main purpose of this thesis research topic. This project investigated the effects of recess on the classroom behavior of elementary students. It was chosen to focus on the effects of recess on the classroom behavior of elementary students because while reviewing 28 articles, little information was found and very few studies were conducted on this topic. This work builds upon the research of Ridgway, Northup, Pellegrin, LaRue, & Highshoe (2003) who also studied the effects of recess on the classroom behavior; however, these researchers focused their study on students with ADHD.

This study was completed in a 3rd grade general education classroom by randomly selecting three students to observe and document the behaviors of. First, 2-20 minute observations of the on-task and off-task behaviors of the selected students on days they did not have recess were completed. Then, the use of recess as an intervention was introduced, and again 2-20 minute observations of the behavior of the selected students’ on-task and off-task behaviors were completed both before and after this intervention occurred. Once this data was collected, the intervention (recess) was removed and again 2-20 minute observations of the three selected students’ on-task and off-task behaviors were completed in order to determine whether or not recess does in-fact have an effect on the classroom behavior of elementary students. A triple-bar graph was then created for each student that included all 8-20 minute observations along with the

amount of times each student was either on-task and tallied as a W (working) and/or off-task and tallied as either an F (fidgeting) or an L (listless).

The research question that drives this project is:

-Does the use of a recess period affect the classroom behavior of elementary students?

### **Literature Review**

Scholarship over the past decades has shown increasing interest among educators for the use of recess to influence behavior. Nelson, Smith, and Colvin (1995) conducted a study pertaining to recess behavior of students and the amount of safety found during recess. The participants in this study were three Caucasian 2nd grade boys. The design of this study was to first complete an observation of the three participants during recess and use this observation as a baseline. After, the participants were given guidelines for recess behavior; the participants were provided with time to review and role play the specific guidelines. The researchers Nelson, Smith, and Colvin (1995) commented:

“The trend in elementary schools is to shift recess supervision from certified staff to classified staff. This trend has weakened the quality of recess supervision and has led to a growing concern among educators and parents regarding safety at recess.” (p. 124)

The participants’ recess behavior was observed again. Results found that the procedure created clear improvements of the participants’ recess behavior. The researchers end this study by suggesting future research to be completed on a larger and more varied population.

The idea of teaching recess behavior to students may provide a more effective use of a recess period because it could possibly cancel out problem behaviors. Todd, Haugen, Anderson, and Spriggs (2002) conducted a study in order to determine whether or not teaching recess behavior is effective. A school in Springfield, Oregon was used as the participants in this study; this created 577 participants ranging from kindergarten to fifth grade. The researchers first collected office-managed discipline referrals from the past two years, and distributed a staff satisfaction survey which consisted of four yes/no questions that related to utilizing classroom instructional time to teach recess expectations and routines. After, researchers then observed the students during their recess period. Once observation data was collected, a recess workshop was

implemented for staff in order to teach recess expectations and routines: a 45-minute outdoor-recess workshop and a 30-minute indoor-recess workshop. Teachers were then to use what they learned in the recess workshop and teach that information to their students. The researchers Todd et al (2002) commented:

“Recess is an activity that most students and supervisory staff participate in daily. These natural opportunities provide regular practice for the behavioral expectations and routines for acknowledgement of appropriate behavior, proactive corrective feedback, and consistent communication.” (p. 50)

Results found that the staff felt the recess workshops were both effective and efficient use of teaching time; the staff also felt recess workshops and teaching recess expectations and routines should be completed annually. The amount of office-managed discipline referrals also decreased after the recess workshops.

Along with teaching proper recess behavior, accurate and active supervision during recess may also reduce problem behaviors commonly found. Colvin and Sugai (2000) researched the effects of active supervision on the recess behavior of elementary students. Participants in this study were 475 students in grades kindergarten through 5th grade and 42 staff. Data was first collected on the rate of student and playground monitor behavior. Playground monitors were then told to try three behaviors: move around, look around, and interact with students. There was a slight increase in days of active supervision for monitors, but no overall levels of trends changed during the observations. “Data indicate a relatively simple intervention effectively reduced rates of problem behavior across the student body.” (p. 118). The researchers suggest a more in-depth intervention for playground monitors for future research.

Along with safety, research was also found about the importance of recess for health-related reasons and the importance of the developmental and social aspects that recess provides. Pellegrini and Smith (1998) completed a research review that considered the nature and possible developmental functions of three specific forms of play: locomotor, pretend, and social. The researchers found many articles that discussed various types of play and the importance of play for the social and developmental needs of young children. Pellegrini and Smith (1998) found similarities in many studies and stated:

“In three sets of field experiments, Smith and Hagan (1980) and Pellegrini and colleagues (Pellegrini & Davis, 1993; Pellegrini, Huberty, & Jones, 1995), respectively, experimentally deprived a sample of British preschoolers and American primary school children of opportunities for locomotor play. Results were consistent across all experiments in showing that increased deprivation led to increased levels of play when opportunities for play were resumed. Future, with the primary school sample, break-time maximized children’s attention to school tasks when they returned to the classroom.” (p. 55)

Studies have found that forms of play are essential to the immediate development of students’ interactions with one another along with problem solving skills. Pellegrini and Smith (1998) suggest future research to be conducted in children’s play in their natural habitats.

A large amount of research has suggested how crucial it is to allow time for students to be active throughout the day instead of sitting for a majority of the time. Jenson (2000) wrote an article that discussed the importance of allowing students to get out from behind their desks and get moving. Many vocabulary terms were introduced during this research article: circulation, episodic encoding, system maturation, and good chemicals. All vocabulary terms discussed the

importance of movement for the health of the students along with how allowing students to move will also help increase their ability to learn and comprehend new information. Jenson (2000) commented:

“Although people can learn while sitting, the typical notion of sitting in chairs for an extended time may be misguided. The human bod, for the last 400,000 years, has primarily been walking, sleeping, leaning, running, doing, or squatting. It has not been sitting in chairs, which are a relatively new invention in human history, only used for the last 500 generations. The typical student who sits much of the day runs the following risks: poor breathing, strained spinal column and lower back nerves, poor eyesight, and overall body fatigue. We expend much energy just to maintain a posture, even a bad one.” (p. 35)

Suggestions for the classroom were provided at the end of this article such as providing small breaks for students throughout the day and allowing students to get up and use their body to learn.

It can also be argued that providing a recess period for children is important for the well-being and overall development of a child. Waite-Stupainky and Findlay (2001) review of literature is extremely interesting to read because of the discussion of the brain development and other physical developments a child’s body endures during free play and/or recess, along with the fact that recess and physical activity is important to the overall development of a child. Throughout their extensive literature review, Waite-Stupainky and Findlay (2001) help prove that recess and physical activity is not only important to classroom behaviors, but it is also important to proper brain development and function. Waite-Stupainky and Findlay (2001) found that “children develop social and emotional skills; increase imagination and creativity; and

increased discovery, reasoning, and manipulation skills.” (p. 20). This study also found that “they (children) also learn to control aggression, develop essential problem-solving skills, practice leadership, and resolve conflicts.” (p. 20). It is suggested that providing a recess period for students will help with their overall development.

