ACTIVITY BURSTS IN THE SPECIAL EDUCATION CLASSROOM: TEACHERS’ PERCEPTIONS OF STUDENT ENGAGEMENT AND BEHAVIOR

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ACTIVITY BURSTS IN THE SPECIAL EDUCATION CLASSROOM:
TEACHERS’ PERCEPTIONS OF STUDENT ENGAGEMENT AND BEHAVIOR

A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Leadership

by
Jacqueline Marie Mantz
December 2018
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Approved by:

Marita Mahoney, Committee Chair, Education
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ABSTRACT

An exploratory case study design and a mixed-methods approach was used to discover the impact of the Activity Bursts in the Classroom (ABC) Fitness Program on students in special education classroom settings, elementary and middle school. Both classrooms were comprised of students with the primary disability of emotional disturbance. Special education intervention teachers’ perceptions of their students engagement and behavior were collected before and during the implementation of the ABC for Fitness Program intervention. Special education intervention teachers completed the Teacher Assessment of Student Engagement, participated in an ABC for Fitness training session, a question and answer session, completed daily written behavior incident logs, a mid-point check-in, and a semi-structured interview. There were four themes found throughout the research. Intervention teachers perceptions’ of student engagement increased as the students enjoyed the ABC for Fitness Program activities. The classroom environment was improved through improving the student to teacher relationship, the ABC for Fitness Program intervention required adaptations for student success to the timing (e.g. length and number of times the exercises and cool down were implemented), structure, and the additional of visual cue cards (e.g. Fit Deck cards). The special education intervention teachers faced specific challenges unique to their setting such as structure and focus. Results indicated three main findings: 1) Special education intervention teachers’ perceptions of student engagement during the intervention
improved; 2) Special education teachers needed to be able to adapt program to suit their students’ specific needs; and, 3) The ABC for Fitness Program was beneficial to participating special education intervention teachers’ classrooms environment in promoting positive interactions between students and staff.
ACKNOWLEDGMENTS

First, I want to first thank my dissertation chair Dr. Marita Mahoney. Your unwavering support and patience was essential in the completion of my dissertation. I truly grew as a researcher and as a writer. I will always be profoundly grateful for your guidance. I would also like to thank my other committee members: Dr. Courtney Doussett, whose research inspired my own path. Thank you for allowing me to take your work into the direction of special education and I pray I did your work justice. Finally, thank you for Dr. Schnorr for the discussion we had when I wanted to give up. You helped me find my path back on the yellow brick road toward the Emerald City of a completed dissertation. Thank you again dearest committee members for being part of this wonderful experience.

A special thanks goes out to my husband Joe for being so supportive of my journey. He believed I could finish this work even when I did not believe it myself. His encouragement, love, and understanding with me these last five years has been the foundation by which I could complete this work. To my sister Roberta, thank you for always supporting and believing in me. To my twin sister Juanita Mantz, you were a role model with your own educational journey many years ago when you received your Juris Doctoral degree. Thank you for always listening to me and understanding. We are truly Wonder Twins now and ready to activate this world into a better place. To my sister Annette Flores, you are my Jiminy Cricket. You inspire me to not only educate myself but become a more
humane loving woman. Thanks mom and dad for giving me the strong work ethic necessary to succeed in my educational journey. I must also thank my canine family members and Boston Terrier babes, Elizabeth Barrett Browning and Harper Lee. Thank you both for sitting by my feet sending me love with those big brown eyes of yours.

I must also thank Cohort 7 for being there for me on this journey. Special thanks to Shine, my mango friend for life. Shine, you helped me channel my own inner diplomat and are my role model as a leader in education.

I must also thank Palm Springs Unified School District for their support; specifically Dr. Denise Ellis, Dr. Victoria Parkinson, Dr. Todd Reed, Kathy Surdin, and my fellow special education reflective coach Dean Troup. All of you are wonderful educational leaders whom I admire. Thank you for all the support.

This dissertation is dedicated to Vincent Flores, a wonderful husband to my sister, a dedicated father to his children; Sara, Selena, and Sophia, devoted son to Helen, and a dear friend.
# TABLE OF CONTENTS

ABSTRACT .................................................................................................................... iii

ACKNOWLEDGMENTS ................................................................................................. v

LIST OF TABLES ....................................................................................................... xi

LIST OF FIGURES ...................................................................................................... xii

CHAPTER ONE: INTRODUCTION

Statement of the Problem ......................................................................................... 1

Research Questions ................................................................................................ 4

CHAPTER TWO: LITERATURE REVIEW

Background on Special Education ........................................................................... 5

Models of Engagement .............................................................................................. 9

Academic Engagement as a Learning Environment ................................................ 12

Engagement and Students with Disabilities .............................................................. 16

Engagement as an Intervention for Students with Disabilities ............................... 21

Engagement and Activity Bursts .............................................................................. 24

Physical Activity and Students ............................................................................... 31

Physical Activity and Students with Disabilities ..................................................... 33

Teachers’ Perceptions on Engagement .................................................................. 37

Teachers as Facilitators to Physical Activity ........................................................... 39

Summary .................................................................................................................. 40

Research Questions ................................................................................................ 43

CHAPTER THREE: METHODOLOGY

Introduction .............................................................................................................. 44

Participants and Setting ......................................................................................... 45
Recruitment ..................................................................................................................... 46

Data Collection ............................................................................................................... 48

Activity Bursts in the Classroom for Fitness Training Workshop Sessions ........................................ 48

Question and Answer Session from the Activity Bursts in the Classroom for Fitness Training Session .................................................. 49

The Teacher Assessment of Student Engagement ........................................................... 49

Daily Behavior Incident Logs ....................................................................................... 51

Elementary School Daily Behavior Incident Logs ....................................................... 51

Middle School Daily Behavior Incident Logs ............................................................... 52

Mid-Point Check-in ...................................................................................................... 54

Follow-up Semi-Structured Interview ........................................................................ 54

Data Analysis Plan ....................................................................................................... 55

Researcher Bias ........................................................................................................... 55

CHAPTER FOUR: RESULTS

Overview ........................................................................................................................ 56

Pre Engagement and Post Engagement Survey Data Results ................................................ 57

Elementary Teacher Assessment of Student Engagement Survey Responses ............... 58

Behavior Incident Log Results, Elementary Classroom ............................................... 58

Middle School Teacher Assessment of Student Engagement Survey Responses ........... 60

Behavior Incident Log Results — Middle School ......................................................... 61

Overview of Analysis of Question and Answer Sessions, Mid-Point Check-ins and Post Interviews of Intervention Teachers ................................................................. 66
Elementary Intervention Teacher’s Question and Answer Session, Mid-Point Check-in and Post Interviews .......................................................... 67

Engagement: Elementary Teacher’s Responses ................................................................................................................................. 69

Classroom Environment: Elementary Teacher’s Responses .................................................................................................................. 74

Adaptability in Special Education Classrooms: Elementary Teachers’ Responses .................................................................................. 76

Challenges with Activity Bursts in the Classroom for Fitness Intervention in Special Education Settings: Elementary Teacher’s Responses .................................................................................................................. 82

Middle School Intervention Teacher’s Question and Answer Session, Mid-Point Check-in and Post Interviews ........................................ 83

Engagement: Middle School Teacher’s Responses .............................................................................................................................. 85

Classroom Environment: Middle School Teacher’s Responses ............................................................................................................. 88

Adaptability in Special Education Classrooms: Middle School Teachers’ Responses ............................................................................. 90

Challenges in Special Education Classes: Middle School Teacher’s Responses .................................................................................... 93

Similarities and Differences with Activity Bursts in the Classroom for Fitness Intervention Case Studies’ Themes ................................ 95

Summary ........................................................................................................................................................................................................... 97

CHAPTER FIVE: CONCLUSIONS, RECOMMENDATIONS AND FUTURE IMPLICATIONS

Overview ....................................................................................................................................................................................................... 99

Research Question One and Three .......................................................................................................................................................... 100

Research Questions Two and Four ......................................................................................................................................................... 102

Research Question Five ........................................................................................................................................................................... 103

Recommendations ................................................................................................................................................................................... 105
LIST OF TABLES

Table 1. Teacher Assessment of Student Engagement — Elementary Classroom ................................................................. 58

Table 2. Behavior Incident Log — Elementary Classroom Rating Levels ........................................................................................................ 59

Table 3. Behavior Incidents — Elementary Classroom .................................................. 60

Table 4. Teacher Assessment of Student Engagement — Middle School Classroom ........................................................................................................ 61

Table 5. Behavior Incident Log — Middle School Rating Levels .................................. 62

Table 6. Behavior Incidents — Middle School Classroom ........................................... 64
LIST OF FIGURES

Figure 1. Percentage of Students with Disabilities (Aron and Loprest, 2012). ........................................................................................................................1
CHAPTER ONE

INTRODUCTION

Statement of the Problem

Currently in the US education system, there are over 6.5 million students with disabilities in the K-12 public school education system, representing 13.1 % of all students. Students in special education are a diverse population; however unfortunately in the education system students with disabilities are believed to be a homogenous group within the school population (Aron & Loprest, 2012; Halfon, Houtrow, Larson, & Newacheck, 2012). Figure 1 illustrates the different qualifying disabilities that make up special education in the United States.

![Percentage of students with Disabilities 2011](image)

*Figure 1. Percentage of Students with Disabilities (Aron and Loprest, 2012).*
The Individual Education Plan (IEP), required by Congress, outlined individualized services for students and upheld a free and appropriate education (FAPE) in the least restrictive environment (LRE) (Yell, Katsiyannis, & Hazelkorn, 2007). The purpose of LRE, FAPE, and the IEP was to protect students’ with disabilities rights to access an education comparable to their regular education peers (Yell, Katsiyannis, & Hazelkorn, 2007). The diversity among students with disabilities illustrate the need for specific strategies successful with diverse groups. Research is needed to study the success of strategies and interventions on different subsets of students with disabilities who are in general education and special education classes within the educational system. Additionally, providing students strategies to increase engagement and positive physical health outcomes align with LRE, FAPE, and the IEP. Students with disabilities are less engaged than their general education peers (Reschly & Christenson, 2006, William & Bailey, 1995). It is important to improve students with disabilities engagement in the classroom setting as students with disabilities have lower academic performance, less rigorous education expectations, and higher high school dropout rates than their non-disabled peers (Aron & Loprest, 2012). It is essential the education system implement techniques to improve student engagement, which is associated with higher academic performance and academic outcomes. Improving engagement is essential if students with
disabilities are to close the gaps in terms of academic performance and academic outcomes (DePaoli, Balfanz, & Bridgeland, 2016).

The Center for Disease Control (CDC) recommends 60 minutes of daily physical activity is for students. Children with disabilities achieve an insufficient amount of physical activity for health purposes (Faison-Hodge, 2004; Hogan, Mclellan & Bauman, 2000; Sit, McManus, McKenzie & Lian, 2007). Interventions which target health and fitness as well as seek to improve engagement will benefit students with disabilities’ engagement, academic outcomes, and physical health. There is a lack of research on students with disabilities and the effects of physical activity programs on their health, emotional well-being, and academic performance (Davis, Hodson, Zhang, Boswell & Decker, 2013). The present study on Activity Bursts within the Classroom (ABC) for Fitness Program examined how classroom physical activity may increase teachers’ perceptions of student engagement in students with disabilities.

The literature review found minimal research on the impact of physical activity on students with disabilities. However, most of these studies were limited to the more severely disabled populations of students. No research was identified on the impact of a physical activity program on student engagement in the special education mild to moderate classroom setting. The present study used an exploratory mixed methods case study model to assess the impact the ABC for Fitness Program, a classroom-based physical activity intervention, had
on teachers’ perceptions of student engagement in terms of behavior such as conduct, time on task, and work completion.

Research Questions

The following questions guided this study:

1. What was the participating special education elementary intervention teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention?

2. What was the participating special education elementary intervention teacher’s perceptions of students with disabilities behavior following a physical activity intervention?

3. What was the participating special education middle school intervention teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention?

4. What was the participating special education middle school intervention teacher’s perceptions of students with disabilities behavior following a physical activity intervention?

5. What other information was discovered from the behavior logs, surveys and interviews?
CHAPTER TWO
LITERATURE REVIEW

Background on Special Education

A discussion on the history of special education is relevant to this literature review due to the need to set the background on the history of students with disabilities in the education system. Until the 1970s, in the United States no federal laws explicitly protected the rights of citizens with disabilities. Before 1975, only one out of five children with disabilities attended public school (Aron & Loprest, 2012). Of the over three million students with disabilities who were being educated, many were in segregated facilities with little instruction. In 1975, the Individuals with Disabilities Act (IDEA) recognized the rights of children with disabilities to attend a public school, have the services they required provided free of charge, and be educated along their non-disabled peers whenever appropriate (Aron & Loprest, 2012 & Halfon, Houtrow, Larson, & Newacheck, 2012).

Aron and Loprest (2012) reviewed the special education system in the United States and discussed the importance of education in the lives of students with disabilities. The civil rights movement in the United States was the impetus for laws protecting access to education for students with disabilities. Specifically discussed was the Rehabilitation Act of 1973, which made it illegal for recipients (e.g., school districts) of federal funds from discriminating against people with
disabilities. Section 504 of the Rehabilitation Act of 1973 guaranteed students with disabilities the right to a free, appropriate public education (FAPE) in the least restrictive setting (U.S. Department of Education, 1996). The present research focused on providing physical activity breaks in the classroom to students with disabilities as they have less access to physical education and other physical activities which would enhance the quality of their education and of their lives (Faison-Hodge, 2004; Hogan, Mclellan & Bauman, 2000; Sit, McManus, McKenzie & Lian, 2007).

The special education system gave students with disabilities greater access to public education, established a model for educating, helped with early identification of students with disabilities, and strove to increase inclusion of these students alongside their nondisabled peers. Aron and Loprest (2012) concluded that students with disabilities, or special education students, continued to struggle in terms of their academic performance and educational outcomes when compared to their non-disabled peers. Teachers were also more likely to have lower expectations of students in special education. Students with disabilities were more likely to drop out of high school than their non-disabled peers (Aron & Loprest, 2012; Halfon, Houtrow, Larson, & Newacheck, 2012). Aron and Loprest (2012) stated, “It also challenged the assumption that disadvantages faced by people with disabilities, such as low educational attainment or unemployment, were the inevitable result of limitations stemming from the disability itself rather than from societal barriers or prejudices” (p. 99).
Thus, the education system plays a pivotal role in the lives of students with disabilities and their families. Education is essential for all students’ success; however, for students with disabilities education may be the difference between a bleak future or one that is fulfilling socially, intellectually, physically, emotionally, and economically. Education may affect children’s health by influencing their ability to manage ongoing health issues, advocate on behalf of themselves, and navigate the complexities of the insurance and medical systems necessary for support services later in life.

Specific strategies are needed to target the lower academic performance of students with disabilities in special education (Aron & Loprest, 2012; Halfon, Houtrow, Larson, & Newacheck, 2012). Despite advances in special education since 1975, students with disabilities continue to have lower academic performance, less rigorous education expectations, and higher high school dropout rates than their non-disabled peers (Aron & Loprest, 2012). Specifically, Aron and Loprest (2012) found in a reading assessment of 12th graders, 64% of students with disabilities tested below basic proficiency compared to 24% of students without disabilities. In math, 76% of students with disabilities tested below basic proficiency compared to 34% of students without disabilities. Aron and Loprest (2012) found, “In 2003–04, among schools nationwide with subgroups of students with disabilities large enough to be counted separately, students in 36 percent of them did not make the required progress” (pg. 112). Aron and Loprest found, that looking at the trends of scores from 2003-2007,
even though students for students who were receiving IDEA services rose, their scores continued to lag significantly behind their general education peers. Aron and Loprest (2012) found there was not enough evidence to show the effectiveness of the services students in special education received. In addition, Aron and Loprest (2012) recommended more research be done to gauge the impact and effectiveness of services and programs on specific subgroups of students with disabilities.

The implementation of IDEA did not result in improved academic performance nor equivalent academic performance for students with disabilities. In addition, students with disabilities’ high school graduation rates are much lower than their general education peers. Balfanz, Bridgeland, Fox, Depaoli, Ingram, and Maushard (2014) reported that nationally students in special education made up 13% of the high school student population. The national high school graduation rates for students with disabilities in special education is 20% points lower than the overall national average graduation rate (p. 4, 2014). Balfranz, Bridgeland, Fox, Depaoli, Ingram, and Maushared stated that the 90% goal for a national student graduation rate cannot be reached without increasing students’ in special education graduation rates.

Students with disabilities underperformance in educational outcomes such as high school graduation affects individuals as well as the nation. Specifically, in Riverside County where the present study took place, recently published data on high school graduation rates of students with disabilities: Students with
disabilities overall high school graduation rate was 70.4\%, while for students with emotional disturbances the high school graduation rate was at 68.9 \%. This is 17.8 \% lower than other mild to moderate student populations, such as students with specific learning disabilities which was at 86.7\% (RCOE, 2018).

As students with disabilities are a heterogeneous population, interventions need to target the whole child and the different subgroups within special education, such as students with emotional disturbances. All students deserve access to interventions that could improve their academic and health outcomes. It is essential that students with disabilities receive such interventions early on due to the impact of their disabilities on their lives. Therefore interventions are needed that increase engagement, academic, and physical well-being outcomes for students with disabilities.

Models of Engagement

A review of the different models of engagement will ensue in order to set the context. Engagement has a long history in educational research (Appleton, Christenson, & Furlonge, 2008) and has numerous variations and conceptualizations. Furrer and Skinner (2003) defined engagement as an active and goal directed process that was flexible, constructive, persistent, and depended on focused interactions with the social and physical environments. Engagement is a person’s active involvement in an activity or task (Reeve, Jang, Carrell, Jeon, & Barch, 2004). Mosher and Bradford (1985) stated academic engagement was an attitude which led to participation in school programs, had
multiple interactive determinants, and impacted student achievement, academic knowledge, and social behavior. Academic engagement is influenced by many factors such as teaching strategies, students involvement in the classroom, school activities, authentic academic work, and identification with school (Cadwallader, Farmer, Cairns, Leung, Clemmer, Gut & Le’Roy, 2002; Marks, 2000; Reeve, Carrell, Jeon, & Barch, 2004; Skinner, Furrer, Marchand & Kindermann, 2008).

Finn (1989) proposed a participation-identification model of student belonging. Finn’s participation-identification model proposed four levels to identify a student’s level of belonging in school and the value placed on outcomes. During the beginning level in Finn’s model, students attended school and responded to teacher’s directions. As students moved through the educational system, they were provided more opportunities to participate, and thus belong. At the highest of Finn’s four levels, students became quite involved in school and began to identify with school resulting in greater participation and belonging. When students did not participate enough to move to the higher levels of participation, this resulted in a lack of identification with school and more alienation and disengagement (Finn, 1989). Finn (1989) described the behavioral engagement component as one of participation in terms of attendance, participation, effort, and prosocial behavior. Furthermore, several studies demonstrated correlations between behavioral engagement and student achievement such as students grades and standardized test scores for

As hypothesized by Finn’s (1989) participation-identification model of student belonging, engagement is malleable and responds to its contextual environment (Fredricks, Blumenfeld, & Paris, 2004). Engagement responds to specific teaching strategies such as involving students in extracurricular activities, promoting participation in school, promoting positive relationships between students and staff, providing students with engaging activities, and autonomy supporting teachers (Cadwallander et al., 2002; Marks, 2000; Reeve et al., 2004). Connell and Wellborn (1991) proposed a three component model of student engagement and hypothesized engagement occurred when students’ psychological needs (competence, autonomy, and relatedness) were met. To be engaged, students sought experiences which satisfied their need to feel competence (capable of achieving a desired goal), autonomy (able to choose something which connect to their own values), and relatedness (connection to setting and feelings of worth and self-respect).

Fredricks, Blumenfeld, and Paris (2004) proposed engagement as a meta-construct that included behavioral, emotional, and cognitive engagement. Appleton, Christenson, Kim, and Reschly (2006) expanded this meta-construct to include a fourth component, psychological engagement. Appleton’s et al. (2008) four component model of engagement consisted of four subtypes of engagement: 1) behavior (positive conduct, effort and participation); 2) cognitive
(self-regulation, learning goals, and an investment in learning); 3) emotional (interest, belonging, positive attitudes toward learning); and 4) psychological (belonging, identification, and self-esteem). Associations between cognitive and psychological engagement and positive learning outcomes were found (Fredricks et al., 2004; National Research Council & Institute of Medicine, 2004). Appleton et al. stated academic and behavioral engagement was studied more frequently; however, psychological and cognitive engagement were associated more often with positive learning outcomes (Fredricks et al., 2004). Baumeister and Leary (1995) assessed psychological engagement through students’ feelings of belonging and relatedness as well as the level of their relationships with teachers and peers. There are multiple links between the need to belong and cognition processes, emotional patterns, behavioral responses, and health and well-being.

Finn (1989) described the behavioral engagement component as one of participation in terms of attendance, participation, effort, and prosocial behavior. These are observable and measurable for students with disabilities. Therefore, while all the engagement models were studied, Finn’s (1989) behavioral component was the most appropriate model for the research.

**Academic Engagement as a Learning Environment**

Engagement and motivation are overlapping constructs (Reeve et al., 2004; Russell et al., 2005). Even though motivation and engagement are two separate constructs they are not independent of each other as an individual may be motivated but not actively engaged (Connell & Wellborn, 1991; Furrer &
The National Research Council and the Institute of Medicine (2004) stated, “A common theme among effective practices is that they have a positive effect on the motivation of individual students because they address underlying psychological variables such as competence, control, beliefs about the value of education, and a sense of belonging” (p. 212). Research on interventions that target students’ feelings of competence, control, beliefs, and belonging must be done for students with disabilities. Skinner and Belmont (1993) found strong empirical support for a reciprocal relationship between teacher’s behavior and student engagement within the classroom setting. Skinner, Furrer, Marchand and Kindermann (2008) concluded that motivation was vital in terms of positive academic, behavioral, and social outcomes.

Students’ level of relatedness to parents, teachers, and parents contributed to student academic engagement as relatedness predicted changes in classroom academic engagement (Skinner & Belmont, 1993). Skinner and Belmont (1993) concluded that academic engagement was an academic outcome in its own right. In students with and without disabilities, engagement was a predictor for academic performance and high rates of academic learning were correlated with student achievement (Fisher & Berliner, 1985). This is seen with students with and without disabilities (Fisher & Berliner, 1985). Patrick, Ryan, and Kaplan (2007) examined fifth grade students’ engagement and the relationship to classroom social environment and achievement. Their regular
classroom teacher taught math to the participating students as part of the Young Adolescents' Motivation in Math Project (Patrick, Ryan, & Kaplan, 2007). In this study, 602 students from 31 classes in six elementary schools completed surveys. Almost all of the students were from European American descent. This students completed surveys in their regular classes. The format for all items was a 5-point scale, ranging from 1 (not at all true) through 5 (very true). Students in special education were excluded from the study.

Patrick, Ryan, and Kaplan (2007) concluded the classroom social environment (including student support and promoting interactions) was related to cognitive and behavioral engagement via students’ self-regulated learning and classroom participation. Therefore, seeking active and goal directed interventions may improve students’ engagement. Research on specific interventions need to be done that shows how students behave, feel, and think so that students’ engagement in school may be focused on in a strategic manner. This finding is important as activities which incorporate active learning may benefit students with disabilities’ engagement.

