THE IMPACT OF A CLASSROOM-BASED PHYSICAL ACTIVITY PROGRAM ON TEACHERS' PERCEPTIONS OF STUDENT ENGAGEMENT

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THE IMPACT OF A CLASSROOM-BASED PHYSICAL ACTIVITY PROGRAM
ON TEACHERS' PERCEPTIONS OF STUDENT ENGAGEMENT

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
Courtney Lynn Doussett

December 2015
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Approved by:

Marita Mahoney, Committee Chair, Education

Louie Rodriguez, Committee Member

Donna Schnorr, Committee Member
ABSTRACT

The purpose of this study was to apply a mixed-methods approach using an exploratory case study design to identify the impacts of a physical activity intervention program on student engagement in an elementary school setting. This exploratory case study research examined teachers’ perceptions of student engagement prior to and following implementation of a classroom-based physical activity intervention program, ABC for Fitness. Participants completed the Teacher Assessment of Student Engagement survey of student engagement and behavior, participated in an ABC for Fitness workshop, semi-structured interviews, a question and answer session, a mid-point check-in, and completed daily written behavior incident logs. Results indicated three main findings: 1) intervention teachers’ ratings and perceptions of student engagement improved; 2) intervention teachers’ attitudes towards students improved; and, 3) intervention teachers’ level of engagement in the classroom improved following implementation of the ABC for Fitness program. The demonstration of the ABC for Fitness program on student engagement levels during the three week intervention examination of its long-term effectiveness. With so much of the public educational discussion revolving around student engagement and student success, a detailed look into a classroom-based physical activity program would be a cost-effective approach to student engagement which is linked to student success.
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CHAPTER ONE
INTRODUCTION

Statement of the Problem

Imagine a classroom with a teacher in the front explaining a particular subject. When looking around the classroom, into the faces of the students, how does the teacher gauge whether those students are actively or even passively engaged? How does the teacher evaluate if learning is actually occurring besides taking a test? In today’s public education system, evaluation comes in the form of test taking. Unfortunately, testing alone may not capture the complexities of student success. Student performance on tests may be impacted by a number of variables. Some students may lack effective cognitive, affective, psychological, or behavioral engagement skills which impacts motivation to learn and academic success. While direct measures of student engagement, such as school attendance can be mandated, indirect measures are difficult to mandate such as being engaged in the schooling process.

Identifying and implementing activities to foster student engagement are essential to student academic success and achievement. Bridgeland, Dilulio, and Morison (2006) found the number one reason for students dropping out is boredom. The key to alleviating boredom is to keep kids engaged (Bridgeland, Dilulio, & Morison, 2006). Furthermore, there is a tangible cost of student disengagement and dropout. In today’s dynamic and fast-paced economy, earning power is more important now than ever. High school graduates earn
more than their dropout counterparts and typically lead more comfortable and secure lives (Alliance for Excellent Education, 2011). Keeping students engaged is essential for motivation, connectedness, and learning.

Beyond the individual costs of poor student engagement and student dropout, there are implications for everyone when a student drops out. “For instance, if the students who dropped out of the Class of 2011 had graduated, the nation’s economy would likely benefit from nearly $154 billion in additional income over the course of their lifetimes (Alliance for Excellent Education, 2011).” Although most students drop out in high school, the discussion around dropping out should begin much earlier, namely elementary school. Elementary school is a critical time in a child’s schooling pathway. A child’s connection and engagement in school at this early age is an important indicator of high school completion and success (NASPE, 2011).

Success in the classroom is more than just tests. A holistic approach to student success in the classroom has been recommended by the National Association for Sport and Physical Education (NASPE). The position of NASPE is a child’s education should include a well-balanced curriculum with intellectual, emotional, and physical components. This position is supported by the Whitehouse Taskforce on Childhood Obesity, the Center for Disease Control and Prevention, and the U.S. Department of Health and Human Services. Regular physical movement improves physical health including bone and muscle structure, and emotional health including reducing anxiety and stress, and
intellectual health including improving concentration (CDC, 2010). Furthermore, a healthy student, with optimum physical, emotional, and intellectual health levels, performs better at school (Basch, 2011).

One reason hypothesized for positive results of physical activity (increased concentration, improved test scores, and decreased behavioral problems) is that physical activity is linked to student engagement (Mahar, Murphy, et al., 2006; Trudeau & Shephard, 2008). Increased student engagement circles back to improved concentration, improved test scores, and decreased behavioral problems. Levels of student engagement may influence classroom climate and impact how teachers’ respond to student needs, as students and teachers influence each other. Incorporating physical activity into the classroom setting may provide the opportunity for increased student engagement, improved classroom climate, and increased teacher engagement. The present study looked at how classroom physical activity may increase student engagement. The present study examined theoretical frameworks of student engagement incorporating the work of Natriello, Finn, Connell and Wellborn, and Christenson and Anderson.

Results of this previous work identified four overarching components of student engagement including academic, behavioral, cognitive, and psychological domains. While each of these domains are essential to a student’s level of engagement, for the purposes of the study the psychological domain was explored in the greatest detail in the review of the literature. Psychological
engagement is uniquely important for education as it assesses a student’s feelings of belonging and relatedness as well as the level of relationships with teachers and peers (Baumeister & Leary, 1995).

The literature reviewed found studies looking at physical activity interventions in school settings to improve overall levels of daily movement, studies looking at the lack of physical activity and its relationship to negative academic and health outcomes, and studies looking at physical activity and how it impacts cognitive functioning. However, not a lot of research has looked at the impact of a physical activity program on student engagement, especially that of psychological engagement. This exploratory case study research was designed to assess the impacts of a classroom-based physical activity intervention, the ABC for Fitness program, on teachers’ perceptions of student engagement.

Research Questions

The following questions guided this study:

Research Question 1: What impacts, if any, will a classroom based physical activity program have on student engagement?

Research Question 2: What information, if any, will surveys and interviews of teacher perceptions provide on student engagement?
CHAPTER TWO

LITERATURE REVIEW

Background

Grade school is a critical time, in which children are developing socially, emotionally, spiritually, cognitively, and physically as well as mentally. Health and educational success are inextricably linked. The primary role of schools is to educate students in order for them to be able to reach their full potential in life (Basch, 2011). With the advent of No Child Left Behind, schools placed a heavier emphasis on standardized testing while simultaneously reducing recess and physical education (Basch, 2011). This educational shift left educators teaching to the test rather than focusing on the whole child. Success in the classroom is more than just test scores.

The National Association for Sport and Physical Education (NASPE) has taken the position that physical education is a critical component to educating the whole child. When using a whole child approach in education, each child should:

- Enter school healthy, and learn about and practice a healthy lifestyle.
- Learn in an intellectually challenging environment that is physically and emotionally safe for students and adults.
- Be actively engaged in learning and connected to the school and broader community.
• Have access to personalized learning and be supported by qualified, caring adults.

• Be challenged by a well-balanced curriculum and prepared for success in college or further study and for employment in a global environment.

When taking into account that children spend more time at school than in any other environment outside the home, it is clear schools have the potential to play an important role in assisting with the development of all of these areas (NASPE, 2011).

Healthy habits need to be taught at a young age in order to be successfully adhered to across a lifespan (Raynor, Jelalian, Vivier, Hart, & Wing, 2009). Schools are focusing on the core subjects of NCLB which are defined as English, reading or language arts, math, science, foreign languages, civics and government, economics, arts, history and geography. It is important to note that physical education was not considered a core subject, despite evidence that healthy individuals perform better in academic and social settings (Basch, 2011; Symons, Cinelli, James, & Groff, 1997). While 36 states mandate physical education in elementary school, only four percent of elementary schools across the nation actually provide physical education (Lee, Burgeson, Fulton, & Spain, 2007). In response to growing concerns about the health of American children, the First Lady, Michelle Obama, developed the national Let’s Move initiative (CDC, 2010). The initiative focused on five goals:

• Creating a healthy start for children
- Empowering parents and caregivers
- Providing healthy food in schools
- Improving access to healthy, affordable foods
- Increasing physical activity (Whitehouse Taskforce on Childhood Obesity, 2010)

Schools have the opportunity to work towards this national initiative by creating an environment in which children engage in regular physical activity and learn lifelong skills for active living without detracting from the core subjects outlined in NCLB. Adding physical activity to a school’s curriculum does not appear to negatively impact academic achievement, even when taking time away from other subjects (Story, Nanney, & Shwartz, 2009; Trudeau & Shephard, 2008). At the same time, taking time away from physical activity and adding it to other subjects has not been shown to improve achievement in those areas (Story, Nanney, & Schwartz, 2009; Trudeau & Shephard, 2008). Based on this research, it is critical to acknowledge that physical activity is not only important to overall development of students, but it does not negatively impact their academic development.

This literature review describes the benefits of physical activity, current levels of physical activity, environmental factors effecting physical activity levels, engagement theoretical framework, and analyzes interventions designed to increase physical activity in school-age children. Based on the literature,
conclusions about how best to increase physical activity levels for elementary school students in order to improve student engagement will be proposed.

**Benefits of Physical Activity**

Many government agencies and national organizations have documented the benefits of physical activity for children. The Center for Disease Control and Prevention (CDC) reported participation in regular physical activity in childhood provided a number of benefits including helping to improve bone and muscle structure, weight control, reducing anxiety and stress, and improving self-esteem (CDC, 2010). According to *Let’s Move*, physical activity during childhood coupled with healthy habits and lifestyle choices reduces the risk of the top three causes of chronic disease death in adults which are heart disease, cancer, and stroke (CDC, 2010).

The U.S. Department of Health and Human Services has outlined specific guidelines for recommended levels of physical activity in order to achieve the greatest benefits:

- Children should accumulate at least 60 minutes of moderate to vigorous physical activity every day.
- Children should participate in several bouts of physical activity lasting about 15 minutes or more each day.
- Children should participate in a variety of physical activities designed to help them achieve optimal health, wellness, fitness, and performance benefits.
• Extended periods (2 hours or more) of inactivity are discouraged for children, especially during daytime hours (U.S. Department of Health and Human Services, 2008)

Besides the physical benefits of increased activity, research has shown physical activity has the potential to improve academic achievement (American Institutes for Research, 2008; Basch, 2011; Kimbro, Bzostek, Goldman, & Rodriguez, 2008; Mahar, Murphy, Rowe, Golden, Shields, & Raedeke, 2006). Mahar, et al, (2006), found regular participation in physical activity was shown to increase on-task behavior in children. In the study, 243 elementary school students participated in a classroom-based physical activity program. For a period of 12 weeks, the homeroom teacher led one 10 minute physical activity session every day. Physical activity levels were measured through pedometers and recorded as the average number of steps taken in a school day. On-task behavior was measured through classroom observations and was conducted by two classroom observers specifically trained to observe on and off task behavior. The group receiving the physical activity intervention took an average of 782 more steps than the control group \((p < 0.05)\). Furthermore, their analysis found on-task behavior improved by 8% \((p < 0.017)\) through regular physical activity and teachers reported less fidgeting and more focus (Mahar, et al., 2006).
Current Levels of Physical Activity

In reality, children are not meeting the U.S. Department of Health and Human Services recommended guidelines (CDC, 2014). *Healthy People 2020* reported only 15% of elementary students get the recommended 60 minutes of physical activity. The CDC found 25% of children under the age of 14 get only about 30 minutes of physical activity three days or less each week. Additionally, 13% of school-age children get more than two hours of computer and/or television time per day. The trends are not improving. The number of children getting low levels (under 60 minutes per day) of physical activity has only increased (CDC, 2014).

The California Healthy Kids Survey (CHKS) is a risk and resilience survey designed to help schools pinpoint major barriers to learning in order to improve school climate and increase student achievement (California Department of Education, 2012). One of those barriers includes exercise as a specific health indicator linked to achievement.

Evidence suggests that exercise is associated with improved academic outcomes, maintenance of positive interpersonal relationships, and reduced incidence of depression, anxiety, and fatigue. One study concluded that school-based physical activity programs increased concentration; improved mathematics, reading, and writing scores; and reduced disruptive behaviors. (Symons, Cinelli, James, & Groff, 1997, p. 224)
One of the reasons hypothesized for improved levels of concentration and test scores as well as decreased behavioral problems is that physical activity is linked to an increase in student engagement (Mahar, Murphy, et al., 2006; Trudeau & Shephard, 2008). In turn, student engagement is a predictor of academic achievement (Appleton, Christensen, & Furlong, 2008). While many studies have looked at how student engagement leads to increases in overall levels of physical activity, few studies have looked at how physical activity can be used in a classroom setting to increase student engagement. The next step in this literature review is to look at the theoretical framework of student engagement.

Theoretical Framework of Student Engagement

Participation in physical activity has the potential to increase a child’s performance in a school setting (Symons, et al., 1997). The achievement of recommended levels of physical activity improves circulation, blood flow to the brain, and increases levels of norepinephrine and endorphins (Taras, 2005). These physiological occurrences may in turn reduce negative impacts of stress, improve overall mood, and lead to an improvement in positive academic outcomes such as attendance and student engagement (Taras, 2005).

Although student engagement is a recurring theme in the existing literature, there is variation in the terminology used and the definitions. Student engagement is often used synonymously with engagement (Connell & Wellborn, 1991; Frydenberg, Ainley, & Russell, 2005; Skinner & Belmont, 1993; Skinner,
Wellborn, & Connell, 1990), engagement in schoolwork (National Research Council and the Institute of Medicine, 2004), academic engagement (Libby, 2004), school engagement (Fredricks, Blumenfeld, & Paris, 2004; Furlong, Whipple, St. Jean, Simental, Soliz, & Punthuna, 2003; Jimerson, Campos, & Greif, 2003), student engagement in academic work (Marks, 2000; Newmann, Wehlage, & Lamborn, 1992), student engagement in/with school (Mosher & MacGowan, 1985; Klem & Connell, 2004; Christenson & Anderson, 2002), and participation identification (Finn, 1989, 1993; Finn & Rock, 1997). The construct definitions of each of these terms, while similar, still vary to some degree. There appears to be an agreement that the engagement construct is indeed multidimensional although the degree of multidimensionality varies.

The term engagement is a relatively recent one with its first use in the literature beginning in the early 1980’s. Natriello (1984) was the first to use the term in an early one component model of behavior which was measured through student participation. The problem with this study was that student participation was measured through absenteeism, withdrawal, and discipline problems; all forms of disengagement. However, Natriello’s work opened the door for further discussion. Most notable in the discussion was Finn (1989). Finn designed the participation-identification model, a two component model comprised of behavior and psychological components. Although Finn did not use the word engagement, the conceptualization is the same. Finn measured participation in four increasing levels. A student’s participation-identification was measured based on the level of
belonging in school and the value placed on school-related outcomes.

Finn (1989) outlined four levels of involvement from the most basic to the highest levels of participation. The most basic forms include attendance and responding to teacher directions. As students progress through the educational system, they have more and more opportunities to increase their level of participation. At the highest level, students become uniquely involved in the decision making process through activities such as student government and personal academic goal setting. Student participation in school activities helps enable a sense of identification and this identification affects ongoing participation. Conversely, if a student begins school without the basic forms of participation necessary to move to higher levels, the student becomes increasingly alienated and disengaged from school. This student is more likely to drop out (Finn, 1989).

In the early 1990’s, a three component engagement model began to emerge in the literature. In addition to behavioral and psychological or affective components, a cognitive element was added. Connell and Wellborn (1991), using a three component model, theorized that when psychological needs are met, specifically competence, autonomy, and relatedness, engagement occurs. Competence, as defined by Connell and Wellborn (1991), is the ability to view oneself as capable of achieving a desired outcome. Autonomy is defined as an individual’s belief that they have a choice in a given activity (initiation, maintenance, and regulation) and are able to connect the activity to their own
goals and values. Relatedness includes an individual's connection to their social setting and feelings of worthiness of love and respect. The process begins with the individual seeking out experiences that fulfill the needs of competence, autonomy, and relatedness. Through actions, thought and emotion, the individual forms an appraisal of how competent, autonomous, and related he or she feels depending on the unique context. The researchers explain this through the following process model:

![Engagement Process Model](image)

Figure 1. Engagement Process Model by Connell & Wellborn (1991).

In addition to the one, two, and three component models of engagement, there are researchers proposing a four component model including academic, behavioral, cognitive and psychological (previously referred to as affective) domains (Christenson & Anderson, 2002; Reschley & Christenson, 2006).
This four part taxonomy incorporates the theoretical framework of Finn (1989) and builds on recent three component models. The four component model will be used for this study. For the purposes of this study, the academic, behavioral, and cognitive components will be discussed briefly with emphasis placed on the psychological component.

Academic Component

The addition of the academic component resonates with the findings that high rates of academic learning time are correlated with student achievement (Fisher & Berliner, 1985). Academic engagement include the amount of time students spend on task, credits earned toward graduation, and homework completion (Appleton, Christensen, & Furlong, 2008).

Behavioral Component

Behavioral engagement is measured through attendance, voluntary classroom participation, and extracurricular participation (Appleton, Christensen, & Furlong, 2008). Finn (1993) examined 5,945 at-risk eighth graders based on race, home language, or socioeconomic level. The purpose was to determine whether level of participation and classroom engagement impacted mathematics and reading achievement tests. Finn categorized students as successful, passing, or unsuccessful. Successful students arrived on time to class, had regular attendance, and were prepared for class. Additionally, successful students actively took part in class activities, completed more homework, and participated in various extracurricular activities. Finn found identification related
to the level of participation in the classroom ($p < .001$).

**Cognitive Component**

Cognitive engagement incorporates thoughtfulness and willingness to exert the effort necessary to comprehend ideas and master skills. Research on cognitive engagement is related to motivational goals and self-regulated learning (Boekaerts, Pintrich, & Zeidner, 2000; Zimmerman & Schunk, 2001). Cognitive engagement can range from simple memorization to the use of self-regulated learning strategies that promote deep understanding and expertise (Fredricks, Blumenfeld, & Paris, 2004).

**Psychological Component**

The four component model of engagement replaced the affective domain with psychological due to its broader definition. Psychological engagement is measured through feelings of belonging and relatedness as well as the level of relationships with teachers and peers. Baumeister and Leary (1995) proposed belonging is naturally driven and can be found in all humans across all cultures. In this regard, belonging is a fundamental human motivation consisting of two primary features. The first being frequent interactions and the second being feeling connected in a stable and authentic context (relatedness). Ideally, these feelings are reciprocated by the other individual in the relationship. Furthermore, if belonging is indeed fundamental then the absence of it in one’s life would eventually cause negative outcomes such as excessive stress, lowered immune system, and increased inflammation (Baumeister & Leary, 1995).
Furrer and Skinner (2003) examined relatedness and belonging. They surveyed 641 third to sixth grade students, equally divided by gender, where students reported their level of relatedness to various social partners (father, mother, teacher, classmates, and friends), level of autonomy in academics, and level of engagement as compared to disaffection in a classroom setting. The study looked at the following: the relationship between relatedness and engagement; how that relationship is influenced by age and gender; and how relatedness to each social partner impacts engagement (Furrer & Skinner, 2003).