Researchers suggest that recess can help improve both academic achievement and peer relationships. Pellegrini and Blatchford (2002) discuss the importance of recess and academic achievement along with the importance of recess and peer relations. Their article synthesized research other researchers have completed about this topic. “Our research has shown that breaks, or play, actually encourage academic achievement.” (p. 1). These authors suggest that, “it (recess) can provide a welcome respite from intense cognitive activity.” (p. 6). Teachers are supposed to help students grow as individuals, both academically and socially. Providing a recess period for students could do just that.

Many extensive literature reviews have been written arguing that recess should be a part of the curriculum. Pellegrini and Bohn (2005) is very similar to other articles written by the famous Anthony Pellegrini because it is another extensive literature review on the topic of children and recess. This article suggests adding recess as the “fourth R” in education because of how important recess, or small breaks throughout the school day, is for the overall development of a child, along with the ability to learn. “Nearly 80 studies have suggested a strong link between the cerebellum and memory, spatial perception, language, attention, emotion, nonverbal cues, and decision making.” (p. 17). This article also provides more evidence of attentive classroom behavior studies other researchers have completed that are also similar to this research project: “The brain operates on a cycle of 90 to between 100 and 120 minutes. Over the course of each cycle, the brain becomes alternately more and less efficient in process either verbal or

spatial information.” (p. 18). “The brain does poorly at continuous high-level attention, capable of no more than 10 minutes of constant and high-level focus on an external stimulus.” (p. 18). “Constant attention is counterproductive to learning. To learn and remember new information, children need time to process information, create internal meaning for it, and imprint it to long-term memory.” (p. 18). By including recess into the school day, teachers would be providing time for the children to develop and grow as individuals while simultaneously allowing time for the students to process the information they have learned.

Through their thorough review of literature, Pellegrini and Holmes (2006) define recess as “an unstructured break time between periods of relatively rigorous academic time.” (p. 37). This article supports the hypothesis that recess affects classroom behavior by discussing research dating back to the 19th century by Ebbinghaus (1885): “distributing work over a long period of time with breaks interjected, rather than massing it into one period, maximizes attention and more general cognitive performance across the life span.” (p. 37). Pellegrini and Holmes (2006) also found the more attentive a student is, the less likely he or she is to become off-task. “Children are less attentive to classroom tasks during longer seatwork periods rather than during shorter ones.” (p. 44). Attentiveness, academic performance, and the overall development of a student were common themes discussed throughout this extensive literature review.

The way children spend their time during recess is also important to look at when researching the role recess has on students. Brown et al (2009) studied the type of play and the amount of physical activity preschool students participated in during both indoor and outdoor free-time. This article found that a majority of preschool students’ physical activity is sedentary. It also suggests teachers becoming more involved in students’ outdoor free time play and structure activities for their free time. “First, under common playground circumstances, the

majority of physical activity was sedentary in nature (i.e., 56%). Second, even when teachers were present, they rarely, if ever implemented teacher-arranged activities to enhance children's physical activity or encourage children's physical activity." (p. 53). This research contradicted a majority of the other articles found which suggest free and unorganized play for the students.

Unfortunately, it is becoming more common for schools to eliminate recess periods due to the recent increased focus on academic achievement. Pellegrini (2009) published a short article that reviewed other literature in order to support his hypothesis that recess and children's play is important in the academic world. He brought up the issue that both North America and Britain are eliminating children's recess periods throughout the academic school day and that this is likely because of the recent extreme focus on achievement test scores; he suggests that schools see recess as an inefficient way to spend time during the school day. From here, Pellegrini (2009) uses both his past research along with research from other researchers to help support his hypothesis about recess. "Experimental evidence also demonstrates that recess breaks during the school day both maximize students' attention to subsequent class work and facilitate children's peer relationships as they make the transition into primary school." (p. 134). Could North America and Britain actually be hindering their students' academic achievement by removing recess from the school day?

Listening to students' wants and needs about physical activity may help them become more physically active. Hyndman et al (2012) provide surplus information about recess and the importance of physical activity for elementary-aged students. Findings from this research suggest that elementary students both want and need more physical activity and time outdoors compared to secondary students. Hyndman et al (2012) utilized map drawing in this Australian research study in order to find out exactly what elementary students' perceptions of their play-space was.

This is very interesting because sometimes it is easier to determine how a child feels or perceives something based off a drawing rather than an interview. Hyndman et al (2012) suggest, “Listening to students’ perspectives of the factors that encourage them to be physically active may assist in reducing the time students spend engaged in sedentary behavior and promote healthy, active school play spaces.” (p. 21). When teachers listen to the wants and needs of their students, they will have an easier time keeping students moving rather than being sedentary.

The American Academy of Pediatrics (2013) discusses the importance of recess on a child’s cognitive/academic, social/emotional, and physical development. It raises a great point that recess allows a break from academics and provides time for students to practice social skills that they may not be able to practice during normal academically structured periods. The American Academy of Pediatrics (2013) commented:

“After recess, for children or after a corresponding break time for adolescents, students are more attentive and better able to perform cognitively. In addition, recess helps young children to develop social skills that are otherwise not acquired in the more structured classroom environment.” (p. 183)

This article supports the hypothesis of the current research study that providing a recess period will affect the classroom behavior of elementary students. It is stated several times throughout this article that recess will help children stay on-task and focused: “Several studies demonstrated that recess, whether performed indoors or outdoors, made children more attentive and more productive in the classroom.” (p. 184). The current research study may also help validate this statement.

A second common theme found while reviewing literature based around the topic of the importance of recess for elementary students was the cognitive improvement that recess

provides. As seen previously, Pellegrini's research has been brought up and/or reviewed in almost every article, so it was very exciting when locating this article. This article by Pellegrini and Bjorklund (1997), review other empirical research to help their argument that recess is needed for the overall performance of a student. The section of this particular article that addresses recess and cognitive performance of a student also discusses how attentive a student is with and without recess. The authors commented:

“We suggest that recess should not be viewed simply as an opportunity for recreation, having little to do with academic attainment; rather, we propose that recess may play a critical role in fostering attentional (sic) skills in children. We argue that young children are in particular need of recess, due to their limited information-processing skills and the greater cognitive effort they must apply to their studies.” (p. 37-38)

By providing a recess period, students, especially young students, will receive the opportunity to gain attention skills and have time to process the information they are learning and store it into their long-term memory.

Providing a recess period may also have an effect on the classroom behavior of elementary students. Jarrett, Maxwell, Dickerson, Hoge, Davies, and Yetley (2001) observed students' classroom behaviors both before and after recess which were also completed during this research study. Findings from the Jarrett et al (2001) study correlate with the hypothesis in this study that classroom behavior will improve after recess is implemented into the day's schedule. “Significant benefits from recess occurred in a classroom where the children already had some freedom of movement. In more rigid classrooms, the need for recess might be even more striking.” (p. 126). Research shows it does not seem to matter whether the classroom is a student-centered classroom or a teacher-centered classroom; recess is suggested for all

classrooms because research shows that providing small breaks will help with students' attentiveness.