Skinner, Chi, and the Learning-Gardens Skinner, Chi, and The Learning-Gardens Educational Assessment Group (2012) defined engagement with academic work as, “constructive, enthusiastic, willing, emotionally positive, and cognitively focused participation in learning activities” (pg. 17). In their study, 310 students in sixth and seventh grade students aged 11 to 13 years and their six Science teachers participated. Of the participants, 55% of the students were
minorities: 8% African American, 24% Latina/o, 15% Asian, 3% Native American, and 4% multiple ethnicities. The authors presented a model of intrinsic motivation and engagement as active ingredients in garden-based education and explored the motivational process in garden-based learning. Teacher- and student-reports of garden engagement demonstrated multidimensional structures, good measurement properties, convergent validity, and the expected correlations with self-perceptions in the garden, garden learning, achievement, and engagement in science and school. A study strength was the inclusion of students’ cognitive engagement and behavioral engagement. This was done by looking at students’ use of self-regulation strategies and their peer interactions on academic tasks. Study limitations included the homogeneity of the students race and socioeconomic status as well as a single data collection time point (Skinner & Chi, 2012). This study illustrated the need for hands learning activities as an intervention for increasing engagement.

The findings from Patrick, Ryan, and Kapling (2007) and Skinner, Chi, and the Learning-Gardens Skinner, Chi, and The Learning-Gardens Educational Assessment Group (2012) supported interventions which changed the classroom learning environment to increase student engagement. The present study added to the research on positive classroom environment interventions to help all students, including special education students, increase their engagement in school as engagement is a predictor of students’ learning, achievement, and
graduation (Fredricks, Blumenfeld, & Paris, 2004; Furlong & Christenson, 2008; Jimerson, Campos, & Grief, 2003; National Research Council (NRC), 2004).

Engagement and Students with Disabilities

Academic engagement impacts academics and behavior. Students with disabilities are less engaged than their general education peers (Reschly & Christenson, 2006; William & Bailey, 1995). Reschly and Christenson (2006) found comparisons between average-achieving students and students with mild to moderate disabilities were significant; however, effect sizes were small. William and Bailey (1995) reported that during free play with adult involvement, children with disabilities spent half as much time interacting with adults than did children without disabilities. Children with disabilities also spent slightly less time engaged in mastery of materials than did children without disabilities. William and Bailey concluded that disability status impacted every type of engagement other than interactions with peers, pre-mastery of materials, and active non-engagement.

As behavior can be observed and measured, Finn’s (1989) behavioral engagement component was focused on in the present study rather than the cognitive component as students with disabilities ability to be engaged and the quality of their engagement may be affected by cognitive or physical disabilities (McWilliam & Bailey, 1995). McWilliam and Bailey stated, “A disability can influence engagement in a number of ways. For example, limited cognitive skills
can affect the type and quality of the engagement” (p.124). For students with disabilities behavior is measurable in terms of observing conduct, effort and participation, and behavioral issues in the classroom setting. Behavioral engagement may be measured by time on task and work completion (Marks, 2000). Marks (2000) studied 24 schools with students in grade 5, 8 and 10 in six core classrooms where the teacher had restructured students’ experiences (had students organize information and consider alternative solutions). Using survey data, Marks found students perceived class work to be authentic, with larger effect sizes as the grade level increased (.34, .40, .42 respectively, \( p \leq .001 \)).

Experiencing social support, defined as a positive school culture, enhanced engagement for all students (.19 for elementary and middle school and .18 for high schools, \( p \leq .001 \)) .

Engagement predicted academic performance, and academic learning was correlated with student achievement (Fisher & Berliner, 1985). Klem and Connell (2004) found teachers who created a well-structured learning environment with clear high expectation had students who were more likely to be engaged in school. The results indicated that, “Students who perceive teachers as creating a caring, well-structured learning environment in which expectations are high, clear, and fair are more likely to report engagement in school” (p. 270).

Starting as early as preschool, students with disabilities exhibited less time engaged and lower levels of engagement than their nondisabled peers (McWilliam & Bailey, 1995). McWilliam and Bailey examined the effects of
disability on engagement. Using developmental age as a covariate, McWilliam and Bailey found children with disabilities spent less time actively engaged with adults and more time passively engaged. These findings highlighted the complex nature of engagement and the difficulty in the identification of differences associated with disability. The study’s participants were 32 children without disabilities and 16 children with mild to moderate disabilities. Participant children were observed in four free-play sessions and four sessions with adult involvement. A momentary time sampling method was used to record student engagement. Engagement was defined broadly as the amount of time the children spent interacting appropriately in their environment. Interaction effects of disability status with developmental age were seen for attentional engagement with peers ($d = 0.75$) and passive non-engagement ($d = 0.92$)" (p. 48). Study limitations were a small sample size; the assumption that engagement is a linear construct; only two levels of engagement (e.g., interactive and attentional) were assessed; and a correlational design. The authors recommended future research to determine if teachers’ behaviors varied depending on students’ ages.

McWilliam and Baily (1995) studied the effects of disability on engagement. The researchers found students with disabilities has less engagement than their non-special education peers. Students with disabilities need activities and interventions designed for them to specifically increase their attentional engagement, meaning directly focusing on a task through observable behavior.
In a national longitudinal transition study, Newman, Davies-Mercier, and Marder (2003) reported on school engagement of youth with disabilities. In this study classroom engagement were measured by staying focused on classwork; completing homework on time; participating in group discussions; and, withdrawing from social contact (Newman, et al. 2003). They investigated students’ engagement behaviors in class by asking teachers to rate their students on a four-point scale (Rarely=1 to Almost Always=4) on four factors of classroom engagement on observable actions. Findings indicated students with disabilities had greater focus in general education classes than in special education classes. Students with disabilities were also less likely to complete homework on time in special education classes than in general education classes. Students with disabilities took part in classroom discussions more often in special education classes than general education classes, and students with disabilities had higher levels of engagement in the special education classes than in the general education classes (Newman et al., 2003). Newman et al. (2003) also studied group differences within the students with disabilities participants. They found students with emotional disturbances were less engaged than students with disabilities without emotional disturbances. Students with emotional disturbances had the highest rates of absenteeism. Students with cognitive disabilities, or classified as other health impaired were less engaged than students with other disabilities. Students with hearing impairments or visual impairments were the most engaged of all students with disabilities (Newman et
al., 2003). Findings indicated students with disabilities had less engagement in participating in classroom discussion in the general education setting. Students with emotional disturbances had the least engagement while students with hearing impairments had the greatest engagement. Engagement is not the same for all subsets of students in special education with disabilities. These findings illustrated the need to study engagement in specific populations of special education in order to design appropriate interventions.

Richardson, Long, and Foster (2004) examined 269 university students taking long distance academic courses with hearing impairments and found them to be as engaged as their non-disabled peers, a sample of 178 students with no hearing loss. For each student with a hearing loss, a comparison student was sought who was the same age and gender. Data was collected using an abbreviated version of the Academic Engagement Form (AEF) developed by Foster et al. (1999) to evaluate affective and behavioral aspects of academic engagement in deaf and hearing students. Students with a hearing loss obtained higher scores in motivation to learn than students with no hearing loss. When background factors were taken into account (e.g., student workload, first language spoken, age of student) there were no differences in motivation to learn between students with deafness or hearing loss and their non-disabled peers. The students who were deaf or hard of hearing scored higher in areas of student autonomy and student control. Richardson, Long, and Foster suggested this was due to the students adopting an attitude of self-reliance.
In summary, many subgroups of students with disabilities have lower engagement than their general education peers. Although, the results were not consistent as students with hearing or visual impairments had the same rates of engagement as their non-disabled peers. There were also differences in engagement of students with disabilities based on their disability. Improving engagement for students with disabilities from an early age will improve educational outcomes.

Engagement as an Intervention for Students with Disabilities

Reschly and Christenson (2006) concluded student engagement was an important factor for students at the highest risk for poor school outcomes. Reschly and Christenson found students with emotional and behavioral disturbances (EBD) were less likely to drop out of high school if they were better prepared for class (7%), had more homework completion (17%), and fewer tardies (36%). Reschly and Christenson (2006) found among students with learning disabilities (LD) that truancies was the strongest indicator of students dropping out of school followed by absences and misbehavior. Additionally, students with LD who had more school warmth decreased their odds of dropping out by 14%. Boredom increased odds of dropping out by 11%. Newman, Davies, and Marder (2003) argued that students with disabilities may be at a higher risk for a lack of engagement or disengagement from school due to lower
rates of attendance, difficulty with focus, and lower academic expectations from teachers.

Engagement may be viewed as an intervention to decrease dropout rates for all students (Alliance for Excellent Education, 2011). Perceiving classwork to be authentic and feeling supported socially may enhance engagement in all students. Student engagement is critical for decreasing the high school dropout rate (Connell, Spencer, & Abner, 1994; Grannis, 1994). At K-12 grade levels a positive orientation toward school predicted engagement, while a negative orientation predicted disengagement (Marks, 2000). Students were at risk to dropout of high school due to boredom, lack of motivation or lack of connection to their school, and academic challenges (Bridgeland, Dilulio & Morrison, 2006).

Bridgeland, Dilulio and Morrison’s report was based, “on four focus groups of ethnically and racially diverse 16 to 24-year-olds who did not complete high school and on interviews, primarily face to face, with 467 ethnically and racially diverse students aged 16 through 25 who had dropped out of public high schools in 25 different locations” (p.2). Lack of engagement is associated with lower student achievement and at risk to leave school (Finn, 1989; Newmann, 1981, 1992; Steinberg, 1996; Wehlage, Rutter, Smith, Lesko & Fernandez, 1989).

Students’ decision to drop out of high school is a gradual process (Finn, 1989) and interventions need to be designed which target engagement to promote high school completion (Connell, Halpem-Felsher, Clifford, Crichlow & Usinger, 1995; Doll & Hess, 2001).
Academic engagement is influenced by specific factors, such as students involvement in the classroom, school activities, authentic academic work, and identification with school (Cadwallander et al., 2002; Marks, 2000; Reeve et al., 2004; Skinner et al., 2008). Finding activities which increase engagement for students with disabilities is essential for improving academic outcomes. Using a logistic regression analysis on the Educational Longitudinal Study dataset, Palmer, Elliot, and Cheatham (2017) found an association between postsecondary degree completion for students with disabilities and extracurricular activity participation. This finding has implications for policies and practices such as the need for specific interventions to increase academic outcomes for students with disabilities.

Fredricks et al. (2003) argued that smaller alternative high school settings may allow more opportunities for students with disabilities to participate in activities. Identifying and implementing interventions which increase the psychological and cognitive engagement of students with disabilities led to positive learning outcomes (Fredricks et al., 2004; National Research Council and Institute of Medicine, 2004) as engagement increased in response to specific teaching strategies (Cadwallander et al., 2002; Marks, 2000; & Reeve et al., 2004). Klem and Connell (2004) argued there is strong empirical support between engagement and academic achievement and behavioral engagement for all students. Appleton, Christenson, Kim and Reschly (2006) stated that measuring cognitive and psychological engagement is central to improving
educational outcomes of students, especially at risk students, such as those with disabilities.

Engagement and Activity Bursts

Healthier students are better learners (Basch, 2011). In a literature review, Basch identified health problems that affected school age students. Basch found health problems disproportionately affected minority youth and indirectly causally affected academic achievement. Basch concluded health problems could be addressed via school health programs and services. The Center for Disease Control (CDC) recommended students have 60 minutes of physical activity a day. However, the majority of school-aged youth do not meet these recommended levels of daily activities even though there is compelling evidence linking health and academic achievement (Basch, 2011). All students deserve to reach their full potential and physical activity bursts are associated with increased engagement in school settings.

Mahar, Murphy, Rowe, Golden and Shields (2006) studied the a classroom-based physical activity program on children's in-school physical activity levels and on-task behavior during academic instruction. The physical activity of 24 students during school hours was assessed. 135 intervention students received an Energizers classroom-based exercise program. The control group, 108 students did not receive the intervention. On-task behavior of the students during academic time was observed before and after Energizer
activities. A multiple baseline across classroom design was used to evaluate the effectiveness of Energizers on on-task behavior of students. Students in the intervention group took more steps than the control group students, for a moderate effect size (ES=.49). The improvement in regards to on-task behavior between the pre-Energizers and post-Energizers was 8% (p < 0.02). The least on-task student improved 20% after Energizer activities (p < 0.001), (ES = 2.20) (Mahar, Murphy, Rowe, Golden, & Shields, 2006). The researchers concluded exercise breaks were associated with increased daily activity and on-task behavior. A study strength was there was a control group that allowed comparisons of physical activity levels of students. This suggested children do not reduce activity during the rest of the school day when they participated in a classroom-based physical activity. The researchers also concluded students who participated in a classroom-based physical activity program were more physically active during the school day than students who did not participate in the program. Findings suggested incorporating a short, classroom-based physical activity may benefit students by exposing them to higher levels of daily physical activity as well.

In a review of the literature on physical activity, Trudeau and Shepard (2008) found physical activity had positive influences on concentration, memory, and classroom behavior. Their quasi-experimental data indicated allocating up to an additional hour per day of curricular time to physical activity (PA) programs did not negatively affect the academic performance of primary school students.
Trudeau and Shepard found focusing on physical activity as part of the school curriculum resulted in small absolute gains in grade point average (GPA), and strongly suggested a relative increase in performance per unit of academic teaching time. Further, Trudeau and Shepard found the majority of physical activity programs reviewed demonstrated an improvement on measures of physical fitness (PF). Cross-sectional observations revealed an association between academic performance and PA; however, this association was not found for PF. PA was associated with cognitive engagement (e.g., concentration, memory) and behavioral engagement (e.g., classroom behavior), and a relationship between PA and intellectual performance. Additionally, Trudeau and Shepard (2008) concluded physical activity could be added to the school curriculum without hindering academic achievement. Conversely, increasing academic time by decreasing physical activity time did not increase academic achievement and may have been detrimental to physical health.

The CDC (2010) conducted a meta-analysis of the physical activity and student engagement research. Of the studies reviewed. Ten of the nine studies looked at short physical activity breaks that were part of the classroom structure. The length of the activity breaks ranged from five to 20 minutes. The goal of the physical activity breaks were to inspire learning or as a break from academics to obtain physical activity. Academic indicators were memory, attention, mood, on-task behavior, concentration, and test scores in math and reading. Eight of the
nine classroom physical activity studies found positive associations with the academic indicators (CDC, 2010).

In the CDC (2010) meta-analysis, results suggested increased time spent in physical education was not likely to reduce academic performance even when there was less time spent on subjects other than physical education. Eight of nine studies related to physical activity breaks in the classroom found incorporating physical activity breaks into classroom instruction had favorable associations with indicators of cognitive engagement, behavioral engagement, and academic achievement. None of the studies found negative associations between physical activity and student engagement or academic performance.

Focusing on physical activity in the classroom and students with intellectual delays (ID), Davis, Hodson, Zhang, Boswell and Decker (2011) assessed students physical activity patterns. Four special education teachers from four schools used the Motivate Adapt and Play (MAP) activities for this project. In interviews, all of the special education teachers had positive perceptions of the MAP Program and stated they would use these activities in the future. The special education teachers also expressed a need for more physical activity and adapted physical education for students with intellectual delays. There was no mention in this study of results relating to improved physical health.

McMullen, Kulinna and Cothran (2014) explored classroom teachers’ perceptions of using physical activity breaks into their daily routines within their
classrooms. Twelve elementary and high school classroom teachers from one Indigenous school district participated in the study. The data collected consisted of semi-structured interviews and teachers’ reflective journals, which were analyzed by patterns and data types. McMullen, Kulinna and Cothran concluded teachers preferred activity breaks which were quick, managed easily, linked to academic content, and ones students enjoyed. A need for classroom control was also identified. Their findings suggested a need for teacher professional development and training in regards to implementation of physical activities in the classroom.

In a study on the ABC (Activity Bursts in the Classroom) for Fitness program studied physical activity incorporated into the classroom, the intervention group showed greater improvements in physical fitness than the control group (Katz, Cushman, Reynolds, Njike, Treu, Walker, & Katz, 2010). Three schools were assigned to receive the ABC for Fitness program, and two comparable schools served as controls. The program, led by classroom teachers, provided multiple, brief, structured physical activity breaks throughout the day. Medication use for asthma, attention-deficit hyperactivity disorder decreased. It was demonstrated that bursts of physical activity were feasible without reducing teaching time. The researchers concluded the ABC for Fitness program was beneficial to daily physical activity, fitness, and other measures, and recommended a more intensive study of the program. Limitations of the
study were: participants were predominantly white; a high proportion of low-income students; small sample size; and, limited follow-up.

Doussett (2015) conducted an exploratory mixed methods study identifying the impacts of a physical activity intervention program on students’ engagement. Doussett examined teachers’ perceptions of their students’ engagement prior and following implementation of the ABC for Fitness Program (Katz, Cushman, Reynolds et al, 2010). Two teachers implemented the ABC for Fitness Program and monitored, observed, and recorded student classroom behavior and engagement. Comparison teachers did not implement the ABC for Fitness Program in their respective classrooms. Participating Teacher 1 had 22 students and Participating Teacher 2 had 22 students, while Comparison Teacher 3 had 24 students and Comparison Teacher 4 had 21 students. All teachers had average class sizes for the participating school. Doussett (2015) reported physical activity bursts helped students focus and provided breaks from challenging coursework. There were positive changes in teachers’ ratings of students’ engagement and students’ connection to the classroom (Doussett, 2015). Doussett concluded physical activity breaks resulted in a decrease of perceived barriers to engagement. Some limitations of the study were the three week implementation period, adequate teacher training, and a correlational design of the ABC for Fitness Program and teachers’ ratings of student engagement.
Schmidt, Benzing, and Kamer (2016) conducted a study of 92 children between the ages of 11 and 12 years ($M = 11.77$, $SD = 0.41$) using a 2x2 between subjects experimental design.

Students were randomly assigned to one of four experimental conditions: (1) combo group (physical activity with high cognitive demands), (2) cognition group (sedentary with high cognitive demands), (3) physical group (physical activity with low cognitive demands), and (4) control group (sedentary with low cognitive demands). Before and after a 10-minute intervention, attention and affect were assessed over a period of three weeks on five different mornings at precisely the same time. The study found that physical activity breaks improved students’ attention and processing speed. The factor that was crucial to these gains was the cognitive engagement. Schmidt, Benzing, and Kamer discussed the need for physical activity that were cognitively engaging. Some limitations of the study were that no standardized instrument was used to control for induced cognitive engagement, neither the level of cognitive demand nor Physical Education (PE) were adjusted on an individual level, and a between-subjects instead of a within-subjects design was used.

In summary, it is suggested classroom teachers add physical activity breaks and movement into the classroom setting as this may lead to increased physical activity and health (Ridgers et al., 2006). Physical activity breaks in the classroom setting may decrease high school drop-out rates, improve students’ academic engagement (focus and cognition), and decrease behavioral issues
while improving the health of students with disabilities. The CDC (2010) stated incorporating physical activity breaks into the classroom may improve the classroom environment and academic performance, and these short breaks from 5-20 minutes required little teacher preparation or special resources.

Physical Activity and Students

One goal of the US Department of Health and Human Services (HHS) is to increase physical activity for all students. The Center for Disease Control (CDC) and the HHS recommend children engage in 60 minutes of daily physical activity. Consistent physical activity improves and strengthens the physical body and decreases the risk of chronic disease. Consistent physical activity also improves students' self-esteem and reduces stress and anxiety (CDC, 2010). HHS indicate meeting the recommended 60 minutes a day of physical fitness can improve cardio fitness, muscular strength, blood pressure, and can decrease depressive symptoms in children. Conversely, childhood obesity is associated with children not being physically active (HHS, 2008).

In the 2016 United States Report Card on Physical Activity for Children and Youth (2016) the CDC reported 42.5% of 6-11 years old youth, 7.5% percent of 12-15 years old youth, and 5.1% of 16-19 years old youth participated in the recommended 60 minutes of daily of physical activity. "The majority of U.S. children do not meet physical activity guidelines (CDC, 2016, p. 8). Although more than half of U.S. youth participate on a sport team, girls participated on
sports teams at a lower rate. While 62.2% of boys participated on one or more sport teams, only 53% of girls participated on one or more sport teams. These gender disparities also show up in health fitness scores as 50.4% of boys compared to 33.9% of girls met cardiorespiratory fitness standards. Additionally, 55.3% of boys compared to 47.8% of girls attended a physical activity class at least once a week. The CDC report suggested investments in promoting increased physical activity levels of all children (CDC, 2016).

Abbott, Straker, Mathiassen, and Toomingas (2013) found a majority of time in school was spent in sedentary behaviors. The CDC (2016) found the proportion of youth who engaged in two hours or less of screen time a day: 47.1% of 2-5 years old, 39.4% of 6-11 years old, and 30.8% of 12-19 years old. This means that over 50% of children 2-5 years old engage in more than two hours of screen time a day. Screen time use increased with age as over 60% of children ages 6-11 years old engaged in more than two hours of screen time, while 69.2% of 12-19 years old engaged in more than two hours per day of screen time use. These findings highlight the need for increasing students’ access to physical activity within the school day.

In Educating the Student Body: Taking Physical activity and Physical Education to School (2013), the Institute of Medicine (IOM) stated, “physical health is a key determinant of health outcomes across the life span...the prevalence of physical inactivity, along with this substantial associated disease risk, has been described as a pandemic” (IOM, 2016, p.1). The IOM (2016)
estimated only about half of youth met the daily guidelines for at least 60 minutes of daily physical activity that was moderate to vigorous. Another recent report by the IOM stated schools should be a focal point for obesity prevention among our youth as children spend over half of their waking hours in school (Committee on Obesity Prevention, 2012).

Increasing student physical activity improves students’ mental, emotional, and physical health. In 2010, a review of 50 studies on the research on physical activity was completed (Symons, Cinelli, James, and Groff, 2010). 112 of 251 associations were between physical activity and academic achievement, academic behavior, and cognitive skills and attitudes. 50.5% of the associations examined were positive, 48% were not significant, and only 1.5% were negative. Symons, Cinelli, James, and Groff (2010) found students’ health status and achievement were associated with physical activity. Specifically, in a randomized controlled trial, researchers found that physical activity lessened increases in Body Mass Index of students (Donnelly, Greene, Gibson et al, 2009). There is a link between physical activity and academic achievement and increasing students with with disabilities is beneficial.

Physical Activity and Students with Disabilities

The National Center for Education Statistics (NCES) reported that in 2013-14, 6.5 million youth ages 3-21 years old received special education services in the United States. This is approximately 13% of all students in public schools
In 2011, 4.6 million students were diagnosed with ADHD (Basch, 2011). According to the CDC (2016), 13-20% of children in the US experience a mental, emotional, or behavioral disorder. There is a lack of research on students with disabilities and the effects of physical activity programs on their health, emotional well-being, and academic performance (Davis, Hodson, Zhang, Boswell & Decker, 2013). Physical activity for children with disabilities was identified as a health priority (Abdullah et al, 2004). Lahtinen, Rintalal and Malin (2007) voiced concerns in regards to children with disabilities maintaining their physical fitness. The US Department of Health and Human Services and CDC cited students with disabilities access to physical activity as an important health goal (CDC, 2010; USDHHS, 1996). CDC (2010) in a comprehensive review of the literature found physical activity reduced the risk of chronic diseases, improved self-esteem, and reduced stress and anxiety. Forty three articles met the inclusion criteria to be included in the CDC study. One of the study’s strengths was it covered a broad range of contexts. Intervention studies (64%) and longitudinal studies (76%) were included in the review. The breadth of the review was a limitation as all the studies included were treated equally regardless of sample size, thus comparisons and summaries were difficult.