Furrer and Skinner (2003) found students who reported a greater sense of belonging (both at home and school) and relatedness (especially to parents, teachers, and peers) had higher levels of behavioral and emotional engagement as well as grades. Furthermore, those students with a greater sense of belonging and relatedness at the beginning of the school year continued to improve more throughout the entire school year, suggesting both short term and longer term positive outcomes (Furrer & Skinner, 2003).

Psychological engagement can range from simply liking to deep valuing of, or identification with, the institution. This potential for evolution in intensity makes psychological engagement a desirable outcome. While each of the four domains are important to student engagement, for the purposes of this study, the psychological and behavioral domains will be explored. In order to better understand student engagement, the routes to it need to be examined. The next section of this literature will look at the distinction between student engagement
and motivation and the role motivation plays within the student engagement process.

The Role of Motivation in the Student Engagement Process

Student engagement reflects a person’s active involvement in a given task, or the action (Appleton et al., 2006). Understanding motivation allows for the answering of the why, the underlying reasons, goals, and attitudes for involvement in a given task. These reasons vary according to each individual as people experience different amounts and different kinds of motivation. In particular, motivation can be broken down into intrinsic motivation, doing something because it is enjoyable, and extrinsic motivation, doing something because there are external rewards as part of the outcome of participation.

Self Determination Theory (SDT) is a theoretical framework that has been used to understand student engagement and the role of motivation. SDT theorists explain that embedded in human nature, with some cultural variation, is the need for fulfillment of several base needs including autonomy, competence, and a sense of belonging (Ryan & Deci, 2000). Intrinsic motivation has long been identified as critical to the field of education. However, certain types of extrinsic motivation can be equally important according to SDT (Ryan & Deci, 2000).

There is often a focus, when discussing motivation, on intrinsic motivators. However, SDT acknowledges the catalyst for behavior can often occur outside oneself, especially in the realm of education (Ryan & Deci, 2000). For instance, physical activity could be a catalyst for student engagement. The theory outlines
varying levels of determination associated with extrinsic motivation and places these levels on a continuum. There are five levels: amotivation, external regulation, introjected regulation, regulation through identification, and integrated regulation (Ryan, 1995). Figure 2 is a depiction of the self-determination continuum.

Figure 2. Self-Determination Continuum (Ryan & Deci, 2000).

Amotivation

At the far left of the SDT continuum is amotivation where there is no intent to act. This is the state of either no actions or just going through the motions. This results from placing no value in the activity, feelings of incompetence, or not expecting participation in the activity to yield desired outcomes (Ryan & Deci,
External Regulation

External regulation is an extrinsic motivation that is least autonomous on the continuum. Participation in activity is contingent on external rewards. Behavior is controlled and alienated (Ryan & Deci, 2000).

Introjected Regulation

Introjected regulation is another type of extrinsic motivation a little further on the continuum. While an individual takes in a regulation, they do not fully accept it as their own. Participation is typically to avoid guilt, anxiety or as ego-inducing like pride (Ryan & Deci, 2000).

Regulation through Identification

Regulation through identification is a more autonomous extrinsic motivator. There is a conscious value placed in participation from the individual and the action is owned as personally important (Ryan & Deci, 2000).

Integrated Regulation

Integrated regulation is the point on the extrinsic motivation continuum where an individual experiences the greatest amount of autonomy. Participation is valued and aligned with one’s other values and needs. Integrated regulation actually contains many of the same attributes of intrinsic motivation. The differences lie in that they are done for reasons other than enjoyment (Ryan & Deci, 2000). Integrated regulation is the most powerful construct within extrinsic motivation.
Motivation is a necessary component of the education and learning process and not a guarantee of student engagement (Appleton et al., 2006). A student can be motivated to act and still remain actively disengaged. Understanding the underlying reasons, or motivations, for why students engage in activities is of utmost importance. Implementing extrinsic motivators in an education setting is appropriate due to the lack of student engagement in school activities via intrinsic motivation. Integrated regulation plays an important role in student engagement as the most autonomous form of extrinsic motivation. Participation in a group physical activity program potentializes extrinsic motivation through integrated regulation and the catalysis of student engagement (Figure 3).

Figure 3. Integrated Regulation to Psychological Engagement Pathway.
Physical Activity and Engagement Research

In a meta-analysis of the physical activity and student engagement research, the CDC (2010) examined studies in four areas: school-based physical education, recess, classroom physical activity, and extracurricular physical activity (CDC, 2010). A discussion of the CDC’s findings follows.

School-based Physical Education Studies

Fourteen studies were found which examined school-based physical education programs. The majority of these studies specifically looked at increasing the duration of a physical education class. The studies found increasing the duration of a physical education class had either a positive relationship or no relationship to academic achievement. None of the studies found a negative relationship to overall academic achievement. Furthermore, 11 of the 14 studies found a positive association between school-based physical education and at least one indicator of academic performance such as attention, self-worth, and the quantity and quality of correct responses (CDC, 2010). Table 1 summarizes the classroom-based physical education studies including sample size, findings, and outcomes.
Table 1. School-based Physical Education Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Findings</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dexter, T. (1999)</td>
<td>517</td>
<td>Academic ability associated with sport skill performance, Curriculum time committed to PE predicts literacy and numeracy competency</td>
<td>+</td>
</tr>
<tr>
<td>Dollman, J., Boshoff, K., &amp; Dodd, G. (2006)</td>
<td>117</td>
<td>Improved classroom behavior, physical work capacity, and BMI</td>
<td>+</td>
</tr>
<tr>
<td>Dwyer, T., Blizzard, L., &amp; Dean, K. (1996)</td>
<td>508</td>
<td>Better attention and impulse control</td>
<td>+</td>
</tr>
<tr>
<td>Ericsson, I. (2008)</td>
<td>251</td>
<td>Improved math scores</td>
<td>+</td>
</tr>
<tr>
<td>Tuckman, B.W. &amp; Hinkle, J.S. (1986)</td>
<td>154</td>
<td>Improved creativity and classroom behavior</td>
<td>+</td>
</tr>
</tbody>
</table>

+ is positive outcome, 0 is no significant outcome
Recess Studies

With regard to recess in elementary schools, eight studies examined the impact of recess on academic performance. Out of these, six developed and implemented interventions to assess this relationship. The remaining two studies looked at the potential impact of recess on classroom behavior and student adjustment to school. When assessing performance indicators of attention, concentration, and on-task behavior, all studies found recess has either a positive relationship or no relationship. Just as in the school-based physical education studies, none of the recess studies found any negative associations (CDC, 2010). Table 2 summarizes the recess studies including sample size, findings, and outcomes.

Table 2. Recess Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Findings</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caterino, M.C. &amp; Polak, E.D. (1999)</td>
<td>125</td>
<td>Improved concentration</td>
<td>+</td>
</tr>
</tbody>
</table>

+ is positive outcome, 0 is no significant outcome
Classroom-based Physical Activity Studies

With regards to classroom physical activity, nine studies were found (see Table 3). Most of these studies took a deeper look into the inclusion of short physical activity breaks imbedded into the classroom material. These breaks typically lasted anywhere from five to 20 minutes and were designed either to promote learning by incorporating course content or purely as a break to get in physical activity. Specific academic indicators were monitored including 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 each of the above indicators (CDC, 2010).
Table 3. Classroom Physical Activity Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Findings</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahamed, Y. &amp; McKay, H. (2007)</td>
<td>308</td>
<td>Improved academic performance on standardized tests</td>
<td>0</td>
</tr>
<tr>
<td>Della Valle, J., Dunn, R., &amp; Geisert, G. (1986)</td>
<td>40</td>
<td>Improved word recognition test scores</td>
<td>+</td>
</tr>
<tr>
<td>Lowden, K., Powney, J., Davidson, J., &amp; James, C. (2001)</td>
<td>198</td>
<td>Improved classroom behavior</td>
<td>+</td>
</tr>
<tr>
<td>Mahar, et al.</td>
<td>243</td>
<td>Improved on-task behavior</td>
<td>+</td>
</tr>
<tr>
<td>Molloy, G.N.</td>
<td>32</td>
<td>Improved math performance</td>
<td>+</td>
</tr>
<tr>
<td>Norlander, T. Moas, L., &amp; Archer, T. (2005)</td>
<td>91</td>
<td>Improved concentration</td>
<td>+</td>
</tr>
<tr>
<td>Uhrich, T.A. &amp; Swalm, R.L. (2007)</td>
<td>41</td>
<td>Improved reading comprehension</td>
<td>+</td>
</tr>
</tbody>
</table>

+ is positive outcome, 0 is no significant outcome

**Extracurricular Physical Activity Studies**

Nineteen studies were found that focused on the impact of extracurricular physical activity participation on overall academic achievement. Specific activities addressed in the various studies were participation in school sports and after-school programs incorporating physical activity sessions. All of the 19 extracurricular studies found a positive association to at least one of the academic indicators including self-concept, attitudes, aspirations, and resiliency.
(CDC, 2010). Table 4 summarizes the extracurricular physical activity studies including sample size, findings, and outcome.
Table 4. Extracurricular Physical Activity Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Findings</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collingwood, T.R., et al.</td>
<td>78</td>
<td>Improved self-concept</td>
<td>+</td>
</tr>
<tr>
<td>Crosnoe, R. (2002)</td>
<td>2,651</td>
<td>Improved academic trajectories for athletes versus nonathletes</td>
<td>+</td>
</tr>
<tr>
<td>Darling, N., Caldwell, L.L, &amp; Smith, R. (2005)</td>
<td>4,264</td>
<td>Higher self-reported grades, academic aspirations, and academic attitudes</td>
<td>+</td>
</tr>
<tr>
<td>Darling, N (2005)</td>
<td>3,767</td>
<td>Higher self-reported grades, academic aspirations, and academic attitudes</td>
<td>+</td>
</tr>
<tr>
<td>Fredricks, J.A. &amp; Eccles, J. (2008)</td>
<td>1,047</td>
<td>Higher resiliency</td>
<td>+</td>
</tr>
<tr>
<td>Fredricks, J.A. &amp; Eccles, J. (2006)</td>
<td>1,075</td>
<td>Higher self-esteem, educational expectations, and self-reported GPA; less depression</td>
<td>+</td>
</tr>
<tr>
<td>Hawkins, R. &amp; Mulkey, L.M. (2005)</td>
<td>1,052</td>
<td>Higher graduation from high school and college attendance</td>
<td>+</td>
</tr>
<tr>
<td>McNeal, R.B. (1995)</td>
<td>14,949</td>
<td>Lower dropout rates</td>
<td>+</td>
</tr>
<tr>
<td>Reynolds, D &amp; Nicolson, R. (2007)</td>
<td>36</td>
<td>Improved motor and verbal skills over time</td>
<td>+</td>
</tr>
<tr>
<td>Schumaker, J.F. et al. (1986)</td>
<td>85</td>
<td>Improved self-concept</td>
<td>+</td>
</tr>
</tbody>
</table>

+ is positive outcome, 0 is no significant outcome
Teachers’ Perceptions of Student Engagement

Various approaches to assessing student engagement have been used in empirical research studies. Self-report scales were most commonly used; however, results from this approach lead to inconsistent data as students’ often struggle to assess their own behaviors and attitudes accurately (Assor & Connell, 1992). To address this, teacher observations of student engagement have been used. The Research Assessment Package for Schools Teacher Report (RAPS-T) is a survey created for teachers to assess ongoing student engagement (Institute for Research & Reform in Education, 1998). The survey consists of three statements: 1) In my class, this student seems tuned in; 2) This student comes to class prepared; and, 3) This student does more than required. Each of these statements is ranked on a five-point scale from Not At All True (1) to Very True (5).

Klem and Connell (2004) used the RAPS-T where teachers completed the survey for each student in their classroom. To create an optimal threshold for teacher reports of student engagement, a cut-point was identified where the sharpest increase in the probability of student success on attendance and test scores occurred. To create a risk threshold, a cut point was identified where the most dramatic increase in the probability of students having poor test scores or poor attendance occurred. This lead to two categorization groups: optimal level and risk level. In the optimal level, teachers rated student engagement as a mean of 3.6 or higher on the RAPS-T. Thus, teachers needed to indicate
students were consistently tuned in, prepared for class, and doing more than necessary (Klem & Connell, 2004). In the risk level, teachers rated student engagement as a mean of 2.6 or less. Thus, teachers needed to indicate students almost always were not tuned in, prepared, or trying (Klem & Connell, 2004).

Skinner, Chi, and The Learning-Gardens Educational Assessment Group (2012) explained that teachers shape student engagement in the classroom by building motivation through positive interactions. Their study built on the work of Klem and Connell by adding an additional 17 items to the original three-item RAPS-T including the following: overall, this student gets very involved; in general, this student puts in a lot of effort; and, during lessons, this student actively participates. Three cut points were used to establish risk thresholds for student engagement: optimal (3.6 or higher), normal (2.7 to 3.5), and at-risk (2.6 or lower) (Skinner, et al., 2012).

In another study, 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 child in their classroom on both action and emotion (or psychological) items (Skinner, Wellborn, & Connell, 1990). For instance, action items rated whether a student actively participated (or were engaged) in class discussions or whether they were just going through the motions. The emotion items rated whether a student seemed happy or whether they seemed bored. For both action and emotion, positive and negative
instances were included. Positive and negative items were averaged separately and subtracted from each other to form an engagement score ranging from -3 to 3, with higher scores indicating more engagement (Skinner, Wellborn, & Connell, 1990). Based on the existing literature, teacher perceptions of student engagement have been used as an effective assessment tool and as such were used in the present study.

**ABC (Activity Bursts in the Classroom) for Fitness**

The Activity Bursts in the Classroom (ABC) for Fitness program (Katz, Cushman, Reynolds, Njike, Treu, Katz, et al.) was developed by health and education experts as a means to incorporate short bursts of physical activity directly into the classroom setting (2010). The five to ten minute activity bursts are non-competitive and include a variety of simple, everyday movements. Teachers incorporate the bursts into the school day at their discretion. The aim of the ABC for Fitness program is to provide teachers the opportunity to get their students active in order to promote improved cognition, creativity, enjoyment, and increased engagement in the classroom (Katz, et al., 2010).

The activity bursts include a warmup activity like stretching, a primary activity such as squats, jogging, or dancing, and a cool-down activity comprised of a low-intensity movement. Teachers can tailor the ABC for Fitness activities to meet the level of the students by either increasing or lowering the intensity and selecting age-appropriate movements. The ABC for Fitness program is a
supplement to not a replacement of existing physical education programs (Katz, et al., 2010).

The existing literature shows classroom based physical activity promotes learning and improves various indicators such as memory, attention, mood, on-task behavior, and concentration. The ABC for Fitness program is designed specifically to incorporate physical activity in classrooms. It is a classroom based physical activity program which helps teachers focus students by integrating structured, productive bursts of physical activity throughout the day. In this sense, the activity bursts become the extrinsic motivators, focusing on a student’s integrated regulation. The ABC for Fitness program breaks up prolonged periods of academic instruction in order to avoid boredom and stimulate interest. As students continue to participate in the program, their integrated regulation becomes the pathway to student engagement. Including this program in elementary schools would improve children’s integrated regulation and lead to improved student engagement. Students without regular bouts of physical activity within the school day will be less engaged. The present study looked for a change in teacher’s perception of student engagement over time as a result of incorporating the ABC for Fitness program in the classroom.

Conclusion

The findings of the CDC’s meta-analysis support various strategies to improve student engagement. Specifically, school-based physical education programs, the inclusion of recess, integrated classroom-based physical activity,
and extracurricular activities have been examined as viable options. Mahar, et al. (2006) found elementary school children often become restless and unruly when exposed to prolonged periods of academic instruction. Long periods of instruction without breaks are counterproductive to academic performance.

To promote policy changes requiring more physical activity in school, empirical data are needed to document the positive effects of school-based physical activity programs. The ABC for Fitness program addresses these areas (Katz, et al., 2010). This program outlines how schools can restructure physical activity into multiple, brief episodes of activity into classrooms throughout the day without taking away valuable classroom instruction time. Teacher’s perceptions of student engagement were assessed pre and post the ABC for Fitness program.

The purpose of the present study was to assess how teachers’ perception change over time with the implementation of the ABC for Fitness classroom-based physical activity program. A mixed method design was used using surveys and interviews pre and post to assess teacher perception of student engagement and how perceptions change over time as a result of the intervention. Children do better in school when they are engaged. Incorporating physical activity breaks into the classroom has been shown in the existing literature to be a useful tool to improve student engagement. The ABC for Fitness program is a mechanism which was used to answer the following questions:
Research Question 1: What impacts, if any, will a classroom based physical activity program have on student engagement?

Research Question 2: What information, if any, will surveys and interviews of teacher perceptions provide on student engagement?
CHAPTER THREE

METHODOLOGY

Introduction

This chapter reviews the methodology and research design of teachers’ perceptions of student engagement in the classroom. Classroom-based physical activity programs have the potential to increase student engagement. This study examined teachers’ perceptions of student engagement prior to and following implementation of the ABC for Fitness program using an exploratory case study design. Two teachers implemented the ABC for Fitness program in their classrooms with 22 students per class for a total of 44 students. Daily written behavior incident logs were completed by the two ABC for Fitness intervention teachers and two comparison teachers for each student in their classroom. The intervention teachers completed online pre and post surveys of student engagement and behavior for each student in their classroom. Qualitative data was collected through semi-structured interviews of the intervention teachers, question and answer session from the ABC for Fitness workshop, mid-point check-in, and written behavior incident logs.

Research Questions

The following research questions guided this study:

Research Question 1: What impacts, if any, will a classroom based physical activity program have on student engagement?
Research Question 2: What information, if any, will surveys and interviews of teacher perceptions provide on student engagement?

Participants and Setting

The two ABC for Fitness intervention teachers have 20 years of classroom experience between them and currently hold multiple subject credentials for elementary school teaching which included a course on physical education. In addition, the ABC for Fitness intervention teachers are required to conduct physical education for 30 minutes every school day. As such, the ABC for Fitness intervention teachers are trained in how to conduct developmentally appropriate physical activities. The teachers are trained in monitoring and reporting behavior and engagement as part of their school-wide Positive Behavior Interventions Support (PBIS) program. Every day all teachers in the participating school are responsible for filling out school-wide written behavior incident logs for each student and submitting these to the site administrator. Intervention Teacher 1 had 22 students and Intervention Teacher 2 had 22 students which represent an average class size. Comparison Teacher 3 had 24 students and Comparison Teacher 4 had 21 students, also average class sizes.

The participating school is part of a school district which requires 30 minutes of physical education each school day taught by the classroom teacher. The participating school supported the present study documented through school site administrator letter (Appendix D). In addition, there are two, 10 minute recesses offered for each school in the school district: one prior to the first bell at
9:00 AM and the second after lunch is served. As per district policy, students should receive 50 minutes of physical activity in a six hour school day. However, physical education time can be waived at the discretion of the teacher if more time is needed for academics. Additionally, recess can be taken away due to problem behavior.

In addition to the two intervention teachers implementing the ABC for Fitness program in their classroom, daily written behavior incident logs were collected from the two intervention teachers and two comparison teachers from the same school site. Teacher ratings of student engagement and student behavior were evaluated by the ABC for Fitness intervention teachers. Only student behavior was evaluated by the comparison teachers. All participating teachers completed an informed consent.