It is very possible that the only time during a day that a child may have the opportunity to go outside and play or just have relaxed and unorganized free time could be during recess. Zygmunt-Fillwalk and Bilello (2005) wrote an article pertaining to the recent controversy about the children's 'right to play' (United Nations, 1989). After conducting a nationwide survey, the authors found that 97% of parents were for recess in the school day. This article provides multiple facts and statistics about the importance of recess for a child; the voice and opinion of this article help support the hypothesis that recess is important for elementary-aged students. One key finding from this article is reasoning behind why parents are for a recess period for their children: "Due to busy parental work schedules, increased participation in extracurricular activities, and concerns about safety, children's free time decreased by 16% and outdoor activities declined by 50% from 1981 to 1997." (p. 20). If students are not receiving the opportunity to play with their peers during the school day, then when are they supposed to develop the basic social/emotional skills needed later in life?

Many teachers and principals do have a positive outlook on providing a recess period. A national Gallup survey (2010) reports the 6 major findings of principals' opinions on recess and the importance of recess in the school day. Not surprisingly, this survey of 1,951 principals nationwide found that recess has a positive impact on achievement and learning. "Two-thirds of principals report that students listen better after recess and are more focused in class." (p. 6) Recommendations from this survey suggests that effective recess should be offered in order to eliminate many problem behaviors. "Recess should no longer be treated as an afterthought or an expendable block of time. Instead, it must be recognized as an essential part of the school day. In

addition, schools should end the practice of taking recess away as punishment.” (p. 12). As stated in this article along with many other articles found in this literature review, teachers are eliminating recess in order to create more time for academics because of the recent importance of academic achievement and the need to meet rigorous standards. By doing this, teachers are being counterproductive. Students will stop retaining information and be more likely to become off-task; providing a recess period will help students’ attentiveness and staying on-task. This goes hand-in-hand with taking recess away as a punishment for off-task classroom behaviors. If a teacher eliminates recess for a student who is being punished for demonstrating off-task classroom behavior, than the student is more likely to continue off-task classroom behaviors; this is because the student is not being provided with a small break to rest his or her brain in order to regain the attentiveness the student needs in order to demonstrate on-task classroom behaviors.

Copious literature reviews have been written suggesting the importance of recess. Ramstetter, Murray, and Garner (2010), chose to write an extensive literature review similar to a “normal” qualitative research study. This means that this article included a methods section, a results section, a discussion section, along with a conclusion and implications section to help confirm the argument that recess in school is important. The table Ramstetter et al (2010) provide indicates that “recess-particularly unstructured recess and free play-provides a unique contribution to the creative, social, and emotional aspects of a child’s development.” (p. 524). This suggests that recess does not only have a positive effect on the academic achievement of a student, but also the overall social/emotional development of a child. This leads to the most important and specific articles found that pertain specifically to this particular research study.

As stated many times throughout this review of literature, many literature reviews have been completed on the importance of providing a recess period for children. The article

completed by Pellegrini and Smith (1993) is an extremely formal literature review that helps the argument that recess is an important part of students' school experience and school outcomes.

“As children sit for prolonged periods of time, they accumulate surplus energy; physical activity in recess is necessary to ‘blow off’ or use up, the energy so that they can then concentrate on the more sedentary tasks of the classroom.” (p. 53). It discussed the overall importance of recess on a student. Pellegrini and Smith (1993) bring up the Novelty/Arousal Theory, which argues that recess is needed for a student that is a psychological theory that also suggests students need small amounts of time to release energy in order to properly perform sedentary tasks such as cooperating in the classroom.

Although this article is dated, many other articles reviewed during this research process brought up Pellegrini, Huberty, and Jones (1995) and their specific experimental study completed. Pellegrini et al (1995) completed three separate studies during this experimental study in order to properly prove their hypothesis that providing a recess period will help with the classroom behavior of elementary-age students and negate any major possible limitations. Pellegrini et al (1995) completed two of the studies using outdoor recess and one study using indoor recess in order to control the temperature. The researchers also used a wide range of grades (K, 2, 4) in order to get an overall idea of the effects of recess timing on classroom behavior and whether or not the age of the students affects the importance of recess. “Children’s cognitive immaturity, relative to adults, is characterized by a short attention span and a desire to play after concentrated periods of attention. Such breaks from demanding cognitive tasks may facilitate school learning. It seems to be the case that children’s attention to classroom tasks does wane as the duration of the class work increases.” (p. 861). This research study did not find a large difference between recess behaviors and post-recess inattention. Pellegrini et al (1995) did

state that this research focused more around the timing of when recess was offered rather than the specific effects recess had on classroom behavior. However, the article does provide copious amounts of research that confirms their hypothesis that after returning from recess, classroom behavior may improve.

Completing this literature review helped create the methodology of this research study which is on the effects of a recess period on the classroom behavior of 3rd grade students. Ridgway, Northup, Pellegrin, LaRue, and Hightshoe (2003) completed a very similar experiment to this research study; however, these researchers used participants with Attention Deficit Hyperactivity Disorder (ADHD). The procedure Ridgway et al (2003) used by first observing students' classroom behaviors on days where recess was not offered, and then later throughout the experiment observing the same students on days that recess was added to the classroom schedule. Ridgway et al (2003) also used recess as more of a behavioral intervention for problem classroom behaviors. Findings from this study showed that "The average of all classroom observations at each time interval for recess and no-recess days shows all participants' levels of inappropriate behaviors progressively increased over time on days when they did not have recess." (p. 259). Ridgway et al (2003) validated their hypothesis that providing a recess period will help with problem classroom behaviors.

As seen throughout this extensive literature review, researchers suggest that the classroom behavior of students will improve if they are provided with a recess period. Barros, Silver, and Stein (2007) conducted a mixed study that included both qualitative and quantitative research methods that included participants from 3rd grade classrooms nationwide which looked at the effects of recess on classroom behaviors. Researchers observed 8 and 9 year old students' behaviors on days they did have recess along with days they did not have recess. Findings from

this research show that recess may benefit classroom behavior as a whole. The researchers Barros, Silver, and Stein (2007) commented:

“Moreover, recess may be an important element of classroom management and behavior guidance. Findings in this study suggest that recess may have a benefit for overall group classroom behavior. Studies by Pellegrini et al (1993; 1995) and Jarrett et al (1998) concluded that students were less attentive and worked less efficiently when confined to their classrooms in continuous instructional time. Those findings support the importance of recess for student attentiveness in the classroom. A change in academic instruction or class topic does not offer a mental change or a physical release. Even a formal, structured, physical education class may not offer the same benefit as a recess.” (p. 435)

The researchers are suggesting that the overall classroom behavior will benefit from a recess period; students will be more attentive and work more efficiently when provided with a recess period. Barros et al (2009) findings were similar to many other research studies completed on the topic of providing a recess period and the affect recess has on the classroom behavior of elementary-age students.

The current study of the effects a recess period has on the classroom behavior of 3rd grade students dives deeper into the research that has already been completed. It used a recess period as a behavioral intervention to determine whether or not providing a small break, or recess period, for 3rd grade students in a teacher-centered rural school will improve their classroom behavior and overall attentiveness in the classroom. Participants from different academic levels will also be used during this study. The hypothesis of this study is that providing a recess period will have a positive effect on the classroom behavior and attentiveness of the 3rd grade participants. In the following chapter, I will detail the methods of this project.