Children with disabilities and physical activity achieved an insufficient amount of physical activity for health purposes (Faison-Hodge, 2004; Hogan, McLellan & Bauman, 2000; Sit, McManus, McKenzie & Lian, 2007). In terms of improving executive functioning of students with disabilities, Diamond and Ling
(2016) concluded students with the lowest executive functioning gained the most from physical activity programs that improved executive functioning (Diamond & Ling, 2016). The subset of students whose physical activity has been studied the most were students with intellectual disabilities. This is due to the size of their population in school settings (Faison-Hodge & Poretta, 2004). Students with intellectual disabilities, when compared to their general education peers, were found to be more overweight, be less physically fit, and have less developed motor skills (Frey & Chow, 2006; Murphy & Carbone, 2008). Hinckson and Curtis (2013) discussed how children and young people with intellectual disabilities had lower levels of physical activity than those peers without a disability. Hutzler and Korensky (2010, conducted a review of the literature (23 articles) on physical activity in persons with intellectual disabilities concluded persons with intellectual disabilities, when compared to the normative population, were found to have higher body mass index and obesity, lower maximal oxygen consumption, and reduced muscle strength and power. Both exercise and sports contributed to well-being. Perceptions of self-efficacy and social competence increased after exercise and sports activities. Peer modeling and audio and video reinforcement of physical activity tasks were suggested in order to maintain compliance in exercise programs (Hutzler & Korensky, 2010).

In a study on Activity Bursts in the Classroom (ABC), three schools were assigned to receive the ABC for Fitness Program and two comparable schools served as controls. Teachers led the ABC for Fitness Program which provided
many quick structured physical activity breaks throughout the school day.
Students in the intervention group with ADHD and asthma reduced their
medication use when compared to the control group (Katz, Cushman, Reynolds, 
Njike, Treu, Walker & Katz, 2010). The results suggested that the ABC for
Fitness Program improved fitness, reduced medication use, and preserved
teaching time and academic performance. Elementary school classrooms can
implement the ABC for Fitness Program without significant interruptions in their
daily classroom activities.

Another subset population that is a concern in terms of health issues are
children and young people with autism spectrum disorder (ASD). Children with
ASD are 40% more likely to be overweight or obese than typically developed
(TD) peers (Curtin, Anderson, Must, Bandini, 2010) Why this phenomenon?
Social and behavioral impairments for children and young people with ASD may
make participation in physical activity, physical education classes, and sporting
activities more challenging. Accelerometry demonstrated children and young
people with ASD failed to meet the recommended amounts of physical activity
(Pan & Frey, 2006; MacDonald, Esposito, Ulrich, 2011). There is minimal
research related to individuals with ASD and physical activity. However, the
limited available research found a positive influence of physical activity on
individuals with ASD, with decreases in stereotypy, aggression, off-task behavior
and elopement after exercise interventions. On-task behavior, academic
responding, and appropriate motor behavior increased following physical
exercise. Results suggested programs promoting physical activity for individuals with ASD would benefit them physically, academically, emotionally and behaviorally (Lang, Koegel, Ashbaugh, Regester, Ence, & Smith, 2010).

In summary, students with disabilities are a risk group for obesity and other diseases. They have less access to physical activity via extra-curricular sports and are less physically active in physical education programs. Implementing physical activity breaks in the classroom addresses academic, emotional, and behavioral needs, and is an important part of educating students with disabilities on positive health choices such as regular exercise.

Teachers’ Perceptions on Engagement

Student engagement has been assessed in various ways; the most common being self-report scales. Using this approach has its challenges. One, it may lead to inconsistent data due to students’ struggles with being able to accurately assess their own behavior and attitudes. (Assor & Connell, 1992). In a review, Van De Mortel (2008) found in studies which used self-report scales that 43% of the results were influenced by Social Desirability Response (SDR). SDR occurs when an individual presents a positive image of self when filling out questionnaires (Van Del Mortel, 2008). Teacher reports of students’ behavior are used to address the issues associated with SDR in student self-reports.

The Institute for Research & Reform in Education (IRRE) (1998) created the Research Assessment Package for Schools Teacher Report (RAPS-T). This
survey was designed to assess students’ ongoing engagement. Klem and Connell (2004) used the RAPS-T in which teachers completed the survey for each student in their classroom. Cut-points and risk thresholds were created based on the highest increase in the probability of occurrences of student scores relating to attendance and test scores and to identify where the greatest increase in the probability of students having poor test scores or poor attendance occurred. Using this data, two categorization groups were created, optimal level and risk level. In the optimal level, student engagement was observed by teachers with a mean of 3.6 or higher on the RAPS-T which means students were frequently paying attention, ready for class, and did more than was expected (Klem & Connell, 2004). Students were in the risk level when teachers rated student engagement with a mean of 2.6 or less, indicating students were almost always not paying attention, Thus, teachers needed to indicate students almost always were not tuned in, ready for class, or putting in effort (Klem & Connell, 2004).

Skinner, Chi, and The Learning-Gardens Educational Assessment Group (2012) built upon the work of Klem and Connell (2004) to determine how teachers shaped student engagement in the classroom by increasing motivation via positive interactions. Skinner, Chi, and The Learning-Gardens Educational Assessment Group added 17 items to the original three-item RAPS-T, and identified three cut points.
Teacher-rated student engagement and disaffection were measured where engagement was assessed using a 10-item scale in which teachers, acting as expert raters, reported for each student in their classroom on action and emotion (or psychological) items (Skinner, Wellborn, & Connell, 1990). For example, action items rated whether a student actively participated (were engaged) in class discussions or whether they did not actively participate (were not engaged. Positive and negative items were averaged separately and subtracted from each other to form an engagement score ranging from -3 to 3. The higher the score, the higher the indication of engagement (Skinner, Wellborn, & Connell, 1990).

In a study on the impact of a classroom-based physical activity, Doussett (2015) found following implementation of the ABC for Fitness Program, teachers' ratings and perceptions of student engagement improved. Additionally, teachers' attitudes towards their students improved as well as their own level of engagement in the classroom. Teachers’ perceptions of their students may be malleable and their perceptions of their students’ engagement as well as their own may increase (Doussett, 2015).

Teachers as Facilitators to Physical Activity

Teachers play a pivotal role in facilitating physical activity programs within the classroom. However, little known about teachers’ role in implementing physical activity programs with special populations (Hinckson & Curtis, 2013). In
studies on students with intellectual disabilities participant teachers reported fun and enjoyment were important to facilitate engagement (Downs et al., 2014; Downs & Knowles, 2014; Mahy et al. 2010). Providing choices and opportunities for students to engage in physical activity were key factors in engagement (Downs et al., 2013; Downs & Knowles, 2014). Teachers reported themselves as important in reinforcing physical activity and engagement via role modeling by engaging in activities with students (Downs & Knowles, 2014). Downs and Knowles suggested additional education, more explicit teaching methods, and more time spent in physical activity. Jobling and Cuskelley (2006) suggested more explicit teaching methods are needed to encourage individuals with disabilities to take responsibility and manage their own health.

There is little research on teachers’ implementing physical activity programs with special education students. Implementing the ABC for Fitness Program with special populations will provide additional research on student engagement and more information on how teachers’ facilitate physical activity in the classroom with special populations.

Summary

A review of the literature illustrated a need for students with disabilities to have access to interventions that increased their physical activity, academic engagement, and academic performance. Integrated physical activity in the classroom is a possible intervention for general and special education students.
Students with disabilities make up 13.1% of school students in school (Aron & Loprest, 2012). There is a lack of research on students with disabilities and the effects of physical activity programs on their health, emotional well-being, and academic performance (Davis, Hodson, Zhang, Boswell & Decker, 2013). Students with disabilities had less access to physical education within the school day, higher rates of obesity and poor health outcomes. Currently, the majority of students are not meeting the recommended 60 minutes a day of physical activity recommended by the CDC despite evidence linking health and academic achievement (Basch, 2011). Abdullah et. al, (2004) identified physical activity for children with disabilities as a health priority. Children with disabilities maintaining their physical fitness has been suggested (Lahtinen, Rintala, & Malin, 2007). The U.S. Department of Health and Human Services and CDC cited students with disabilities access to physical activity as an important health goal (CDC, 2010; USDHHS, 1996). The CDC’s (2010) review of literature found physical activity reduced the risk of chronic diseases, improved self-esteem, and reduced stress and anxiety. Increasing students with disabilities access to physical education may improve engagement, academic performance, and improve health outcomes.

Students with disabilities have lower engagement than their general education peers. This results in lower academic performance and contributes to the discrepancy in the high school graduation rate for students with disabilities which averages 20% points less nationally. Axelson and Flick’s (2010) words,
“Engagement may simply be the byproduct of a learning environment that suits the student,” (p.42) continued to echo through my head as I did a review of the research on programs and interventions for students with disabilities shown to improve engagement. Students with disabilities may benefit in a variety of ways from physical activity breaks in areas such as engagement, behavior, and academic outcomes. Making physical activity part of the curriculum improved GPA and to have a relative increase in performance per unit of academic teaching time. The ABC for Fitness Program is associated with increased engagement, increased students’ access to physical activity, and improved behavior of at risk students. Additionally, providing students with disabilities with increased access to physical activity meets the need for students’ access to the same education as general education peers as required by the Individual with Disabilities Act (IDEA).

The purpose of this study was to assess teachers’ perceptions of students in a special education setting engagement after implementation of the ABC for Fitness Program. It was believed teachers’ perceptions of students’ engagement would change following implementation of the ABC for Fitness Program. The goals of the study were to see the overall perceptions of the two participating intervention teachers and the generalizability and applicability of the intervention for students in special education classrooms based upon the perceptions of the participating intervention teachers as it relates to engagement and behavior.
Research Questions

The following questions guided this study:

1. What was the special education elementary intervention teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention.

2. What was the special education elementary intervention teacher’s perceptions of students with disabilities behavior following a physical activity intervention.

3. What was the intervention special education middle school intervention teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention.

4. What was the special education middle school intervention teacher’s perceptions of students with disabilities behavior following a physical activity intervention.

5. What other information is discovered from the behavior logs, surveys and interviews?
CHAPTER THREE
METHODOLOGY

Introduction

An exploratory case study design was used to study teachers’ perceptions of students with emotional disabilities engagement after a classroom-based physical activity intervention (e.g., ABC for Fitness). Three special education teachers volunteered to participate. Two were from middle school and one was from elementary. One of the middle school teachers had to drop out due to health issues after the question and answer session portion. The remaining two special education teachers were both from the Therapeutic Education Program (TEP). TEP is a self-contained classroom setting for students with the primary diagnosis of emotional disturbance. Teacher One was an elementary special education teacher working with students with Emotional Disturbances in the TEP Program. Teacher Two was a middle school special education teacher working with students with Emotional Disabilities in the TEP Program. Both of these classes implemented the ABC for Fitness Program in their classrooms with four students in one class (elementary school teacher) and seven students (middle school teacher) in the other class for a total of eleven students. The ABC for Fitness Program was a resource found within the induction resources for new teachers. Additionally, the two intervention teachers were doing similar activity breaks (e.g., GoNoodle) within the classroom setting. GoNoodle is a free
resource online that has physical activity videos for kids. The teachers were allowed to access this resource through the participating school district’s internet portal. The participating school district suggested physical activity breaks to all teachers using resources such as GoNoodle within the classroom day. The classroom students were not the participants in the study. The intervention teachers’ perceptions of their students’ engagement and behavior after the ABC for Fitness intervention was the focus of the study.

Participants and Setting

The researcher was not an administrator or in a position of power over the teachers. The researcher met weekly with the teacher participants in the capacity of a Teacher on Special Assignment. Teacher One, the elementary school TEP teacher, was being supported by the Teacher on Special Assignment due to an out of state credential status. Teacher Two, the middle school TEP teacher, was guided through the induction program requirements by the Teacher on Special Assignment. The Teacher on Special Assignment Teacher’s support time was not impacted by the ABC for Fitness Program. Intervention Teacher One, the special education elementary classroom teacher, had four students. Intervention Teacher Two, the special education middle classroom teacher had seven students for a total of eleven students. The ABC for Fitness Program was listed in the resources for special education teachers on the Center for Teacher Innovation Website. These activities were within the bounds of the physical
activity requirements for the participating school district. Additionally, these programs used breaks and activities such as the ABC for Fitness Program to help students manage their behavior and complete academic tasks.

Recruitment

The researcher was a Teacher on Special Assignment as a reflective coach within the participating school district. The special education director of the participating school district provided a letter of support as this was the protocol for the district.

Participants were recruited via email from the special education director of the participating school district with a recruitment flyer describing the study attached and a secure online link to register for the study if they were interested in participating. Participants were limited to special education teachers (K-8th) who taught students with mild to moderate disabilities in a special day classroom (SDC) setting within the participating school district. There were approximately 25 special education mild to moderate teachers in the district who fit the inclusion criteria. The teachers answered the following questions via the secure link on the recruitment questionnaire: first and last name, cell phone and preferred email address, the grade levels they taught, area of certification, if they held a valid mild to moderate credential or a moderate to severe credential, the number of students in their class, and their school site. The recruitment period lasted one
week. Three teachers volunteered to participate and the researcher contacted the teachers individually at the end of the recruitment period.

Prior to the start of the study, all participating teachers were provided with the informed consent (see Appendix E). Informed consent was completed before the teachers participated in the ABC for Fitness Program training. Teachers were informed all participation was voluntary and they could withdraw at any time, and no identifying student information would be collected. One of the participating teachers dropped out due to health reasons after the question and answer session, and their responses were not included in the data analysis.

The remaining two participating teachers completed pre and post surveys for each student their classroom. Qualitative data was collected through pre and post surveys of student engagement, questions and answers from the ABC for Fitness Program training sessions, a mid-point check in interviews, semi-structured interviews of the participating teachers, and written behavior incident logs. The written behavior logs did not have any student data as all identifying information including student ID numbers was removed prior to giving it to the researcher. Students were only identified by a sequential letter or number. The interviews were audio recorded and transcribed by the researcher. A time check off sheet was included in the materials but both teachers declined to use it based upon their classroom’s needs.
Data Collection

Five data sources were used: a question and answer session, pre and post surveys of student engagement, daily written incident behavior logs, a follow-up semi-structured interview, a mid-point check in interview; and a final semi-structured interview. The special education intervention teachers implemented the ABC for Fitness Program in their classrooms for a four week period.

Activity Bursts in the Classroom for Fitness Training Workshop Sessions

The ABC for Fitness Program was developed by David Katz, MN, MPH, and is available to the public. The four goals of the ABC for Fitness Program are: to promote health and fitness; to help prevent obesity in children; to enhance concentration and behavior; and, to help increase academic performance. The program consists of several short bouts of physical activity. The bouts range from five to ten minutes and integrated into the school day and add up to approximately 30 minutes. A one-on-one training session was conducted with each of the ABC for Fitness Program intervention teachers after school from 4 pm to 7 pm by the researcher. The training sessions were done on an individual basis as the teachers worked at different school locations. Before the training but after the informed consent was signed, teachers were provided with the ABC for Fitness Program PowerPoints and manual prior to the trainings for review. The ABC for Fitness Program training sessions covered the program description,
mission, managing and planning for ABC for Fitness Program, components of an activity burst, tips to implement, program enhancements, ABC in action (practice). The two ABC for Fitness Program intervention teachers were provided a hard copy of the ABC for Fitness Program manual.

Question and Answer Session from the Activity Bursts in the Classroom for Fitness Training Session

Each teacher received a copy of the ABC for Fitness manual and a copy of the Fit Deck cards listed as a resource in the manual. After the ABC for Fitness Program individual training sessions, the special education elementary and middle school special education intervention teachers participated in a one-on-one question and answer session with the researcher for thirty minutes. The researcher asked the following question to start the question and answer session: Since we completed the ABC training, we will start out with any questions or clarifications you want me to cover? The rest of the question and answer session consisted of questions the special education intervention teachers had about the ABC for Fitness Program implementation. The question and answer sessions were audio recorded and transcribed by the researcher.

The Teacher Assessment of Student Engagement

The Teacher Assessment of Student Engagement survey (Skinner, et al., 2012) (see Appendix A) was used pre and post intervention to assess the ABC for Fitness Program intervention teachers’ perceptions of engagement for
students with disabilities. The survey consisted of 20 items rated by the intervention teachers on a five-point scale from Not at all True to Totally True. The special education intervention teachers rated each student in their classroom in the following areas: Involvement, enthusiasm, hard work, effort, and participation. On a five-point scale, engagement levels were: Optimal 3.6 or higher, Normal 2.7-3.5, and At-risk 2.6 or below (Skinner, et al., 2012), with higher ratings indicating higher engagement levels.

The participating teachers completed the surveys via a typical weekly meeting the researcher already had scheduled. They were given one week to complete the survey prior to the ABC for Fitness training session. Pre surveys were completed prior to the ABC for Fitness Program training with the researcher. The surveys took approximately 20 minutes to complete. Post surveys were completed on the last day of the four-week implementation period of the ABC for Fitness Program. The post-surveys were collected within one week in person individually. Example survey items included: Overall, this student gets very involved; in general, this student puts in a lot of effort; and, during lessons, this student actively participates. The special education intervention teachers identified by the researcher in order to compare their pre and post results; however, students were only identified by a random number and the researcher was not given access to any information that linked student numbers to identifying information.
Daily Behavior Incident Logs

Both special education intervention teachers at the participating school sites were already currently completing a daily behavior incident log which recorded the students daily points, levels, and any negative behavioral incidents, sending them home to the parents/guardians of the students in their classroom and keeping a copy for their records. (see Appendix B for the elementary school behavior incident log and Appendix C for the middle school behavior incident log).

During the four week long intervention period of the ABC for Fitness Program, the daily behavior incident logs completed by the two special education intervention teachers were collected by the researcher weekly with student identifying information removed (a random assigned number or letter remained). The researcher did not have access to information that linked student identifying information to their student school numbers or the randomly assigned numbers or letters used in the research study.

Elementary School Daily Behavior Incident Logs

The special education elementary classroom intervention teacher used a weekly behavior log which rated students’ behavior from 0-3 points, 3 being optimal and 0 being least optimal. (see Appendix B). The areas focused on were the following: Following instructions, respectful conduct, staying in seat and designated area, keeping hands and feet to self, and MYOB which to is focus on
self-management. Ratings were based on check-ins with the students throughout the day by periods and activities. Ratings determined each student’s activities during reinforcement time. Ratings were tabulated on a weekly basis which provided a weekly rating level. On a daily basis, students were rated as Platinum (3) (165-150 points), Gold (2) (149-134 points) or Silver (1) (133-0 points); Platinum being optimal and silver being least optimal. There was also a safety level for students who have major behavioral incidents (e.g., leaving room without permission, stealing, hitting, kicking, and bullying). These levels determined the students’ reward system with the TEP (Therapeutic Educational Program) which was tabulated on a daily and weekly basis which they receive determined specific reinforcements at predetermined times during the school day. Level 3 students were allowed the following reinforcers: coloring, reading, drawing, writing, playing board games, use the IPad or Chromebooks, and legos. Level 2 students were allowed the following reinforcers: Coloring, reading, drawing, playing with legos, playing board games, and watch others on the IPads or Chromebooks. Level 1 students were allowed the following reinforcers: Coloring, reading, or drawing. The weekly levels are determined by averaging the daily average. At the safety level, students received no reinforcers.

Middle School Daily Behavior Incident Logs

The behavior goals of the elementary and middle school classrooms were the same but different logs were used to track behavior due to the different ages
of the students. The special education middle school classroom intervention teacher used a weekly behavior log which rated students behavior from 3-0 points, 3 being optimal and 0 being least optimal (see Appendix C). The areas focused on were the following: Following instructions, respectful conduct, staying in seat and designated area, keeping hands and feet to self, and MYOB which is focus on self-management. Ratings were based on check-ins with the students throughout the day by periods and activities. These points determined the reinforcement the student would receive during the scheduled reinforcement time built into the classroom schedule. The points were tabulated daily as follows: (3) (165-150 points), (2) (149-134 points) or (1) (133-0 points); Platinum being optimal and silver being least optimal. There was also a safety level for students who have major behavioral incidents (e.g., leaving room without permission, stealing, hitting, kicking, and bullying). These levels determined the students’ reward system with the TEP (Therapeutic Educational Program) which was tabulated on a daily and weekly basis for which they received specific reinforcers at predetermined times during the school day.

Level 3 students were allowed the following reinforcers: Student could use electronics (e.g., computers, Chromebooks, Xbox). Level 2 students were allowed the following reinforcers: Legos, art, board games and sit and watch a friend. Level 1 students had to first complete academic work at their desks and were then allowed to draw at their desks. The weekly levels were determined by averaging the daily average.
Mid-Point Check-in

The researcher conducted a mid-point check-in with the special education intervention teachers to provide any needed additional support and to assess the progress of the ABC for Fitness Program intervention. Individual one hour meetings occurred after school hours at the end of the second week of implementation of the ABC for Fitness Program intervention. The mid-point check-in included the following four questions: 1) How has the training you received prepared for the implementation of the program? 2) What challenges, if any, have you had so far? 3) Have you had to make any accommodations or modifications to the program? 4) Do you have any questions for the researcher? The mid-point check-in interviews were audio recorded and transcribed by the researcher.

Follow-up Semi-Structured Interview

The special education intervention teachers participated in one-on-one follow up semi-structured interviews (see Appendix D for interview questions/prompts). The researcher and the intervention special education intervention teachers met face-to-face in their classrooms after school. Interviews occurred near the end of week four during the intervention of the ABC for Fitness Program. The interviews focused on the impact of the intervention on the teacher’s perceptions of student engagement and student behavior. Sample interview questions included: Describe how students responded to the
intervention; describe any changes in students’ level engagement in the classroom; and, how did your ability to assess student engagement change over time? Interviews were audio recorded and transcribed by the researcher.

Data Analysis Plan

The pre and post Teacher Assessment of Student Engagement survey results were analyzed for changes and descriptive data. The behavior incident logs were looked at daily and then the incidents were computed individually per students on a weekly basis. Qualitative data were analyzed using exploratory analysis (Ryan & Bernard, 2010). The qualitative responses from each special education intervention teacher was analyzed separately. After analyzing the data of each intervention teacher separately, results were then compared and contrasted.

Researcher Bias

The researcher acknowledges bias based on experience, culture and educational background. The researcher believes that physical activity of students with disabilities needs to be increased, is positive, and may improve engagement.
CHAPTER 4

RESULTS

Overview

The ABC for Fitness Program was an intervention implemented to identify the effects of a classroom-based physical activity on teachers’ perceptions of student engagement and behavior of students in a special education classroom setting. Each classroom’s data were first analyzed separately as a case study and then brought together to compare and contrast the results. This method of analysis was used as while the participating programs were similar they differed in grade levels of the programs (one was an elementary grade, one was a middle school grade), were at different schools (although within the same school district), and the use of different behavior incident logs to track and document students’ behavior. The special education intervention teacher’s perceptions of student engagement were measured pre and post intervention. The Teacher Assessment of Student Engagement Survey was used. Student behavior was documented daily using the behavior incident logs.