Recruitment

The participating school's two grade four teachers requested to be part of the physical activity intervention due to high incidences of behavior issues within their classes. The two comparison grade five teachers volunteered to have the researcher evaluate students’ written behavior incident logs only.

Informed Consent

Informed consent (Appendix D) was obtained from the ABC for Fitness intervention teachers and comparison teachers. The informed consent included details on participating teacher requirements. Teachers were informed all participation was voluntary, they could withdraw at any time, students could
choose to opt out at any time, and no student identifying information would be collected.

Data Collection

The intended purpose of this study was to assess how teachers’ perceptions of student engagement change over time with the implementation of the ABC for Fitness classroom-based physical activity program. This study used five data sources: pre and post surveys; daily written behavior incident logs; a semi-structured interview; a mid-point check-in; and, question and answer session transcripts from the ABC for Fitness teacher workshop. The ABC for Fitness intervention teachers completed both the student engagement and student behavior conditions which included pre and post surveys, written behavior incident logs, question and answer session from the ABC for Fitness teacher workshop, a mid-point check-in, and a semi-structured interview. The intervention teachers implemented the ABC for Fitness program in their classrooms for a three week period. The comparison teachers completed the student behavior condition only by completion of the written behavior incident logs.

Pre and Post Surveys

The Teacher Assessment of Student Engagement survey (Skinner, et al., 2012) was used pre and post intervention to assess the ABC for Fitness intervention teachers’ perceptions of student engagement. The survey consisted of 20 items rated by the participating intervention teachers on a five-point scale
from Not at all True to Totally True (Appendix C). After providing Informed Consent (Appendix B) the two ABC for Fitness intervention teachers filled out the survey for each student in their class.

The researcher provided the online surveys to both ABC for Fitness intervention teachers at the same time through email prior to the ABC for Fitness Workshop. The participating school site provided the researcher with the ABC for Fitness intervention teachers’ emails. They were given three days to complete the surveys prior to the ABC for Fitness workshop. The survey took approximately 20 minutes for teachers to complete. Example survey items include: overall, this student gets very involved; in general, this student puts in a lot of effort; and, during lessons, this student actively participates. Both ABC for Fitness intervention teachers were able to be identified by the researcher in order to compare pre and post results. The students were only identified by their school number and the researcher was not given access to any information that linked student numbers to any identifying information.

ABC for Fitness Workshop

An ABC for Fitness workshop was conducted at the school site as part of the school’s teacher professional development. All teachers at the school site were invited to participate, and the workshop was facilitated by the researcher. The ABC for Fitness workshop covered the program description, mission, managing and planning for ABC, components of an activity burst, kinds of activity bursts, tips to implement, program enhancements, ABC in action (practice), and
a question and answer session. Only the intervention teachers participated with the researcher in the question and answer session following the ABC for Fitness workshop. A complete transcription of the question and answer session was completed by the researcher and is included in the Appendix (Appendix E). The two intervention teachers were provided a hard copy of the ABC for Fitness manual as they would be implementing the program in their classroom following completion of the ABC for Fitness workshop.

**Written Behavior Logs**

As mentioned, all teachers at the participating school site currently complete a daily written behavior incident log on each regarding their students daily and submit these to the site administrator (Appendix D). The participating intervention teachers and comparison teachers were previously trained on how to observe engagement in their students as part of the school-wide Positive Behavior Interventions and Supports (PBIS) program. The PBIS logs were filled out daily for every student already. Although these logs are submitted to the school site administrator on a weekly basis, the teachers and the site administrator informed the researcher that the logs had not been recorded, evaluated, nor analyzed. During the three week implementation of the ABC for Fitness program, the daily written behavior incident logs completed by the two ABC for Fitness intervention teachers and two comparison teachers were collected by researcher weekly with student identifying information already removed (as student school number remained). The researcher did not have
access to information that could link student identifying information to their student school numbers.

**Question and Answer Session from the ABC for Fitness Teacher Workshop**

The ABC for Fitness workshop was provided to all teachers at the participating school site as part of a professional development day prior to the start of the intervention. Only the two ABC for Fitness intervention teachers received the ABC for Fitness teacher manual. The ABC for Fitness program was developed by David Katz, MD, MPH and is available to the public. There are four goals of the ABC for Fitness program: to promote health and fitness; to help prevent childhood obesity; to enhance concentration and behavior; and, to help optimize academic performance. The program consists of several short bouts of physical activity from five to ten minutes. These bouts, or activity bursts, are integrated into the classroom over the school day and add up to 30 minutes per day.

**Mid-point Check-in**

The researcher conducted a mid-point check-in with ABC for Fitness intervention teachers in order to gauge progress of the ABC for Fitness intervention and to provide additional support. The researcher scheduled a one hour block of time with Intervention Teacher 1 and a one hour block of time with Intervention Teacher 2 in the middle of the second week of implementation at the participating school site. The mid-point check-in was designed to provide additional support for the ABC for Fitness intervention teachers. During the mid-
point check-in, the researcher asked three questions: How has the training you received prepared you for implementation of the program? What difficulties, if any, have you encountered so far? Do you have any questions of me? The mid-point check-in was audio recorded and transcribed (Appendix F).

Semi-structured Interview

The ABC for Fitness intervention teachers participated in one-on-one semi-structured interviews (see Appendix E) post intervention, face-to-face with the researcher in their respective classrooms after the school day. Interviews were scheduled within one week post intervention of the ABC for Fitness intervention at a time convenient for each intervention teacher. Interviews were recorded for audio only and transcribed verbatim (Appendix F). The interviews gathered information on the impact of the intervention on both of the study conditions: student engagement and student behavior. Sample questions included: describe how students’ responded to the intervention; describe any changes in students’ level of engagement in the classroom; and, how did your ability to gauge student engagement change over time?

Data Analysis Plan

The pre and post Teacher Assessment of Student Engagement survey was analyzed for descriptives and changes from pre and post responses. An exploratory analysis (Ryan & Bernard, 2010) was used to analyze the qualitative data (i.e., responses from the ABC for Fitness workshop question and answer
session; mid-point check-in; written behavior incident logs; and, post-intervention interviews).

The study was implemented in several steps. First, the intervention teachers took the pre-survey online was sent via email three days prior to the ABC for Fitness workshop. The ABC for Fitness workshop was conducted for both participating teachers on the same day and lasted approximately three hours. The intervention began on the first school day following the workshop. Written behavior logs were collected by researcher on a weekly basis. The post survey was given online to both intervention teachers at the end of the three week intervention. Interviews were scheduled with the intervention teachers in the week following the last day of the intervention.

**Researcher Bias**

The researcher acknowledges bias based on experience and educational background. The researcher believes physical activity is positive for students and will increase student engagement.

**Dissemination**

The present study was published in ScholarWorks in California State University, San Bernardino’s online library. Findings and recommendations will be presented at various conferences on the relevance of using a cost-effective, easy-to-implement classroom-based physical activity program. Participating teachers and the site administrator were given a copy of the executive summary,
and met as a group to disseminate the results, recommendations, and possible implementation.

Confidentiality of the Data

All information is confidential and will only be used for research purposes. No identifying student information was collected. Audio recordings and digital data are stored on researcher's password protected computer in the researcher's locked work office. Written information collected is stored in locked filing cabinet in researcher's home office. All information will be stored until Spring 2022. At that time, all information associated with the present study will be destroyed.

Risks and Benefits

Activities were conducted throughout the normal school day. None of the structured activities were outside the realm of what students would do in a physical education class. All activity bursts were within normal intensities and did not include any strenuous activities. A letter of permission from the school site administrator is included (Appendix D).
CHAPTER FOUR
RESULTS

Overview

The ABC for Fitness intervention program was implemented in order to examine the impact of a classroom-based physical activity program on teachers’ perceptions of student engagement. Teachers’ perceptions of student engagement were measured pre and post intervention using the Teacher Assessment of Student Engagement survey. Changes in student behavior and engagement were tracked using daily written behavior incident logs. Finally, teacher perceptions of the overall impact of the ABC for Fitness program intervention on student engagement and their own attitudes towards students were assessed through post interviews.

Teachers at a southern California elementary school received the ABC for Fitness teacher training workshop led by the researcher. All participating teachers participated in the ABC for Fitness workshop as part of the participating school site’s on-going professional development. Two fourth grade teachers (intervention teachers) implemented the ABC for Fitness program in their classrooms over a three week period and two fifth grade teachers (comparison teachers) did not. Daily written behavior incident logs were completed by the four participating teacher. The two intervention teachers completed pre and post online surveys of student engagement, question and answer session from the
ABC for Fitness workshop, mid-point check in, and post-intervention semi-structured interviews. The study considered the following questions:

Research Question 1: What impacts, if any, will a classroom based physical activity program have on student engagement?

Research Question 2: What information, if any, will surveys and interviews of teacher perceptions provide on student engagement?

Data Collection Process Results

Intervention Teacher Perceptions of Student Engagement

Initial teacher perceptions of student engagement were examined using the Teacher Assessment of Student Engagement survey (Skinner, et al., 2012) prior to the two intervention teachers receiving the ABC for Fitness workshop. Final teacher perceptions of student engagement were examined using the same survey post the three week ABC for Fitness intervention. The survey consisted of 20 items rated by the intervention teachers on a five-point scale from Not at all True to Totally True (Appendix C). The survey asked the participants to rate each student in their respective classroom on levels of involvement, enthusiasm, hard work, effort and participation. Based on survey guidelines, optimal levels of student engagement were set at 3.6 or higher (out of 5), normal was 2.7 to 3.5, and at-risk was 2.6 or below (Skinner, et al., 2012).

Teacher Assessment of Student Engagement Survey Responses

Intervention Teacher 1 indicated out of 22 students in her classroom, 15 were rated at optimal levels of engagement prior to implementation of the ABC
for Fitness intervention program, two were at normal levels, and five were at-risk. Post survey ratings indicated the 15 optimal level students remained unchanged post implementation, the two normal level students remained unchanged, two of the five at-risk students changed to optimal levels and the other three changed to normal levels.

Intervention Teacher 2 indicated out of 22 students, 11 were rated at optimal levels of engagement prior to implementation of the ABC for Fitness intervention program, seven were at normal levels, and four were at-risk. Post survey results indicated the 11 optimal level students remained unchanged, and six of the normal level students changed to optimal levels of engagement with one remaining unchanged. Of the four at-risk students, one student changed to normal levels, one changed to optimal levels, and two remained unchanged. Table 5 illustrates pre and post ratings of student engagement for both intervention teachers. An asterisk indicates an improvement from pre and post engagement ratings for that particular student. No student decreased in engagement ratings.
<table>
<thead>
<tr>
<th>Student</th>
<th>Pre</th>
<th>Post</th>
<th>Level</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>4.25</td>
<td>4.25</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>2.50</td>
<td>3.50</td>
<td>At-risk to normal</td>
<td>*</td>
</tr>
<tr>
<td>1-3</td>
<td>4.00</td>
<td>4.33</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-4</td>
<td>3.67</td>
<td>4.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>4.33</td>
<td>4.67</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-6</td>
<td>4.00</td>
<td>4.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
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<td>4.00</td>
<td>4.00</td>
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<td></td>
</tr>
<tr>
<td>1-8</td>
<td>2.33</td>
<td>4.00</td>
<td>At-risk to optimal</td>
<td>*</td>
</tr>
<tr>
<td>1-9</td>
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<td>Optimal</td>
<td></td>
</tr>
<tr>
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</tr>
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<td>1-12</td>
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<td>At-risk to optimal</td>
<td>*</td>
</tr>
<tr>
<td>1-13</td>
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<td>3.00</td>
<td>Normal</td>
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</tr>
<tr>
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<td>5.00</td>
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<td></td>
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<td>1-17</td>
<td>4.67</td>
<td>4.67</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-18</td>
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<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-19</td>
<td>2.00</td>
<td>3.00</td>
<td>At-risk to normal</td>
<td>*</td>
</tr>
<tr>
<td>1-20</td>
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<td>3.33</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>1-21</td>
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<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>1-22</td>
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<td>3.00</td>
<td>At-risk to normal</td>
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</table>

<table>
<thead>
<tr>
<th>Student</th>
<th>Pre</th>
<th>Post</th>
<th>Level</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
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<td>4.25</td>
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<td>3.25</td>
<td>3.75</td>
<td>Normal to optimal</td>
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<td>4.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-4</td>
<td>3.33</td>
<td>3.00</td>
<td>Normal</td>
<td></td>
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<td>3.00</td>
<td>4.00</td>
<td>Normal to optimal</td>
<td>*</td>
</tr>
<tr>
<td>2-7</td>
<td>4.00</td>
<td>4.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-8</td>
<td>2.33</td>
<td>3.33</td>
<td>At-risk to normal</td>
<td>*</td>
</tr>
<tr>
<td>2-9</td>
<td>5.00</td>
<td>5.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-10</td>
<td>4.33</td>
<td>4.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-11</td>
<td>5.00</td>
<td>5.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-12</td>
<td>1.67</td>
<td>2.00</td>
<td>At-risk</td>
<td></td>
</tr>
<tr>
<td>2-13</td>
<td>3.00</td>
<td>3.67</td>
<td>Normal to optimal</td>
<td>*</td>
</tr>
<tr>
<td>2-14</td>
<td>3.00</td>
<td>3.67</td>
<td>Normal to optimal</td>
<td>*</td>
</tr>
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<td>Engagement</td>
<td>Rating</td>
<td>Status</td>
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<td>4.33</td>
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<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-17</td>
<td>4.67</td>
<td>4.67</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-18</td>
<td>4.00</td>
<td>3.67</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-19</td>
<td>2.00</td>
<td>2.00</td>
<td>At-risk</td>
<td></td>
</tr>
<tr>
<td>2-20</td>
<td>3.00</td>
<td>3.67</td>
<td>Normal to optimal</td>
<td></td>
</tr>
<tr>
<td>2-21</td>
<td>5.00</td>
<td>5.00</td>
<td>Optimal</td>
<td></td>
</tr>
<tr>
<td>2-22</td>
<td>2.50</td>
<td>4.00</td>
<td>At-risk to optimal</td>
<td></td>
</tr>
</tbody>
</table>

Indicates improvement in student pre and post engagement ratings

Intervention Teachers’ Daily Written Behavior Logs

As mentioned previously, all teachers at the participating school site currently complete a daily written behavior incident log on each of their students as part of the school-wide Positive Behavior Interventions and Supports (PBIS) program. The daily written behavior logs were collected on a weekly basis from the four participating teachers, at the end of the week, for the three weeks during the ABC for Fitness intervention.

In the daily written behavior logs, Intervention Teacher 1 described specific behavioral incidents with three students in the first week of the intervention including verbally bothering other students, fighting with another student, and eating in class. In week two, three students were documented with incidents ranging from making inappropriate sexual comments to throwing random students papers away. Two students were documented in week three for incidents such as antagonizing other students and wandering. A total of 17 incidents were documented in the span of three weeks of the ABC for Fitness
intervention amongst the same five students. These five students were the at-risk students identified in the pre surveys of student engagement.

In the first week there were eight documented incidents, in the second week there were six incidents, and in the third week there were three incidents. Patterns of student behavior were found in the written behavior logs from Intervention Teacher 1. For instance, student 1-2 acted up primarily during history lessons and student 1-19 acted up during art, singing, and writing structured activity times. After recess appeared to be a frequent time of disruptive incidents for students. Table 6 presents students with documented behavior incidents throughout the three week ABC for Fitness intervention period from Intervention Teacher 1.
<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Day 2 - Verbally bothering other students&lt;br&gt;Day 3 - Calling other students unkind names&lt;br&gt;Day 5 - Verbal outburst</td>
<td>Day 2 – antagonizing other students</td>
<td>Day 4 - wandering</td>
</tr>
<tr>
<td>1-8</td>
<td>Day 2 – inappropriate sexual comments&lt;br&gt;Day 5 – calling girls derogatory terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-12</td>
<td>Day 5 – wandering around, bothering other students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-19</td>
<td>Day 1 – hands on another student&lt;br&gt;Day 2 – fighting with another student&lt;br&gt;Day 3 – throwing crayons at another student&lt;br&gt;Day 5 – hair pulling</td>
<td>Day 3 – frustrated&lt;br&gt;Day 5 – throwing random students papers away&lt;br&gt;Day 2 – antagonizing other students</td>
<td></td>
</tr>
<tr>
<td>1-22</td>
<td>Day 2 – eating in class</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intervention Teacher 2 documented 22 incidents on the written behavior logs amongst 11 students. In the first week of the intervention, there were 11 incidents compared to seven in the second week and four in the third. It is important to note that two of the incidents listed in the second week were for positive behaviors. Student 2-14, whom Intervention Teacher 2 rated at a normal
level of student engagement in the pre survey and rated at an optimal level of engagement in the post survey, was documented as having good participation in the written behavior logs during the implementation of the ABC for Fitness intervention program. Ratings for student 2-20, also changed from normal to optimal levels on the pre and post surveys, was described as encouraging to other students during a math lesson. Ratings for two at-risk students remained unchanged in the pre and post surveys, as students 2-12 and 2-19, continued to incur serious behavior incidents. Table 7 presents students with documented behavior incidents throughout the three week ABC for Fitness intervention period from Intervention Teacher 2.
Table 7. Intervention Teacher 2 Written Behavior Logs

<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Day 1 – off task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>Day 1 – talkative</td>
<td>Day 2 – talkative</td>
<td></td>
</tr>
<tr>
<td>2-4</td>
<td>Day 2 – talkative</td>
<td></td>
<td>Day 5 – fighting</td>
</tr>
<tr>
<td>2-6</td>
<td>Day 1 – argumentative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-8</td>
<td>Day 1 – not following directions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-12</td>
<td>Day 1 – off task</td>
<td>Day 2 – off task</td>
<td>Day 3 – fighting with another student, Day 5 – yelling, punching, fist in hand</td>
</tr>
<tr>
<td></td>
<td>Day 3 – out of assigned area</td>
<td>Day 1 – off task, talking</td>
<td></td>
</tr>
<tr>
<td>2-14</td>
<td></td>
<td>Day 2 – good participation</td>
<td></td>
</tr>
<tr>
<td>2-17</td>
<td>Day 1 – talkative</td>
<td>Day 1 – talkative</td>
<td></td>
</tr>
<tr>
<td>2-19</td>
<td>Day 3 – not following directions</td>
<td>Day 3 – very emotional, heated, had problems</td>
<td>Day 1 – not doing work, playground incident with another student, serious</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Day 5 - argumentative</td>
</tr>
<tr>
<td>2-20</td>
<td></td>
<td>Day 2 - encouraging</td>
<td></td>
</tr>
<tr>
<td>2-22</td>
<td></td>
<td>Day 2 – quietly distracted</td>
<td></td>
</tr>
</tbody>
</table>

Comparison Teachers’ Daily Written Behavior Logs

In order to provide further context of the impact of the ABC for Fitness program intervention, the daily written behavior incident logs of two comparison teachers, Comparison Teacher 3 and Comparison Teacher 4, were also examined. As mentioned previously, all teachers at the school site complete the daily written behavior logs. The researcher, with the consent of Comparison
Teacher 3 and Comparison Teacher 4, was provided their daily written behavior logs by the site administrator. The comparison teachers completed the daily written behavior logs for students in their classroom during the same three week period, but did not implement the ABC for Fitness intervention program in their respective classrooms.