### **Methodology**

This study was based on whether or not providing a recess period to 3rd grade students affects their classroom behavior. Issues of safety, health concerns, developmental and social needs from recess for students (especially young students), improved cognitive performance, behavior, and attention formed the core of the reading material for this research study. The general objective was to observe three 3rd grade students' on-task and off-task classroom behavior twice when they were not offered recess, and then observe the same three students' on-task and off-task classroom behavior twice when they were offered a recess period. Once these observations were completed, two more observations were completed when the same three 3rd grade students were again not offered a recess period; an observation evaluating the on-task and off-task behavior of these students was completed both before and after the recess period. The observations for this research study were 20 minutes each time, completed at the same time of day, which was 2:15pm, and during the same core subject during each observation, which was English Language Arts. At the end of all of the observations, 8-20 minute observations of the students' on-task and off-task classroom behaviors were collected. All three participants being observed throughout this research project were from the same 3rd grade classroom and were randomly selected by the classroom teacher.

### **Type of Research and Definitions**

This type of research study is a mixed method style of research; this involves both qualitative and quantitative research. This is because an observation of students' on-task and off-task behavior was collected by utilizing a checklist of how many times each student is either on-task or off-task for every minute for 20 minutes. The number of times each student was on-task or off-task was counted and then graphed into a triple-bar graph for each individual student. On-task behaviors include completing assigned work, working efficiently with peers, looking and

listening to the teacher, or following instruction provided by the teacher. Off-task behaviors include constant movement, playing in desk, tapping a pencil, talking to others when not appropriate, touching others, head on desk, looking out the window, starrng at a various object in the classroom, eyes closed, slumping over in seat, or not attending classroom instruction. This research question could only be answered through both qualitative and quantitative modes of inquiry because collecting data from observations and being able to provide concrete numbers and graphs helped validate the findings from this study.

### **Participants and Setting**

The student selection was randomized by having the classroom teacher randomly select three students to be observed. These three students were used as the participants throughout the whole research study.

Student 1 is an 8 year old Caucasian female special education student who pushes into this general education classroom during English Language Arts. She comes from a middle-class socioeconomic status. A few unique characteristics of this student is that she is constantly picking at her fingers, has extreme difficulty focusing and staying on-task, and is very anti-social.

Student 2 is an 8 year old Caucasian female who has a high academic achievement level compared to other 3rd grade students. She also comes from a middle-class socioeconomic status. A few unique characteristics of this student is that she is a very hard-worker and she tries to perfect everything she does.

Student 3 is a 9 year old Caucasian male who has an average academic achievement level compared to other 3rd grade students. He also comes from a middle-class socioeconomic status.

A few unique characteristics of this student is that he is extremely social and has a background of struggling to stay on-task.

This type of inquiry method was used because it determined whether or not the use of a recess period affects the classroom behavior of elementary students. I decided to use the one-group pretest-posttest design because it helps delete possible limitations of this study. For example, if I decided to use the pretest-posttest control-group design, limitations may occur from the different types of students in either the control group or the experimental group. A student in the control group or the experimental group may have a behavior problem which could throw-off the reliability of the observation data collected. Using the one-group pretest-posttest design, I will eliminate the possibility of this limitation occurring.

### **Materials**

The codes utilized during this research study focused on the following classroom behaviors:

**W (work)** - On-task behaviors such as completing assigned work, working efficiently with peers, looking and listening to the teacher, or following instruction provided by the teacher.

**F (fidgety)** - Off-task behaviors such as constant movement, playing in desk, tapping a pencil, talking to others when not appropriate, or touching others.

**L (listless)** - Off-task behaviors such as head on desk, looking out the window, staring at a various object in the classroom, eyes closed, slumping over in seat, or not attending classroom instruction.

The checklist was set up in the following way:

Minute	On-Task and Off-Task Behaviors		
	W (working)	F (fidgety)	L (listless)
1	W	F	L
2	W	F	L
3	W	F	L
4	W	F	L
5	W	F	L
6	W	F	L
7	W	F	L
8	W	F	L
9	W	F	L
10	W	F	L
11	W	F	L
12	W	F	L
13	W	F	L
14	W	F	L
15	W	F	L
16	W	F	L
17	W	F	L
18	W	F	L
19	W	F	L
20	W	F	L
<b>Total</b>			

### **Design and Analysis Procedure**

The specific type of inquiry method that was utilized during this research study was a one-group pretest-posttest design. This is because the same group of students' was observed for two days that they did not have a recess period; the same students were observed both before and after recess for another two days that a recess period was offered. After this, the same group of students was again observed for two days that they did not receive a recess period. The type of recess offered to the students during this research study was a 15 minute free period inside where the students were allowed to socialize, play games, color, or just relax. The recess period was indoors because of the inclement weather that took place throughout the data collection of this research.

The type of analysis that was used during this research study are similar to that used by Jarrett, Maxwell, Dickerson, Hoge, Davies, & Yetley (2001) used in their study. It was decided to use a similar analysis as these researchers because the set-up of their research study is very thorough and covers all information that needed to be collected during this research study. It was also decided to create the analysis of this research study in a similar way as Jarrett et al (2001) because in their study, these researchers made a suggestion for future research to be completed in various grades and in more teacher-centered classrooms. Their study was completed in student-centered 4th grade classrooms; the research conducted in this study was in a teacher-centered 3rd grade classroom. While collecting the observation data, a similar coding system (as seen above) to the one Jarrett et al (2001) was utilized to determine whether or not each participant was on-task or off-task for every minute for 20 minutes.

An on-task/off-task checklist was completed on each student during each observation. More than one code could be circled during a specific moment depending on how the student

was behaving at that time. For example, a student could be on-task and completing his or her assigned work while fidgeting (i.e. tapping a pencil) at the same time. A student could also be listless and fidgeting at the same time (i.e. playing in his or her desk with his or her head on the desk).

Once all of the data was collected after the first two observations, the number of times each student was either on-task or off-task was tallied. Again, once the second two two-part observations were completed, the number of times each student was working, fidgety, or listless was tallied up. After the last two observations were completed, the same process occurred where the number of times each student was either on-task or off-task was tallied up. A three-bar graph was also created based on each participant's total number of times he or she received a W (working), F (fidgeting), or L (listless) for each observation. After this, the triple-bar graphs were compared to determine whether or not offering a recess period affects the classroom behavior of 3rd grade students.

I chose to use this type of analysis strategy because it was a very simple and organized way to collect all of the data and then be able to easily review it when needed. Creating a triple-bar graph of how often each participant was on-task or off-task helped to easily compare the numbers. This is because the graphs helps as a visual to determine whether providing a recess period to third grade students affects their classroom behavior for each individual student.

### **Limitations**

While collecting this data, the strategy was to sit in the back of the classroom so minimal distractions for the participants occurred, and to ensure that the observations did not affect the participants' behaviors in any way. This was done because modifying the participants' behaviors

in any way could be considered as a limitation. If a participant knows his or her behavior is being watched specifically, than the student may alter his or her behavior which could become a limitation to this study.

Another limitation of this research study is the specific time of day that the observation data was collected. Since it was at the end of the day, the students could have been eager to leave school and become more likely to be off-task.

A third limitation to this study is the type of recess the students' received. The participants were not able to partake in an outdoor-recess period (due to cold conditions and snowy weather) and had to participate in indoor-recess. The outcome of the students' on-task and off-task behaviors could have been different if they were provided an outdoor-recess period.