The study considered the following questions:

1. What was the special education elementary intervention teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention?
2. What was the special education elementary intervention teacher's perceptions of students with disabilities behavior following a physical activity intervention?

3. What was the special education middle school intervention teacher's perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention?

4. What was the special education middle school intervention teacher's perceptions of students with disabilities behavior following a physical activity intervention?

6. What other information was discovered from the behavior logs, surveys and interviews?

Pre Engagement and Post Engagement Survey Data Results

The pre and post survey results were initially analyzed separately, as they involved different grade levels and different behavioral goals. Results were then compared with one another. Table 1 presents the Teacher Assessment of Student Engagement Survey response for the elementary classroom.
Elementary Teacher Assessment of Student Engagement Survey Responses

Table 1.

*Teacher Assessment of Student Engagement — Elementary Classroom*

<table>
<thead>
<tr>
<th>Number</th>
<th>Pre-ABC for Fitness Intervention</th>
<th>Post-ABC for Fitness Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>3.15</td>
<td>3.15</td>
</tr>
<tr>
<td>Student 2</td>
<td>2.85</td>
<td>3.15</td>
</tr>
<tr>
<td>Student 3</td>
<td>2.9</td>
<td>3.2</td>
</tr>
<tr>
<td>Student 4</td>
<td>3.05</td>
<td>3.15</td>
</tr>
</tbody>
</table>

NOTE: On a five-point scale, higher numbers represent higher engagement. Engagement levels: Optimal level 3.6 or higher, normal 2.7-3.5, and at-risk at 2.6 or below (Skinner, et al., 2012).

Following Skinner, et al’s, (2012) cutscores, the elementary special education intervention teacher rated all four students at a normal level of engagement prior to and following the ABC for Fitness Program intervention. Engagement ratings for three of the four students in the elementary special education classroom minimally increased.

Behavior Incident Log Results, Elementary Classroom

Students were rated as Platinum (3) (165-150 points), Gold (2) (149-134 points) or Silver (1) (133-0 points), with Platinum being optimal and silver being
least optimal. There is also a Safety level when students had major behavioral incidents. To see patterns of behavior, the results are reported on a weekly basis. Table 2 presents the behavior level results for the elementary classroom.

Table 2.

*Behavior Incident Log — Elementary Classroom Rating Levels*

<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Platinum level</td>
<td>Gold Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
</tr>
<tr>
<td>1</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
</tr>
<tr>
<td>2</td>
<td>Gold Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
</tr>
<tr>
<td>3</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
</tr>
<tr>
<td>4</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
<td>Platinum Level</td>
</tr>
</tbody>
</table>

Table 3 presents the weekly student behavior incidents to provide a holistic view of behavior patterns. Students with emotional disturbances struggle with behavior and the reported behaviors and incidents were typical for the students according to the special education elementary intervention teacher.
Table 3.

Behavior Incidents — Elementary Classroom

<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1 Incidents</th>
<th>Week 2 Incidents</th>
<th>Week 3 Incidents</th>
<th>Week 4 Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Disruptive</td>
<td>Stood on chair, not following directions</td>
<td>No Incidents noted</td>
<td>No Incidents noted</td>
</tr>
<tr>
<td>2</td>
<td>Not following directions</td>
<td>No incidents noted</td>
<td>Sleeping</td>
<td>Sleeping</td>
</tr>
<tr>
<td>3</td>
<td>Eloped 3 times</td>
<td>No incidents noted</td>
<td>No incidents noted</td>
<td>No incidents noted</td>
</tr>
<tr>
<td>4</td>
<td>No incidents noted</td>
<td>No incidents noted</td>
<td>Talking at lunch</td>
<td>No incidents noted</td>
</tr>
</tbody>
</table>

Middle School Teacher Assessment of Student Engagement Survey Responses

The pre and post survey results were initially analyzed separately, as they involved different grade levels and different behavioral goals. Results were then compared with one another. Table 4 presents the Teacher Assessment of Student Engagement Survey response for the middle school classroom.
Table 4.

Teacher Assessment of Student Engagement — Middle School Classroom

<table>
<thead>
<tr>
<th>Number</th>
<th>Pre-ABC for Fitness Intervention</th>
<th>Post-ABC for Fitness Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>3.15</td>
<td>3.2</td>
</tr>
<tr>
<td>Student 2</td>
<td>2.65</td>
<td>2.65</td>
</tr>
<tr>
<td>Student 3</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Student 4</td>
<td>2.65</td>
<td>2.8</td>
</tr>
<tr>
<td>Student 5</td>
<td>2.85</td>
<td>3.05</td>
</tr>
<tr>
<td>Student 6</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Student 7</td>
<td>3.1</td>
<td>2.5</td>
</tr>
</tbody>
</table>

NOTE: On a five-point scale, higher numbers represent higher engagement. Engagement levels: Optimal level 3.6 or higher, normal 2.7-3.5, and at-risk at 2.6 or below (Skinner, et al., 2012).

The middle school special education intervention teacher rated no students at an optimal level of engagement prior to and after the ABC for Fitness Program intervention. Engagement ratings for three of the seven students in the middle school special education classroom minimally increased after the ABC for Fitness Program intervention.

Behavior Incident Log Results — Middle School

Table 5 presents the weekly student behavior incidents to provide a holistic view of behavior patterns. Students with emotional disturbances struggle
with behavior and the reported behaviors and incidents were typical for the students according to the special education middle school intervention teacher.

Table 5.

*Behavior Incident Log — Middle School Rating Levels*

<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1 Levels</th>
<th>Week 2 Levels</th>
<th>Week 3 Levels</th>
<th>Week 4 Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>2</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 3</td>
</tr>
<tr>
<td>3</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>4</td>
<td>Level 2</td>
<td>Level 1</td>
<td>Level 1</td>
<td>No data log</td>
</tr>
<tr>
<td>5</td>
<td>Level 3</td>
<td>Level 2</td>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>6</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>7</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 2</td>
<td>Level 2</td>
</tr>
</tbody>
</table>

Students were rated as level 3 (165-150 points), 2 (149-134 points) or Silver 1 (133-0 points); Platinum being optimal and silver being least optimal. There is also a Safety level when students have major behavioral incidents. This is why the data is reported on a weekly level by the researcher to see patterns of behavior.

Many middle school students struggled with their behaviors during the ABC for Fitness Program intervention. The behavioral incidents are presented in Table 6 and represent a weekly summary in order to provide a holistic view of
student behavior. Numerous behavioral incidents reported. This is a classroom where all students have a primary disability of emotional disturbance. The special education middle school intervention teacher described these incidents and behaviors as typical for the students.
Table 6.

*Behavior Incidents — Middle School Classroom*

<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1 Incidents</th>
<th>Week 2 Incidents</th>
<th>Week 3 Incidents</th>
<th>Week 4 Incidents</th>
</tr>
</thead>
</table>
| 1       | Refused to get off computer  
Noted that student is working hard on behavior levels | Slapped peer’s leg  
Trouble keeping hands to oneself, disruptive, talking | Inappropriate comment to peer | No incidents noted on log |
<p>| 2       | Inappropriate comment, threw pencil, disrespectful, inappropriate body language, arguing with peer, did well at PE, Great effort noted for Friday | Disruptive, disrespectful, talking, difficulty participating in group work, talking, and blurting out words during lesson, good day on Friday | Disruptive, talking, inappropriate comments | Inappropriate physical act toward peer |
| 3       | Doing great completing work in class | Great week noted on log | No incidents noted on logs | No incidents noted on logs |
| 4       | Intimidating peer, ignoring staff directions, running around in class | Played with chain, security took to office, lifted staff desk, defiant, banging on wall, slept, name calling to peer, work refusal, disruptive, removed from class, yelled at staff | Banging head repeatedly, pushed student slept | No data logs |</p>
<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1 Incidents</th>
<th>Week 2 Incidents</th>
<th>Week 3 Incidents</th>
<th>Week 4 Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>No incidents noted on logs</td>
<td>Disruptive during math lesson, trouble keeping hands to self, cussing at peer during PE, good day noted on Friday</td>
<td>No incidents noted on logs</td>
<td>No incidents noted on logs</td>
</tr>
<tr>
<td>6</td>
<td>Bus ticket for fighting</td>
<td>Good day noted on Friday</td>
<td>No incidents noted on logs</td>
<td>No incidents noted on logs</td>
</tr>
<tr>
<td>7</td>
<td>Threatened peer, cursing at peer, physical violence toward peer, sexually inappropriate comments, harassing students at PE, not following directions, Fight on bus, threw lemon at student hitting them in face, sexual comments, ignoring staff directions, and cussing at staff</td>
<td>Cussing, running and shouting in restroom, disrespectful to staff, banging head on wall, tossing work, talking when teacher is teaching, teasing peer, bus ticket for language and yelling, trouble keeping hands to self during PE</td>
<td>Playing music without permission, instigating peers, disrupting group, flipping off people during PE, cussing at peer, and disrespectful to staff, Not allowed on field trip due to behavior</td>
<td>Inappropriate language, sexual language, bullying during math</td>
</tr>
</tbody>
</table>
Overview of Analysis of Question and Answer Sessions, Mid-Point Check-ins and Post Interviews of Intervention Teachers

To discover and analyze the higher order themes and subthemes in the qualitative responses, a phenomenological approach was used to interpret the intervention teachers’ perceptions of their students’ engagement during the ABC for Fitness Program intervention. A phenomenological approach was the best approach to come to an understanding of the special education intervention teachers’ experiences and perceptions and present the results as unifying themes by listening to their voices and unique experiences as special education teachers.

For each teacher, the three interviews (Q & A Session, Mid-Point Check-In Interview, Follow-up Semi-structured Interview) were examined as if a complete interview for the following reasons: 1) The ABC for Fitness Q and A Sessions following the ABC for Fitness training sessions did not yield many responses; 2) Due to the four-week intervention period changes over time was not the focus of the study; and, 3) To include all responses from each participant as single viewpoint.

To analyze the interview responses, an approach by Ryan and Bernard (2003) was followed. Each participating special education intervention teachers’ complete interview transcript was read three times. Repeated words were identified and words used more than twice and key phrases were identified and color-coded based on similar ideas. In order to determine the most frequent
words, a word count was used with any word or phrase seen more than once in
the interview transcripts. A word count was completed of this list of identified
and color-coded key words and phrases. Initial themes were identified from
these key words and phrases. From these themes, higher order themes were
identified.

Elementary Intervention Teacher's Question and Answer Session,
Mid-Point Check-in and Post Interviews

From the special education elementary school intervention teacher’s
complete interview response, 1,065 key words and phrases were identified. A
word count of repetitive words resulted in identification of 30 repeated words.
These key words and phrases were sorted into eight initial themes. These initial
themes were named by categorizing them into groups based upon similarity of
ideas. These initial themes were not in an order of importance, rather they
described the overall special education elementary intervention teacher’s
perception of student engagement. The initial themes identified were: Fit Deck,
Perceptions on Students’ Reactions, Challenges, Adaptations/Modifications,
Engagement/Focus, Pacing/Timing, Benefits, and Teacher’s Feelings.

After reviewing and rereading the interview responses and the identified
eight initial themes, the themes were consolidated into four higher-order themes:
Engagement, Classroom Environment, Adaptability in Special Education
Classrooms, and Challenges for Special Education classrooms.
The Fit Deck there was determined to be more of a tool used within the context of the ABC for Fitness Program intervention. The Fit Deck theme was consolidated into the higher-order themes of Adaptability and Engagement as it was related to these other themes based upon the context of the interviews. The Fit Deck was used to adapt the curriculum using a visual scaffold and the students like using the Fit Deck cards which was reported by both teachers to improve engagement. Throughout the interviews, the special education elementary intervention teacher described the use of the Fit Deck resource. The Fit Deck was a set of cards referenced in the ABC for Fitness training manual as an additional resource. No prior research on the ABC for Fitness Program intervention had mentioned their use. The Fit Deck cards were purchased separately on Amazon for seven dollars a set and provided to both special education intervention teachers. The Fit Deck cards have a Superhero theme, include stretching and core exercises displayed with a picture example, and were used by both special education intervention teachers in the intervention process. The Fit Deck cards were mentioned nine times by the special education elementary intervention teacher who described positive student reactions to the ABC for Fitness intervention. The reactions related to the themes of Engagement, Adaptability in Special Education Classrooms, Classroom Environment, and Challenges in Special Education Classrooms.

The initial theme of Pacing/Timing was incorporated into the higher order themes Adaptability in Special Education Classrooms and Challenges in Special
Education Classrooms. The timing (e.g. length and number of times the exercises and cool down were implemented) and pacing of the ABC for Fitness Program needed to be adapted due to the teacher’s perceptions of students’ needs and it was also reported by the teachers to be a challenge. The initial theme of Benefits was consolidated into the higher order themes of Classroom Environment and Engagement as benefits fit into both of these categories as classroom environment and engagement were at first seen as benefits but due to the teacher’s in depth discussion on these ideas; they were categorized into their own themes. The special education elementary intervention teacher’s feelings encompassed the feelings of the teacher during the intervention which was moved into all of the final four higher order themes: Engagement, Classroom Environment/Culture, Adaptability in Special Education Classrooms, and Challenges for Special Education Classrooms.

Engagement: Elementary Teacher’s Responses

Engagement was identified as a higher-order theme from the special education elementary intervention teacher’s interviews. Engagement was each mentioned nine times throughout the interviews. Focus, a word closely related to engagement, was mentioned eight times. Participation was mentioned eight times. The special education elementary intervention teacher described concerns with students participating. The special education elementary intervention teacher reported that they were unsure if the kids would participate in the ABC
for Fitness Program intervention. The special education elementary intervention teacher reported one way they were going to encourage engagement was to have the staff (staff includes a mental health therapist, para-educators, and one-on-one aides) and the teacher model the ABC for Fitness Program intervention. “For my staff though, I think if they do the exercises with me, the kids will be more accepting to do them. So I am going to ask them if they could participate when they want to and a lot of them are good with participating” (Appendix F, p.126). The special education elementary teacher described how this manifested itself during the ABC for Fitness Program intervention. “I think my biggest challenge with my kids is, they are kinda more hyperactive so trying to get them to focus as it is a structured physical activity. So trying to get them to have fun but still focus, and following directions. So right now I am struggling with having them follow along rather than doing their own thing” (Appendix F, p. 130).

The special education elementary intervention teacher reported the students did participate and enjoyed the ABC for Fitness Program intervention: “So they kind of understood it better so I think I need to just keep being on them about that. I also think I do not really have that much of a struggle when my kids wanting to participate cause they actually want to do it” (Appendix F, p. 130). This was for the warm up and core activity portion in which they used the Fit Deck resource cards. The students were engaged due to their enjoyment of the ABC for Fitness Program intervention according to the special education intervention elementary school teachers’ perceptions.
The cool down period was described as challenging in terms of resistance and engagement. Resistance and the refuse were each mentioned two times in relation to the cool down period.

Although they are a little bit resistant to the cool down, I think for them they need that as it is so much active and then it’s like let’s do some work. And that’s when I get defiance. Cause they are like, why were not playing anymore? Ya know, so that’s why I make sure the cool down is the biggest part because they need that to come back” (Appendix F, p. 134).

The cool down period of the ABC for Fitness Program may have decreased engagement at first according to the perception of the special education elementary intervention teacher. However, changing the timing (e.g. length and number of times the exercises and cool down were implemented) and the types of the cool downs was reported to help counteract some of the resistance. The special education elementary intervention teacher stated, “we would do different cool downs as that really helped because they would get bored. So I think the variety of what you showed me really really helped” (Appendix F, p. 137).

This issue of expanding the cool down time to increase Engagement was specifically related to a special education classroom as the special education elementary intervention teacher stated, “I definitely think for special ed, they need those extra minutes to cool down and it works with them, because they are like ohh it went so fast. Then I am like, well we are really going to cool it down
because they really need that. For gen ed I think it would just be a benefit” (Appendix F, p. 139)

After the ABC for Fitness Program intervention, the special education elementary teacher reported an increase in engagement immediately as evidenced by less prompting and the length of time students stayed on task. According to the special education elementary intervention teacher’s perception this engagement occurred approximately three times per week when implementing the ABC intervention:

So, one of the first days that I did it, my kids were going on Dreambox and Lexia right after, and we did it, and they and I saw immediate reaction to it. Normally, I would have to tell them, “Okay, make sure we’re focusing, you know, I don’t really want to hear a lot of talking. We are focusing on our Dreambox and Lexia, whatever Programs you choose to go on. That is normally what happens, but after we did the first or one of the first ABCs, during that day they were glued to the computer so that was really cool to see. I was like, “Whoa...So, I mean for 15 minutes I did not have to tell them anything. And that’s huge with my kids as I feel as if I always have to redirect them all the time. So that was really cool that I didn’t have to do anything like that (Appendix F, p. 135).

My kids are pretty good at participating but I do feel as though they were more on task. The first time I did it, it was like magic. Like we did it and then we went on to Lexia and Dreambox and for 15 minutes I didn’t have to say anything. For me, 15 minutes normally I have to say something at least 3 times...it
happened maybe 3 times out of the week. Also, I feel like the students did not need as much assistance from the aides to redirect them a bit because I do have a lot of staff. So I feel like they are the ones who kinda redirect before I do. Um, so I didn’t really hear the adults saying for them to get back on task. So yeah, I think it was helpful for them engaging” (Appendix F, p. 142).

However, the special education elementary intervention teacher also stated that engagement may have been challenged by the timing (e.g. length and number of times the exercises and cool down were implemented) of the ABC for Fitness Program intervention as it was during the last four weeks of the school year. “I know like in the beginning it was like whoa like they are really really focused. Towards the end, I do not know if it is due to being the end of the school year. They would get like really really excited so I had to lengthen my cool down time because they couldn’t get back down to baseline” (Appendix F, p. 140). In order to maintain student’s focus the teacher perceived they had to be flexible and accommodating in the ways in the way the intervention was implemented with their students.

The special education intervention teacher perceived the students to enjoy the ABC for Fitness intervention thus increasing the engagement of students within the classroom setting. The special education intervention teacher described the need for flexibility in the timing (e.g. length and number of times the exercises and cool down were implemented) of the program in order to facilitate engagement of students as the cool down portion could create
challenges due to the need for a longer transition. The special education intervention teacher reported increased engagement approximately three times per week after the ABC for Fitness Program intervention.

Classroom Environment: Elementary Teacher's Responses

Another higher order theme was that the ABC for Fitness Program intervention was beneficial to the special education elementary intervention teacher special education classroom environment and throughout the intervention period. The special education elementary intervention teacher described the students enjoyed doing the exercises and saw it as a positive experience. The special education elementary intervention teacher stated, "I also think I do not really have that much of a struggle when my kids wanting to participate cause they actually want to do it" (Appendix F, p. 130). The mental health therapist observed the ABC for Fitness Program intervention two times as described by the special education elementary intervention the teacher, "She wanted to present it to principals. She did a principal meeting and she presented as ways to help with behaviors. I don’t know for sure if she got to present it, but she asked me for all the materials so I gave it to her. She was like even, "Oh my God, it is such a good tool" (Appendix F, p. 139). The special education elementary school intervention teacher described the mental health therapist as having a positive perception of the ABC for Fitness Program intervention.
Changes to the classroom environment were described as increasing the connections between the teachers, staff and students. It was a way to make the class environment more fun, get the students’ excess energy out, and it provided a break between academic activities.

I think it is to help teachers...instead of always being negative about behavior and constantly redirecting, all that stuff, it allows you to have a connection with them and allows you to have fun with them and then you can go back and it also gets the jitters out of the kids but it is structured enough that they are not running wild..it helps to avoid redirecting and they are already focused because they got that little break and they can focus again and they got that little break and they can focus again. I think that just giving that the kids a time to breathe, and giving their brains a break”(Appendix F, p. 141).

The classroom environment became more kid focused as reported by the special education elementary intervention teacher. The teacher enjoyed doing the ABC for Fitness Program with the students and it strengthened the relationship between student and teacher increasing the teacher’s understanding and patience level.

I feel like though it allowed me to be more kid focused and it wasn't just me, me, me, up there. Ya know, it was more like a classroom thing we were doing. I just love playing with them and it makes our relationship a lot better with them. So, I think I am a little more open as I do have a student with hyperactivity so I think I have gotten a little more patient with him as we did this went on.
Umm, just because I think I understand a little better. I think this student just needs as many breaks as possible (Appendix F, p. 144).

The classroom environment was also improved by adding student choice via the Fit Deck cards. This in turn increased student compliance in participating in the ABC for Fitness Program intervention.

Yeah, so if they got a choice with what they were doing, the majority would do it...Yes there should (have choice). Ummm, I normally do the choices all the choices all day every day within a whole group. Within this the choice was pretty much you could do it or you couldn’t do it. The activities would change every day depending on who got to pick the cards” (Appendix F, p. 143).

The classroom environment was reported to improve the classroom environment by increasing the number of fun activities, providing students with an opportunity for a brain break, improving teacher and staff’s relationships with students, and providing students with choices within the classroom.

Adaptability in Special Education Classrooms: Elementary Teachers’ Responses

The special education elementary intervention teacher described that keeping the ABC for Fitness Program intervention flexible was an important part of adapting the intervention so it could be successful. The word flexible was repeated four times in the interviews with the participating special education
elementary intervention teacher. The importance of flexibility was described as essential for the special education classroom:

I feel like making me aware of the flexibility of the program so I can deal with it. I know there has to be this, this and this. I know there is a warm-up, and there is a core and a cool down. But knowing how many times a day I do it or when I do it. But giving me that flexibility and telling me that; I have been less stressed about trying to fit it in. So it is at my pace and I can adapt it to my classroom (Appendix F, p. 129-130).

Additionally, adaptations were necessary given the structure of the classroom and students’ needs. The word time was repeated thirty-six times while structure was mentioned ten times. Adapting the timing (e.g. length and number of times the exercises and cool down were implemented) was necessary throughout the ABC for Fitness Program intervention implementation. The importance of adapting the time, due to the structure of their classroom, when implementing the ABC for Fitness Program intervention was an ongoing issue for the special education elementary intervention teacher. They were constantly refining the timing by increasing and decreasing the number of activity bursts to make the ABC for Fitness Program intervention fit into the structure of their class.

So, well it started off with doing it 5 times a day for six minutes and that was really hard for myself and my kids. Because I think, we were trying to do it, and it was breaking up our schedule. And for my kids, like the schedule is so structured. We do the same thing like every single day at
the same exact time, every single day. So, for them it was really hard, and for me, as I had to stop so many times, instruction. And I had to, it was kinda like almost an annoyance for me anyway. So I thought, this is not working. So I thought maybe if I tried four times a day for 8 minutes a day. Or 8 minutes for that four times a day. Even like the four times was like a little bit too much. Because it was hard trying to get them, it was like, okay let’s do this again. You know, let’s do it. They were kind of “really, again?” They wanted to do it but they had that resistance. So then, Tuesday of this week, I was like let me see if we can do two times a day for fifteen minutes. Is it always fifteen minutes, no. But, it is around the ten to fifteen minute mark (Appendix F, p. 131-132).