Comparison Teacher 3 documented 25 incidents over the span of three weeks amongst seven students. Of the 25 incidents, eight were documented in week 1, seven in week 2, and ten in week 3. Thirteen incidents occurred during challenging coursework (math, reading, history, and writing), six incidents occurred after recess, four in the morning upon arrival to the classroom, and two at lunch.

Comparison Teacher 4 documented 22 incidents between six students over the same three week period. Of the 22 incidents, six were documented in week 1, nine in week 2, and seven in week 3. Ten incidents were documented during challenging coursework (reading, writing, and math), eight incidents occurred during recess, two at lunch, and two waiting in line for the bus.

In the three week ABC for Fitness intervention program timeframe, Intervention Teacher 1 and Intervention Teacher 2 described fewer negative behavior incidents and documented several positive behavior incidents. Comparison Teacher 3 and Comparison Teacher 4, in the same timeframe, did not experience the same drop in behavior incidents. Even though all teachers at the school site have been completing the daily written behavior logs on a regular
basis for over a year, at the time of this study there has not been any evaluation of the daily written behavior logs. The importance of the daily written behavior logs appears to be in their evaluation in order to identify patterns of behavior and to make modifications accordingly.

**Intervention Teachers’ Question and Answer, Mid-point Check-in, and Post Interviews**

The question and answer session, mid-point check-in, and post interviews with the intervention teachers were digitally recorded and transcribed verbatim by the researcher. A Ryan and Bernard (2003) approach was used to guide the analysis process. In the first reading of these transcriptions, the researcher highlighted key words and phrases based on repetition and similarities. The key words and phrases identified as repetitions and similarities were inputted into EXCEL. Four-hundred-and-fifty-three key words and phrases were documented in the master list.

The researcher then combined repeated key words and phrases creating a new list of 220 while documenting the number of repetitions (Appendix G). In the second reading of the transcriptions, the researcher organized the master list into emergent themes, grouping similar key words and phrases based on situational context described by the intervention teachers. For instance, the most frequent emergent themes included focus and refocus, connectedness and bonding, help and helpful, and anticipation. The intervention teachers repeatedly described that after doing the ABC for Fitness intervention activities, students
demonstrated improved focus and refocused attention on coursework. This was brought up a number of ways by both intervention teachers and included descriptions such as “focus for longer stretches”, “focus much more complete”, “helps with focus”, and “helps students refocus”.

Connectedness and bonding was another important identified emergent theme, referred to on 14 different occasions. The intervention teachers made the following comments: we’re a team, brought class back together, bonding time, we’re connected now, and we were all together.

Another identified emergent theme was help and helpful, with 15 key words and phrases making up this emergent theme. The intervention teachers described how the ABC for Fitness intervention activity bursts using the following phrases: helped with transitions, helped when kids check out, help when kids struggle, and help when kids get tired.

Another important identified emergent theme was the anticipation of the ABC for Fitness intervention activity bursts from students on how the students were more apt to stay on task when they knew the activity bursts were coming up. Thirteen key words and phrases contributed to this emergent theme.

This process of sorting the 220 key words and phrases into related concepts until the entire list was categorized into emergent themes, leading to the identification of 46 emergent themes (Appendix H). Table 4.4 presents the 46 themes extracted from the list of 220 key words and phrases and the number of times repeated across the intervention teachers.
Table 8. Forty-six Emergent Themes Used by Intervention Teachers

<table>
<thead>
<tr>
<th>Focus/refocus 19</th>
<th>Decision-making 8</th>
<th>Health 5</th>
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</thead>
<tbody>
<tr>
<td>Help/helpful 15</td>
<td>Enjoyment 8</td>
<td>Participation 5</td>
</tr>
<tr>
<td>Easy 15</td>
<td>Motivation 8</td>
<td>Practice 5</td>
</tr>
<tr>
<td>Connectedness/bonding 14</td>
<td>On task 7</td>
<td>Recess 5</td>
</tr>
<tr>
<td>Anticipation 13</td>
<td>Plan 7</td>
<td>Social 5</td>
</tr>
<tr>
<td>Physical activity 11</td>
<td>Positive 7</td>
<td>Timing 5</td>
</tr>
<tr>
<td>Corrective behavior 10</td>
<td>Good/great 6</td>
<td>Coursework struggles 4</td>
</tr>
<tr>
<td>Fidgety 10</td>
<td>Modification 6</td>
<td>Lifesaver 4</td>
</tr>
<tr>
<td>Fun 10</td>
<td>Redirection 6</td>
<td>Out of focus 4</td>
</tr>
<tr>
<td>Switch gears 10</td>
<td>Teaching 6</td>
<td>Patterns 4</td>
</tr>
<tr>
<td>Behavior change 9</td>
<td>Benefit/reward 5</td>
<td>Physical education 4</td>
</tr>
<tr>
<td>Manual 9</td>
<td>Break 5</td>
<td>Request 4</td>
</tr>
<tr>
<td>Supportive 9</td>
<td>Cues 5</td>
<td>Classroom structure 3</td>
</tr>
<tr>
<td>Academics 8</td>
<td>Doing 5</td>
<td>Buy-in 2</td>
</tr>
<tr>
<td>Attitude 8</td>
<td>Excitement 5</td>
<td></td>
</tr>
<tr>
<td>Calming 8</td>
<td>Flow/routine 5</td>
<td></td>
</tr>
</tbody>
</table>

Finally, these 46 emergent themes were further funneled into three overarching higher level themes based on relatedness and overlap of context: student response to ABC for Fitness; changes in teacher ability to gauge student engagement; and, changes in teacher attitudes toward students.

For the student response to ABC for Fitness higher level theme, both intervention teachers initially identified a wide array of barriers thought to limit or impede student engagement. These barriers included students feeling like they
were not getting enough teacher-to-student feedback, students struggling with coursework, students coming in to the classroom after recess riled up, and too much sitting down throughout the school day.

As they implemented the ABC for Fitness intervention, the intervention teachers described how the ABC for Fitness program was effective in reducing these barriers in a number of ways. The intervention teachers described how students saw the ABC for Fitness activity bursts as a reward with instant gratification rather than having to wait for more formal methods of teacher-to-student feedback. The following comments were made by the intervention teachers: “students were able to switch gears”; “take a break”; “refocus after challenging coursework”; “students were able to come together as a class”; and, “came together as a team after they were pumped up coming into class after recess”. Lastly, the intervention teachers described how students were able to “get the wiggles out” through movement and students “anticipated being able to get out of their seats” to “break up the monotony of sitting down”.

For the changes in teacher ability to gauge student engagement higher level theme, the researcher noticed following the implementation of the ABC for Fitness intervention program both teachers reported a greater understanding of their monitoring and awareness of student engagement in their classrooms. Both intervention teachers described their ability to adapt lesson plans as they noticed cues from students using the following statements: “I noticed their eyes glazing over”; “one kid was wandering”; they talk to neighbors”; and, “lots of general
disruptions”. Both intervention teachers reported feeling better equipped to know when students needed a break when sitting too long or when to switch gears when coursework was too difficult.

For the changes in teacher attitudes toward students higher level theme, the researcher noticed following the implementation of the ABC for Fitness intervention program that the intervention teachers emphasized it was not only the students experiencing changes in attitudes and behaviors after incorporating the ABC for Fitness activity bursts in the classroom. The intervention teachers described how the atmosphere in their classrooms improved: “I saw the students having fun”; “they came together”; and, “they kept each other on task and that made me happy”. Intervention Teacher 1 described how students that had not previously written love notes for her were writing love notes:

I started getting love notes from those kids that I don’t usually. They would say you’re my favorite teacher, I love this class so much. And those aren’t constant. Some kids do say I love you no matter who their teacher is. Whether it’s a sub, not a sub. They’re just very lovey dovey when it comes to those types of things and other kids don’t. They don’t feel something. They don’t give a compliment. They don’t care. And those kids, their attitudes changed (Personal communication, June 2014).

The intervention teachers’ perceptions of students increasing level of engagement was described as “bringing the class together” and it increased the
teachers’ connections with their students as expressed in the following comment by Intervention Teacher 1:

This job is about giving them an education, but I also do want to please them. I want them to want to come to school. I want them to like how I give the lesson and I do change things so that they can like it. It’s a partnership, it’s not a dictatorship and I think that they saw that. I noticed that they liked it. I tried to do it more often. I tried to have it planned out sooner. I tried to modify the lessons so that we would have half of it and then we would have our break and we would finish the rest of it afterwards. They saw that. They saw I was doing that and they knew it was because I wanted them to be happy and I wanted them to be excited and they appreciated it. They let me know (Personal communication, June 2014).

Powerful sentiments were expressed by both intervention teachers during discussions with the researcher. However, looking at the results of the qualitative data alone, that is the question and answer session, mid-point check-in, and post interviews, does not allow for a thorough understanding of the impact of the intervention. As such, the results of the pre and post surveys, written behavior logs, and qualitative data (from the question and answer session, mid-point check-in, and post interviews) were triangulated within a lens of the three higher level themes.
Theme 1: Student Response to ABC for Fitness

The intervention teachers indicated initial factors which impeded student engagement including not enough teacher-to-student feedback, students struggling with coursework, students coming in after recess riled up, and too much sitting down in the school day. Intervention teacher descriptions of student response to ABC for Fitness intervention specific to these four indicators of student engagement impediments follow.

Teacher-to-student Feedback. Intervention Teacher 1 described some students as “super squirrely”. With those students, she said, “You can’t say, on Friday I’m going to write you a good note home. It has to be every time they do something you have to acknowledge and praise or acknowledge and reward. They don’t function on it will come later…no, they’ll just go back to whatever it is you didn’t want me to do because I didn’t get any feedback” (Personal communication, June 2014). Both intervention teachers brought up the importance of giving consistent and helpful feedback to students with regards to improving student engagement levels. Intervention Teacher 1 identified these students in the pre survey as her five at-risk students. These students were the ones who made the greatest improvements in behavior and engagement in response to the ABC for Fitness program. Intervention Teacher 1 shared how at-risk students saw the activity bursts in the classroom as their reward:

And that’s what they saw it as, those super squirrely kids. They saw those bursts of activity as this is our reward, this is our fun that we get to do in
the middle of the day. Because they looked at it as a reward, that also helped with the function of the flow of the day because I didn’t have to keep reminding them. I didn’t have to give them 90% of my attention to make sure they kept feeling like they were getting instant gratification. None of the instructional changes I made alleviated improper behavior completely, but at the same time, having that in the day made it so much easier to get through the day without, at the end of the day, both of us feeling exhausted and tired and disappointed. So it definitely helped with those students (Personal communication, June 2014).

In the post survey, Intervention Teacher 1 indicated two of the five at-risk students, students 1-8 and 1-12, moved to optimal levels. The remaining three at-risk students, students 1-2, 1-19, and 1-22, moved to normal engagement levels as indicated on the post survey. Additionally, the number of incidents went down from eight in the first week, to six in the second week, and only three in the third week of the intervention.

**Students Struggling with Coursework.** The intervention teachers shared that students tended to be off-task more when they are struggling with the material. Intervention Teacher 2 described her low performing students as the ones off-task and not choosing to participate. Intervention Teacher 1 explained how students break down when they become frustrated that they are not getting it. At these moments, both teachers expressed using the activity bursts to switch gears and take a break from the material would help refocus students and
improve their ability to learn and retain information when they came back to the material. Intervention Teacher 1 stated, “I could see their eyes getting glazed over. We did the physical activity, everybody was unfocused, everyone had a different focus because we did the activity and then after that everyone was back on the same page” (Personal communication, June 2014).

Both intervention teachers reported how they were able to identify patterns in student behavior specific to students who were struggling with coursework from the written behavior logs. Intervention Teacher 1 documented four behavior incidents for student 1-19 during art, singing, and writing. Student 1-2 was documented with three incidents during history lessons. Intervention Teacher 1 added activity bursts during those times and explained in the interview that both students responded positively.

While there were no more incidents for each of these students during the courses in which she felt they were struggling, she noticed both students had behavioral incidents coming into the classroom after recess the following week. It was during the second week that Intervention Teacher 1 explained how she implemented a new activity burst upon returning to the classroom after recess. Although she admitted the intervention did not eliminate all behavior incidents, she felt as though the students in her class with the most serious behavioral and engagement issues were impacted to the greatest degree.

Intervention Teacher 2 documented behavior incidents with student 2-4 and student 2-22 during reading. No more documented incidents for those
students were recorded after she incorporated activity bursts after those lessons to their daily class schedule. She said, “We did put that up on the schedule because they look forward to those things. Even knowing that that’s coming up, and the kids are like can we do this, can we do that, they were asking for it” (Personal communication, June 2014). Intervention Teacher 2 described how one of her students who had been struggling in math and used to disengage during math coursework, student 2-20, actually began to help and encourage other students. This was documented on the written behavior logs as well during the second week after implementation of the ABC for Fitness intervention program.

Not all students experienced a positive change in behavior and engagement. As stated in the discussion of the pre and post surveys, Intervention Teacher 2 had two students rated at-risk who remained unchanged in post surveys. One potential reason for the lack of change in levels of engagement could be that they have further to travel academically than their classmates. During the post interviews Intervention Teacher 2 elaborated on this idea saying:

The ones that I have problems with it’s because of their academics. They’re so low that they choose not to participate. They’re not on task, but this didn’t change that because they’re just not at that level yet. They’re still not able to do the work (Personal communication, June 2014).
Students with a more serious degree of coursework struggles could benefit from a longer intervention program.

**Students Coming in After Recess Riled Up.** Intervention Teacher 2 noted how she saw the majority of the behavior issues right after recess. This was illustrated by her recount of student behavior after recess:

I notice they have a lot more problems right after recess which you would think they would be a little worn out but I think we’re coming in with all that craziness out there. Some of them are having fights and other things going on and so they’re bringing it into the classroom and they’re still heated or still pumped up about what they were doing and it worked out good to do those right after recess to bring them together and calm them down (Personal communication, June 2014).

Both teachers described how adding the activity bursts upon return to the classroom after recess helped students become refocused, centered, and was calming after they were riled up and hyper. Intervention Teacher 2 emphasized the activity bursts seemed to pull the students together after they were having issues out at recess, “it’s a bonding thing,” she explained, “it brought us back as a group whereas out there they were having issues with this person and that person and they would have to get focused again and we were a team, we were all together, it was calming after” (Personal communication, June 2014).

**Too Much Sitting Down in the School Day.** Too much sitting down in the school day was also viewed by the intervention teachers as an important factor
impeding student engagement. Both intervention teachers expressed everyone, especially kids, need a little bit of movement in order to get the wiggles out and to refocus. Intervention Teacher 2 described the activity bursts as helping “with the monotony of sitting down and doing math or doing language arts or doing history or that type of thing” (Personal communication, June 2014). When students are sitting down for long periods of time and cannot see an end in sight they are more likely to say to themselves, “Oh my god, I have an hour and a half until recess, what am I going to do?” But with the activity bursts interspersed throughout their sitting time they say “no, I have 5 more minutes to get through and then it’s going to be something where I can be a little bit crazy. I can be physical, I can be out of my seat. I can be a little loud, you know something like that” (Personal communication, June 2014).

The intervention teachers noted that when students knew the activity bursts were coming up on the schedule it really helped them to: self-regulate, stay on task, and correct the behavior of their classmates. The intervention teachers saw the activity bursts as breaking up the day into “manageable chunks of time” for them and for the students. Intervention Teacher 1 documented on the written behavior incident logs three times where students corrected their peers by explaining the rules to them and reminding them of the upcoming activities. Intervention Teacher 2 documented one incident of peer corrected behavior and two incidents where students encouraged and helped their peers during activity bursts.
The intervention teachers described the student response to the activity bursts in a number of positive ways during the interviews. The words and the number of times used are as follows: fun 10, calming 6, attitude change 8, connectedness and bonding 14, enjoyment 8, lifesaver 4, excitement 5, anticipation 13, motivation 8, supportive 9, corrective behavior 10, good and great 6, benefit and reward 5, and on task 7. Intervention teachers were able to identify several barriers for students including not enough teacher-to-student feedback, students struggling with coursework, students coming into class after recess riled up, and too much sitting down in the school day. Once those barriers were identified, the intervention teachers were able to make changes to their existing class schedules in order to alleviate student barriers by incorporating activity bursts when they felt students benefitted from the bursts the most. The activity bursts were seen as: rewards for students, helped provide a break, got the wiggles out, and helped the class come together as a group.

Theme 2: Changes in Teacher Ability to Gauge Student Engagement

Both intervention teachers expressed an improvement in their ability to gauge levels of student engagement as a result of noticing cues from students and paying more attention to the written behavior logs to identify patterns. The intervention teachers were then able to modify the class schedule and adapt activities to better meet the needs of their students.

The intervention teachers noticed student cues which was expressed five times during interviews such as “notice quality of their responses”, “notice cues
when they need a break”, “notice saturation point”, and “notice when they need to switch gears” (Personal communication, June 2014). Intervention Teacher 1 brought up how it was easier for her to pick up on cues from her students. She discussed how when she paid attention to those cues, like eyes glazing over, she was able to avoid break downs when kids were frustrated or tired.

Now I can see it and I can adjust, start the activity a few minutes earlier than planned, whatever, and then go back to the math or the history. Noticing the fidgetiness or looking away or the quality of their responses. Looking back, sure I noticed them before, but I didn’t necessarily equate them with they need a break, we need to switch gears. It was just, kids fidget, everybody does, big deal. Noticing those as cues where they’re telling me I’m done, reaching saturation point. That, I think, is something after having done the program, I’m better at (Personal communication, June 2014).

Noticing cues in the moment, despite having a preplanned schedule for the day, allowed teachers to make on-the-spot adaptations. Using activity bursts to transition between subject matter or even to switch gears when students were showing signs of struggling was a common theme. Transitions and switching gears were brought up ten times during interviews by both intervention teachers including phrases such as “switch gears when instruction is too difficult”, “switch gears before kids get frustrated or tired”, and “used mostly for transitions between subject matter” (Personal communication, June 21014). Intervention
Teacher 1 even believed her ability to help the students switch gears and alleviate frustrations could eventually lead to better academics given time.

I even think that eventually it will help them academically because their frustration level comes much sooner than mine. By the time I’m frustrated with it, how long have they been sitting there not retaining anything? It’s horrifying to think of now. You know, how long did they sit there out of it before we did something else where they were able to refocus afterwards?

I think I can say now it’s no longer productive doing this so let’s switch gears, come back and see what happens. I’ve already noticed their ability to retain information and their excitement is improved (Personal communication, June 2014).

Besides noticing cues in the moment, intervention teachers discussed paying attention more to the written behavior logs and picking up on patterns. This was brought up a number of different ways such as, “recognized patterns in behavior logs”, “noticed patterns around recess”, “making some changes based on patterns”, and “changed little things in our schedule” (Personal communication, June 2014). Intervention Teacher 1 explained how she had been filling out the written behavior logs before, but not paying attention to them. When she began to focus on them, she was able to pick up the patterns of when kids were getting in trouble and the context, especially over the short term.