An alternate approach that I considered before rejecting it as a strategy was to write down exactly what each student was doing for each 20 minute observation. It was decided not to use this approach because it would have been too difficult to write what behaviors three different participants were exhibiting at the same time for 20 minutes. This is because behaviors could have been missed or overlooked if this type of approach would have been used and this could have also been considered a limitation to this study. The coding system and checklist was more efficient because it was easier to simply circle what each student doing for each minute rather than writing it down.

Using the one-group pretest-posttest design along with a mixed method research paradigm within the framework of critical discourse theory, helped determine whether or not providing a recess period affects the classroom behavior of 3rd grade students. Avoiding any possible limitations that could have occurred by using a different design such as the control-group pretest-posttest design was also decided for this research study. Utilizing a coding system

and checklist sheet also aided in keeping all data collected organized. The findings of this study are reported in the proceeding chapter.

## Results

When observing Student 1, Student 2, and Student 3, I was looking for on-task and/or off-task behaviors (working, fidgeting, and listlessness). The participants were able to score more than one on-task and/or off-task behavior at the same time. For instance, if Student 1 was observed playing with her pencil while having her head on her desk, than she was considered being both fidgety and listless. This occurred many times throughout the 8 observations.

The completed observations for students 1, 2, and 3 are seen in figures 1-3 below. A completed triple-bar graph was completed on each student based on all 8-20 minute observations. The outcome of the effects of recess on the classroom behavior of the participants varied for each student. This could be because of each individual student's academic level.

As seen in Figure 1, Student 1 was consistently fidgeting throughout all 8 observations. However, the amount of time Student 1 is on-task (W-working) increased from 1 to 8 between the first observation without recess and the third observation with recess. The amount of time Student 1 was recording on-task also went up from a 1 on her first observation to a 6 during part 2 of her fourth observation. Observations 7 and 8 did record student 1 working on-task 7 times out of both 20-minute observations; however, this could be because this student was working in a small group with a teacher during both of these observations. Since Student 1 was working in a small-group during observations 5 and 6, she may have been more likely to stay on-task and focused during these observations. As stated earlier, Student 1 is constantly picking and tapping her fingers, which constitute as fidgeting; this is why Student 1 scored so high for fidgeting throughout all of her 8 observations. Do take note that her fidgeting did decrease between observation 3 part 1 and observation 3 part 2 from 6 to 5 and observation 4 part 1 and observation 4 part 2 from 12 to 7. It was interesting to see that Student 1's listless behavior either stayed the same or actually increased from observations 3 and 4 part 1 and 2. Overall, there was

no extreme correlation between the effects of a recess period and the classroom behavior of this student. However, there was an intense correlation between the listlessness of Student 1 between observations 3 and 4 part 1 and 2.

As stated earlier, Student 2 is has a high-achieving academic level. Figure 2 shows that throughout all 8 observations that this particular student was working either more than or almost just as much as she is fidgeting. I observed that Student 2's fidgeting maintained at a 6 during observation 3 and from 9 to 3 during observation 4. Student 2 is very rarely listless; she was seen being most listless during observation 6 when she is listless 12 times out of a 20-minute observation. However, it should be noted that Student 2's listless behavior did decrease during observation 3 part 1 and 2 from 7 observed times to 2 and from 5 observed times to 1 time during observation 4. The amount of time Student 2 spend fidgeting was so high compared to the other 6 observations was because Student 2 recently brought a new water bottle to school and she was constantly recorded either playing with or drinking from this water bottle.

Student 3 displayed the most effects of a recess period on the classroom behavior of this 3rd grade student. By analyzing Figure 3, it is very obvious that providing a recess period for this average-academic level student affected his classroom behavior significantly; this is because the amount of time Student 3 was observed on-task and working went from 1 to 18 during observation 3 and from 5 to 14 during observation 4. It is apparent that providing a recess period for this student did affect the on-task behavior for Student 3. This student fidgeted multiple times throughout all 8 observations; this is because Student 3 was constantly socializing with his peers. Figure 3 indicates that the amount of time Student 3 spent fidgeting decreased from 9 to 4 during observation 3 and from 14 to 7 during observation 4. The amount of time student 3 spent being listless also decreased from 10 to 2 during observation 3 and from 6 to 3 during observation 4.

Student-specific triple-bar graphs are seen in figures 1-3; student-specific percentage tables of the average amount spent working, fidgeting, and/or listless during specific observations is seen in figures 4-6; figure 7 is a percentage table of the amount all 3 participants were working, fidgeting, and/or listless during specific observations.

The findings from the current study indicate that there is an effect from recess on the classroom behavior of elementary-aged students, but could the academic level of a student contribute to how much of an effect recess makes on the classroom behavior of a student? The following chapter will go into further detail about the findings of the effects of providing a recess period on the classroom behavior of the 3rd grade participants.