Adapting the timing (e.g. length and number of times the exercises and cool down were implemented) was necessary due to the needs of the classroom, “I can slow thing down and we are not rushing through the activities and rushing through the whole ABC workout. Because I think when I slow things down for them they can actually like understand it and enjoy it” (Appendix F, p. 132).

The timing of the cool down breaks needed to be adapted for the duration of the ABC for Fitness Program intervention and the number of activity breaks throughout the day decreased, “Because it is not hitting it and breaking instruction so many times in the day. It is only doing it twice in a day” (Mid-Point Check-In, p. 4). It was reported that decreasing the number of activity bursts
throughout the day and increasing the length of the cool down was necessary in order to implement the ABC for Fitness Program successfully:

“I definitely think for special ed, they need those extra minutes to cool down and it works with them, because they are like ohh it went so fast. Then I am like, well we are really going to cool it down because they really need that” (Appendix F, p. 139). Additionally, adaptations were required in the way the exercises were structured to incorporate lots of repetition during the stretching portion of the ABC for Fitness Program intervention.

“I think, for me being a special ed class, I think it is really important to have almost have the same routines over and over again. I mean we did the stretching and my kids knew exactly what to do. We did it maybe the first three times, and I had to talk them through it and then they just knew” (Appendix F, p. 146).

The ABC for Fitness Program intervention was also adapted in regards to student participation expectations in other ways by the special education intervention teacher. The students were allowed to try to do the exercises. Exercises were modified on an as needs basis. The teacher reported that the students were allowed to opt out. Students were also allowed to stop when they became tired. The teacher reported flexibility was essential in implementing this program successfully with students in a special education classroom:

I think umm even during the exercise, letting teachers know, if they do do an exercise and the kids aren’t doing it exactly that’s okay because like
they try. If you are doing the same exercise for even a minute, my kids get um really really tired, fast. So some of them would modify it as they would go through the whole minute of that exercise, so in there just try not to get so like ya know like this has to be like this. Just try to be a little more flexible” (Appendix F, p. 137).

Using additional visual supports was another adaption in the special education classroom. The Fit Deck cards were used as a visual prompt during the stretching portions of the intervention. Various activities such as drawing and cool-down videos via GoNoodle to support students were used during the cool down portion which was the most challenging portion to implement:

For the cool down I kind of thought what would work with my kids, my kids love drawing so I would set a timer for 5 minutes and turn the lights off. They could have pencil and paper, it was quiet, and they could put their heads down. My kids needed to slow down and cool down by sitting quietly. My kids loved to draw. Other times I would read to them and Go Noodle has a really good cool down like using your mind and body together so I would use those as well so for the cool down I would use those as well (Appendix F, p. 146).

The special education elementary intervention teacher reported, “Also, I think giving me the cards is great. Even my kids were like, one of them said, “Oh we’re working out like Superman.” So that was a cool connection that they made” (Appendix F, p. 130). The special education elementary intervention
teacher stated that Fit Deck was used to choose the stretching exercises and to provide an opportunity for student choice during the core exercises. Giving students some choice in terms of picking exercises was one way in which the participating special education intervention teacher was flexible implementing the ABC for Fitness Program intervention. The word pick was mentioned 13 and choice five times during the interview. Students were allowed to choose the core activities if it was their turn as determined by their names in order on the board. The word schedule was mentioned four times.

So, I have a list of my students’ names, the four of them. And each day it rotates. And, so for that day, they’re the ones who get to pick the cards. For the whole day and the next day it will rotate to the next kid and they get to pick the cards for that day...I think it works really well. Umm, because I think they are not like, “Oh, can I pick, can I pick, oh?” They know, and it is visually on my board so they know that is their day. It works well (Appendix F, p. 133-134).

GoNoodle, was also used as an additional resource during the ABC for Fitness Program intervention for some of the core exercises and the cool down portion stating, “So I let my kids got to pick out a video from GoNoodle...In the middle we would use the cards or GoNoodle (Appendix F, p. 146).

Adaptability in special education classes was a higher-order theme that encompassed being flexible in the way the intervention was implemented in terms of adapting it to the needs of the specific special education population,
timing (e.g. length and number of times the exercises and cool down were implemented), using other resources such as Fit Deck and Go Noodle, and giving students choices using the Fit Deck or with their names on a schedule to pick exercises.

Challenges with Activity Bursts in the Classroom for Fitness Intervention in Special Education Settings: Elementary Teacher’s Responses

Another higher-order theme were the specific challenges when implementing the ABC for Fitness Program intervention within a special education classroom. The special education elementary intervention teacher reported the biggest struggle was having the students still have fun, keeping it within the necessary structure, and have them focus. “I think my biggest challenge with my kids is, they are kinda more hyperactive so trying to get them to focus... But I think like the compliance of doing the cool down is the first thing I struggled with” (Appendix F, p. 130-131).

A specific challenge identified was the time when the ABC for Fitness Program intervention was implemented. The implementation occurred at the end of the school year during the last four weeks of school. This posed a significant challenge but the solution was discussed although not implemented. “I think it affected it (the ABC for Fitness Program intervention) a lot because we had days off, we had kinda like, we had minimum days. I think a great time to implement it would be at the beginning of the school year or introduce it right before winter
break and implement it right when you get back from winter break (Appendix F, p. 146).

It was reported that the teacher had specific challenges that were specifically related to students in special education classrooms with issues such as hyperactivity, the need for structure, and the challenge of introducing new programs to students at the end of the year. The teacher, however, did their best to implement the ABC for Fitness Program intervention by providing structure via the schedule on the board and repetition.

Middle School Intervention Teacher’s Question and Answer Session, Mid-Point Check-in and Post Interviews

From the special education middle school intervention teacher’s complete interview response, 1,365 key words and phrases were identified. A word count of repetitive words resulted in identification of 17 repeated words. These key words and phrases were sorted into eight initial themes. These initial themes were named by categorizing them into groups based upon similarity of ideas. These initial themes are not in order of importance, rather they describe the overall perception of student engagement as it relates to implementation of the ABC for Fitness Program in a special education setting. The initial themes were the following: Fit Deck, perceptions of students’ reactions, challenges, adaptations/Modifications, engagement/focus, pacing/timing, Benefits, and teacher’s feelings. Upon reviewing and rereading the interview data; the eight
themes were consolidated into four higher order themes by consolidating the ideas into the following: Engagement, Classroom Environment, Adaptability in Special Education Classrooms, and Challenges for Special Education Classrooms.

The eight original themes were consolidated into the final four higher order themes in the following manner. The physical aspect of the program was mentioned by the participating middle school intervention teacher. However this theme was moved into the challenges higher order theme. The teacher’s perceptions of students’ reactions original theme was related to the higher order themes of engagement and focus, classroom environment and culture, and challenges so this theme was consolidated into the higher order themes. The Fit Deck Cards was a resource given to the participating special education middle school intervention teacher and was used to adapt the program for the students in the special education classroom and was merged into the related higher order theme of adaptability. The original theme of leadership was related to the theme of classroom environment and so it was merged into this higher order theme. The original theme of time was moved into challenges as time was a challenge during the implementation of the program. The original theme of accommodation was merged into the higher order theme of adaptability as this theme presented a clearer idea of the need of adaptability when implementing the ABC for Fitness Program intervention in special education classes.
Engagement: Middle School Teacher's Responses

Engagement was identified as a higher-order theme from the special education middle school intervention teacher. Words related to this emergent theme were mentioned multiple times. Like was mentioned seventy-three times (not always used as an adjective), love was mentioned five times, and excited was mentioned four times. The special education middle school intervention teacher reported the students really enjoyed the ABC for Fitness Program intervention seeing it as a game and that the students enjoyment of the ABC for Fitness Program intervention was surprising.

The teacher reported the students “complete dedication to it”, that most of the students “love it”, and “they have so much fun doing it” (Appendix F, p. 155-156). This idea was further expanded upon within the interview. “I am surprised, I am genuinely surprised how much the other ones like it. They kind of see it as a game not so much as we are going to do physical activity. It is like a game to them (Appendix F, p. 156).

The teacher described their enthusiasm for the ABC for Fitness Program and discussed how giving students the power of choice within the ABC for Fitness Program intervention increased their excitement. “They get really excited about it and they love being able to pick the cards as it gives them the power of choice. It breaks up anything they think is boring. They like that little break where they can just play around and have that little burst of activity” (Appendix F, p. 159).
The ABC for Fitness Program intervention was engaging due to it being a fun physical activity that was different from the typical academic assignments. It was also a way for students to expend their excess energy in a positive manner:

I think it helped with engaging them in more active activities. I don’t know if I really saw an effect on behavior, maybe I just was not paying attention. The immediate satisfaction of doing something they absolutely loved it and it did burn off their energy. It was just like that moment for them, we get to do something different. It was just something fun for them to do and it was how they saw it and how I treated it just something fun for them to do (Appendix F, p. 162).

The idea of engagement was expanded, “The students were a little more engaged as they just did something together”, “I can see more engagement in science”, and “more hands raised or more discussion or more conversation and discussion rather than waiting for me to say it” (Appendix F, p. 165).

The special education middle school intervention teacher reported the ABC for Fitness Program intervention improved the engagement of the students as they found the activities fun and the students displayed more engagement in academic activities (e.g. Science) after the implementation of the ABC for Fitness Program intervention. The participating special education middle school intervention teacher stated, “it kind of like makes me feel better knowing that they have their energy out. And, that they are not going to be as rambunctious as they usually are...(Appendix F, p. 156).
The participating special education middle school intervention teacher discussed specific elements of the ABC for Fitness Program intervention the students enjoyed such as the Fit Deck cards resource. The special education middle school intervention teacher described a number of times when students’ engagement and focus improved when the Fit Deck resource was utilized within the intervention:

Ya know, they really like the animal cards, the animal exercises. Like the bunny hop and all that. They really, really, like that and those are the cards they usually pick out so really like their enthusiasm to it (Appendix F, p. 156).

The special education middle school intervention teacher reported students enjoyed the break from the normal routine, they enjoyed making the exercises their own, and they enjoyed the activities due to the participation of staff including the special education middle school intervention teacher:

I think they enjoyed ummm having something they can do with their group and with their staff. I think that students have that perception of staff. Staff don’t do silly things. When Ms. ___ and I did the stuff with them, It kinda puts us all of a level, an even level rather than student and teacher. We are all down here trying to do these exercises together. So it was kind of an equalizer. I think that was the part that they enjoyed the most. Where it was all of us together trying to do the same thing and we can kinda see ya know who can do it best and who is kinda struggling but it
was a really supportive thing. I think that is what they got from it the most aside from it being fun. I think that is what they really liked. They loved watching me on the floor struggling through the exercises (Appendix F, p. 163).

Classroom Environment: Middle School
Teacher’s Responses

Another higher-order theme was that the ABC for Fitness Program intervention was beneficial to the classroom environment and students throughout the intervention period. The special education middle school intervention teacher perceived that students enjoyed doing the ABC for Fitness Program intervention together with staff and that it brought them together as a class. The special education middle school intervention teacher stated the student and staff connection was one of the effects of the intervention on classroom environment:

It makes you a person. Ya know, it makes you a person, and you are not the teacher who knows everything or the teacher that is leading the class or it just puts you, wait, if I can’t do and she can’t do it, maybe something we can work on together or like do together (Appendix F, p. 164).

It brings teachers out of their shells because it definitely brought me out of my shell kinda. Like I said before, putting the teachers and students on an even playing field and humanizing us. For me, that was the most important part (Appendix F, p. 169).
The special education middle school intervention teacher perceived the ABC for Fitness Program intervention promoted leadership within the classroom environment. The word leader was mentioned seven times. The middle school intervention teacher was surprised by the student who became a leader to the class when implementing the ABC for Fitness Program intervention:

I have one who kinda comes out as a leader. I actually expected another student to kind of come out as the leader of the group. But I have another one and they kind of follow his lead. I thought that was pretty interesting, yes (Appendix G, p. 156).

Another way the classroom environment was improved by providing students with the power of choice in regards to the exercises found within the Fit Deck resource. The words pick and choice were repeated a total of nine times. The special education middle school intervention teacher combined choice and student leadership to promote the ABC for Fitness Program intervention. “They pick maybe like 4-5 to 6 cards and it is like 5 reps each. So I am worn out afterwards (Appendix G, p. 156). Students were allowed the opportunity to choose the exercises from the Fit Deck resource, “They get really excited about it and they love being able to pick the cards as it gives them the power of choice (Appendix G, p. 159).

The classroom environment were changed during the ABC for Fitness Program intervention by the increased student-to-teacher interaction in non-
academic activities, leadership opportunities for students, and student choice-based activities.

Adaptability in Special Education Classrooms:
Middle School Teachers’ Responses

The special education middle school intervention teacher reported The ABC for Fitness Program intervention was adapted to suit the needs of the special education setting in the middle school classroom. The perception of the special education middle school intervention teacher was that while most of the students enjoyed it there was one student who did not participate fully, “Some of them aren’t into it. I have one that just one that doesn’t like physical activity. He participated a little bit” (Appendix F, p. 156).

The special education middle school intervention teacher stated that if they implemented this in the future they might differentiate the exercises into beginning, intermediate, and advanced:

I know in the handbook there are exercises that are more stationary. So maybe incorporate more of those, more stationary like standing up or sitting down workouts and not having so much movement. But I know that is not going to be attractive for the kids. But, if we put in two stationary and two are a little more active, it might balance out...I have a student who doesn’t like working out and who hates participating in PE and doesn’t really participates in these things where he can sit in the chair and maybe move his arms (Appendix F, p. 160).
Another way the ABC for Fitness Program was adapted and for the special education classroom setting was in the use of the Fit Deck cards suggested as a resource in the ABC for Fitness Program training manual. The Fit Deck cards provided a visual cue and the power of choice for the students and they included exercises that mimicked animal movements which the students were drawn to as reported by the special education middle school intervention teacher.

Time was mentioned 18 times. The timing (e.g. length and number of times the exercises and cool down were implemented) and number of breaks of the ABC for Fitness Program were changed to suit the needs of the students in the special education middle school classroom setting. The special education middle school intervention teacher could not implement it the thirty minutes suggested and instead did it approximately one to two times daily:

Cause we lunch, then they go to PE, and they have already had their fifty minutes of physical activity, and then come back from group. They are usually really squirrely for group because they do it with a therapist and after that it is just social studies and they get their reinforcer. It moves really fast at the end of the day so it makes it hard to schedule in the later half...I would like to do it at least twice a day so what I’ve been thinking of doing is maybe once during 1st period which is usually the time we do it anyways. And then maybe squeeze one in during third period. And see if I can do just the warm-ups in the later half (Appendix F, p. 158).
The special education middle school intervention teacher suggested starting this intervention at the beginning of the year due to their perceptions of students’ behavior at the end of the school year as the students were “super anxious” and stated, “I think profanity is the one thing we have struggled with the last few weeks (Appendix F, p. 165). This was not attributed to the ABC for Fitness Program intervention stating the following:

It is not so much as this activity, just this last month in general has been difficult... I think maybe it was more so the last four weeks of school. I attribute for the particular student who doesn't like the activities I attribute the profanity to his anxieties (Appendix F, p. 166).

It was reported that the best time to begin the ABC for Fitness Program intervention would be at the beginning of the school year. This was due to the need to establish routines.

The beginning of the year, that would establish the routines, something that we do every day, they would get used to it. Definitely at the beginning of the year and it could be a year long thing, I think that would be best (Appendix F, p. 166).

The ABC for Fitness Program intervention was adapted within the special education classroom setting due to the participating middle school intervention teacher perceptions of students’ needs. Students were allowed to participate as much or as little as they wanted to, the teacher utilized the Fit Deck resource as a way for student choice and as a visual cue, and the length and timing (e.g.
length and number of times the exercises and cool down were implemented) of
the ABC for Fitness Program intervention was cut down from thirty minutes to
approximately 8-15 minutes daily. The special education middle school
intervention teacher also stated that starting this at the beginning of the school
year would be best for special education classrooms.

Challenges in Special Education Classes:
Middle School Teacher’s Responses

Another higher-order theme was the challenge of implementing the ABC
for Fitness Program intervention in a special education classroom. There was
the physical tiredness of the special education middle school intervention teacher
who modeled the exercises and did them along with the students for the ABC for
Fitness Program intervention. The middle school intervention teacher described
being tired from implementing the ABC for Fitness Program intervention. The
special education middle school intervention teacher reported the physical
tiredness was more than they expected. “The first day that I actually did it, and
then the days after, the training did not prepare me for the physical aspect of it”
(Appendix F, p. 156). The special education middle school intervention teacher
enjoyed doing the exercises so they did not want to stop the intervention but they
reported being surprised. This was reiterated at the final interview, “I just didn’t
expect the physical toll on me... So by the warm up I am already winded and I
have to do two more exercises, then the cool-down (Appendix F, p. 159).
The challenges faced during the intervention with working it into the end of the year were described by the special education middle school intervention teacher. Students in the classroom had many personal challenges and anxiety which may have impacted their ability to participate in the ABC for Fitness Program successfully. The special education middle school intervention teacher reported excessive behavioral issues including excessive profanity.

It is not so much as this activity, just this last month in general has been difficult. Maybe this whole month of May and now into June has been such a struggle. Kids know it is the last month and we are about to be outta here. But it is also like they are excited but now they are super anxious because now they have to spend a whole summer at home being bored because most of these parents work or into other things...It is such a huge factor on behaviors this month, yeah these past four weeks. It is just like, I am super excited, but not really. And we’ve seen uh increased levels of profanity. I think profanity is the one thing we have struggled with the last few weeks. It’s gone from using profanity to insult someone to using profanity in your everyday conversation and or more outbursts. So my student who doesn’t like the physical activity has been more outbursty more verbally (Appendix F, p. 165).

The special education middle school intervention teacher reported modeling the exercises was a challenge. The teacher reported the end of the year implementation and students’ behavior issues were a challenge as it may
have limited students from participating fully in the ABC for Fitness Program intervention.

Similarities and Differences with Activity Bursts in the Classroom for Fitness Intervention Case Studies’ Themes

Both special education intervention teachers had similar perceptions of students’ responses to the intervention. The higher-order themes were the same; however, the experiences that resulted in the higher order themes were unique to each teacher. The teachers had similar yet different experiences with implementing the ABC for Fitness Program intervention.

The special education elementary intervention teacher and the special education middle school intervention teacher both adapted the program to suit the needs of their special education population. Timing (e.g. length and number of times the exercises and cool down were implemented) were adapted in both classrooms. This was due to the schedule of the classrooms as well as the need to make the program at consistent times due to the perception that their students needed a more structured approach to implementation.

Both teachers used the Fit Deck resource consistently in their program. The Fit Deck resource was used as a visual scaffold and support and a way to provide opportunities for student choice. Both participating special education intervention teachers also allowed students to participate in varying degrees. Both participating teachers were aware of the need to embed accommodations and modifications into their curriculum and activities due to the nature of their
student population. The special education elementary intervention teacher used other activities such as drawing and GoNoodle within their adaptations of the ABC for Fitness Program intervention which the special education middle school intervention teacher did not use. The special education elementary intervention teacher also added it into their schedule on the board as an additional support to the structure. Both special education intervention teachers allowed students some choice within the ABC for Fitness Program intervention which both reported benefits from this strategy of allowing students to use the Fit Deck cards.

The special education intervention teachers used similar modeling styles to encourage engagement. This resulted in both special education intervention teachers’ participation in the program. The special education middle school intervention teacher reported more tiredness from implementing the ABC for Fitness Program intervention within their classroom.

The special education middle school intervention teacher reported more difficulty in fitting in the ABC for Fitness Program intervention into their schedule only implementing it once a day. The special education intervention teachers both reported the students enjoyed doing the program and that the program increased engagement. The special education intervention teachers did not report a perception of improved behavior for their students in either case, which was corroborated by the results of the behavior incident logs. However, due to the students’ primary disability of emotional disturbance behaviors in both
classes, it is not possible to discern what if any impact the ABC for Fitness Program intervention had on behavior issues. The middle school behavior incident logs recorded more behavior incidents and severity of behavior than the elementary classroom behavior incident logs. Both participating special education intervention teachers stated that the end of the year was not an optimal time to implement such a change to their routine.

Summary
The two special education intervention teachers discussed similar experiences when implementing the ABC for Fitness Program intervention in a special education classroom setting. The teacher perceptions of engagement and focus of students improved in both classes as students saw the activity as a game and as fun. Both participating special education intervention teachers stated the ABC for Fitness Program had a positive effect on classroom environment and allowed students and teachers to bond doing the exercises and gave students an opportunity to do activities they could be successful with in the classroom that were not tied to academics. The ABC for Fitness Program intervention required adaption for the special education classroom in a number of ways such as using the Fit Deck, adjusting the time, and giving students the ability to do the exercises in varying levels. There were additional challenges in the implementation of the ABC for Fitness Program intervention for special education classes. The special education elementary intervention teachers
reported that some students struggled with calming down after the activities. The special education elementary intervention teacher lengthened their cool down times due to this issue. Also, the intervention was started at the end of the year and both special education intervention teachers reported that it would be best to begin the year with the ABC for Fitness Program intervention.
CHAPTER FIVE
CONCLUSIONS, RECOMMENDATIONS AND FUTURE IMPLICATIONS

Overview

Specific strategies are needed to target the lower academic performance of students with disabilities in special education (Aron & Loprest, 2012). There is minimal research on students with disabilities and the effects of physical activity programs on their health, emotional well-being, and academic performance (Davis, Hodson, Zhang, Boswell & Decker, 2013). Despite advances in special education since 1975, students with disabilities continue to have lower academic performance, less rigorous education expectations, and higher high school dropout rates than their non-disabled peers (Aron & Loprest, 2012). Increasing student engagement via physical exercise is one specific intervention as students with disabilities are less engaged than their general education peers (Reschly & Christenson, 2006; William & Bailey, 1995). Associations between behavioral engagement and student achievement indicators, including grades and standardized test scores for elementary, middle and high school students have been found (Connell, Spencer, & Aber, 1994; Connell & Wellborn, 1991; Marks, 2000; Skinner, Wellborn, & Connell, 1990).

This study followed a four-week implementation of the ABC for Fitness Program classroom-based physical activity intervention in two special education classrooms (one in an elementary school and one in a middle school). Special
education intervention teachers’ perceptions of student engagement were examined using an exploratory case study model. As minimal research existed for students with mild to moderate disabilities responses to a physical activity intervention to increase engagement, a case study phenomenological approach was used. A phenomenological approach was the best approach to understand teachers’ experiences, feelings, and responses to the ABC for Fitness Program intervention and to create a deeper understanding through thematic analysis. The goals of the study were to identify teachers’ perceptions of student engagement, and explore the generalizability and applicability of the ABC for Fitness Program intervention for students in special education classrooms. The study did not address changes over time due to the short intervention period (four weeks).

**Research Question One and Three**

1) What was the participating special education elementary teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention?

3) What was the participating special education middle school teacher’s perceptions of students with disabilities engagement (Conduct, effort, participation, time on task, and work completion) following a physical activity intervention?
Consistent with previous research (Doussett, 2015; Katz et al., 2010), both special education intervention teachers reported students enjoyed and participated in the ABC for Fitness Program. The theme of Engagement emerged in both special education intervention teachers’ experiences. Teachers reported students were more engaged in class after the ABC for Fitness Program intervention in the areas of conduct, effort, participation and time on task. However, intervention teachers’ perceptions of student behavior did not change. This may be due to the students in the special education classroom having the primary disability of emotional disturbance. Both intervention teachers reported students’ behaviors were consistent with past behaviors prior to the intervention implementation. Both special education intervention teachers reported the behaviors reported in the behavioral incident logs were consistent with students with emotional disturbances in the Therapeutic Educational Program (TEP).