I would look at it and say, ok, we started doing it this way at the beginning of the week and then we had three good days. So that’s helpful for me to
look at their behavior in the short term as opposed to over the course of a month. What happened this week that changed their behavior for the better or for the worse? I wasn't really paying attention to that until I really started looking at the logs (Personal communication, June 2014).

The intervention teachers’ growth in ability to pick up patterns of behaviors, attitudes, and engagement in their students was emphasized repeatedly. Each teacher shared similar stories of adaptations and modifications made in class to accommodate students needing it the most based on their increased attention to the written behavior logs and improvements in their ability to notice cues in the moment. As Intervention Teacher 1 noted, a teacher’s ability to “know when to switch gears” may help alleviate student frustrations and has long term implications for improved academic achievement (Personal communication, June 2014).

**Theme 3: Changes in Teacher Attitudes toward Students**

While a positive student response to the ABC for Fitness intervention program and changes in teachers’ ability to gauge student engagement were not surprising, changes in teacher attitudes toward their students was an unexpected outcome. The intervention teachers expressed positive changes in their own attitudes in a variety of ways. Phrases included, “it changes the effort I put into the day”, “absolutely changes you”, “attitude change for me and for them”, and “they picked up on my attitude change” (Personal communication, June 2014). The recurring theme of connectedness and bonding did not solely impact
students, rather it was all encompassing; a social experience. Intervention Teacher 2 emphasized the social component of the activity bursts numerous times. She discussed how spending the time doing these activities brought them together as a team, helped to motivate, decompress, and feel good about each other.

I think we have a pretty close-knit class and it was kinda fun. They love watching each other, laughing with each other, or laughing at each other, whichever it was. But it was just a fun time doing that and it would be like any other activity. They were having fun, coming together, being social. These activities are motivators for students to get on task, to bring ourselves together, to decompress I guess, especially after hard work. It’s something we look forward to and we all need that (Personal communication, June 2014).

Beyond the ability to socialize through movement in the classroom, both intervention teachers talked about how it is easy to be excited around students who are engaged in school: come regularly and are prepared, listen attentively, and show affection. Disengaged students, on the other hand, can be challenging to teach and can even lead to a destructive, chaotic environment in the classroom. Intervention Teacher 1 said, “I feel so sorry for their parents that have them all the time and I only have them for 6 ½ hours” (Personal communication, June 2014). These are the students who are the most difficult to teach. The
intervention teachers realized that their feelings toward the disengaged students changed over the course of the three weeks. Intervention Teacher 1 noted:

Just seeing how happy they were and how excited they were to do these things and how they would be happy and excited to get back on task afterwards, that changes personally how you feel about those students. Whenever, as a parent, your kids are excited to do something that’s positive, it makes you happy and makes you excited that they have found something to do that is a positive thing and it was the same kind of feeling. When they say, I feel good when I’m doing something that you feel good about that you’re excited about, that you’re happy about, instead of ugh, this kid again with the behavior. Sometimes when that is the only behavior that you see, it does change your attitude about how you feel about that kid. It does change how much effort you put into that kid because all you see is a negative (Personal communication, June 2014).

Intervention Teacher 1 continued to talk about how the kids picked up on those changes in attitude towards them. She explained how when children feel an individual cares about them, they want to make that individual happy. They try a little harder, they show up prepared, and they begin to care, “There was an attitude change all around for the class as a whole, for me and for them” (Personal communication, June 2014). Although the ABC for Fitness program did not eliminate all problems, the general feeling of the intervention teachers was
that it reduced the number of disengaged students and this changed the atmosphere in the classroom.

Summary

Research Question 1: What impacts, if any, will a classroom-based physical activity program have on student engagement?

Identification of the impact of the ABC for Fitness intervention program on student engagement was uncovered through the triangulation of the data: pre and post surveys, written behavior logs, and qualitative data (from the question and answer session mid-point check-in, and post interviews). The intervention teachers indicated four primary barriers to student engagement (not enough teacher-to-student feedback, students struggling with coursework, students coming into class riled up, and too much sitting down in the school day) and how the implementation of the ABC for Fitness intervention program was essential in alleviating those barriers. Students viewed the activity bursts as instant rewards which provided immediate feedback. The activity bursts helped students focus and provide break from challenging coursework. Students were able to bond and come back together as a team after coming into class riled up from recess. Lastly, the activity bursts provided the opportunity for students to get the wiggles out after sitting down for long periods of time. These findings support the underlying theories of motivation, as determined through Self-Determination Theory, and student engagement discussed in the review of literature.
Research Question 2: What information, if any, will surveys and interviews of teacher perceptions provide on student engagement?

Data collected from surveys and interviews, as well as the written behavior incident logs, generated insights into the impacts of the ABC for Fitness intervention program on student engagement as previously discussed for Research Question 1. Positive changes in rate of engagement were indicated for several students in the pre and post surveys. The intervention teachers' felt more confident in their ratings of student engagement on surveys and daily written behavior logs following the ABC for Fitness intervention program. Intervention teachers noticed cues from students (eyes glazing over, checking out, frustration, and boredom) and paid more attention to the written behavior logs to identify patterns.

Intervention teacher interviews provided unexpected data with regards to changes in teacher attitudes toward students. The intervention teachers explained how the ABC for Fitness intervention program deepened teacher-to-student and student-to-student connections improving the overall atmosphere in the classroom. The combination of a question and answer session following the ABC for Fitness workshop was expressed, by both intervention teachers, as a benefit. Additionally, the mid-point check-in provided follow-up for intervention teachers and was described in a number of positive ways including “supportive”; “helpful”; “helped me practice”; and, “helped answer questions that came up after the workshop” (Personal communication, June 2014). When taken together, the
question and answer session, mid-point check-in, and post interviews, gave a voice to the intervention teachers. Recommendations for future research, researcher observations, and conclusions are discussed in the next section.
CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

Overview

As discussed in the literature review, physical activity is linked to an increase in student engagement (Mahar, Murphy, et al., 2006; Trudeau & Shephard, 208). This process occurs through improved circulation, improved blood flow to the brain, and increased levels of norepinephrine and endorphins (Taras, 2005). It is proposed that these physiological adaptations to physical activity reduce negative impacts of stress, improve overall mood, and potentially lead to improvements in positive academic outcomes such as increased levels of student engagement (Taras, 2005).

This study focused on teacher perceptions of student engagement prior to and post a three week implementation of the ABC for Fitness classroom-based physical activity program at an elementary school in an exploratory case study format using the four component model of student engagement (Reschley & Christenson, 2006). The data collection and analysis processes were driven by two questions. The first question addressed the potential impacts of a classroom based physical activity program on student engagement. The second question addressed the efficacy of surveys and interviews on providing information of teacher perceptions of student engagement.

When the results were aggregated, data from the pre and post surveys, daily written behavior incident logs, and qualitative data from the question and
answer session, mid-point check-in, and post interviews identified a change in teacher perceptions of student engagement. The intervention teachers discussed how increasing levels of connectedness and bonding was one of the ways students demonstrated engagement. This finding is consistent with previous research. Connell and Wellborn (1991) described the importance of an individual's connection to their social setting in improving levels of relatedness and belonging. Self-Determination Theorists, Ryan and Deci (2000), explained relatedness and belonging are base needs embedded in human nature and are important motivators of behavior. Feeling connected in an authentic context is an indicator for higher levels of behavioral and emotional engagement (Furrer & Skinner, 2003). This study supported these concepts as both intervention teachers reported improvement in their ratings of student attitudes, behaviors, and feelings about school over the three week implementation of the ABC for Fitness intervention program. In several cases students initially identified as ‘at-risk’ at post rating demonstrated the greatest improvement. Though not all students were rated as demonstrating change in levels of engagement, no students were rated as demonstrating a regression or negative impacts on levels of engagement.

Additionally, both intervention teachers described a change in their attitudes towards students during the three week implementation of the ABC for Fitness intervention program. This was captured by Intervention Teacher 1, "Being able to see them happy and excited, that’s something you start to see as
a positive and you look for those positives and how to make those positives happen more often. So it absolutely does change you” (Personal communication, June 2014). Intervention Teacher 2 said, “I think we have a pretty close-knit class now” (Personal communication, June 2014). It is likely the improved change in attitudes toward students was a response to the increase in excitement and anticipation of the students that usually are not engaged in school. The change the intervention teachers underwent indicates the ABC for Fitness intervention program was able to reshape their perceptions of student levels of engagement. Furthermore, the intervention teachers expressed how students were able to pick up on their positive feelings towards them and reciprocated the caring and connected attitude. Although not addressed in the literature review, it appears that teacher perceptions of the level of student engagement is a critical piece to improving the collective atmosphere in the classroom (Klem & Connell, 2004; Skinner, et al., 2012).

Creating a positive classroom atmosphere is especially important given the focus in public schools on standardized testing and the subsequent reduction of physical activity. Intervention Teacher 2 described how the testing culture has created a more rigid environment that could be addressed through regular movement, “I think we do need to have more movement in the classroom. With all these new things coming down after No Child Left Behind, everything’s become more structured so that freedom and flexibility that used to be there is gone” (Personal communication, June 2014). Schools have the opportunity to
work towards creating an environment in which children engage in regular physical activity without detracting from the core subjects outlined in NCLB (Story, Nanney, & Shwartz, 2009).

As the intervention teachers demonstrated, the implementation of the ABC for Fitness intervention program helped reshape their perceptions of student engagement and improved the collective classroom atmosphere. Furthermore, the existing literature has found classroom-based physical activity promotes learning and improves various indicators such as memory, attention, mood, on-task behavior, and concentration (Ahamed & McKay, 2007; Lowden, Powney, Davidson, & James, 2001; Uhrich & Swalm, 2007). At the same time, taking time away from physical activity and adding it to other subjects has not been shown to improve achievement in those areas (Story, Nanney, & Schwartz, 2009; Trudeau & Shephard, 2008). While a complete return to local freedom and flexibility in a teacher’s classroom is improbable, it is the hope of the researcher that an addition of a program such as ABC for Fitness could potentially help teachers loosen the reins on some of that rigidity. Considering the cost-effectiveness and ease of implementing the ABC for Fitness program, its use in primary public schools could be pivotal in reshaping student engagement and teacher perceptions of student engagement in the classroom.

Beyond identifying intervention teachers’ ratings of improving levels of student engagement in their classrooms and the strengthening of teacher-to-student relationships, the data pointed to a surprising impact of the ABC for
Fitness program on the intervention teachers’ level of engagement as it was not addressed in prior research. Both intervention teachers expressed a personal benefit of the ABC for Fitness intervention program because it allowed them to take breaks. Taking breaks regularly throughout the day improved their own frustration levels and helped them refocus on teaching. Intervention Teacher 1 shared the following story:

Before the training I would stop the students and say, it’s not our PE time but we need to do something because I can’t talk about this anymore. I can’t keep focusing on this because I’m bored or I’m frustrated. I’ve explained it, you know, 60 different ways and you’re still not getting it so I need to stop and think about something else and then think about how I can come at it a different way so that it does make sense. But it’s not working so I’m not going to sit here and be frustrated. So for me, personally, it’s a good program (Personal communication, June 2014).

Intervention Teacher 2 corroborated the need for teachers to be able to take breaks. She described how participating in the ABC for Fitness activities helped her when she was restless by stating:

For us too, we need breaks. Because when we sit in training programs we get restless and start using lots of bathroom breaks but we don’t want the kids to take bathroom breaks so it was good. I think it was a good reminder that everybody needs a little bit of movement to relax, to refocus
again, and get all the little wiggles out. Even us (Personal communication, June 2014).

It is important to remember that not only do students need breaks from coursework, need to let out the “wiggles”, and need to “decompress”, but teachers need the same things in order for everyone to “get back on the same page” as both intervention teachers expressed (Personal communication, June 2014). This study demonstrated the ABC for Fitness program was effective in identifying intervention teachers’ ratings of improving levels of student engagement in their classrooms, was effective in strengthening teacher-to-student relationships, and was effective in improving teachers’ levels of engagement in their classrooms. Teacher perceptions, rather than student perceptions, were found to be accurate measures of student engagement in the previous literature (Klem & Connell, 2001; Skinner, et al., 2012). The present study supported this finding as the researcher was confident the teachers supplied honest, reliable answers providing accurate measures of student engagement. The collection of rich qualitative data from the combination of the question and answer session, mid-point check-in, and post interviews gave a strong voice to the intervention teachers and helped build their confidence. Both intervention teachers, through self-reflection and insight, explained confidence in their ratings of student engagement following the ABC for Fitness intervention program.
The present study confirmed the theoretical framework of student engagement and motivation namely the four component model of engagement and Self-Determination Theory. Following the ABC for Fitness intervention program, teachers’ ratings of student engagement increased, particularly in the psychological and behavioral domains. Intervention teachers described the ABC for Fitness intervention program as an external motivator for students which led to the development of intrinsic motivation, consistent with previous research (Connell & Wellborn; Ryan & Deci, 2001; Skinner, et al., 2004). Beyond student motivation and engagement, teachers’ level of motivation and engagement was impacted. Originally, intervention teachers were extrinsically motivated to implement the ABC for Fitness intervention program in order to alleviate student behavioral problems. Similarly to their students, intervention teachers experienced a change from extrinsic motivation to intrinsic motivation and an overall increase in engagement.

Recommendations

Structured physical education programs have been reduced from elementary schools despite evidence pointing to an array of benefits for children (Basch, 2011). Most of a child’s physical education training is provided by their elementary school teacher (Lee, Burgeson, Fulton, & Spain, 2007). It is not uncommon for an elementary school teacher, who is not uniquely trained as a physical educator, to feel overwhelmed and unqualified to teach PE as both intervention teachers corroborated. However, with educational focuses on
standards for testing and academic achievement, it is critical to remember that students and teachers can benefit from the incorporation of movement and regular physical activity.

Future research may approach the study design differently. For instance, there could be an added benefit to conducting a longitudinal study of a classroom-based physical activity program on academic achievement. The demonstration of the ABC for Fitness program on student engagement levels in the span of three weeks warrants further look into its long term effectiveness. Especially for students most at-risk of disengagement as they potentially have to travel a greater distance to catch up academically. Besides teacher perceptions of student engagement, student ratings of their engagement could be incorporated to see if changes mirror teacher ratings. Students could also rate their teacher’s engagement to see if those ratings change over time. With so much of the public educational discussion revolving around student success, a detailed look into a classroom-based physical activity program, like that of the ABC for Fitness program, on student success measures would be a cost-effective option for further research.

The use of the daily written behavior incident logs is a common practice in schools using the PBIS system. The intervention teachers’ newfound attention to the daily written behavior logs was instrumental in the identification of student behavioral and engagement patterns. If the school site in this study is an indicator of practices at other school sites, the daily written behavior incidence
logs are not being evaluated. To help teachers identify student behavioral and engagement patterns, it is suggested for educational leaders and classroom teachers to evaluate the daily written behavior incident logs. Evaluation should be completed on a daily or weekly basis to allow for real time changes and implementation.

Educational leaders should work to promote policy changes requiring more physical activity in school including recess, Physical Education, and classroom-based physical activity. To this end, taking away a student’s recess or PE time should not be allowed as punishment for behavior. Additionally, A classroom-based physical activity program, such as ABC for Fitness, is easy to implement and a viable option to increase movement, student engagement, and potentially improve academic achievement.

Limitations

Although the study identified improvement in ratings of teacher perceptions of student engagement, limitations did exist. The three week duration of the study was one limitation. It is possible that the three week duration of the intervention was not enough time for identifying all engagement and behavior trends in the classroom setting. Additionally, the three week duration of the intervention was a short amount of time for change to occur. There is no way of knowing if the changes as a result of the implementation of the ABC for Fitness program are permanent, if the changes can be sustained over the long term, or if
the changes can remain if the ABC for Fitness program is withdrawn from the
curriculum.

Another limitation of the study is adequate training for teacher
implementation of the ABC for Fitness program. Though both intervention
teachers expressed how easy the ABC for Fitness program was to implement in
the classroom, they also shared that they believed they would have benefitted
from more hands on practice of specific activities before implementing in their
classrooms. This was demonstrated by Intervention Teacher 1 who stated, “The
only thing that would help is maybe to do more of the activities in the actual
workshop. That type of thing so you see how easy it is to put that lesson into
instruction” (Personal communication, June 2014). There could potentially be
higher levels of student engagement across more students if teachers felt they
were adequately trained, or with the addition of follow-up booster sessions, on
each activity burst prior to implementation in the classroom. This could be
accomplished with a longer workshop prior to the implementation of the ABC for
Fitness program such as a three day workshop rather than the one day workshop
used in this study. Follow-up booster sessions could be added within the first few
weeks of implementation for further hands on practice.

Another limitation of the study is that correlation is not causation. Study
findings indicate a correlation between the implementation of the ABC for Fitness
classroom-based physical activity program and improvements in teachers’
ratings of student engagement. Other variables might factor into the study
results. For instance, teachers might have improved their ability to gauge student engagement and were able to fill out the student engagement surveys better. Finally, the case study design poses various limitations, as well as strengths. Limitations of the case study design include the small sample size (two intervention teachers and two comparison teachers) and the lack of generalizability. However, the case study design allowed for rich contextual narrative and qualitative data. Intervention teacher interviews provided a wealth of data which, when triangulated with Teacher Assessment of Engagement surveys and daily written behavior logs, validated the holistic, multi-method assessment used in the present study.

Conclusion

The ABC for Fitness program contributed to teachers’ ratings of increased levels of student engagement for many students. As found in previous research, elementary school is a critical time for children to grow, learn, and engage in coursework (Finn, 1989). Engaging in coursework is essential for sustained progression and many students become disengaged when faced with challenges (Finn, 1989). Intervention Teacher 2 emphasized that,

How you switch from one subject to the other or to recess or to something else are really important times. Adding this program allows movement. It gets all that little restless energy out of them. Sometimes we just change things over automatically and just assume that the kid is ready to switch over (Personal communication, June 2014).
Providing the opportunity for brain breaks and movement breaks during those critical transitions can help refocus students and alleviate potential pit falls and break downs.

Unfortunately, many students remain physically inactive during the school day. Schools need to be aware of the benefits of regular movement beyond the physical components including affective, psychological, and cognitive benefits. Existing literature points to increases in on task behavior, participation, academic achievement, concentration, and reductions in disruptive behavior when children are exposed to regular physical activity (Mahar, et al., 2006).

While not part of the original research focus of this study, the intervention teachers suggested participation in the activity bursts improved their levels of engagement in the classroom as well. The intervention teachers described a need to take breaks from teaching and the coursework when it was becoming boring for them or they were frustrated with students not understanding the material. Both intervention teachers believed the ABC for Fitness program was a “compliment to their existing classroom structures” and was described as a “lifesaver” by Intervention Teacher 2 and a “godsend” by Intervention Teacher 1 (Personal communication, June 2014).

Throughout this study, both intervention teachers discussed the increasing connectedness and positive feelings gained between both teacher and student. Intervention Teacher 2 noted that,
After we started doing this and my attitude started changing towards some of the kids, their attitude started changing. I started getting love notes from those kids that I don’t usually. They would say you’re my favorite teacher. I love this class so much (Personal communication, June 2014).

Children are often described as “sponges”. Soaking up all the information around them. A classroom is a unique setting in which children are soaking up both positive and negative cues from their surroundings.