Figure 1: Student 1

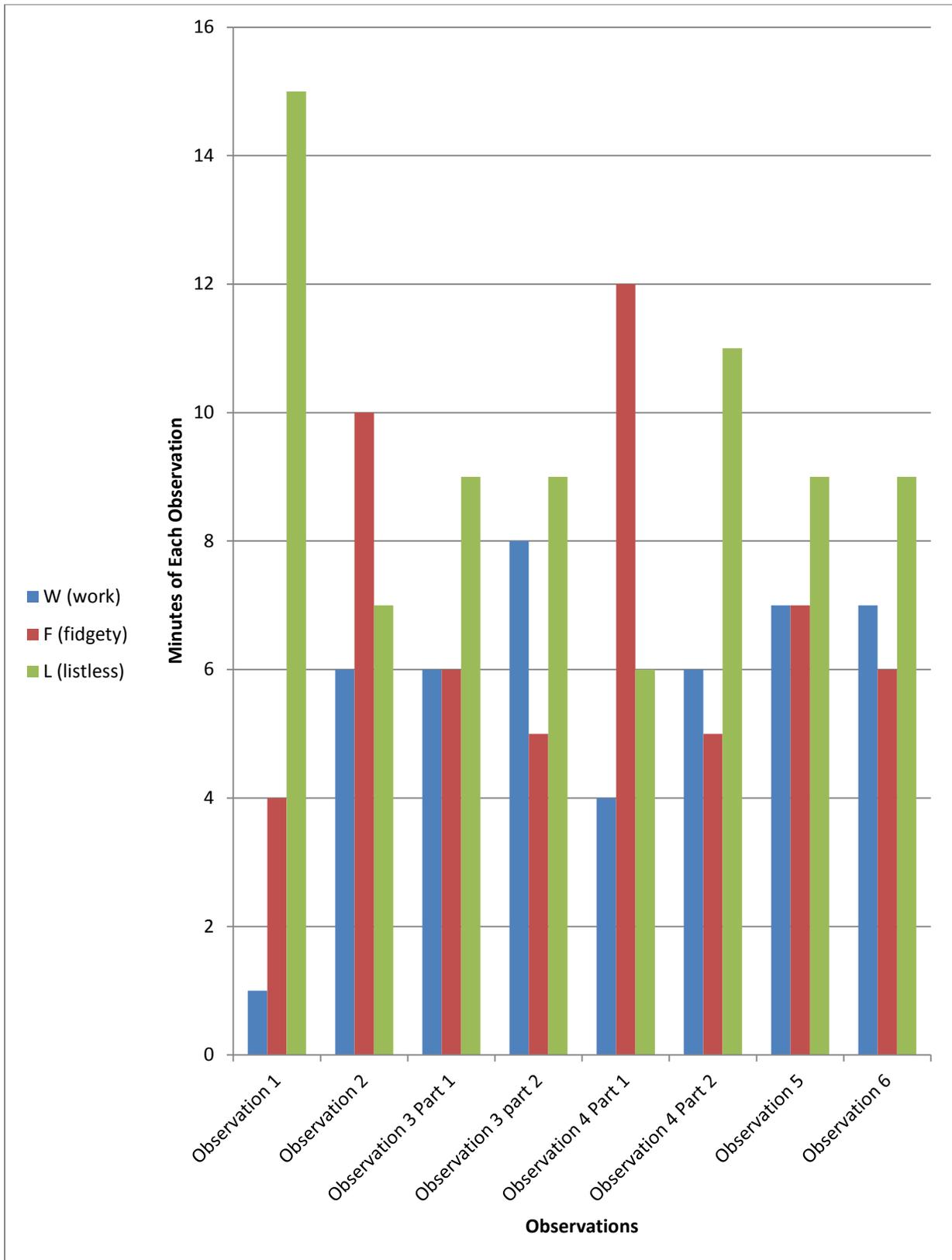


Figure 2: Student 2

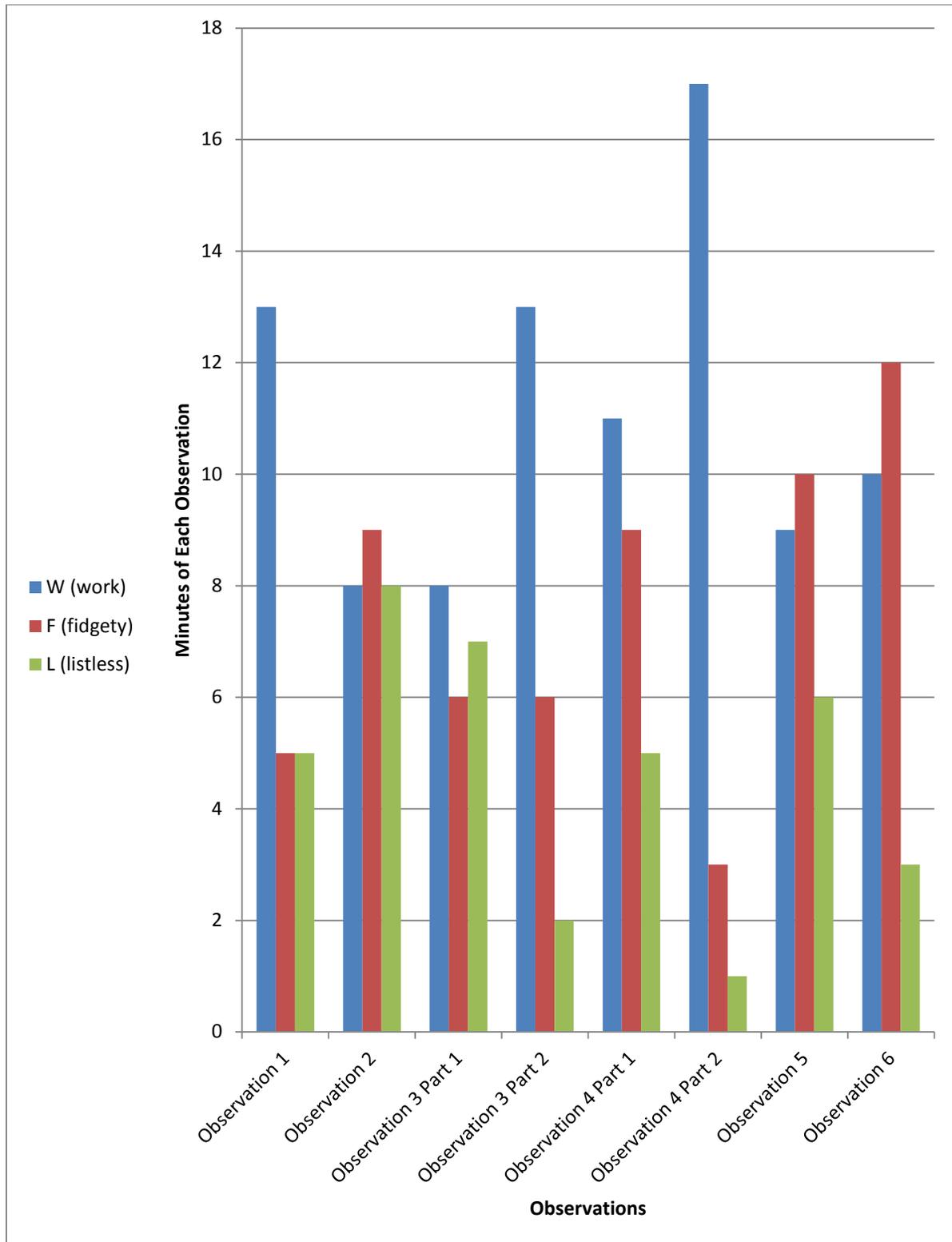
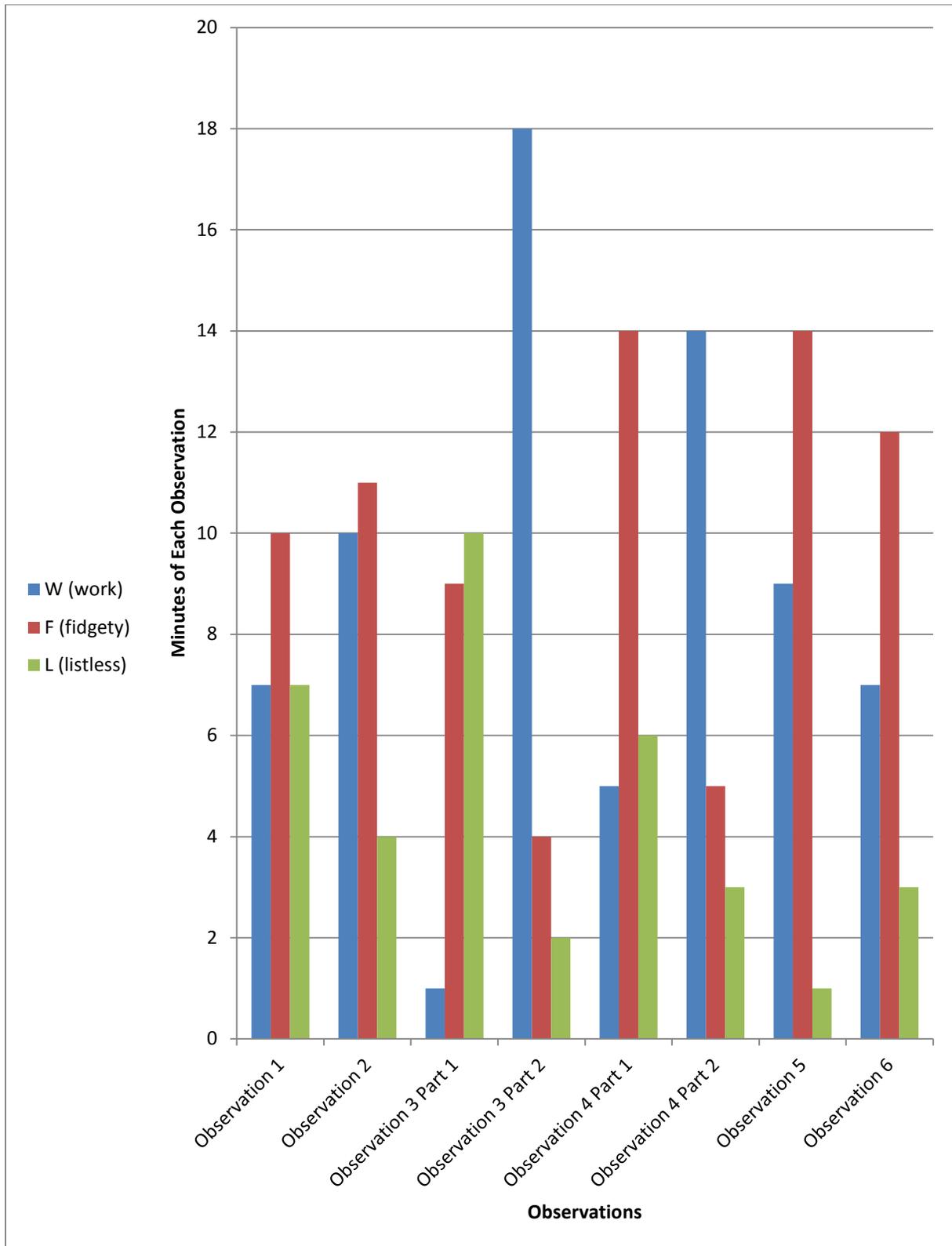