The theme of Classroom Environment emerged from the special education intervention teachers’ perceptions of student engagement. Described changes to the classroom environment included increasing connections between students, teachers, and staff. The ABC for Fitness Program made the classroom environment more fun, got students’ excess energy out, and provided a break between academic activities. Consistent with previous research (Patrick, Ryan, & Kaplan, 2007) classroom environment (including student support and promoting interactions) was related to cognitive and behavioral engagement via students’ self-regulated learning and classroom participation.
Additionally, the theme of Adaptability in Special Education Classrooms aligned with the ongoing process both special education intervention teachers went through to support students’ engagement in the ABC for Fitness Program intervention. Both special education intervention teachers adapted the timing (e.g., length and number of times the exercises and cool down were implemented) and pacing of the ABC for Fitness Program intervention and used visual supports (e.g., Fit Deck Cards) throughout the intervention. The theme of Challenges in Special Education Classrooms identified challenges the special education intervention teachers faced such as behavior incidents, focus, and the time of the academic year of the intervention. Engagement responds to specific teaching strategies such as involving students in extracurricular activities, promoting participation in school, promoting positive relationships between students and staff, providing students with engaging activities, and autonomy supporting teachers (Cadwallander et al., 2002; Marks, 2000; Reeve et al., 2004). The special education intervention teachers promoted participation in the ABC for Fitness Program intervention and dealt with special challenges by adapting the fitness curriculum to suit the needs of their students.

Research Questions Two and Four

2) What was the participating special education elementary teacher’s perceptions of students with disabilities behavior following a physical activity intervention?
4) What was the participating special education middle school teacher’s perceptions of students with disabilities behavior following a physical activity intervention?

No improvements in behavior occurred. The special education intervention teachers described The ABC for Fitness Program did not impact change on student behavior in the classroom. This may be due to all students in the intervention teachers’ classrooms having the primary disability of emotionally disturbed, and both special education teachers described behaviors reported in the behavioral incident logs were consistent with student with emotional disturbances in the TEP.

Research Question Five

5) What other information is discovered from the behavior logs, surveys and interviews?

There were specific challenges in implementing the ABC for Fitness Program intervention not identified in previous research. The themes of Challenges in Special Education Classrooms and Adaptations in Special Education Classrooms described how both special education intervention teachers reported making adaptations to the ABC for Fitness Program for their students who had mild to moderate disabilities with emotional disturbances. The special education intervention teachers described having to find the times and number of sessions that would work with the classroom schedule and structure due to the need for structure and consistency within the classroom schedule. The
special education middle school intervention teacher reported challenges with the timing (e.g., length and number of times the exercises and cool down were implemented) of the intervention and implemented it only one to two times a day for a period of 10 minutes thus decreasing the total implementation time to 20 minutes, or less rather than the daily-recommended 30 minutes. The cool-down time was increased to more than the one to two recommended minutes by the special education elementary intervention teacher to facilitate calming and transition to other activities. Other adaptations to the ABC for Fitness Program included the use of visual aids such as the Fit Deck resource and GoNoodle. Both special education intervention teachers used the Fit Deck resource and described it as beneficial. Results indicated students in special education classrooms could successfully participate in The ABC for Fitness Program. Adaptations were necessary, such as visual supports (e.g., Fit Deck), and adaptations to the timing (e.g., length and number of times the exercises and cool down were implemented) of the exercises during the ABC for Fitness Program intervention. These adaptations to the ABC for Fitness Program intervention are consistent with the values of The Individual Education Plan (IEP) to uphold a free and appropriate education (FAPE) in the least restrictive environment (LRE) (Yell, Katsiyannis, & Hazelkorn, 2007).

The theme of Classroom Environment identified another positive benefit consistent with research (Patrick, Ryan, and Kaplan, 2007) promoting engagement. Both teachers perceived the students enjoyed the ABC for Fitness
program. The implementation of the ABC for Fitness intervention Program intervention provided opportunities for student choice and student leadership, which the special education teachers reported improved the classroom environment by providing students opportunities to be successful within the classroom.

Recommendations

Physical activity for children with disabilities is a health priority (Abdullah et al, 2004), along with children with disabilities maintaining their physical fitness (Lahtinen, Rintala, & Malin, 2007). The ABC for Fitness Program was a valuable resource for special education classroom teachers. The program can implemented in special education classrooms to provide additional physical activity throughout the day without taking away valuable classroom instruction time (Katz, et al., 2010). In special education classrooms, it is recommended: 1) the program be adapted to incorporate visual aids (e.g., Fit Deck cards); 2) teachers account for students with disabilities’ specific physical, learning, and social emotional needs; and, 3) provide students in special education classrooms opportunities to enjoy school activities. The ABC for Fitness Program was an adaptable way to incorporate increased opportunities for physical education into special education classrooms to address physical health and social emotional needs of students.
Additional research on the ABC for Fitness Program, including other populations in special education, is recommended. There are many different subsets of students with disabilities in special education (e.g., learning disabilities, autism, other health impairments). The study results are not generalizable to other subsets of special education students. Teachers’ perceptions of engagement and behavior of different subsets of students in special education, after the ABC for Fitness Program intervention, may be different. It is recommended that within this research on the ABC for Fitness Program, student voice be included within the research. It is recommended the adaptations used in this study be included on future research on the ABC for Fitness Program. These adaptations could be used with different populations of students. They could allow more students to successfully participate in the ABC for Fitness Program. It is recommended the ABC for Fitness Program be implemented at the beginning of the academic year due to the need for increased structure and routines within special education classrooms. Further research with special education teachers will identify the best implementation time. It is recommended that additional research be done on teachers’ physical fitness and how teacher’s physical fitness impacts physical fitness focus in classrooms

Limitations

One study limitation was the small sample size. There were only two intervention teachers and classroom’s sizes were small as the elementary
intervention teacher had four students and the middle school intervention teacher had seven students. Additionally, the pre and post engagement surveys were reported and analyzed; however, there were limitations due to the short intervention time, the small sample size, students’ disabilities (primary disability was emotional disturbance), and lack of a control group.

Another limitation were the behavior logs. These were already in use by the special education intervention teachers’ classrooms. The behavior incident logs focused on the negative behavioral incidents of the students rather than the observable behavior associated with engagement.

Another limitation was the length of time the intervention was done within the classroom. The intervention time was short (four weeks) and was done at the end of the school year, which may have impacted the intervention’s effectiveness. Another limitation was the adaptations to timing (e.g., number of minutes the exercises were done throughout the day, length of exercises and cool down) which were not suggested as part of the program. Both teachers increased and decreased the timing (e.g., length and number of times the exercises and cool down were implemented) of the intervention to suit their unique student populations. This was done due to their perceived students’ needs and classroom structure as a special education classroom teacher working with students with disabilities. However, decreasing the number of minutes the ABC for Fitness Program intervention was implemented was
increasing and decreasing the time of the exercises and cool downs was not protocol for the ABC for Fitness Program.

Another limitation was the special education intervention teachers were trained individually on the ABC for Fitness Program. Both special education intervention teachers reported they had no questions on implementation. However, during and at the end of the study, the teachers reported they would have benefited from increased practice in modeling the routines and ways to adapt the exercises for students with special needs. An additional limitation may have been one of teacher's self-described lack of fitness in regards to modeling and implementing the ABC for Fitness Program. This may be a point of further study as teacher’s physical fitness and interest may impact their ability to implement the program effectively to their students.

Recommendations for Educational Leaders

The ABC for Fitness Program is a cost effective intervention that may benefit additional populations of students in special education classes and help close the achievement gap between them and their general education peers. Increased engagement is associated with increased academic performance. The ABC for Fitness Program is an inexpensive intervention that is effective in promoting engagement, a positive classroom culture, and may increase achievement. Educational leaders in special education should promote this cost
effective program to all teachers in mild to moderate special education classrooms.

The ABC for Fitness Program was enjoyable for students with emotional disturbances. It also increased engagement according to the teachers’ perceptions. Allowing students numerous opportunities to succeed and increasing engagement is associated with improved academic performance. However, teachers’ perceptions of student behavior did not improve following the ABC for Fitness Program intervention. This demonstrates that students with the disability of emotional disturbance may need multi-tiered levels of support and programs, such as TEP, to be successful in school.

Future Implications and Directions

Educational leaders must inform, education, and train all stakeholders on the ABC for Fitness Program including special education teachers, parents, paraeducators, and other support staff. The ABC for Fitness Manual should be revised to be inclusive of students with disabilities. Students in special education classrooms should be provided opportunities to participate in physical activities throughout the school day to improve engagement and teacher-student relationships. Teachers in special education need to step out of the darkness and into the light and be encouraged and supported to adapt intervention programs such as ABC for Fitness to fit need the needs of their student population in order to include rather than exclude students in special education.
classrooms. Finally, the results of this study will be presented to the special education department and the school board of the participating district.
APPENDIX A

TEACHER ASSESSMENT OF STUDENT ENGAGEMENT SURVEY
APPENDIX B

WRITTEN BEHAVIOR INCIDENT LOGS — ELEMENTARY
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<th>Name:</th>
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**Levels M, T, Th, & F**

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**Levels Wed./Min. Day**

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**VIP 5 Day Week**

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<th>Silver</th>
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<td>184-165</td>
<td>164-0</td>
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**VIP 4 Day Week**

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<td>144-128</td>
<td>127-0</td>
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<tr>
<td>Name:</td>
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<td><strong>FOLLOW INSTRUCTIONS</strong> (stay on task &amp; participate)</td>
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<tr>
<td><strong>RESPECTFUL CONDUCT</strong> (use kind &amp; polite words/ actions)</td>
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<tr>
<td><strong>STAY IN SEAT &amp; DESIGNATED AREA</strong> (ask permission)</td>
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<tr>
<td><strong>KEEP HANDS &amp; FEET TO SELF</strong> (respect other’s property)</td>
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<tr>
<td><strong>MYOB</strong> (focus on self management)</td>
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**Subtotal**: 15 15 15 (15/45) 15 15 15 (15/45) 15

**Scoring System**
- 3: Completed most or all w/o issues/ Met goal 9 out of 10
- 2: Completed some, very few issues/Met goal 7-8 out of 10
- 1: Completed very little and had difficulties/Needs Improvement
- 0: Did not meet goals/ 0 or less of 10
- 0: Displayed Disruptive behaviors (i.e. AWOL, Bully, Physicality)

**Comments**: /105 (daily)

**Reinforcer Level System**
- Level 3: A score between 39 - 45, On Level 3, students are able to use electronics (Mac, CB, Xbox, Wii) etc...

- Level 2: A score between 35 - 38, On Level 2, students are able to use Legos, Art, and Board games, sit and watch a friend

- Level 1: 34 and below Must first complete remaining work, then students are allowed to draw at their desk.
1. So tell me, how did the training you received in the ABC for Fitness Workshop prepared or did not prepare you for implementation in your classroom?

2. In your opinion, were the training materials you received helpful to you throughout the implementation of the program? If so, how?

3. Tell me about any difficulties you encountered when implementing the intervention.

4. Can you explain to me your understanding of the purpose of the ABC for Fitness program?

5. How effective was this program in meeting its goals?

7. Describe how students’ responded to the intervention, specifically in terms of engagement (conduct, effort, participation, time on task, and work completion).

8. Describe the students’ behavior in the classroom during the ABC intervention.

9. Explain how you felt and/or responded to the ABC intervention.

10. Is there anything else you would like to tell me in regards to your experience with the ABC for Fitness program?

Adapted from C. Doussett’s study (2015).
APPENDIX E

TEACHER INFORMED CONSENT WITH INSTITUTIONAL REVIEW BOARD APPROVAL LETTER
Teacher Informed Consent

The study in which you are being asked to participate is designed to investigate how teacher’s perceptions of students change over time with the implementation of the ABC for Fitness classroom-based physical activity. This study is being conducted by Jacqueline Mantz, an Ed.D candidate under the supervision of Marita Mahoney, Ph.D., Director of Assessment and Research at California State University, San Bernardino. The Institutional Review Board at California State University, San Bernardino approved this study.

Purpose: Increased engagement improves students’ performance in school. Incorporating physical activity breaks into the classroom has been shown in the existing literature to improve students’ engagement and behavior. This study’s purpose is to assess how teacher’s perceptions of their students change over time when the ABC for Fitness classroom-based physical activity program is implemented.

Description: This study will examine teachers’ perceptions of students prior to and following the implementation of the ABC for Fitness program in participating special education teachers’ classrooms using a case study design. The participating special education teachers will be implementing the ABC for Fitness classroom-based physical activity for a total of 30 minutes a day. Note: The activity bursts will be done when the teacher feels it is appropriate and will not impact instructional time. The researcher will collect data from the participating special education teachers implementing the ABC for Fitness program using a Q & A from the ABC for Fitness individual training sessions, pre and post questionnaires, a mid-point check-in, and semi-structured interviews. The researcher will collect student data from the participating special education teachers using written behavior incident logs.

Participation: You have been asked to participate in this research between April through June 2018. For the ABC Fitness participating teachers, the manner of participation will include the following: ABC for Fitness training session (two hours), Q & A after the training session (30 minutes), pre and post questionnaires (20 minutes each for a total of 40 minutes), implementation of the ABC for Fitness program (30 minutes broken up throughout the day for four weeks), written behavior logs (200 minutes), a mid-point check in (45 minutes), and an interview (45 minutes). You can decide to to not answer all or part of the questionnaires associated with the study or the questions in the interview, even if you have signed this letter of consent. You can freely withdraw from participation at any time.

Confidential: All information is confidential and will only be used for research purposes. Student names will not appear in any written reports that stem from data collected from the

909.537.5600, fax: 909.537.7011
5500 University Parkway, San Bernardino, California 92407-2393

Figure E1. Teacher informed consent, page 1.
researcher. Audio recordings and digital data will be stored on the researcher’s password protected computer. Written information collected will be stored in a locked filing cabinet in the researcher’s home office. All information will be stored until Winter 2025. At that time, all information associated with the present study will be destroyed.

**Duration:** The entire duration of the study will take over a six week period beginning in April 2018 and ending in May of 2018. The ABC for Fitness intervention will last four weeks. The ABC for Fitness Workshop will last three hours, the pre and post questionnaires will take between 15 and 20 minutes, and the midpoint check-in and the interview will take approximately 45 minutes each.

**Risks:** There are minimal risks due to the issue that teachers may be uncomfortable discussing their teaching practices while they are being audio recorded. Due to my position as a teacher on special assignment some teachers may also feel coerced into participating but to clarify teacher on special assignment is still classified as a teacher and holds no administrative position. The activities will be conducted throughout the typical school day. None of the structured activities will be outside the norm of what students do in a physical education class. All activity bursts will be within normal intensities and will not include any strenuous activities.

**Benefits:** The research believes that participants in this study will improve the quality of instruction and services for participating students. The study will also add to research on engagement and strategies for teachers in special education classrooms.

**Audio:** To ensure adequate collection for review, all interviews will be audiotaped recorded. Should you not want to be audio recorded, then the Q & A and/or interview will be by hand note taking to record responses. I understand that this research will be audio recorded initials _____.

**Contact:** If you have any questions about this study, please contact:

Jacqueline Mantz  
909-241-5093, email: jmantz@psusd.us

Marita Mahoney, Ph.D., Faculty Advisor, California State University, San Bernardino

**Results:** The results of this study can be obtained through ScholarWorks at scholarworks.lib.csusb.edu

909.537.5600, fax: 909.537.7011  
5500 University Parkway, San Bernardino, California 92407-2393

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**Figure E2.** Teacher informed consent, page 2.
Confirmation Statement:

I have read the information and agree to participate in your study.

Signature:

Name of Teacher (please print):

Signature: ______________________ Date: _______________
1 message
mgillesp@csusb.edu <mgillesp@csusb.edu> Fri, Apr 27, 2018 at 10:28 AM
To: 001612779@coyote.csusb.edu, mmahoney@csusb.edu

April 27, 2018

CSUSB INSTITUTIONAL REVIEW BOARD
Expedited Review
IRB# FY2018-67
Status: Approved

Ms. Jacqueline Mantz and Dr. Marita Mahoney
Doctoral Studies Program
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

Dear Ms. Mantz and Dr. Mahoney:

Your application to use human subjects, titled “Activity Bursts in the Classroom and Teachers’ Perceptions of Student Engagement and Behavior” has been reviewed and approved by the Institutional Review Board (IRB). The informed consent document you submitted is the official version for your study and cannot be changed without prior IRB approval. A change in your informed consent (no matter how minor the change) requires resubmission of your protocol as amended using the IRB Cayuse system protocol change form.

Your application is approved for one year from April 27, 2018 through April 26, 2019. Please note the Cayuse IRB system will notify you when your protocol is up for renewal and ensure you file it before your protocol study end date.

Your responsibilities as the researcher/investigator reporting to the IRB Committee include the following 4 requirements as mandated by the Code of Federal Regulations 45 CFR 46 listed below. Please note that the protocol change form and renewal form are located on the IRB website under the forms menu. Failure to notify the IRB of the above may result in disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years. Please notify the IRB Research Compliance Officer for any of the following:

1) Submit a protocol change form if any changes (no matter how minor) are proposed in your research protocol for review and approval of the IRB before implemented in your research,  
2) If any unanticipated/adverse events are experienced by subjects during your research,  
3) To apply for renewal and continuing review of your protocol one month prior to the protocols end date,  
4) When your project has ended by emailing the IRB Research Compliance Officer.

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the IRB Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

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Figure E4. Institutional Review Board approval letter.
APPENDIX F

TRANSCRIPTS
Elementary School Intervention

Question and Answer Session

On Wednesday, May 9th I trained and then did a Q and A with the elementary teacher participant. The teacher participant and I reviewed the ppt, the manual, reviewed the supplementary card deck, and practiced the exercises from 2:30-3:30 pm. The training went quicker than anticipated due to one on one trainings. The teacher had also reviewed all the materials beforehand.

RESEARCHER: So now that we finished the ABC, Activity Bursts in the Classroom Training, this is our question and answer session where you can ask any questions and get any clarification on the ABC intervention you are going to use on Monday.

ELEMENTARY SCHOOL TEACHER: I know you answered the question already on the nature of confidentiality and what I needed etc such as the numbers instead of students’ names. I think it will be interesting how my kids react to this. Some may be defiant and I know that some may eventually grab onto that. As their teacher, I think it would be interesting to implement this later to see their data.

RESEARCHER: What kind f accommodations do you think you are going to make for students with disabilities?

ELEMENTARY SCHOOL TEACHER: I definitely think making sure that they are not being forced to do this and if they refuse they refuse. None of my students have physical disabilities but some of them do come in and they may be
feeling sick or not feeling well. Like I said I am not going to force them to do something they don’t want to. But, I am not going to force them to do things they are not able to do physically either. So I may modify some of the cards, some of them so I know they can do it.

RESEARCHER: How are you going to deal with the staff in your classroom as I know you have a lot of staff?

ELEMENTARY SCHOOL TEACHER: On Friday, before we start all of the exercises and everything I am going to have a meeting with them or a group chat letting them know I am doing this exercise intervention with you. I need to make sure that everyone is on board and know the rules and talk to them about not forcing kids to do if they don’t want to do it.

RESEARCHER: So their points won’t be compromised?

ELEMENTARY SCHOOL TEACHER: No, their points won’t be compromised because that is a huge part, they feel their whole entire world is devastated if they lose a point so for this I am not gonna do that to them. For my staff though, I think if they do the exercises with me, the kids will be more accepting to do them. So I am going to ask them if they could participate when they want to and a lot of them are good with participating.

RESEARCHER: You talked about earlier when we were doing the training about having it at specific times, you saw some value in that? What times were you thinking?
ELEMENTARY SCHOOL TEACHER: I am kinda thinking about the time right before exchange where they have their reward system um reward time. Right before that, they tend to run to the I-Pad cart and they are so anxious to get to that. I think if they have a cool down and then we dismiss one by one by one. That will completely decrease the amount of rushing. And I also think, definitely in the afternoon when we don’t have P.E. on Tuesdays. That would be a huge time to do that, yeah I definitely think on Tuesdays during the afternoon.

RESEARCHER: Do you foresee any challenges for your students?

ELEMENTARY SCHOOL TEACHER: Just with being defiant and not wanting to. I also think the challenging part is having this structured. Although they love structure and they need structure. This is going to be something new for them. That we haven’t done throughout the year. And I think introducing it to them slowly to it and preparing them. I was going to do a prepare session on Friday Then, talk about it, introduce it to them. Tell them we have to have a warm-up, a core activity and then a cool down. So I think if they know that there is those three and I say to them very structurally, they will definitely get that, yeah. Just with having, I just need to prepare them.

RESEARCHER: What other questions do you have with the implementation or adaptations, questions about the cards?

ELEMENTARY SCHOOL TEACHER: I think I am more nervous about timing.
RESEARCHER: Okay, I think timing will help but there is no time constraint. You can do this for three minutes and if you are finished and stop. You can do it for five minutes and stop. You can do it for ten minutes. It depends how you want to do it.

ELEMENTARY SCHOOL TEACHER: Okay, yeah, timewise, I feel like they are good when it comes to structure but it is so hard if it is like five minutes and then it is like okay we are going onto the next thing. Like that transition, of going into those things. I think they might struggle with that. I am nervous to do short amount of times. Ya know, instead of like 5 to 10 minutes doing.

RESEARCHER: With your population, the more movement the better. Remember use the cool down as the transition time to get them more focused. If that takes more time it takes more time. You are going to be able to adapt it as there is no set time limit. Ideally, you will get thirty minutes in a day, however you get that, is your decision.

ELEMENTARY SCHOOL TEACHER: So for the cool down times, my kids like when I read to them.

RESEARCHER: I think so like take deep breaths as you read.

ELEMENTARY SCHOOL TEACHER: They like when I transition into something else.

RESEARCHER: I almost like the idea of the students closing their eyes and doing deep breathing as you read them something.
ELEMENTARY SCHOOL TEACHER: Yeah or picture themselves somewhere as I am reading the book.

RESEARCHER: Okay, any other questions, clarifications?

ELEMENTARY SCHOOL TEACHER: So for “Go Noodles”, can I use it for Core?

RESEARCHER: Yes.

ELEMENTARY SCHOOL TEACHER: For the recording, do you want how many minutes?

RESEARCHER: I just want a check mark on when you did it. You can do how many minutes you did it if you want. It is not necessary, as I want to make this as easy as possible. You will get an idea how many minutes you spent on it during the day just naturally. We are going to do a two week check in so I will be interviewing you again and I will have specific questions then.

ELEMENTARY SCHOOL TEACHER: Okay (Recording stopped).

Mid-Point Check-in

RESEARCHER: Hi, my elementary teacher. Today we are going to do your mid-point check in about the ABC intervention and I will be asking you some questions about how it is going so far okay? The first question I have is, how has the training you received prepared you for the implementation of the program?