The ABC for Fitness program demonstrated that a simple, cost-effective classroom-based physical activity program could potentially shift the balance towards more positive environmental cues resulting in increased levels of student engagement. Self-Determination Theory describes those positive environmental cues as extrinsic motivators (Ryan & Deci, 2000). Participation in a group physical activity program increases extrinsic motivation through integrated regulation which leads to improvements in student engagement, as discussed in the review of literature (Ryan & Deci, 2000). This could be life changing for students and teachers alike. It is highly recommended that schools incorporate classroom-based physical activity programs into the regular school day.

Teachers in this study have demonstrated the ability to lead students in the activity bursts, to gauge student engagement, and adapt their class schedules according to the needs of their students in order to alleviate specific factors identified in the impediment to engagement including inadequate teacher-to-
student feedback, students struggling with coursework, students coming into class riled up, and too much sitting down during the school day.

In order to benefit our youth, attention needs to be directed to creating and fostering positive and constructive classroom environments in which all children have the potential to thrive. Teacher-to-student relationships are key to creating this type of environment and can be achieved through an addition of a classroom-based physical activity program such as the ABC for Fitness program.
APPENDIX B

WRITTEN BEHAVIOR INCIDENT LOG
# Student ID | Green | Yellow | Red | A- antecedents | B- behavior | C- consequences
---|---|---|---|---|---|---
1 | | | | | | |
2 | | | | | | |
3 | | | | | | |
4 | | | | | | |
APPENDIX C

INTERVIEW TOPIC GUIDE AND QUESTIONS
Teacher Interview Topic Guide and Questions

Views on the ABC for Fitness Workshop and training materials
1. How did the training you receive in the ABC for Fitness Workshop prepare you for its 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?

General opinions towards the ABC for Fitness program intervention
3. What is your understanding of the purpose of the ABC for Fitness program?
4. What are your thoughts on the effectiveness of the ABC for Fitness program in meeting its stated goals?

Perceived impact of the ABC for Fitness program intervention and possible improvements
5. Describe how students’ responded to the intervention.
6. Describe any changes in students’ level of engagement in the classroom.

Impact of the study on participating teachers
7. What difficulties did you encounter when implementing the intervention?
8. How did your ability to gauge student engagement change over time?
9. Explain any changes in your own attitudes and feelings towards students.

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

TEACHER INFORMED CONSENT WITH IRB APPROVAL LETTER
June 10, 2015

Ms. Courtney Doucett
Department of Educational Leadership
Eve. Dr. Maria Mahoney
College of Education - Administration
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

Dear Ms. Doucett:

Your application to use human subjects, titled “The Impact of a Classroom-Based Physical Activity Program on Teachers’ Perceptions of Student Engagement” has been reviewed and approved by the Institutional Review Board (IRB). The attached informed consent document has been stamped and signed by the IRB chairperson. All subsequent copies used must be this officially approved version. A change in your informed consent (no matter how minor the change) requires resubmission of your protocol as amended. Your application is approved for one year from June 17, 2015 through June 16, 2016. One month prior to the approval end date you need to file for a renewal if you have not completed your research. See additional requirements (items 1 – 4) of your approval below.

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, 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:
3. To apply for renewal and continuing review of your protocol one month prior to the protocol 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 benefits of the proposal related to potential risk and benefit. This approval notice does not replace any institutional or departmental approvals which may be required.

If you have any questions regarding the IRB decision, please contact Michael Gillingham, the IRB Compliance Officer. Mr. Gillingham can be reached by phone at (909) 537-7538, by fax at (909) 537-7038, or by email at mcgillingham@csusb.edu. Please include your application number and identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely,

Judy Sylva
Judy Sylva, Ph.D., Chair
Institutional Review Board

312-537-7538 • Fax: 909-537-7038 • http://irb.csusb.edu
5500 University Parkway, San Bernardino, CA 92407-2301

The California State University is committed to the highest standards of excellence and integrity in the conduct of research. The Institutional Review Board is responsible for the protection of human subjects in research. The IRB ensures that institutional policies and federal regulations are followed.
TEACHER INFORMED CONSENT

The study in which you are being asked to participate is designed to investigate how teacher's perceptions of student engagement and student behavior change over time with the implementation of the ABC for Fitness classroom-based physical activity program. This study is being conducted by Courtney Dousett, an Ed.D candidate, under the supervision of Marita Mahoney, Ph.D., Director of Assessment and Research from the College of Education at California State University, San Bernardino. This study has been approved by the Institutional Review Board, California State University, San Bernardino.

PURPOSE: Children do better in school when they are engaged. Incorporating physical activity breaks into the classroom has been shown in the existing literature to be a useful tool to improve student engagement and student behavior. The purpose of this study will be to assess how teacher's perceptions change over time with the implementation of the ABC for Fitness classroom-based physical activity program. Specifically, this study will look at what changes, if any, occur in student engagement and student behavior at an elementary school level.

DESCRIPTION: This study will examine teacher's perceptions of student engagement and student behavior prior to and following the implementation of the ABC for Fitness program in their respective classrooms using a case study design. The researcher will collect student engagement data from the teachers implementing the ABC for Fitness program only using online pre and post questionnaires, semi-structured interviews, a mid-point check in, and Q & A from the ABC for Fitness Workshop. The researcher will collect student behavior data from both the ABC for Fitness intervention teachers and the comparison teachers using written behavior incident logs.

PARTICIPATION: You have been asked to participate in this research study between the dates of June and July 2015. For the ABC for Fitness intervention teachers, the manner of your participation will include the following: AEC for Fitness Workshop, pre and post questionnaires, implementation of the ABC for Fitness program with written logs, a mid-point check in, and an interview. You can decide to not answer all or parts questionnaires associated with this 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. For the comparison teachers, the manner of your participation will include the following: written behavior incident logs.

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 researcher. Audio recordings and digital data will be stored on

909-537-5600, fax: 909-537-7031
5500 University Parkway, San Bernardino, California 92407-2391

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researcher's password protected computer. Written information collected will be stored in
a locked filing cabinet in researcher's home office. All information will be stored until
Spring 2022. At that time, all information associated with the present study will be
destroyed.

DURATION: The entire duration of the study will take place over a six week period
beginning June 2015 and ending July 2015. The ABC for Fitness Intervention will last
three weeks. The ABC for Fitness Workshop will last three hours, the pre and post
cuestionnaires will take between 15 and 20 minutes, and the mid-point check in and the
interview will take approximately 45 minutes each.

RISKS: There are no foreseeable risks involved in participating in this research beyond
those experienced in everyday life. Activities will be conducted throughout the normal
school day. None of the structured activities will be outside the realm of what students
would do in a physical education class. All activity bursts will be within normal intensities
and will not include any strenuous activities.

BENEFITS: As a participant in this research study, the researcher believes that the
information produced will improve the quality of instruction and types of services it
provides for participating children.

AUDIO: To ensure accurate data collection for subsequent review, it is planned that all
interviews be audiotape recorded. Should you object to the audiotape recording of your
interview, then it will not be recorded and hand note taking will be used to record your
responses. I understand that this research will be audio recorded Initials ______

CONTACT: If you have questions or concerns about this study, please contact:

Courtney Dussett, Researcher
(909) 547-5578, email: cdussett@collegeoffhoddesd.edu

Maria Mahoney, Ph.D., Faculty Advisor, California State University, San Bernardino
(909) 537-3021, email: mmahoney@csusb.edu

RESULTS: The results of the study can be obtained through ScholarWorks at:
scholarworks.lib.csusb.edu.

CONFIRMATION STATEMENT:

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

SIGNATURE:

Name of Teacher (Please print): ____________________________

Signature: ____________________________ Date: ___________
APPENDIX E

SCHOOL SITE LETTER OF SUPPORT
SCHOOL PERMISSION TO CONDUCT RESEARCH

April 28, 2015

To the California State University, San Bernardino IRB:

The purpose of this letter is to inform you that I give Courtney Drussell permission to conduct the research titled *The Impact of a Classroom-Based Physical Activity Program on Teacher's Perceptions of Student Engagement at Cabazon Elementary School*. As the principal of Cabazon Elementary, I am aware of the research procedures for the study. My permission is contingent upon IRB approval.

Sincerely,

[Signature]

Johnny Baker
Principal
ibbaker@banning.k12.ca.us
R = Researcher
T1 = Teacher 1
T2 = Teacher 2

R: since we have now completed the ABC for Fitness training we'll start off with any questions you have of me or clarifications of anything we covered

T1: you mentioned the startling obesity trends which we have all heard about, do you think this program will help reverse some of that?

R: This program has had one study done on it that I know of and it looked specifically at improving levels of physical activity. The study showed that students receiving the intervention increased overall levels to optimum levels. They used pedometers to track those improvements. Is that enough to reverse obesity trends? I think the issue is much bigger than just physical activity levels. Nutrition and environment also play huge roles in those outcomes.

T1: but it definitely can’t hurt?

R: Right, of course.

T2: I do find that my kids are more attentive after recess, but we just don’t get enough active time and I find it’s more and more difficult to squeeze it in when we have to focus so much on tests. How is this program going to impact schooling?

R: good question. The researchers I already mentioned found that this program actually reduced overall instruction time which freed up time for academics. I know…I can see your faces, but think about it. How long does it take you each day to calm kids down and get them ready for work?

T2: You’re right. Especially at transitional periods. It always takes time…or it takes a while in the morning when they get there to…and after, uh, recess it’s
almost worse right after. I mean they love it and eventually it’s better but it takes time to get them to refocus.

R: Exactly

T1: So when do you think a good time to do these activities would be?

R: Well, based off of what you just said, I think transition periods are good. It’s based on you and your situation, but based off of what you said it sounds like first thing in the morning and maybe right after recess or lunch might be good.

T2: I would also think it would be good to do when they’re having a hard time with something. Sometimes I feel like the kids need a break and I would like to try this in those times.

R: Absolutely, I think that would be smart.

T2: So I’m looking at the manual and these look pretty simple, like I can do them too.

R: Absolutely, some of them are more difficult than others and that’s the point. Only you will know what level your students are at and it might take a little playing around to see which activities they like more than others. You can always adjust the level of difficulty as you go too.

T1: okay, I like that.

R: what do you think about your ability to gauge student behavior and engagement as you are conducting these activities and throughout the school day?

T1: no problem, we do it anyway.

T2: yeah, I don’t think I have any issues with that. If I have any questions I can just text you right?

R: of course, whatever you need.

T2: I’m thinking I might sit down with my kids right in the beginning with the book so they can pick some of the things that look the coolest to them. What do you think?
R: I like that idea, it would give them some choice in the matter and probably help them get into the idea more
T1: yeah, I’d like to do that too
T2: What about making up a calendar?
R: you mean with activities already planned out ahead of time?
T2: yeah, I like to make up a calendar so the kids are prepared, it helps.
T1: I’m not that prepared…haha…I just wing it.
R: Hahaha…I like the idea. Really, anything that will help them buy into the activities will strengthen the comfort level, the participation…keep in mind that if a student isn’t comfortable with anything they can always opt out. It should always be their choice. That’s an important piece of the study.
T1: I get it, of course
T2: yeah
T1: I really like the dancing…I’ve been wanting to get some music and do dancing, especially when we do cultural awareness, I think the kids would respond well to that
R: Definitely, adding music is a great way to add fun, you can even ask the students if there are cultural specific music they would like to bring to class or share.
T1: that’s a good idea.
T2: these are things we should be doing anyway, you know we are required to do p.e. but most of the teachers don’t do it, we are some of the few who do and it bothers me, these kids need to get outside and the heat is not a good excuse.
T1: but that’s what they say.
T2: oh, I know. We hear it all the time. Geez, do something else then. Do something in the classroom like this.
T1: I wonder how many of them will actually do this in their classroom.
T2: I can already tell you. Not one of them. Maybe, [name removed]. But I’d be surprised if anyone else did.
R: well, hopefully the others will realize how easy it is and will be able to see your successes. This is something that isn’t comfortable for some and that’s okay. It’s also really difficult to look past tests, that’s a lot of pressure.

T2: it is, don’t get me wrong. I just wish they’d realize how much physical activity has to do with good grades.

R: no, I know. It’s also about changing the culture. That takes time.

T1: Do you want us to leave the forms at the front desk?

R: that would be perfect, I’ll come pick them up on Fridays and leave new ones for you in your boxes for the next week. Do you still want to meet in 2 weeks on Wednesday?

T1 & T2: yes

R: so you guys have had a lot of good questions, do you have anything else for me?

T1: no, I think I have it for now. Who knows once I get started.

T2: yeah, I think I will know more later, but for now I feel like we’ve covered everything. These manuals are great. I think I’ll just keep it with me on my desk to refer to. I like the way it breaks everything down step by step. It’s like a activity book for dummies.

T1: I know, it’s cool.

R: Alright, thank you for your time and we will meet again for the mid-point check in not next week, but the following Wednesday. If you need anything else in the meantime, I am available to answer questions either by phone, email, or in person so don’t hesitate to contact me. Okay.

T1: great, thanks.

T2: yeah, thanks.
Mid-Point Check-In Transcripts

R: Researcher  
T1: Teacher 1  
T2: Teacher 2

R: Alright let’s get started. So you both have been implementing the ABC for Fitness Program in your respective classrooms for a little over a week now, after you completed the teacher training and we had our initial Q&A. How are things going so far?

T2: I have to say that the students have been really responsive so far. In fact, there has been a level of excitement that I haven’t seen.

R: and what exactly have you seen that gives you the impression they are excited?

T2: well…I sat down with the class right away and had the students look at the manual with me. I had them point out what looked most interesting and fun to them and then we selected several activities together. We also took time developing the weekly schedule together so they were able to know ahead of time when the activities would fit in with our other work during the day. I noticed right away that they enjoyed being part of the decision-making process and I also noticed that there is a certain level of anticipation when the activities are coming up. They check themselves.

R: what do you mean?

T2: if one kid is acting up, other kids will say something like hey, be quiet or stop or we won’t be able to do the activity. I love that!

T1: I’ve seen similar things. I didn’t have the kids plan out a schedule because I’m not that organized, but I do have them decide on the activity after giving them a few options. You know, I really notice that they need it after recess. Which seems funny because you’d think they would be ready to go after recess
but most of them just sit around and do nothing, then they come in the class all riled up. I have been adding an activity to calm them down as soon as they get back to class and it works!

R: great, what other times have you found effective?

T2: I haven’t been doing the recess thing, I should try that, but I notice that the activities make good transitions when I’m switching subjects. I have been doing some of the academic stuff into the activities like especially for math. That one has been really helpful.

T1: I’ve done that and also I’ve done some just spur of the moment. You know…when the kids are just stuck on a problem and they aren’t getting it…I had this problem last week. They weren’t understanding the material and I was pounding my head going crazy, you know. I had this little light go off in my head and I thought…we need to stop this and try something else so we did an impromptu activity. Then I picked back up where we left off and they got it! I couldn’t believe it but it was what they needed…you know we all need a little break from time to time. I guess it makes sense. Shoot…I needed a break too!

T2: I’ve had those times too. Sometimes you need to switch gears and then come back to the material. It works well.

R: It sounds really positive so far. Have you had any students that have not wanted to participate or seem disinterested?

T1: you know…the very first exercise we did I had one girl say she didn’t want to do it so she just stayed at her desk. But what was funny was that she has participated ever since that first one and no one else has opted out. I really think she was testing the waters. It was right after I had let them know that they didn’t have to do any of the exercises if they didn’t want to and I really think she was testing to see if that was true. It was so funny.

R: what about you?
T2: no, I haven’t had any students not want to participate. In fact, I’ve been doing everything with them and they love it. They think it is so funny that I do it too. They love to laugh, but they love it. It’s good for them.

R: to see you participate?
T2: yeah, they need to see that I can do it too. I think it makes the atmosphere charged, you know?
R: I think I do. I love that.
R: Is there anything you’ve had problems with or difficulties?
T1: yes, I had a specific question about this particular activity I tried to do. I didn’t understand the cadence. There’s a singing bit, like a military thing I think but I couldn’t get it right so I wanted to see if you could help me?

R: Absolutely. This one goes like this [sings the song]
T1: Aaah. Okay, now it seems so easy.
R: Any other issues?
T1: what about this one? Can you show me how you would do it?
R: definitely, let’s practice a few of them now so you get it down.
[practice 3 activities, switching leaders and followers each time]
R: okay, so let’s return to any other issues.

T2: You know, I haven’t had any. The first few times it took a little getting used to the pacing and timing. Once you do it a few times though it starts to become familiar, easier.

T1: yeah, I had the same issue. I even forgot one day to do anything in the morning so I’ve been setting an alarm so I don’t forget. I ended up doing an extra long one in the afternoon to make up but it was good. The kids didn’t mind…who am I kidding? I didn’t mind.

R: Anything else?
T1: no, I think that’s it.
T2: I’m good, thanks for coming in, this was helpful.
T1: Yeah, I appreciate you taking the time to answer questions, it helps a lot.
R: your welcome, contact me anytime. And if you don’t have anything else than I will be back in to pick up forms on Friday
R: How did the training you receive in the ABC for Fitness Workshop and the manual help prepare you for implementation in the classroom?

T1: I think that it for me at least that it was a new concept, that it was to the point so I didn't feel overwhelmed with the information I was presented. I thought it was really clear and concise and seemed like something that I could easily implement as opposed to like a lot of the things we get. Where I'm like, “Now how am I supposed to fit this in to the rest of the day.” The way that you explained it and the way that the information was structured seemed like I could easily fit this in. Try it out and see if this works or doesn’t work for me in the course of the day. So for me, I thought that with the way that I understand things, there was enough concise explanation and enough of the actual physical stuff that we did together for me to see exactly how it was going to manifest itself in the classroom.

R: would you like to see any changes?

T1: with the workshop, the only thing that would help is maybe to do more the activities in the actual workshop. Just so you know, the one that we did was really fun, had that been like part of it the whole time and afterward we would have been like, oh, and we would have seen exactly how easy it is. Look how easy it is to just add this in here. Even if it's just the typical workshop thing where they have you get up and move to different seats or they number you off. That type of thing so you see how easy it is to put that lesson into instruction. It was a good presentation in my opinion, but I think that would also help it cause I think there’s more to it than just...because we are going to do this, this is the only
physical activity that’s going to happen. Otherwise, I thought it was done really well.

R: What about the manual?
   T1: I thought the manual was great. It was very easy to find things I was looking for and it actually did…the students and I looked together so that we were able to go in and say, these are things we would like to do, can we do this, so I think making them a part of it and having them help structure the day with which activities they wanted to do, not only kept them focused but kept them excited about, oh is there going to be time for us to do the activity and things like that. I found that just with teaching period, the more students have a say in what we’re doing, even if it’s just them saying we want to do math first today, we want to do language arts today, when they know what’s coming, which is why I always have an agenda, then they are able to plan ahead, nothing is a surprise. So they’re not…so they don’t get anxious about what’s coming because they can look at the agenda and go, “oh, I know what the assignment is”. And the more buy in that they have to the activities, the harder they’re going to try to be successful so letting them choose which physical activities we’re going to do first, letting them choose what order we do our instruction in makes it easier.