Figure 3: Student 3



**Figure 4: Table of Percentages out of 100% of the Classroom Behaviors of W (working), F (fidgety), and L (listless) Observed on Student 1 During Specific Observations**

<b>Observation Type</b>	<b>Observation Number</b>	<b>W (working)</b>	<b>F (fidgety)</b>	<b>L (listless)</b>
Days No Recess was Provided	1, 2, 5, 6	26%	35%	53%
Days Before Recess was Provided	3: Part 1 4: Part 1	25%	45%	38%
Days After Recess was Provided	3: Part 2 4: Part 2	35%	25%	50%

**Figure 5: Table of Percentages out of 100% of the Classroom Behaviors of W (working), F (fidgety), and L (listless) Observed on Student 2 During Specific Observations**

<b>Observation Type</b>	<b>Observation Number</b>	<b>W (working)</b>	<b>F (fidgety)</b>	<b>L (listless)</b>
Days No Recess was Provided	1, 2, 5, 6	50%	45%	28%
Days Before Recess was Provided	3: Part 1 4: Part 1	48%	38%	30%
Days After Recess was Provided	3: Part 2 4: Part 2	75%	23%	8%

**Figure 6: Table of Percentages out of 100% of the Classroom Behaviors of W (working), F (fidgety), and L (listless) Observed on Student 3 During Specific Observations**

<b>Observation Type</b>	<b>Observation Number</b>	<b>W (working)</b>	<b>F (Fidgety)</b>	<b>L (listless)</b>
Days No Recess was Provided	1, 2, 5, 6	41%	59%	19%
Days Before Recess was Provided	3: Part 1 4: Part 1	15%	58%	40%
Days After Recess was Provided	3: Part 2 4: Part 2	80%	23%	13%

**Figure 7: Table of Overall Percentages out of 100% of W (working), F (fidgety), and L (listless) Classroom Behaviors Observed on All 3 Participants During Specific Observations**

<b>Observation Type</b>	<b>Observation Number</b>	<b>W (working)</b>	<b>F (fidgety)</b>	<b>L (listless)</b>
Days No Recess was Provided	1, 2, 5, 6	39%	46%	33%
Days Before Recess was Provided	3: Part 1 4: Part 1	29%	47%	36%
Days After Recess was Provided	3: Part 2 4: Part 2	63%	23%	23%

### **Discussion**

Chapter 5 goes into greater detail about the findings of the present study; it looks closely at each participant's results from providing a recess period on his or her classroom behavior. This chapter will also conclude similarities and differences among the participants. It will also discuss the limitations of this research study, along with future research that should be conducted to help validate these findings.

### **Significance**

The present findings discussed in the previous section depicted that providing a recess period for 3rd grade students did have an overall effect on the classroom behavior. The ways the recess period affected each student varied; this could be because of the academic level of each of the participants: Student 1 is currently enrolled in special education classes; Student 2 has a high level of academic achievement; and Student 3 is at an average level for academic achievement. When the participants were being observed during the initial 2 observations, it was seen that all 3 participants were off-task (fidgeting and/or listless) more than they were on-task. Once the intervention (recess) was introduced, the amount of time Students 2 and 3 spent being on-task increased drastically. Overall, the percentage of time all 3 participants spent being on-task on observation days that recess was not provided was 39%; students were also observed fidgeting 46 % and being listless 33% during these same observations. The amount of time all 3 participants were observed being on-task during observation days that a recess period was offered increased from 29% before the recess period and 63% after the recess period ended. The overall percentage of fidgeting during these two-part observations decreased from 47% to 23%. I also observed a decrease in the overall amount of time all 3 participants spent being listless from 36% to 23 %.

**Student 1:**

Providing a recess period for Student 1 did show that she was on-task more when a recess period was offered and that the amount of fidgeting she participated in did decrease. The overall percentage of time she was observed being on-task on days she did not receive a recess period was an average of 26% and the percentage of time she was observed being on-task after a recess period was offered was 35%. It is also seen that the amount of time this student spent being listless either remained the same or actually increased after the provided recess period. For instance, I observed the participants for 20 minutes before providing a recess period and observed them again for 20 minutes after the recess period ended. On these observation days, Student 1 was observed being listless 38% of the time before recess was offered and then 50% of the time after recess was offered. Could the recess period have calmed her down so much that she became tired/listless?

**Student 2:**

Although there was some correlation between providing a recess period for Student 2 and the effect it had on her classroom behavior, the amount of time she spent off-task was always less than the amount of time she spent on-task. The percentage of time she was observed being on-task on days in which she did not receive a recess period was an average of 50% and the percentage of time she was observed being on-task after a recess period was offered was 75%, she was still always on-task either the same amount or more than compared to the times she was observed fidgeting or being listless. The findings did indicate that on the observation days Student 2 was observed both before recess and after recess, her on-task behavior increased from 48% to 75%. As stated in Chapter 4, this could be because Student 2 has a high level of academic achievement; that is it could be that her high level of academic achievement was a

contributing factor behind why she was always on-task just as much or even more than the times that she was fidgeting or being listless

**Student 3:**

The recess period seemed to positively affect the classroom behavior of Student 3 the most of all of the student participants. The percentage of time I observed him being on-task on days he did not receive a recess period was an average of 41% and the percentage of time I observed him being on-task after a recess period was offered was 80%. The findings from this study indicated that on the observation days Student 3 was observed both before recess and after recess, his on-task behavior increased from 15% to 80%. This finding shows that there was a strong correlation between providing a recess period and the effect it has on the on-task classroom behavior for this participant.