ELEMENTARY SCHOOL TEACHER: I feel like making me aware of the flexibility of the program so I can deal with it. I know there has to be this, this and this. I know there is a warm-up, and there is a core and a cool down. But
knowing how many times a day I do it or when I do it. But giving me that flexibility and telling me that; I have been less stressed about trying to fit it in. So it is at my pace and I can adapt it to my classroom. Also, I think giving me the cards is great. Even my kids were like, one of them said, “Oh we’re working out like Superman.” So that was a cool connection that they made. Then, even just like allowing me and telling me I can use other resources like Go Noodle. I think the flexibility the training gave me was nice and some of the resources you gave me were good as well.

RESEARCHER: What challenges, if any, have you had so far?

ELEMENTARY SCHOOL TEACHER: I think my biggest challenge with my kids is, they are kinda more hyperactive so trying to get them to focus. As it is a structured physical activity. So trying to get them to have fun but still focus, and following directions. So right now I am struggling with having them follow along rather than doing their own thing. Making sure it is structured and I said to them, “I am not going to take points away from them if you do not do it, but if we are not respecting and following directions of what I am asking you then yes, that is one of our rules to follow directions so I am going to take a point for that.”

So they kind of understood it better so I think I need to just keep being on them about that. I also think I do not really have that much of a struggle when my kids wanting to participate cause they actually want to do it. I think the cool down though, I do get whines and I don’t wanna do this. But I reinforce this by saying, “Well our heartbeats are high up, so we have to cool it down and we have
to calm our body down so we can get back into what we were doing. But I think like the compliance of doing the cool down is the first thing I struggled with.

RESEARCHER: You mentioned something in a casual conversation about what you are using for the cool down?

ELEMENTARY SCHOOL TEACHER: So, I am using, well I started doing, so they really like drawing, so I said okay I will turn the lights off for two minutes and they can just draw or doodle and all that kind of stuff. Then I was thinking, okay as they we’re kind of ehh about that. So then I was thinking let’s try Go Noodle as they have really good, as on the Flow channel they have really good cool down and you know centering your mind and all that kind of stuff and they are only three minute videos. They are really nice so I normally turn the lights off and we do that or I was thinking, they really like when someone reads to them. So I think maybe next week I will try that as a cool down, where I pick a mini book and I read. Ya know, I mean not an intense kind of book but a little lower than their reading level so it is just more fun. It is kind of relaxing so they do not have to think that hard and I’m thinking about this for next week.

RESEARCHER: Can you think about the time and I know this goes with accommodations and modification you made to program. Can you talk about that?

ELEMENTARY SCHOOL TEACHER: So, well it started off with doing it 5 times a day for six minutes and that was really hard for myself and my kids. Because I think, we were trying to do it, and it was breaking up our schedule.
And for my kids, like the schedule is so structured. We do the same thing like every single day at the same exact time, every single day. So, for them it was really hard, and for me, as I had to stop so many times, instruction. And I had to, it was kinda like almost an annoyance for me anyway. So I thought, this is not working. So I thought maybe if I tried four times a day for 8 minutes a day. Or 8 minutes for that four times a day. Even like the four times was like a little bit too much. Because it was hard trying to get them, it was like, okay let’s do this again.

You know, let’s do it. They were kind of “really, again?” They wanted to do it but they had that resistance. So then, Tuesday of this week, I was like let me see if we can do two times a day for fifteen minutes. Is it always fifteen minutes, no. But, it is around the ten to fifteen minute mark.

RESEARCHER: Right.

ELEMENTARY SCHOOL TEACHER: It’s nice because I can slow thing down and we are not rushing through the activities and rushing through the whole ABC workout. Because I think when I slow things down for them they can actually like understand it and enjoy it. If it is fast, it is like, okay we gotta get this done, move on. So I think beneficially, we do one, and I did it yesterday and today, I think it works a lot better with the program, my schedule and my kids. Because it is not hitting it and breaking instruction so many times in the day. It is only doing it twice in a day. And, we just kind of slow everything down when we do it. We can do more activities when we do it that way. I think they like that
better. So like normally what I do is we do our stretching for two minutes. And we do the same stretching all the time, every single time we do it. So they know...

RESEARCHER: Where do you get the stretching activities?

ELEMENTARY SCHOOL TEACHER: I get them from the Superman cards you gave me. It is the, so you roll your head and neck, then you do the cross over the shoulders. Then you stretch up your arms, then you put your hands behind your back and stretch your chest. Then you do your triceps and the back. So you stretch over and that is like the upper body. There is also like the lower body but we haven’t really done that one yet. So, they know exactly what comes next in the stretching sequence. So it is nice because I don’t have to tell them all the time. It is just like a natural thing that they do now. Ummm, and then after that then, I will have a kid, so each kid gets to pick a card.

RESEARCHER: Talk about that, what do you mean pick a card?

ELEMENTARY SCHOOL TEACHER: So, there is the deck of cards that have all the core exercises you can do. You and I went through and deciphered which ones would be too advanced. So, I have a list of my students’ names, the four of them. And each day it rotates. And, so for that day, they’re the ones who get to pick the cards. For the whole day and the next day it will rotate to the next kid and they get to pick the cards for that day.

RESEARCHER: Oh, how has that been working?

ELEMENTARY SCHOOL TEACHER: I think it works really well. Umm, because I think they are not like, “Oh, can I pick, can I pick, oh?” They know, and
it is visually on my board so they know that is their day. It works well. Sometimes I will have them pick three cards and sometimes I will have them pick two. Normally, I will decipher how I want them to do it, like what order. So normally, I like to do the harder ones first, so it is kinda a better transition to the cool down. Umm, so I will, so let’s say they pick three cards, I will put them in order and we will do them for probably like a minute. Cause they are hard to do for a minute. And um that’s three minutes of that and then normally the cool down is the longest part. Definitely the cool down is the longest part of the workout for my kids as for them it is just easier. Although they are a little bit resistant to the cool down, I think for them they need that as it is so much active and then it’s like let’s do some work. And that’s when I get defiance. Cause they are like, why were not playing anymore? Ya know, so that’s why I make sure the cool down is the biggest part because they need that to come back so.

RESEARCHER: So you just talked about like after the activity, what is going on after you do these ABCs, Activity Bursts in the Classroom? Have you seen anything interesting?

ELEMENTARY SCHOOL TEACHER: So, one of the first days that I did it, my kids were going on Dreambox and Lexia right after, and we did it, and they and I saw immediate reaction to it. Normally, I would have to tell them, “Okay, make sure we’re focusing, you know, I don’t really want to hear a lot of talking. We are focusing on our Dreambox and Lexia, whatever programs you choose to go on.”
That is normally what happens, but after we did the first or one of the first ABCs, during that day they were glued to the computer so that was really cool to see. I was like, “Whoa.”

RESEARCHER: For how long?

ELEMENTARY SCHOOL TEACHER: For about 15 minutes. So, I mean for 15 minutes I did not have to tell them anything. And that’s huge with my kids as I feel as if I always have to redirect them all the time. So that was really cool that I didn’t have to do anything like that. So.

RESEARCHER: Do you have any other questions for me so far? I know we are about two week point after Friday.

ELEMENTARY SCHOOL TEACHER: So, I do have a question. So, does it have to total thirty minutes? Like, all the time every day?

RESEARCHER: No.

ELEMENTARY SCHOOL TEACHER: No? Okay, cause, if I do it two times a day, it is normally like today it was fifteen both times.

RESEARCHER: So, it doesn’t have to be exactly thirty minutes, do what is right for your classroom. I think it is interesting what you have experienced.

ELEMENTARY SCHOOL TEACHER: Today, we did two fifteen minutes but yesterday it was like two ten minute ones.

RESEARCHER: When do you think you will be using it? Are you going to use it before you do Lexia and Dreambox as I heard you say you saw something there, right?
ELEMENTARY SCHOOL TEACHER: So, I might change it up because this morning I wanted to do it when we first got in but I didn’t. Maybe Friday morning as soon as we get it as that’s writing prompt and math both back to back.

RESEARCHER: Ohhh.

ELEMENTARY SCHOOL TEACHER: Yeah, it’ll be interesting as we did it right before recess. Every single time like today I did it before they did something non-academic. Just because, I just have. But maybe on Friday or tomorrow I’ll do it before.

RESEARCHER: Whatever you see there maybe make a quick note. Is it better to do it before academic or non-academic? It will be interesting.

ELEMENTARY SCHOOL TEACHER: Okay, definitely.

RESEARCHER: Any other questions?

ELEMENTARY SCHOOL TEACHER: That was kind of the only question, the thirty minute one as I didn’t know if it was too much or too little? I was trying to get thirty

RESEARCHER: No, do what is right for your classroom. Right? Do what you feel what is right and we can talk about it. Thank you.

ELEMENTARY SCHOOL TEACHER: Sounds good.

Final Interview

RESEARCHER: So tell me, how did the training you received in the ABC workshop prepare you or not prepare you for the ABC Fitness in the classroom?
ELEMENTARY SCHOOL TEACHER: I think the training was good because it gave me a lot. I made sure that I did all three steps of it and I think that’s the structure of that really helped my kids. So you do the warm up, then you do the core exercise and then you do the uh cool down. I think that really, all of the different examples that were done were really good as I think my kids. They get like okay with doing the same thing over and over again. Like the stretching, the warm up we did the same thing and they knew exactly what to do. But then we would do different cool downs as that really helped because they would get bored. So i think the variety of what you showed me really really helped.

RESEARCHER: Was there anything lacking in the training or needing to be added to the training?

ELEMENTARY SCHOOL TEACHER: I think I know we talked about accommodations. Maybe just tips on ways to accommodate for kids in special ed, kids with special needs. For me, I wrote my stuff up on the board. My kids really liked it that I had it scheduled on the board and they saw it. I think um even during the exercise, letting teachers know, if they do do an exercise and the kids aren’t doing it exactly that’s okay because like they try. If you are doing the same exercise for even a minute, my kids get um really really tired, fast. So some of them would modify it as they would go through the whole minute of that exercise, so in there just try not to get so like ya know like this has to be like this. Just try to be a little more flexible.
RESEARCHER: How did you feel doing the exercises?

ELEMENTARY SCHOOL TEACHER: I honestly felt like I was completely out of shape (laughing). So, it kinda boosted me up but I definitely felt tired and thought, I need to go to the gym. Honestly, it was nice to do it with the kids because it was just another way to connect with them. So it is not just me up there teaching. We are doing the ABC together and I think that is really good because they like the playfulness and they also like the structure of it. For myself I definitely was like hmmm and as we kept doing it, I felt like I got better at it and I think my kids got better at it as well.

RESEARCHER: So you talked about the benefits of you like doing it with them so can you think of any other benefits?

ELEMENTARY SCHOOL TEACHER: I know like in the beginning it was like whoa like they are really really focused. Towards the end, I do not know if it is due to being the end of the school year. They would get like really really excited so I had to lengthen my cool down time because they couldn’t get back down to baseline.

RESEARCHER: So is that accommodation you would add just for students with emotional disturbances or for all students, extension of the cool down time?

ELEMENTARY SCHOOL TEACHER: Ummm, I don’t know as it kinda depends on the classroom and the environment. I definitely think for special ed, they need those extra minutes to cool down and it works with them, because they
are like ohh it went so fast. Then I am like, well we are really going to cool it down because they really need that. For gen ed I think it would just be a benefit. Do they need it? I don't know?

RESEARCHER: Thank you for answering the first question so thoroughly. Were the training materials helpful throughout the implementation of the program and if so how?

ELEMENTARY SCHOOL TEACHER: So I looked back on the powerpoint, the training one just to see the exercises And some ideas. I also actually talking to Miss ____ and she wanted to present it to principals. She did a principal meeting and she presented as ways to help with behaviors. I don't know for sure if she got to present it, but she asked me for all the materials so I gave it to her. She was like even, “Oh my God, it is such a good tool. So I only looked at it for those things.

RESEARCHER: What is that person’s position?

ELEMENTARY SCHOOL TEACHER: She is the mental health therapist for my program.

RESEARCHER: Did she watch you do it at all?

ELEMENTARY SCHOOL TEACHER: Yeah, she did maybe like two sessions. She really liked it. At first she was like oh what is it? She’s like a huge fitness person so she was like oh my gosh this is so great. Ya know, so I think she wanted to use that when I think she gets into a higher position. Ya know, show other people the resource.
RESEARCHER: So she is a fitness person and you are into fitness. Do you think this helps you want to do it?

ELEMENTARY SCHOOL TEACHER: I think some teachers may want to do it, the hardest thing teachers might have is timing. They are so bombarded with a lot of stuff. So, i think they would be like, where can I fit this in. Like I totally understand that and I put it in my schedule and that helped. So, that was a huge challenge to try to make sure I did it at that time but I think like not being so “fitnessy” as a teacher I think you could even do it with other simple tasks. I do think you should do it with the students if you are going to do it.

RESEARCHER: Are there any other ways you could model it?

ELEMENTARY SCHOOL TEACHER: For example, I used Go Noodle sometimes and those are videos. I mean I had staff and there were staff who didn’t model and that was fine. There does need to be some modeling.

RESEARCHER: Okay, Can you explain to me the purpose of the ABC for Fitness program? How do you understand the purpose.

ELEMENTARY SCHOOL TEACHER: The purpose for me I think is in my class that it is to help teachers um, I think it is to help teachers, it helps teachers um, instead of always being negative about behavior and constantly redirecting, all that stuff, it allows you to have a connection with them and allows you to have fun with them and then you can go back and it also gets the jitters out of the kids but it is structured enough that they are not running wild. Um, so I think that having the structure and setting apart that time helps instead of redirecting it
helps to avoid redirecting and they are already focused because they got that little break and they can focus again and they got that little break and they can focus again. I think that just giving that the kids a time to breathe, and giving their brains a break. I think that is kind of the purpose.

RESEARCHER: So thinking of that, how effective was the program in meeting its’ goals?

ELEMENTARY SCHOOL TEACHER: Umm, for my kids it is a little harder.

RESEARCHER: Why?

ELEMENTARY SCHOOL TEACHER: A lot of my kids have disabilities, the fact that they are disruptive and they are, some are hyperactive. I think it just help because they are all boys, it is a way for them to be a little more physical rather than acting out physically.

RESEARCHER: Describe any changes in the students level of engagement in the classroom.

ELEMENTARY SCHOOL TEACHER: My kids are pretty good at participating but I do feel as though they were more on task. The first time I did it, it was like magic. Like we did it and then we went on to Lexia and Dreambox and for 15 minutes I didn’t have to say anything. For me, 15 minutes normally I have to say something at least 3 times.

RESEARCHER: Did that happen again?

ELEMENTARY SCHOOL TEACHER: Um, yeah it did.
RESEARCHER: How many times?

ELEMENTARY SCHOOL TEACHER: Umm, holistically it happened maybe 3 times out of the week. Also, I feel like the students did not need as much assistance from the aides to redirect them a lit because I do have a lot of staff. So I feel like they are the ones who kinda redirect before I do. Um, so I didn’t really hear the adults saying for them to get back on task. So yeah, I think it was helpful for them engaging.

RESEARCHER: Was there any specific task that they seemed to be more or less engaged in after the activity?

ELEMENTARY SCHOOL TEACHER: No, it was all kind of equal.

RESEARCHER: Can you discuss any challenges or difficulties you encountered when trying to do the ABC.

ELEMENTARY SCHOOL TEACHER: Some of my kids are a little bit defiant so and I never was like we are not going to take points away. Ya know, so it was hard for me to constantly encourage the other ones to keep going when one of the other students was not doing it. So obviously we are usually, we are going to take a pint. But, we when one student is not doing what they are supposed to be doing it is natural for us to say we are going to take a point. So for example, one of my students he didn’t do it and said he didn’t want to and I was like it is okay and yeah but inside I was like yeah. I mean we do have bonus points so the ones who did do it. It would be on and off with that student, he
would do it sometimes and he wouldn’t do it sometimes. He was very, and on the days he would pick the card of course he would do it.

RESEARCHER: That is interesting.

ELEMENTARY SCHOOL TEACHER: Yeah, so if they got a choice with what they were doing, the majority would do it.

RESEARCHER: So do you suggest, for your population, should there always be an element of choice.

ELEMENTARY SCHOOL TEACHER: Yes there should. Ummm, I normally do the choices all the choices all day every day within a whole group. Within this the choice was pretty much you could do it or you couldn’t do it. The activities would change every day depending on who got to pick the cards. Because we have our own little issues between students so when one student picked a card that day a student would say I am not doing it because that student is doing it. I would say, “Remember we are a school family”, ya know kind of thing, “we want to comply”. So like the point system when they did their self-monitoring it didn’t affect it but the bonus points it definitely did because the ones were doing it my staff used praise and bonus points so that I mean.

RESEARCHER: How did your ability to gauge student engagement change over time?

ELEMENTARY SCHOOL TEACHER: Umm, I don’t know if I am thinking of this right but observation and the point system for me. Like obviously if they are not engaged they are going to go on off task behavior. So, and I told them, I
said, “I don’t mind if you don’t participate but if you engage in off task behavior, that is not appropriate I will still take points.” So I think that was a way for us, for their off task behavior we do their self-points. So if they are sitting on the floor, calling out, or not doing their work. If they are not doing their work, they get a 1. So that’s how we engage their engagement.

RESEARCHER: Explain any changes in your attitudes or feelings toward your students. Did anything surprise you?

ELEMENTARY SCHOOL TEACHER: So I am going to be honest, I think the ones who were like ehhh about doing it sometimes. I personally would get like a little agitated as like it is super simple. So inside i was a little agitated about it. I feel like though it allowed me to ne more kid focused and it wasn’t just me, me, me, up there. Ya know, it was more like a classroom thing we were doing. I just love playing with them and it makes our relationship a lot better with them. So, I think I am a little more open as I do have a student with hyperactivity so I think I have gotten a little more patient with him as we did this went on. Umm, just because I think I understand a little better. I think this student just needs as many breaks as possible. Even individually we will ask him if he wants to run a lap outside as he needs that little break. So we needed to implement this for him.

RESEARCHER: Is there anything else you’d like to add about the ABC for Fitness program?
ELEMENTARY SCHOOL TEACHER: I don’t know if I could do 30 minutes a day. I think it is a little too much for my program.

RESEARCHER: What would be more feasible?

ELEMENTARY SCHOOL TEACHER: I think ya know maybe 15-20 minutes or 5 minutes in the morning and 5 minutes in the afternoon as I already give them physical stuff but it is not structured. We won’t have that recess next year so that will be rough so I can maybe do the ABC then, Umm then we have a 20 minute recess. They get with me they will get 3 recesses a day.

RESEARCHER: What is the benefit between structured and unstructured?

ELEMENTARY SCHOOL TEACHER: I think actually, I mean, I think it is more so when they out to recess they are messing around but some kids just sit there, they will just sit on the swings. Or they will sit there on the little worm so in this they are actually engaging and burning. Wheres they might just sit there and talk.

RESEARCHER: This was done at the end of the year, was this the best time to do it?

ELEMENTARY SCHOOL TEACHER: I don’t think so.

RESEARCHER: When would you do it?

ELEMENTARY SCHOOL TEACHER: I think it affected it a lot because we had days off, we had kinda like, we had minimum days. I think a great time
to implement it would be at the beginning of the school year or introduce it right
before winter break and implement it right when you get back from winter break.

RESEARCHER: Any comments or suggestions about the program?

ELEMENTARY SCHOOL TEACHER: I think, for me being a special ed
class, I think it is really important to have almost have the same routines over
and over again. I mean we did the stretching and my kids knew exactly what to
do. We did it maybe the first three times, and I had to talk them through it and
then they just knew.

RESEARCHER: So keep the stretching consistent?

ELEMENTARY SCHOOL TEACHER: I would then just have to say,
“Okay, next. Okay next.” so it is so simple and they knew what to do.

RESEARCHER: Did you do the same core activity all the time?

ELEMENTARY SCHOOL TEACHER: No, I think kids would get bored
and we even did an extra one. So I let my kids got to pick out a video from Go
Noodle. So we did more on Wednesdays. In the middle we would use the cards
or Go Noodle. For the cool down I kind of thought what would work with my kids,
my kids love drawing so I would set a timer for 5 minutes and turn the lights off.
They could have pencil and paper, it was quiet, and they could put their heads
down. My kids needed to slow down and cool down by sitting quietly. My kids
loved to draw. Other times I would read to them and Go Noodle has a really
good cool down like using your mind and body together so I would use those as
well so for the cool down I would use those as well.
Middle School Intervention

Question and Answer Session

On Friday, May 11 the middle school teacher in the study the teacher previewed the materials including the ppt and the manual prior to training. The training took an hour and we reviewed the ppt and reviewed the cards which are supplemental. The teacher and I planned out first week on a piece of paper which she kept after practicing. The training went quickly due to the one on one nature of the training. The Q and A was done directly after the training.

RESEARCHER: So now we have completed the training and practice session of the ABC program, This is the question and answer session where I Can clarify any information I have given you or answer any questions about the program.

MIDDLE SCHOOL TEACHER: I think it will be a great idea. I will have some kids that will be probably reluctant or hesitant to participate but they will get used to it and they will want to do it especially if they see the other kids doing it and they see the others kids are having fun. I can definitely see this as the kids taking it as fun activity that they are going to be doing.

RESEARCHER: What questions do you have on that part, in terms of getting student engagement? How are you addressing it in the classroom if they are not doing anything?

MIDDLE SCHOOL TEACHER: Well, usually if the students are not doing anything in the classroom in regards to tasks or anything like that, they end up
taking a break. So they go to use the breakroom for around five minutes. I think maybe for this activity, I do have a particular student in mind who might refuse to participate. So umm maybe he just can use the break room while we’re doing the bursts. Usually, this particular student does join the class before the five minutes is up. He might end up wanting to participate but I also know this student doesn’t like physical activity. So, we’ll see. I think if he sees his peers having fun, he’ll want to join as well. You have all boys in your classroom correct?

RESEARCHER: In terms of the point system, I know I am going to be collecting the logs but your not going to deduct points from their point sheet right?

MIDDLE SCHOOL TEACHER: Uh huh.

RESEARCHER: Good, what other questions do you have regarding the activity bursts themselves?

MIDDLE SCHOOL TEACHER: If I I, If I, I do have a question. If for example one day we only get to do one burst? Is that okay?

RESEARCHER: Yeah, all I want to do to see how you are using it in the classroom and what are your perceptions of this program and its benefit or lack of benefit to students’ behavior and engagement. Is is appropriate for middle school, we’ll see? I only want you to keep an open mind and just do it and keep in mind what is going on and your own experiences so that when I talk to you we can talk about it but there is no mandate. It said up to thirty minutes, right?
MIDDLE SCHOOL TEACHER: Right:

RESEARCHER: In addition to their PE activities. You can accommodate and modify it and be as flexible as you want especially since you have students with disabilities. What accommodations, modifications, changes do you think you might make to the program?

MIDDLE SCHOOL TEACHER: Ummm, probably when it comes to terms of the engagement I get from the students. If they come across an activity that maybe is too complicated for them to do or I can just look back at the suggested activities on the manual or on the little fit deck or if it is something else they want to try? I am open to taking their suggestions if they want to try or learn something in PE maybe we are not doing.

RESEARCHER: That is a great idea, really the core, the stretching and the cool down can be anything in that kind of realm. So when you think of warm-up, what do you think of?

MIDDLE SCHOOL TEACHER: It’s kinda like, it stays kinetic, you are on the balls of your feet. I think I learned it from P90X. But it is very kinetic but it is not exactly stretching. I think of it like raising your heartbeat and getting ready to do more strenuous activity.