R: What is your understanding of the purpose for the ABC for Fitness program?
   T1: I think, from what I understood, the purpose is to complement the existing structures in the classroom, it’s just to help things run more smoothly throughout the course of the day. We’re not getting bored, the kids aren’t getting bored. It helps everybody’s focus to do something and then what I noticed in doing it is that it just kept bringing them back to focus. So as they start to get tired, as they start to get you know…I could see their eyes are getting glazed over. We did the physical activity, everybody was unfocused, everyone had a different focus because we did the activity and then after that everyone was back
on the same page. So the way I see it is it’s just a complement to what you already have going on in the classroom. It’s something that helps keep things on the path that they’re supposed to go. That’s what I saw it as. A Complement to existing curriculum and instruction.

R: What are your thoughts on the effectiveness of the intervention in meeting its purpose?

T1: I wish that I had it all year just because of the end of the year and the beginning of the year the kids are squirrely as all get out. They don’t need a reason to be off task in la-la land and having something like this in the beginning of the year helps to facilitate what we always do. Instead of me losing my mind having to redirect, I say it’s time for me to do something physical and then get everybody back on the same page. It’s a life saver because we still have instruction to give. Not only that it’s something…even though it’s such short bursts of activity, it’s something they really look forward to. I know that my class we went outside enough that if we could do a day that’s nothing but PE, that’s what they would do. They would love something like that, go out and play, go out and do drills…whatever. For that to be interspersed throughout the day, I think it helped them with their day. It helps with the monotony of sitting down and doing math or doing language arts or doing history or that type of thing.

R: Describe how students responded to the intervention.

T1: With certain students they have to have…it’s not a constant. You can’t say, on Friday I’m going to write you a good note home it has to be every time they do something you have to acknowledge and praise or acknowledge and reward. They don’t function on it will come later, they’re just not…that’s not their personality type…it’ll come later. No, they’ll just go back to whatever it is you didn’t want me to do because I didn’t get any feedback. For students like that, for that particular student, the fact that he knew looking at the agenda we had that coming and that was going to be a fun thing and that was going to be something he was going to excel at meant that he was
able to function and focus for longer stretches of time because he knew that was coming. Right there on the agenda, as soon as we’re done with this we’re getting that reward. And that’s what they saw it as…those super squirrely kids…they saw those bursts of activity as this is our reward, this is our fun that we get to do in the middle of the day. Our 3 minutes of PE our 5 minutes of PE that’s interspersed with regular periods of instruction. Because they looked at it as a reward, that also helped with the function of the flow of the day. Because I didn’t have to keep reminding them, I didn’t have to give them 90% of my attention to make sure they kept feeling like they were getting that instant gratification. I was able to go there it is on our agenda and they knew that it was coming. None of the instructional changes I made alleviated improper behavior completely, but at the same time, having that in the day made it so much easier to get through the day without, at the end of the day, both of us feeling exhausted and tired and disappointed. So it definitely helped with those students, because there’s one that is the most difficult case but I have other students. Especially those students that have ADD and ADHD it was a godsend for them to know that this was coming up. I think that they’re able to not self-monitor but self-regulate better because they knew there was something coming up, you know where they could get some of that out without overwhelming them. Oh my god, I have an hour and a half until recess, what am I going to do? It’s like, no I have 5 more minutes to get through and then it’s going to be something where I can be a little bit crazy, I can be physical, I can be out of my seat, I can be a little loud, you know something like that. I would say for those students it definitely helped.

R: Did you find they were able to refocus consistently?

T1: I found it consistently. Every now and then, I know that one of the stretches one of the kids fell over and I think it was more being silly than not being able to do it. And so everybody laughed and that kid was laughing and when we refocused on the activity 5 minutes later that kid was still laughing because he was thinking about the fall, that type of thing, so yeah, it was
consistent that they were able to refocus. Every once in a while there were times when all of us would laugh at something that had happened during that or something like that or they would reference when someone sang a song wrong or that type of thing. But it was definitely something that I would employ in my regular classroom instruction practice now after doing it because it is more helpful than a hindrance. It was much more useful for me to have that because their focus is so much more complete having the activities.

R: Did you have any students that didn’t seem to appreciate it?

T1: No, the only thing…you know ability levels are different and so you do have some students that say as soon as I do this I’m going to be proficient, as soon as I do this I’m going to be the best at it and they’re not and so they’re so disappointed because it was their first time doing it and they weren’t a complete success. I did have some of those students where we would do something and they couldn’t do it the way they wanted to do it and they would get a little discouraged for that activity but that didn’t stop their excitement and enthusiasm for a different activity and then when we would do it again they would say, I want to do it better than I did last time as opposed to say well, I don’t want to do this now so everybody was excited about the activity every time.

R: What about you. Did you encounter any difficulties implementing the program?

T1: No, but then, I…you know, I have the agenda up there not just for the students but for me as well and I do keep track…because you know, I get bored. Before the training I would stop them and say it’s not our PE time but we need to do something because I can’t talk about this anymore, I can’t keep focus on this because I’m bored or I’m frustrated because I’ve explained it you know, 60 different ways and you’re still not getting it so I need to stop and think about something else and then think about how I can come at it a different way so that it does make sense. But I need to not do this right now and because I have that type of personality I think for me personally it fit really well because with the
program they're built in throughout the course of the day for us. For me I would do that anyway, it wouldn't always be physical. Sometimes we would stop and just read or talk or listen to a song so that I could I guess switch gears in my brain so for me it definitely helped. I can't stay on something when it's not working, you know I can't say well we're going to keep doing this because we still have 25 minutes left on our reading time. But it's not working so I'm not going to sit here and be frustrated so for me personally it's a good program.

R: Did you do it too? Participate?
T1: Oh yea, absolutely. I loved it. I thought it was a lot of fun. I won't lie. It did hurt my feelings the first couple of times we did things and the kids were like, wow, we didn't think you could do this! I do most of their PE with them anyway, but um… I try different things with them anyway, yoga, Tai Chi, some of them did not work. I would do all of those things anyway, but when we started to these activities they would say I didn’t think you could do these things. I think for all of us, to just stop and do the activities, to look at them and see the fun they were having or to see their struggles because there were kids that I went around and I showed them, no you need to go around and watch, it was good for all of us.

R: Did you notice any changes in your ability to see student levels of engagement?
T1: I did especially when I first started to do it, to see is this something that is beneficial to me, am I noticing a difference with how they're doing, how their behavior is and so…I did definitely pay closer attention. Anytime we're given a new tool to use we have to do that so you know if it's worth your time. Should I keep doing this or should I shelve it until somebody says I have to or we move on to something else. That's just kind of how it goes, but yeah, I did definitely monitor them more closely to see how this program is effecting them because if it had been a situation where we did it and it took them longer to get back on task
or they were more squirrely during the day because of it then it’s not something I would use consistently because then it would have been a hindrance.

R: What about the logs. Did you see differences?
T1: The thing I liked about the logs is that it really made me think about what was happening during the course of the day because sometimes…my kids I do keep a calendar with things on them for parent teacher conferences and things like that and then I look at them right before the parent teacher conference and it isn’t something because it’s a whole calendar, it’s a whole month, I note it down but I don’t keep track and with the log being looked at week to week it was easy for me to actually think about it and when I did that…to see this is getting to be a problem or this is stopping. You know, we started doing it this way at the beginning of the week and then we had 3 good days, so that’s for me helpful to look at their behavior in the short term as opposed to over the course of a month. What happened this week that changed their behavior for the better or for the worse.

R: What about your ability to engage student engagement? Do you feel now you are better equipped to gauge their level?
T1: Yes, because it’s easier for me to tell now when they need a break. Because just because of how they would look when they knew it was coming up and before if I had paid attention to that 5 minutes before it would have alleviated some of the break downs when kids get frustrated or tired. If I had paid a little more attention things would have been different. Now I can see it and I can adjust, start the activity a few minutes earlier than planned whatever and then go back to the math or the history. Noticing the fidgetiness or looking away or the quality of their responses, kind of looking back sure I noticed them before but I didn’t necessarily equate them with they need a break, we need to switch gears. It was just, kids fidget, everybody does, big deal. Noticing those as cues where
they’re telling me I’m done, reaching saturation point that I think is something after have done the program that I’m better at. I even think that eventually it will help them academically because their frustration level comes much sooner than mine. By the time I’m frustrated with it, how long have they been sitting there not retaining anything. I don’t know. It’s horrifying to think of now, with, you know how long did they sit there out of it before we did something else where they were able to refocus afterwards. I think I can say now it’s no longer productive doing this so let’s switch gears, come back and see what happens. I’ve already noticed their ability to retain information and their excitement is improved. It’s less about what I can say to be done with it and more about what we can do to add value.

R: Explain any changes in your own attitudes toward your students.
T1: For myself and for them I think that some of the students that I look at I have said, I feel so sorry for their parents that have them all the time and I only have them for 6 ½ hours, but just seeing how happy they were and how excited they were to do these things and how they would be happy and excited to get back on task afterwards that changes personally how you feel about students. Whenever as a parent, your kids are excited to do something that’s positive, it makes you happy and makes you excited that they have found something to do that is a positive thing and it was the same kind of feeling. When they say, I feel good when I’m doing something that you feel good about that you’re excited about, that you’re happy about, instead of a ugh this kid again with the behavior. Sometimes when that is the only behavior that you see it does change your attitude about how you feel about that kid, it does change how much effort you put into that kid because all you see is a negative. Being able to see them happy and excited, that’s something you start to see as a positive and you look for those positives and how to make those positives happen more often so it absolutely does change you.
R: So how do the kids relate to that, do they pick up on it?
T1: Absolutely, I know that because with kids, especially in elementary school they write you love notes all the time. If you’re sick and you’re out and you’ve had a sub and it was horrible, you know the day you get back there’s all of these notes, please don’t ever leave us again and all of these type of things and after we started doing this and my attitude started changing towards some of those kids, their attitude started changing. I started getting love notes from those kids that I don’t usually. They would say you’re my favorite teacher, I love this class so much and those aren’t constant. Some kids do say I love you no matter who their teacher is, whether it’s a sub, not a sub, they’re just very lovey dovey when it comes to those types of things and other kids don’t. They don’t feel something, they don’t give a compliment, they don’t care. And those kids, their attitudes changed. I think they absolutely picked up on my attitude change that it was something where…this job is about giving them an education but I also do want to please them. I want them to want to come to school, I want them to like how I give the lesson and I do change things so that they can like it. It’s a partnership, it’s not a dictatorship. And I think that they saw that. I noticed that they liked it, I tried to do it more often. I tried to have it planned out sooner, I tried to modify the lessons so that we would have half of it and then we would have our break and we would finish the rest of it afterwards. They saw that. They saw I was doing that and they knew it was because I wanted them to be happy and I wanted them to be excited and they appreciated it, they let me know. With just their change in attitude, the fact that they would give me less static when it was time to get out their books or whatever, less moaning and groaning or slamming the book on top of the desk type of thing. Less complaining when I put the problems on the board we would do for the day. There was an attitude change all around for the class as a whole, for me and for them.

R: How much time do you think you spent doing that out of the day?
T1: Anywhere between 25-40 minutes per day. Some days we did more and some days we did less but on average it fell between those times. For me, that was about how often they’d need a break. We would most usually do them in between activities. So inbetween math before language arts, inbetween literacy but before history but then we’d intersperse them too like in the middle of math or the middle of language arts the days they needed it more to get through the day.

R: Did you find that it reduced instructional time?
T1: No, the reason that I don’t feel that it reduced, I can say my math class takes an hour and a half a day, 45 min of that is actual instruction, delivering instruction, going over problems, learning the steps and then the other part of that time is monitoring their practice, some of that time is redirection. That’s just how it goes. Does my lesson actually take an hour and a half? No, because 20 minutes I’m putting into redirection. To say, okay let’s get back to task. Okay, you don’t get it and I understand that but they do get it so let me explain it a different way for you. I mean all of that time you put in…the activities cut down on that redirection time. So because the activities cut down on that redirection time my day still had the same instruction time, I wasn’t losing anything or I even gained more time. Only because they knew it was coming, they were excited about doing it so they stayed focused because we’re going to get to do this as soon as we’re done with this so we’re going to get it done. All of that is them policing each other. You know…monitoring each other. Don’t get off task because we have this coming up. Don’t talk to me because I want to get finished because we have this coming up. And that’s how it needs to work because it’s a school family. When you see your brother or sister doing something you go, you don’t want to do that, you know you’re going to get in trouble, don’t do that type of thing. They were so encouraging to each other. Especially to the kids that couldn’t do something right away. Some of the kids, especially with the instruction, if they weren’t getting it right away they would help each other. We had one of the girls, she’s a
cheerleader, she says you know we do this in cheer all the time, that’s why I’m
good at you, you just need practice she says to the other girl. Let me show you
how to do it or I wasn’t good at it the first time I tried to do it but because I have to
do it all the time I do have it. They were really encouraging each other to be
successful. But I’ve noticed that with them, even in PE, somebody would run and
they wouldn’t run as fast, they wouldn’t say oh man, you’re taking forever. They
would say come on you can do it. We’d go out and play kickball and it was, you’ll
get it the next time you only got one strike and you’ve got two more tries. That
type of thing. They were really good about being nice to each other and not
discouraging and that manifested with these activities as well.

R: Is there anything else you would like to tell me with regards to your
experience?

T1: I thought that it was incredible, I thought it was amazing. I taught middle
school for 10 years and I could definitely see using something like this in middle
school too because there, even though you only have that hour class period,
again, you have that hour and 20-25 minutes of it is redirection and getting back
on task, refocusing. The activities aren’t something that necessarily require
outside space. It is something that can be done in a class, behind a desk and so
you do 5 minutes, 10 minutes, 15 minutes of that in class and you get maximum
saturation of information. That to me is more of a benefit than 30 minutes of
instruction and 20 minutes of redirection and less saturation when it comes to
using that information. It’s fun, it helps break up the day, and help it not be so
intense and serious all the time. We don’t, as an educational society, we don’t
think kids need that time as they get older. Elementary school absolutely need
that recess, they absolutely need that time in middle school, in high school and
walking between classes is not enough time. Even in high school if it was
something low key, just a stretch. You know, everybody stretch, everybody do
some deep breathing, everybody do something that helps them refocus. I think that those aren't bad habits for them to have as adults to use in college or to use at work. Even at work you just get to that point and you say, there's no more I can do and you're sitting there and wasting the whole rest of the day as opposed to knowing how to refocus yourself and go back and be productive and get more out of what you're doing.

R: So inbedding it a little more culturally?
T1: Yes, the best PE class I ever had was my freshman year, you know you don't have a choice. The PE teacher was the football coach and he said if the football players can do it you can to and we did all of the same things and I was so fit for my whole childhood, I was the most fit my freshman year. I felt good about myself, I had the energy, I was very successful academically, it just…it was an all around good thing. I think that there's a thing where it's either either or. It's not a whole thing. It's not either or. It's not just you're good at physical activity or you're just healthy or you're smart academically or successful academically, no it's an all the way around kind of thing. I think that were we to start introducing it early and getting kids moving and seeing it as a habit that it would be beneficial all around because it helps with focus.

R: Do you think you will continue doing it?
T1: Oh absolutely.

R: Do you think this is less intimidating for teachers than teaching PE?
T1: Oh yes. I am one of the few teachers that actually takes my kids out to do PE. The district had people come around and watch what we were doing with the kids when we were doing PE. I take my kids out all the time and when they came around it was very intimidating. Are they going to be grading me? Am I doing this the right way? Is that okay? There is the intimidation factor to no…my credential is K-8, but it is not PE. I took the one required course for teaching PE, but it was
just games and square dancing, but this was so much less intimidating. One, it’s in my classroom so it’s just me and the kids in here. And the fact that it’s a short amount of time so if it all goes to hell, it’s okay because it’s only 5 minutes. What you notice is, it’s a benefit so now you think you can do this more often and it definitely is way less intimidating than on, now I’ve got to teach PE. I know for a lot of teachers it’s just extra recess, go out and play and I’m going to sit here while you play. This is more structured and for me it’s just fun if we do something structured together. This is less intimidating for the people concerned with people looking at them and rating them on whether or not they’re doing it right. You’re not doing enough or this is not the way I would do it, it’s you and the kids in the comfort and safety of your classroom.

R: Do you think some teachers might feel the activities are a disruption?
T1: I think some might feel that way at first until they tried it and saw the benefit to them. Ultimately, whatever you think about a program, good or bad, if it helps you you’re going to use it. Were they to do it, even if we went in together, when I was doing this I talked to one of my friends because we taught together in middle school and I went in there and said this is awesome, this is so good when they start to get crazy and the environment is devolving into chaos, you stop and do this activity and they’re all right back on the same page. I told her about it and she’s all, really. So we discussed that and I told her I could have her come in when it’s recess or lunch and we can do it with your class and show you how fun and how easy it is to do. You would get those people to have buy in that didn’t have it before if someone came in and showed how easy it is and look at the benefit it gives. Whether they liked it or thought it was awesome or not they would do it and they would try it.
R: Researcher
T2: Teacher 2

R: How did the training you receive in the ABC for fitness workshop prepare you for the implementation in the classroom?
T2: I think you prepared me quite well because we actually did it. It was hands on and we all participated in it. We were able to talk things out and go over some ideas and it was fun so it made it seem like it was possible to do with kids.
R: Anything you would change?
T2: No, no I don’t think there would be anything I would change, I thought it went well.
R: Would you have benefitted from more practical application time?
T2: No, I think what fell short was our time with you, the Q&A because we were crunched on time because we had to leave early.
R: Were the training materials you received helpful to you?
T2: Yes, I refer to it all the time and I kept it right in the front of the classroom so I could see what activities might be the easiest at the last minute because I am not a planner. There were lots of things in there that were easy to do, quick, lots of pictures, and everything was step by step so it was really easy and it went by grade level.
R: What is your understanding for the purpose of the program?
T2: Okay, my understanding is it’s a way to get everybody, all the little wiggles and all the little distractions out of the way to get them to refocus. From teaching younger kids transitions are important, how you switch from one subject to the other or to recess or to something else are really important times. It allows movement, it gets all that little restless energy out of them. They’re jumping into 4th grade now and I notice that transitions aren’t as important…we just change things over automatically and just assume that the kid is ready to switch over so
that brought me back to the primary grades because that’s really important…for us too, because when we sit in training programs we get restless and start using lots of bathroom breaks but we don’t want the kids to take bathroom breaks so it was good. I think it was a good reminder that everybody needs a little bit of movement, to relax, to refocus again, and get all the little wiggles out.

R: So what are your thoughts on the effectiveness of meeting its goals?
T2: I think that part was effective, I think for me, the part I struggled with because of the timing we were not really on a set schedule so the flow of the class was different, but it was still really good though. When we had time periods where we were doing a lot of writing and we wanted to switch out, we did the little activities and it brought them back together and kind of wore them out a little bit so they could focus. I thought it was effective, I could see doing it throughout the year.