The findings of this present study are similar to the results of previous research that showed that providing a recess period will: (a) improve the on-task behaviors (Pellegrini & Bjorklund, 1997; Jarrett et al., 2001; Zygmont-Fillwalk & Bilello, 2005; Pellegrini & Holmes, 2006; Castelli et al., 2007; Ramstetter et al., 2010; Dills et al., 2011;) and (b) improve the overall classroom behaviors (Pellegrini & Smith, 1993; Pellegrini et al., 1995; Ridgway et al., 2003; Pellegrini & Holmes, 2006; Barross et al., 2009; Pellegrini, 2009) of elementary students. Current findings extend the external validity of the effects providing a recess period has on the classroom behavior to a specific grade (i.e., 3rd grade students).

Current findings also indicate that there may be a relationship between providing a recess period for elementary students and the effects it has on the students' classroom behaviors depending on their academic level. As seen in Figure 4, Figure 5, and Figure 6, each student's on-task behavior increased after he or she was provided with a recess period compared to days

each student was not offered a recess period. However, when studying the results of each student individually, differences in the percentage each student's on-task behaviors increased varied drastically. For example, Figure 4 indicates that Student 1 (the participant currently enrolled in special education classes) was on-task 25% before recess was provided and 35% after recess was provided; this is a 10% increase. Figure 5 indicates that Student 2 (the participant who is currently at a high level of academic achievement) was on-task 48% before recess was provided and 75% after recess was provided; this is a 27% increase. And lastly, the percentage results seen in Figure 6 of Student 3 (the average academic level participant), indicates that he was on-task 15% before recess was provided and 80% after recess was provided; this is a drastic 65% increase. While all students did show an increase of on-task behaviors after a recess period was provided, the percentage of how much each student increased was not consistent. The recess period seemed to affect the on-task behavior of Students 2 and 3 the most. It was seen that the listless off-task behavior of Student 1 actually increased after recess by 12%. Even with the extensive literature review completed in Chapter 2 of this study, no research was discovered that discussed the effects of providing a recess period has on the classroom behavior of elementary students depending on their current academic level.

Three of the biggest arguments to date that schools use as reasoning for eliminating recess are: (a) due to the recent focus on academic achievement (Pellegrini & Bjorklund, 1997; Pellegrini & Blatchford, 2002; Jarrett, 2002; Pellegrini & Bohn, 2005; Zygmunt-Fillwalk & Bilello, 2005; Pellegrini & Holmes, 2006; Pellegrini, 2009; Ramstetter et al., 2010; Dills et al., 2011), (b) the lack of time for recess in a school day (Waite-Stupiansky & Findlay, 2001; Pellegrini & Blatchford, 2002; Jarrett, 2002; Zygmunt-Fillwalk & Bilello, 2005; Pellegrini & Holmes, 2006; Ramstetter et al., 2010; Dills et al., 2011), and (c) the lack of academic purpose

that recess has on students (Pellegrini & Bjorklund, 1997; Pellegrini & Smith, 1998; Jensen, 2000; Waite-Stupiansky & Findlay, 2001; Pellegrini & Bohn, 2005; Zygmunt-Fillwalk & Bilello, 2005; Pellegrini & Holmes, 2006; Pellegrini, 2009). The findings of previous research and the current results of this study urge that recess be provided during the school day because students on all academic levels benefited from the provided recess period. I observed that after the participants completed their 10 minute recess period, the amount of time each student was on-task improved: Student 1 improved by 10%; Student 2 improved by 27%; and Student 3 improved by 65%. Jarrett et al. (2001) raise an interesting point about the recent elimination of recess in public schools in the United States. The researchers discuss the typical school day of Japanese schools and how students in Japan are provided with 10-20 minute breaks between 45-minute lessons; they then bring up the fact that Japan has higher academic achievement scores. Could the reasoning behind the higher academic performance of Japan compare to the United States be due to the fact that Japanese schools offer students breaks throughout the school day?

Providing a small 10-minute recess during observations 3 and 4 did not present any difficulties for the classroom teacher of the participants in this study. The teacher said that significant time was not taken away from the academic day; she also said that she felt it was not difficult to regain the attention of the students after the recess period ended. The students also seemed to be very excited about receiving a 10-minute recess period. The key finding of this study is that providing a recess period will have an effect on the classroom behavior of elementary-age students. The results from this study show that students' at all academic levels will benefit from a recess period because they will be on-task (working) more and off-task (fidgety and listless) less.

### **Limitations**

Although the present findings of this study were positive and did depict a correlation between providing a recess period and the classroom behavior of 3rd grade students, there are some important limitations to consider when interpreting these findings. First, the location of the recess that the participants received was indoors due to the inclement weather during a Western New York Winter; if students received outdoor recess, the findings could have been different. Another limitation is the time of the day that the observations were completed and the recess periods were offered. All of the observations were completed at the end of the school day. This could have an effect on the findings because students tend to be more off-task at the end of the day. A third limitation of this study is the specific subject the students were learning when the observations were being done. If a student is not interested in or struggles with a specific subject, he or she is less likely to stay on-task and focus; the same situation occurs if a student is interested in a specific subject: he or she will be more likely to be on-task and focus during it. The last limitation of this study is the amount of participants included. Only 3 participants were observed during this study and they were all from the same classroom. Students from other classrooms could act differently depending on the structure of the classroom and the classroom management of the teacher.

### **Future Research**

This research study found that providing a recess period affected the classroom behavior of students varies depending on the academic level of the student. Future research should be completed on the effects recess has on the classroom behavior of students within a specific academic level (i.e. special education, low academic level, average academic level, or high

academic level). Similar future research should also be completed with a larger participant pool in order to validate these findings.

Although this research study is a small study with few participants in the same 3rd grade classroom, it is still a significant contribution to the field because it validates previous research that indicates that recess does have a positive affect the classroom behavior of elementary-aged students. This study shows that it is important to provide a recess period for students because the students will be more likely to stay on-task if they are provided with small breaks. Just think, adults receive small breaks (i.e. coffee breaks) throughout the work day, so isn't it only fair that students receive small breaks (i.e. recess) throughout the school day?

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## Appendix

**COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)****HUMAN RESEARCH CURRICULUM COMPLETION REPORT**

Printed on 02/12/2014

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<b>EXPIRATION DATE</b>	12/10/2014

**GROUP 1.**

<b>COURSE/STAGE:</b>	Basic Course/1
<b>PASSED ON:</b>	12/10/2012
<b>REFERENCE ID:</b>	9004106

<b>REQUIRED MODULES</b>	<b>DATE COMPLETED</b>
Introduction	10/22/12
History and Ethical Principles - SBE	12/10/12
Defining Research with Human Subjects - SBE	12/10/12
The Regulations - SBE	10/22/12
Assessing Risk - SBE	12/10/12
Informed Consent - SBE	12/10/12
Privacy and Confidentiality - SBE	12/10/12
Research with Prisoners - SBE	12/10/12
Research with Children - SBE	12/10/12
Research in Public Elementary and Secondary Schools - SBE	12/10/12
International Research - SBE	12/10/12
Internet Research - SBE	12/10/12
Avoiding Group Harms - U.S. Research Perspectives	12/10/12
Vulnerable Subjects - Research Involving Workers/Employees	12/10/12
Conflicts of Interest in Research Involving Human Subjects	12/10/12
SUNY Fredonia State College	12/10/12

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Program course site is unethical, and may be considered research misconduct by your institution.

Paul Braunschweiger Ph.D.  
 Professor, University of Miami  
 Director Office of Research Education  
 CITI Program Course Coordinator