RESEARCHER: Right, for core?

MIDDLE SCHOOL TEACHER: For Core, ummm getting their whole body moving. You know getting them engaged and trying or doing the activities the Fit Deck. I think those are really good.
RESEARCHER: What ones are you going to start with?

MIDDLE SCHOOL TEACHER: I think I like the animal cards especially the bunny one.

RESEARCHER: What is it bunny hop?

MIDDLE SCHOOL TEACHER: It is bunny hop, crab crawl, bear walk, and I thought I had giraffe walk.

RESEARCHER: Oh, that would be good, maybe do the four?

MIDDLE SCHOOL TEACHER: That will be cool, they'll relate to that especially since I already have three of them that bunny hop all day all over the campus.

RESEARCHER: Laughs

MIDDLE SCHOOL TEACHER: So they will like that, you know, the cool down is all about coming back down, coming back down to a place of rest and relaxation and I love deep breathing exercises so I think that will be good and our therapist, already kinda does relaxation exercises with them. So that will be familiar for them.

RESEARCHER: Good.

MIDDLE SCHOOL TEACHER: So I hope that'll be…

RESEARCHER: Now, it was interesting when we were going through the training as you liked some of the sports suggestions, referencing it to sports and to reference it to travel. Why is that? Well, the majority of the kids love sports they love being real active. I can only think of one student that will probably be
very hesitant to do this but I have one kid in particular who is such a natural
athlete and he is good at everything he does, so I think, and he is kind of a leader
in the class. So I think if the other kids see him doing it they are going to want to
and love and they always turn things into a little competition. So, I think if I do
the sports one they would love that and it kind of introduces them to different
sports. I think they had volleyball there and stuff like that like soccer kicks.

RESEARCHER: And you can change it up. When do you think you are
going to do that one?

MIDDLE SCHOOL TEACHER: Week two.

RESEARCHER: Great.

MIDDLE SCHOOL TEACHER: So start off with something kind of kiddish
and something they like to do. Bring it up to sports, ya know and then the travel
and try to connect it to Social Studies.

RESEARCHER: I will make you a powerpoint before the third week than.
Not by Sunday and I will try to get it to you by Sunday just so you can look it. I
thought that was a great idea to put a visual like walk across-

MIDDLE SCHOOL TEACHER: The Golden Gate bridge.

RESEARCHER: Even have them do the bicycle, there is a card where
they do the bicycle, this is hard (demonstrating). You can even have them sit
down and do it.

MIDDLE SCHOOL TEACHER: Yeah.
RESEARCHER: It is more strenuous if you do it on your back (demonstrating).

RESEARCHER: Are you going to use anything to have them lay on the floor?

MIDDLE SCHOOL TEACHER: Maybe bring a rug?

RESEARCHER: Do you have one?

MIDDLE SCHOOL TEACHER: I have one at home.

RESEARCHER: Or towels?

MIDDLE SCHOOL TEACHER: Everyone has towels.

RESEARCHER and MIDDLE SCHOOL TEACHER laugh.

RESEARCHER: I do have a couple of yoga mats?

MIDDLE SCHOOL TEACHER: I think the rug or towels would be fine.

RESEARCHER: Okay. Any other questions of clarifications? I was thinking of something? Oh, how are you going to introduce it?

MIDDLE SCHOOL TEACHER: Ummm, I think I will introduce it as a fun side activity. Because they do like to get off task a lot. So I will introduce it as something they can do while they are off task or I can introduce it as a a break. Like I will say, “Ok guys, let’s do a break, let’s do a burst.” And just introduce it like that as I know all kids will get tired of doing their work and stuff. So I can just introduce it lik that.

RESEARCHER: Okay.
MIDDLE SCHOOL TEACHER: “We are going to stop our work right now, we are going to do these little quick bursts and they are going to be like yay!”

RESEARCHER: It will be interesting how you sell it.

MIDDLE SCHOOL TEACHER: i think I will sell it like a break from work. I’ll sell it as that and you know I will talk about the benefits to it and all that. But my selling point will be, “A break from work, pencils down, let’s do something fun.” And that will be my selling point.

RESEARCHER: I like that. When do you think you will be using it, where do you see it in your mind’s eye right now?

MIDDLE SCHOOL TEACHER: In my mind’s eye, probably once during 1st, once during third, and then after third is lunch and after lunch is PE. So they will probably come back tired during PE. During group which is after PE they already do relaxation stuff with the therapist. And maybe I can do it again once more in the last period of the day.

RESEARCHER: Okay. So that’s three and sounds good. And how long were your times when we practiced?

MIDDLE SCHOOL TEACHER: So 7 minutes, so maybe 20-25 minutes a day.

RESEARCHER: Okay that’s good. Any other questions or clarifications that you have about this program, the Activity Bursts in the Classroom or the data collection?

MIDDLE SCHOOL TEACHER: No I think I am okay.
RESEARCHER: So do the surveys before you start the interventions. You already do the logs and make sure to use random numbers for each student. So I will collect the behavior logs and log weekly and check off what time approximately you do the breaks.

MIDDLE SCHOOL TEACHER: Yeah.

RESEARCHER: Then, in two weeks I will check back in with you. We will do another talk like this and then at the very end I will collect everything and we can do our final interview. Any questions?

MIDDLE SCHOOL TEACHER: No.

RESEARCHER: Okay.

Mid-Point Check-In

May 24th, 2018

RESEARCHER: Hello, how are you doing?

MIDDLE SCHOOL TEACHER: I am good, how are you?

RESEARCHER: Good, so this is the Mid-Point Check-in. We’re about two weeks into the program tomorrow. Two school weeks, which is ten days. So I just wanted to ask you some questions and check-in with you. How has the training you received prepared for the implementation of the program?

MIDDLE SCHOOL TEACHER: The training was very informative and think it kind of mentally prepared me for what we were going to be doing with the kids. But then the first day that I actually did it, and then the days after, the training did not prepare me for the physical aspect of it. I know I did it with you
but actually doing it with the kids and making sure they are doing it the right way and making sure they are not messing around, and then trying to keep with the time and all that. I was like, “Oh man, this is going to be really time consuming.” But, they really enjoy it but the first couple of times I was worn out, “I was like whew.”

RESEARCHER: So you were tired physically?
MIDDLE SCHOOL TEACHER: Yes, physically and I did not expect that so that was something that was something that was unexpected.

RESEARCHER: Anything else that was unexpected?
MIDDLE SCHOOL TEACHER: There complete dedication to it. They do goof off, of course they’re kids. But they were like, “We wanna pick.” So I’ve been just letting them pick instead of doing the ones that I had agreed upon. Ummm, they’ve been picking the cards and they get really into it. So, I like that they got really involved in it.

RESEARCHER: Are you are doing a warm-up and a cool down? So do they just pick the middle, the core? What do you do for the warm-up and cool down?
MIDDLE SCHOOL TEACHER: The warm-up were doing the stretches on the one stretch card. We’re doing the upper half and the lower half.

RESEARCHER: So you do them both?
MIDDLE SCHOOL TEACHER: Yeah and then they pick the core workouts and they do the breathing exercises as a cool down.
RESEARCHER: How many cards do you use in the car do you think?

MIDDLE SCHOOL TEACHER: We’ve been using a bunch. They pick maybe like 4-5 to 6 cards and it is like 5 reps each. So I am worn out afterwards.

RESEARCHER: How do you feel afterwards?

MIDDLE SCHOOL TEACHER: Umm, tired, out of breath, old. It kind of like makes me feel better knowing that they have their energy out. And, that they are not going to be as rambunctious as they usually are, although one day I felt like it hyped them up even more and I was like like “uhhhhh.” But, I like it, they love it. They have so much fun doing it so I think it is great for them to be doing.

RESEARCHER: How are the kids? Anything you notice about the kids? You said you were tired?

MIDDLE SCHOOL TEACHER: Ummm, some of them aren’t into it. I have one that just one that doesn’t like physical activity. He participated a little bit. But the other ones, I am surprised, I am genuinely surprised how much the other ones like it. They kind of see it as a game not so much as we are going to do physical activity. It is like a game to them. Ya know, they really like the animal cards, the animal exercises. Like the bunny hop and all that. They really, really, like that and those are the cards they usually pick out so I really like their enthusiasm to it. And then, I have one who kinda comes out as a leader. I actually expected another student to kind of come out as the leader of the group. But I have another one and they kind of follow his lead. I thought that was pretty interesting, yes.
RESEARCHER: What specific challenges, if any, have you had so far with the program?

MIDDLE SCHOOL TEACHER: Getting them to do it all together rather than like skipping ahead because you know they get really into it.

RESEARCHER: Right.

MIDDLE SCHOOL TEACHER: So I’m having, I’m finding myself saying, “Okay guys, hold on, we’re doing this one all together. Ya know, then getting them to do the five reps and all that stuff. Because they get really excited and they think it’s a game, they think it’s super fun. So just like getting them to be like a cohesive group rather than separate parts of a group.

RESEARCHER: How long is it taking you to do it. Is there a time your doing or a lack of time or?

MIDDLE SCHOOL TEACHER: It's about 7 minutes each time. 6-7 minutes each time.

RESEARCHER: How many times are you saying you are doing each day, approximately?

MIDDLE SCHOOL TEACHER: I think the most we have done is twice a day otherwise it is just once a day.

RESEARCHER: Have you had to make any accommodations or modifications to the program?

MIDDLE SCHOOL TEACHER: Not really, I think we just go ahead and do it. Um, I don’t think really I’ve done any changes to it. When it comes to the cool
down, it is a little bit difficult to get them to calm down and do the breathing exercises and all that. And we usually do it in the morning like around 8ish as after lunch the day just kind of goes by and we don't have time to do it afterwards.

RESEARCHER: Cause you have?

MIDDLE SCHOOL TEACHER: Cause we lunch, then they go to PE, and they have already had their fifty minutes of physical activity, and then come back from group. They are usually really squirrely for group because they do it with a therapist and after that it is just social studies and they get their reinforcer. It moves really fast at the end of the day so it makes it hard to schedule it in the later half.

RESEARCHER: Any other comments or questions you have?

MIDDLE SCHOOL TEACHER: No.

RESEARCHER: Oh, are you going to make any changes next week, are you going to do anything differently?

MIDDLE SCHOOL TEACHER: Umm, I would like to do it at least twice a day so what I've been thinking of doing is maybe once during 1st period which is usually the time we do it anyways. And then maybe squeeze one in during third period. And see if I can do just the warm-ups in the later half.

RESEARCHER: Do you still think you are going to use the journey one, going on a journey? Do you still want that?

MIDDLE SCHOOL TEACHER: Maybe, yeah.
RESEARCHER: I will finish that and get that to you. I will have it ready to you by this weekend. Any other questions or comments?

MIDDLE SCHOOL TEACHER: I think that they really like it. They show that they really like it.

RESEARCHER: How does it show?

MIDDLE SCHOOL TEACHER: They get really excited about it and they love being able to pick the cards as it gives them the power of choice. It breaks up anything they think is boring. They like that little break where they can just play around and have that little burst of activity. So.

RESEARCHER: Okay thank you.

MIDDLE SCHOOL TEACHER: You're welcome.

Final Interview

RESEARCHER: How did the training you received in the ABC workshop prepare you or not prepare you for the ABC Fitness in the classroom?

MIDDLE SCHOOL TEACHER: Ummm, be okay because like I said before, I just didn’t expect the physical toll on me. I figured they would ok because they are kids and they have like bundles of energy.

RESEARCHER: Right.

MIDDLE SCHOOL TEACHER: But I also thought like, Oh they are just little exercises, not like a full on workout. So, I just didn’t expect, maybe it is because I am very lethargic and I don’t exercise in my own personal life. I’m not
that active, so going through the exercises. So by the warm up I am already winded and I have to do two more exercises, laughs, then the cool-down.

RESEARCHER: Right.

MIDDLE SCHOOL TEACHER: I didn’t expect that part so for the staff who is not so physically active, maybe just kinda like put it in their like your going to get tired. It just makes practical sense to put it in there. Maybe in the million things we have in our head, we have to do this and we have to do that, especially right now at the end of the year so for practical purposes it should say, This is an actual workout, even if it seems like it is just 5, 6, 7 or 8 minutes, at a time, it is going or it is probably going to wind you.

RESEARCHER: What supports could we put for teachers who are less active?

MIDDLE SCHOOL TEACHER: I think that maybe the exercises, the ones in the Superman thing (referring to cards). They are really like hit workouts like bursts. So it is a burst. And as a teacher you are probably only thinking about time, like time management like how long is it gonna last or how long it is going to take from the lesson. Maybe for those people who are not so active, maybe include exercises that are not so HIT. I know in the handbook there are exercises that are more stationary. So maybe incorporate more of those, more stationary like standing up or sitting down workouts and not having so much movement. But I know that is not going to be attractive for the kids. But, if we put in two stationary and two are a little more active, it might balance out. Even
for the kids, I have a student who doesn’t like working out and who hates participating in PE and doesn’t really participates in these things where he can sit in the chair and maybe move his arms.

RESEARCHER: So like differentiate the workouts?

MIDDLE SCHOOL TEACHER: Exactly, like beginning, intermediate, and advanced.

RESEARCHER: Anything else, umm now this is talking about the training materials. Were the training materials helpful throughout the implementation of the program and if so how?

MIDDLE SCHOOL TEACHER: They are pretty self-explanatory and straightforward. I don’t know how else you could read into it. I looked at it once or twice after the training.

RESEARCHER: Can you explain to me the purpose of the ABC for Fitness program? How do you understand the purpose.

MIDDLE SCHOOL TEACHER: The way I perceived it in a classroom for my students with ED. It can reduce behavior as lots of behavior in the classroom stem from restlessness or ya know a lot of students have ADHD so they have a lot of energy they can use probably for a productive purpose rather than ya know, hitting one, mouthing out or yelling out. So the exercises can help with reducing that feeling of restlessness or anxiety or impulsivity. So you channel it into something that is more positive. Rather than letting them use that energy for something that is disruptive in the classroom. Then we have the health benefits
and active benefits where instead of just getting there regular 55 minutes of PE which is really about 45. Ya know if you account for dressing out and dressing back in. I think it can boost their overall health on a long run. But short term and immediate effects are behavior management.

RESEARCHER: So thinking of that the behavior management and the health, how effective was this program this month long intervention in meeting that goal?

MIDDLE SCHOOL TEACHER: I think it helped with engaging them in more active activities. I don’t know if I really saw an effect on behavior, maybe I just was not paying attention. The immediate satisfaction of doing something they absolutely loved it and it did burn off their energy. It was just like that moment for them, we get to do something different. It was just something fun for them to do and it was how they saw it and how I treated it, just something fun for them to do. Aside from the regular routine, this week has been different because it is like the last week of school. There are no more chromebooks, my ELMO has been disconnected. So all of my instructional tools are out. So we just have been kinda been our own things. This week has been kinda more stationary but they like the bursts of activity.

RESEARCHER: So have you used it as a replacement activity this week?

MIDDLE SCHOOL TEACHER: No, what did we do? I took them outside to play as I did the a game where you like trust or team building activities but it was active. So we went outside, we blindfolded them, and they had to talk to
their partner, and find the object. Most of them liked it as they got to go outside and play however, it was really hot, a 102. I had a student who claimed they were overheating so we came back inside but we were out there for a full period.

RESEARCHER: Wow.

MIDDLE SCHOOL TEACHER: Then we came back and they super tired.

RESEARCHER: So describe how your students responded to the intervention?

MIDDLE SCHOOL TEACHER: Ummm, I think they enjoyed the break from normal routine. I think they enjoyed making the exercises their own. I think they enjoyed ummm having something they can do with their group and with their staff. I think that students have that perception of staff. Staff don’t do silly things. When Ms. ___ and I did the stuff with them, It kinda puts us all of a level, an even level rather than student and teacher. We are all down here trying to do these exercises together. So it was kind of an equalizer. I think that was the part that they enjoyed the most. Where it was all of us together trying to do the same thing and we can kinda see ya know who can do it best and who is kinda struggling but it was a really supportive thing. I think that is what they got from it the most aside from it being fun. I think that is what they really liked. They loved watching me on the floor struggling through the exercises. (with emphasis on love)

RESEARCHER: Why do you think they enjoyed that?
MIDDLE SCHOOL TEACHER: It makes you a person. Ya know, it makes you a person, and you are not the teacher who knows everything or the teacher that is leading the class or it just puts you, wait, if I can’t do and she can’t do it, maybe something we can work on together or like do together?

RESEARCHER: Right.

MIDDLE SCHOOL TEACHER: She doesn’t know how to do everything, she doesn’t know everything or everything there is to know about everything. I like that when students can see you more as a person rather than this adult that they have to listen to or this adult that ya know you have to do the work that she or he tells you.

RESEARCHER: Were there any changes in your students level of engagement that you can remember?

MIDDLE SCHOOL TEACHER: In regards to the activities or just in general?

RESEARCHER: In regards to the activity bursts.

MIDDLE SCHOOL TEACHER: I guess after they were a little more engaged as they just did something together.

RESEARCHER: Okay.

MIDDLE SCHOOL TEACHER: So in class, I am trying to think back to Science as we did most of them in the mornings. So going back to Science, I guess I can see more engagement in Science.

RESEARCHER: In what way?
MIDDLE SCHOOL TEACHER: Wanting to answer questions and wanting to be more interactive but they also really like Science. Science was their favorite class. Maybe more hands raised or more discussion or more conversation and discussion rather than waiting for me to say it.

RESEARCHER: Right. So thinking about this intervention, were there some challenges trying to integrate it into your daily routines?

MIDDLE SCHOOL TEACHER: It is not so much as this activity, just this last month in general has been difficult. Maybe this whole month of May and now into June has been such a struggle. Kids know it is the last month and we are about to be outta here. But it is also like they are excited but now they are super anxious because now they have to spend a whole summer at home being bored because most of these parents work or into other things. The only ones I see doing something are the Ranch students because the Ranch provides activities for them to do but my students who are not at the Ranch are going to be at home bored. It is such a huge factor on behaviors this month, yeah these past four weeks. It is just like, I am super excited, but not really. And we’ve seen uh increased levels of profanity. I think profanity is the one thing we have struggled with the last few weeks. It’s gone from using profanity to insult someone ot using profanity in your everyday conversation and or more outbursts. So my student who doesn’t like the physical activity has been more outbursty more verbally.
RESEARCHER: So how do you think the ABC was related or was it at all to the issue of profanity in the classroom?

MIDDLE SCHOOL TEACHER: Um, I think maybe it was more so the last four weeks of school. I attribute for the particular student who doesn’t like the activities I attribute the profanity to his anxieties. He feels like he is alone in the world. Yeah, he is going to be at Ranch and in familiar surroundings. At the same time, as much as he does not like coming to school here. It is like a place of comfort. So, I just think it has a lot to do with that, the end of the year.

RESEARCHER: Was this the right time to implement this program, what time?

MIDDLE SCHOOL TEACHER: The beginning of the year, that would establish the routines, something that we do every day, they would get used to it. Definitely at the beginning of the year and it could be a year long thing, I think that would be best.

Researcher: What is the issue with putting something new in your classroom? What do you think about that, starting something new at the last month of school.

MIDDLE SCHOOL TEACHER: They are already going out of whack, spazzing out, it is the end of the school year and we give them something new like, boom. It completely disrupts their normal routine. They are already being disrupted in their normal routine. Now it is the last week of school, and we don’t have anything to do work with, and that is another disruption in their normal
routine. Definitely in an ED class I feel like if you want to introduce something you do it at the beginning of the year.

RESEARCHER: How did your ability to gauge your students’ engagement change over time or did it?

MIDDLE SCHOOL TEACHER: I think I am pretty good at gauging their engagement in general. Usually, I can tell so they have a leader in the class so if the leader is into it, then they are all going to be into it. And if the leader is not feeling it, then they are not going to feel it and they are not going to want to do it. So I kinda have to hype it up to that kid. Ya know, and he is pretty to hype up as this student is very challenging. He comes across as very naive and sweet and innocent and he is not. He is really manipulative and clever He uses that against the students to kind of have them do whatever he wants them to do. so , that’s who I use in group settings.

RESEARCHER: How did that student react to ABC?

MIDDLE SCHOOL TEACHER: He liked it.

RESEARCHER: So, since he like it?

MIDDLE SCHOOL TEACHER: Since he liked it everyone else liked it, except for that one student who didn’t like to do anything.

RESEARCHER: Explain any changes or changes in your own attitude toward students.

MIDDLE SCHOOL TEACHER: Ummm, I guess, I didn’t think at first that they would like it as a lot of the complaints are about PE. Like, I don’t want to go
to PE or it is too hot for PE. Maybe that is why I did it primarily in the mornings so they could have a little bit of time in the morning. Then, not have to complain right afterwards but I think that it worked out great. I think that the kids liked it and I think it is a program to do once you establish the routines and the purpose of it for yourself and the kids. I think it is something I would want to try again for next year.

RESEARCHER: So, are you?

MIDDLE SCHOOL TEACHER: I think so, in some form. I think that I would want to start it off first period, like the first thing that we do kind of like a wake up thing and then we can work it into third period right before lunch as we follow the 6th grade schedule. After that we have PE, so maybe just twice in the morning. I think that maybe for my program, based on the schedule I have right now it would work out best in the morning and that is what I would want to try next year.

MIDDLE SCHOOL TEACHER: What do you think is the difference for your students regards PE and ABC? PE is outside and it is hot and ABC is inside and it is air conditioned.

RESEARCHER: Anything else you can think of?

MIDDLE SCHOOL TEACHER: Water is right outside.

RESEARCHER: Okay. Do you think anything else had an effect?

MIDDLE SCHOOL TEACHER: It is just that, it is hot outside. They come back from PE drenched, the staff is drenched. They are all tired.
RESEARCHER: This is the final question, Is there anything else you would like to tell me in regards to the ABC for Fitness Program?

MIDDLE SCHOOL TEACHER: I think it is a great experience and all teachers should try it, sped asd gen ed, both.

RESEARCHER: Why?

MIDDLE SCHOOL TEACHER: It brings teachers out of their shells because it definitely brought me out of my shell kinda. Like I said before, putting the teachers and students on an even playing field and humanizing us. For me, that was the most important part.

RESEARCHER: Do you think any teachers would have an issue with this and why?

MIDDLE SCHOOL TEACHER: I see it as an issue in general ed teachers with that because they are the teacher and they need to maintain that rule of authority. Teachers don’t play and be silly and we don’t show emotions. I feel like all of my experiences in gen ed when I was in school, I don’t really remember. I think maybe the teachers I remember the most or my favorite teachers maybe were more like ya know parenting kinda like how I am with my kids. But my other teachers were just a teacher ya know and I don’t really see beyond that. I feel like I see that as an adult now teaching. Teachers are teachers and that is the way it is supposed to be. Students follow what the teachers says.
REFERENCES


Meece (Eds.), *Student perceptions in the classroom* (pp. 25–47). New York: Routledge.


Exceptional Children, 62(5), 399–413.
https://doi.org/10.1177/001440299606200502


Preventive Medicine, 49(4), 336–341.
https://doi.org/10.1016/j.ypmed.2009.07.022


https://doi.org/10.17763/haer.51.4.xj67887u87l5t66t


https://doi.org/10.1080/00220671.2015.1058221