R: Describe how your students responded to the intervention.
T2: All of the children, I think I only had one little girl one time that did not want to participate and that was just that one time, and even for that short period of time that we did it, they were looking forward to it and they remembered the little activities. They were like let’s do this one, let’s do the song one, let’s do the soldier one, they named them and they looked forward to them and they were using the terms from the book. In the middle of the lesson sometimes they would say I think we need to do this and they would yell out, but because they wanted to because they were looking forward to it, they all got to participate, they all enjoyed it and I thought it…I notice they have a lot more problems right after recess which you would think they would be a little worn out but I think we’re coming in with all that craziness out there some of them are having fights and other things going on and so they’re bringing it into the classroom and they’re still heated or still pumped up about what they were doing and it worked out good to do those right after recess to bring them together and calm them down. It’s a bonding thing, it brought us back as a group whereas out there they were having
issues with this person and that person and they would have to get focused again and we were a team, we were all together, it was calming after.

R: How much time do you think you accrue daily doing the activities?
T2: I would do about 10 or 15 minutes at a time and do that 2 or 3 times a day. After recess and then a transition or two. It worked out really nice. I liked spending a little more time on the activities. Once we did one for a long time. A writing one where they’re pretending to ride a horse and we did it with another class, they were so quiet writing and then as soon as the music came on they danced and rode their horses to the other spot, sat down, and they’re struggling to read the writing of the other kid because they had to read all of that to add to the story, but it was calming and it was academic and it was team building. They knew they would have this moment and it was calming…I don’t know if you’ve heard the story 365 children? I think I told you about this, he had a lot of problems with his class, he said he didn’t know how to figure it out, and then he structured free time and when they knew they were going to have the free time, they calmed down. So just the kids knowing, because they’re anticipating doing these activities, let them relax and focus on their work because they knew they were going to have another activity time.

R: Did you notice a difference with how you felt about students?
T2: I think we have a pretty close-knit class now and it was kinda fun. They love watching each other, laughing with each other, or laughing at each other, whichever it was but it was just a fun time doing that and it would be like any other activity, they were having fun, coming together, being social. But I don’t have extreme behavior issues like the other teacher. Mine is just like they get tired of doing things and then just check out. They’re not extreme. The ones that I have problems with it’s because of their academics, they’re so low that they choose not to participate, they’re not on task but this didn’t change that because they’re just not at that level yet, they’re still not able to do the work.

R: Did you come across any difficulties in implementing the program?
T2: I guess just time management because I didn’t know initially when would be a good time to fit one in, you know because we weren’t as structured. It was a little bit hard as far as time management goes. I’m going to continue though. I just like it, I have the manual.
R: A huge part of the PBIS program is monitoring student behavior, what are your thoughts about recognizing behavior and engagement?
T2: Most teachers do it without realizing. I hate to say rewards because I’m not a big fan of rewards. There should be the expectation that we have a standard to live up to and it’s expected at all times. There should be good things going on in the classroom all the time. Activities all day long, not all day long, but you know activities that these kids want to be a part of, I don’t think it should be well if you do this you get this reward, it should already be planned in the day and the kids should be able to…you know with these activities, it’s another thing to add to it. It’s an ongoing activity that encourages the kids, something to look forward to and to refocus, and that’s part of the routine of the day…that just motivates them. They get to go home and say we did this activity and that activity, it’s another thing they’re going to share with their parents and it makes them look forward to coming. Because they love it, they really enjoy participating.
I think, I’m a strong believer in structure in a kids life so when they have that agenda up there of what’s going to happen, because we did put that up on the schedule because they look forward to those things. Even knowing that that’s coming up, there were days that we didn’t because of the schedule, and the kids are like can we do this, can we do that, they were asking for it.
R: How did your ability to gauge student engagement change over time?
T2: I tried to focus, what I was noticing before, I was noticing the kids that were getting in trouble was right after recess and I wasn’t really paying attention to that until I started looking at the logs. From this high, you would think that they would be ready to come in and learn but they weren’t and usually it was the same kids with the same problems right after recess so that’s when I started making some
changes and we started doing the activities right after recess and it calmed them down. Brought them back from whatever craziness was happening on the playground and then we were able to start our lessons. I guess I noticed the patterns of behavior after. I didn’t have any big things. There were a lot of little things. They were very supportive of each other, they would call each other out, but in a positive way, do it this way, try it like this, they had a lot of fun so we did really good staying in our personal space and they were aware of their skinny jeans and how they would get in the way of doing things. Just the one time I had one girl that didn’t want to participate and I really think it was because I told them they didn’t have to participate in any of the activities if they didn’t want to and she just wanted to challenge that to see if it was true. And I said that’s fine, but I thought for sure other kids would say I don’t want to do it either but it was just the one and it was only the one time. There was no reason, she wasn’t mad or had any other issues and after she did everything.

R: is there anything else you would like to tell me?
T2: I enjoyed it and the kids enjoyed it. I personally would have liked to spend even more time with you so that I’m comfortable with the terms and activities. I tried to do a song and couldn’t and finally figured it out. That’s just planning and preparing, I guess, I just took it and tried to jump into it and it would have been better had I been more organized on my part so the kids knew exactly what to do. Or if I had just ran through a little before myself…but it was very organized, it activity was lined out with details.

R: how did you feel prepared to do some of the activities in the classroom?
T2: it wasn’t out of my comfort zone, I felt very comfortable doing all of those things. Like I said we do a lot…all of my PEs are organized PEs. It’s not like I know a lot of teachers like to just go out and play. Mine are usually things that are structured so this kind of just fell along with it. We do PE twice a week. We have 2 scheduled PE’s, Tuesdays and Thursdays and if we have more time we’ll go out and do some other things but it’s not scheduled on my books. They really
like games, most of the time it’s because they don’t know how to play things and they love it. That whole thing when they learn the rules and play it for a while and then they feel good about themselves, they do it.

R: Did you feel doing the activities took time away from your academic instructional time?

T2: No, I thought it would add time on at first. I thought are we going to have time to do this? I was thinking if I do this through the whole year, will this take away from it? But I don’t think so. It’s only short periods of time, like 5 minutes. We’ll spend 5 minutes doing other things, it can take 5 minutes just to take all of their stuff out and it’s because they don’t want to. It’s not because it takes that long. So when they’re motivated, when they’re doing something they enjoy or they know something they enjoy is coming up, and I know they’ve got it out of their system, they’re going to do things a little quicker.

I think we do need to have more movement in the classroom. With all these new things coming down after no child left behind, everything’s become more structured and we’re trying to move away from that now with the common core it’s more project based. I don’t think there are a lot of teachers going back to it because they’ve been so used to having everything just boom boom boom. We were at a point where it was expected of us teaching a lesson to read exactly what was in the book. When they came in to evaluate us they expected us to have our manual in front of us, reading exactly what was in there. So that freedom and that flexibility that used to be there was gone but we’re going back to it now and I know that a lot of teachers are not comfortable doing that. They liked that rigidity, where everyone’s on the same task. I’m comfortable with it, but I’m coming from kindergarten. I’m used to kids moving, it seems normal when kids are moving around, I’m comfortable but I get nervous when people come in to evaluate because I’m thinking that that’s not what they’re looking forward.

R: You brought up your feelings on rewards and punishments earlier. Can you explain more on that topic?
T2: You know we’re doing the PBIS program here and honestly, I had really stopped looking for behavior issues, because I just think our classroom has to be functioning all the time, there’s a certain level we need to be working on, there are certain expectations. You know those kids that have problems, they already stand out. We already know who they are, they don’t need to be up on the wall. They don’t need to be shown a chart. It’s dealt with one on one. Doing this program though is another motivator. I don’t necessarily see it as a reward and I wouldn’t use it as a punishment, I don’t believe in that. I believe in consistent expectations, motivating students to want to do well, to be a part of the team and I think I have that. These activities are motivators for students to get on task, to bring ourselves together, to decompress I guess, especially after hard work. It’s something they look forward to and they need that.
APPENDIX G

LIST OF 220 KEY WORDS AND PHRASES
<table>
<thead>
<tr>
<th>List of 220 Key Words &amp; Phrases</th>
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<td><strong>Academic, 4</strong></td>
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<td><strong>Active, 2</strong></td>
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<td><strong>ADD/ADHD, 1</strong></td>
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<td><strong>After recess, 6</strong></td>
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<td><strong>Recess, 5</strong></td>
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<td><strong>Avoid melt downs, 1</strong></td>
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<td><strong>Aware, 2</strong></td>
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<td><strong>Back on same page, 2</strong></td>
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<td><strong>Back together, 2</strong></td>
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<td><strong>Be successful, 1</strong></td>
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<td><strong>Behavior, 5</strong></td>
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<td><strong>Named the activities, 1</strong></td>
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<td><strong>Practice, 3</strong></td>
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APPENDIX H

FORTY-SIX EMERGENT THEMES CUTTING AND SORTING PROCESS
<p>| Focus/Refocus, 19 | Help stimulate student focus, help students focus/refocus, refocus, get students back on same page, focus students, focus for longer stretches, focus much more complete, focus so much on tests, refocus, get more focus out of what you’re doing, helps with focus, back on same page, refocus, focus on work, refocus, brought them back, tried to focus, academic focus, refocus | Help/Helpful, 15 | The ABCs were helpful in a number of ways: smooth transitions, with course struggles, when tired, etc. | Helpful (x5), help with transitions, I’ll help you, help when kids check out, help each other do activities, help when kids struggle, help not be so intense, help not be so serious, help when kids get tired, practicing the activities is helpful, program will help reverse obesity |
| --- | --- | --- | --- |
| Easy, 15 | Look easy to do, easy to read, easy to show kids, easy to do (x4), easy to implement, seem easy to implement, seem easy to fit in the school day, easy to find things, makes instruction easier, made the day easier, easier for me to tell when they need a break | Connectedness/Bonding, 14 | Increased feelings of connectedness, bonding, and team building was expressed by teachers. | Connectedness, bonding, school family, we’re a team, it’s a partnership, brought class back together, bonding, brought class back together, bonding, brought us back together, we were all together, came together as a class, bonding time, we’re connected now, team family, team building |</p>
<table>
<thead>
<tr>
<th>Anticipation, 13</th>
<th>Physical Activity, 11</th>
<th>Kids aren't getting enough active time, difficult to squeeze in PE; need more PA in middle school, need more PA in high school, not enough to walk to and from classes, not doing enough PA, need to do more PA, too much sitting, get kids moving, start introducing PA early, see PA as a habit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students anticipated and looked forward to the activity bursts; they stayed on task when they knew it was coming up.</td>
<td>Student anticipation of activity bursts, anticipation of ABCs, anticipation of upcoming activities keeps on task, anticipation of ABCs, something kids look forward to, looked forward to ABCs, we have this coming up, knew it was coming, anticipating activities, get to do activities next, looked forward to activities, anticipation of ABCs makes them looks forward to coming</td>
<td>All of these are concerning teacher perceptions of current levels of PA in children from elementary to high school, both teachers feel more PA is needed to break up the sitting time, it should be a habit.</td>
</tr>
<tr>
<td>Corrective behavior, 10</td>
<td>Fidgety, 10</td>
<td>Takes time to get kids settled, fidgety after recess, fidgety in the morning, come to class riled up, kids don’t need a reason to be</td>
</tr>
<tr>
<td>Students often policed the behavior of peers in order to not lose the opportunity to get</td>
<td>Check themselves, correct behavior of classmates, tell each other not to do that type of thing, they say to each</td>
<td>Teachers feel that students are generally more fidgety coming into class; in the morning and after recess.</td>
</tr>
<tr>
<td><strong>the activities; they monitored and corrected.</strong></td>
<td><strong>other you don’t want to do that, they say you’re going to get in trouble, policing each other, monitoring each other, don’t get off task, don’t talk to me, I want to get finished, students check themselves, correct behavior of classmates</strong></td>
<td><strong>squirrely, super squirrely kids, notice fidgetiness or looking away, do activities when devolving into chaos, get wiggles out (x2)</strong></td>
</tr>
<tr>
<td><strong>Fun, 10</strong></td>
<td><strong>Fun (x7), loved seeing kids have fun doing activities, show how fun, had fun with kids</strong></td>
<td><strong>Switch gears, 10</strong></td>
</tr>
<tr>
<td>Teachers described the ABCs as fun, perceived students as having fun, and they all had fun together.</td>
<td><strong>ABCs were used often to transition between subject matter or even to switch gears when struggling, etc.</strong></td>
<td><strong>Switch gears (x4), transitions, switch gears when instruction too difficult, switch gears before kids get frustrated or tired, mostly for transition between subject matter, transitions, after recess and transitions</strong></td>
</tr>
<tr>
<td><strong>Behavior change, 9</strong></td>
<td><strong>Noticed behavior more, look at behavior in the short term, found myself asking what happened to change behavior, became better at gauging student needs, I can see how they look before they break down, I</strong></td>
<td><strong>Manual, 9</strong></td>
</tr>
<tr>
<td>Teachers were able to pick up on behavior changes and student needs more; they were looking for behavior and managing it better.</td>
<td><strong>Teachers discussed quality design, helpfulness, and clarity of the manual as well as the teacher training.</strong></td>
<td><strong>Clear and concise manual, concise explanations in the manual, to the point, lots of pictures, able to visualize the activities in the manual, useful manual, lots of pictures, well-designed manual, the manual prepared me well</strong></td>
</tr>
<tr>
<td><strong>Supportive, 9</strong></td>
<td><strong>Academics, 8</strong></td>
<td><strong>Calming 8</strong></td>
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<td>Students were more supportive of each other, came together as a group, spoke encouraging word.</td>
<td>Let me show you, encouraging each other to be successful, you can do it, you'll get it next time, keep going, you’ve got two more tries, brings out niceness, supportive of each other, come together.</td>
<td>It changes the effort I put in to the day, absolutely changes you, attitudes change positively, attitude change for me and for them, they picked up on my attitude change, less moaning and groaning, less complaining, give me less static.</td>
</tr>
<tr>
<td><strong>Attitude, 8</strong></td>
<td>Teachers feel ABCs are good for grades but not sure yet, feel like it shouldn't be an either or situation though.</td>
<td>They need to get the wiggles out to calm them down and relax.</td>
</tr>
<tr>
<td>Attitudes changed positively for both students and teachers, circular, more effort.</td>
<td>Will program impact academics, important for academics, better at retaining information, maximum saturation of information, learn how to be productive academically, it's not academics vs. physical activity, it's not if you’re healthy or you’re smart, it’s not either physical activity or academics.</td>
<td>Takes a while to calm kids, calming, calming when kids pumped up, helped calm them, calmed them down, relax (x2), calming (x2).</td>
</tr>
</tbody>
</table>
## Decision-making, 8
Teachers recruited students into the decision-making process for the activity bursts; choosing activities helped them buy-in.

<table>
<thead>
<tr>
<th>Students help choose, teachers want kids to help decide, select activities together, students enjoy decision-making, requested by students, looked it over with students to decide, students helped choose activity bursts, students buy-in when they choose</th>
</tr>
</thead>
</table>

## Enjoyment, 8
Kids and teachers enjoyed/liked/loved the program; both would have liked to spend more time on activities.

<table>
<thead>
<tr>
<th>Enjoyment (x2), love ABCs, loved it, liked ABCs, enjoyed it, like to spend more time because it’s enjoyable, enjoyed</th>
</tr>
</thead>
</table>

## Motivation, 8
Teachers felt students were more motivated and able to set goals, stay on task without being reminded.

<table>
<thead>
<tr>
<th>Students try harder, charged atmosphere is motivating, motivated more, self-monitor, self-regulate, motivates students, encourages kids, motivated because more goal-oriented</th>
</tr>
</thead>
</table>

## On task, 7
Kids, especially behavior problem students, stayed on task more, not as frustrated and would get work done.

<table>
<thead>
<tr>
<th>Didn’t have to give all of my attention and energy, students on task with ADD/ADHD, staying on task consistent with students, alleviated frustration with students so they could stay on task, we’re going to get our work done, as soon as we’re done, grade level attention</th>
</tr>
</thead>
</table>

## Plan, 7
Planning the activity bursts helped the teachers and students, especially when students were part of it.

<table>
<thead>
<tr>
<th>Plan out ABCs, planned activity bursts ahead of time,</th>
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</table>

## Positive, 7
Kids stayed positive, expressed love when didn’t before, kids knew teachers cared about them.

<table>
<thead>
<tr>
<th>Positive (x3), carries over into adulthood, they say I’m their favorite teacher now, lovey dovey, they knew I wanted them to be happy</th>
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<tbody>
<tr>
<td><strong>Good/great, 6</strong> Program was good for students, teachers, and students feeling good made teachers feel good.</td>
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<td><strong>Redirection, 6</strong> Activities cut down on redirection time, so activities didn’t take away from instruction, but added.</td>
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<tr>
<td><strong>Benefit/reward, 5</strong> Teachers and students saw benefits, students viewed it as a reward.</td>
</tr>
<tr>
<td><strong>Cues, 5</strong> Teachers noticed student cues, when they needed an activity not scheduled.</td>
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<tr>
<td><strong>Excitement, 5</strong></td>
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<tr>
<td><strong>Health 5</strong></td>
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<tr>
<td><strong>Practice, 5</strong></td>
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<td><strong>Social, 5</strong></td>
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</table>

Breaks up monotony of sitting down, regularity, improved flow of the day, break up the day, part of routine for the day.

Participation, participation in ABCs, teacher does it too, participated in ABCs, participated.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coursework struggles, 4</strong></td>
<td>Kids tend to be off task when they are struggling with the material.</td>
<td>Check out when struggling, kids struggling with coursework, kids don’t need a reason to be off task when struggling, 20 minutes spent on redirection when coursework is too hard. Life saver, saved time and energy, godsend.</td>
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<td></td>
<td><strong>Lifesaver, 4</strong> ABCs saved time and energy so teachers felt like it was a lifesaving tool.</td>
<td></td>
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<tr>
<td><strong>Out of focus, 4</strong></td>
<td>Kids get burnt out naturally and lose focus.</td>
<td>Check out at end of day, notice kids eyes glaze over, too much wasting time, wasn’t paying attention. Patterns, 4 Teachers were able to notice patterns that helped them adapt to needs. Recognized patterns, noticed patterns, making some changes, little things were noticed.</td>
</tr>
<tr>
<td></td>
<td><strong>Patterns, 4</strong> Teachers were able to notice patterns that helped them adapt to needs.</td>
<td></td>
</tr>
<tr>
<td><strong>Physical education, 4</strong></td>
<td>PE is seen as intimidating for teachers, don’t feel adequate to teach.</td>
<td>PE intimidating to do, intimidating to teach, feel like people are watching when I do PE, not adequately trained for PE. Request, 4 Students would request to do activities &amp; knew names. Requested by students, they were asking for it, named the activities, referred to it frequently by request.</td>
</tr>
<tr>
<td></td>
<td><strong>Request, 4</strong> Students would request to do activities &amp; knew names.</td>
<td></td>
</tr>
<tr>
<td><strong>Classroom structure, 3</strong></td>
<td>ABCs were both complemented and provided structure.</td>
<td>Complement existing classroom structure, provides structure, complement existing structures in classroom. Buy-in, 2 Students get more buy-in when they choose ABC. Students buy-in when they choose, get buy-in.</td>
</tr>
<tr>
<td></td>
<td><strong>Buy-in, 2</strong> Students get more buy-in when they choose ABC.</td>
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</tr>
</tbody>
</table>
REFERENCES


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