

5-2018

The Cost of Going Big: Class Size in Middle School Physical Education

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<https://doi.org/10.33015/dominican.edu/2018.edu.11>

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The Cost of Going Big: Class Size in Middle School Physical Education

Jason Gatti

A culminating thesis submitted to the faculty of Dominican University of California in partial fulfillment of the requirements for the degree of Master of Science in Education

Dominican University of California

San Rafael, CA

May 2018

Signature Sheet

This thesis, written under the direction of the candidate's thesis advisor and approved by the department chair, has been presented to and accepted by the Department of Education in partial fulfillment of the requirements for the degree of Master of Science in Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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Abstract

Class size is a perennial issue that has been debated and researched for years. While there has been a significant amount of research conducted on the impact that class size plays on the teaching process, much of this research has focused on core academic subjects. California education code exempts Physical Education (PE) from student cap limits, which has resulted in a disparity in class size between academic core subjects and PE. Despite this, there is a distinct lack of scholarship concerning class size and its impact on the teaching process in middle school PE. This research attempts to fill this gap by furthering our understanding of the impacts that class size has on the physical educator. A qualitative research design was used to collect data from a sample of seven teachers currently teaching middle school PE across three different school sites in the San Francisco Bay Area. The results of the study indicate that class size has a negative impact on the instructional practices of middle school PE teachers. In particular, teacher-student interaction, modification of activities, and class instruction were seen to be affected by larger class sizes. Along with that, teacher apathy was seen to occur when teachers become overwhelmed with the physical and emotional cost of teaching large classes in middle school PE. Physical educators need more support from their district in the form of professional development workshops with appropriate follow up as well as an increase in curriculum meeting time to ensure that educators receive the support they need to remain motivated towards the teaching process.

Acknowledgments

The process of writing this thesis has been an incredibly demanding accomplishment. I owe much of the credit to my professor, Jennifer Lucko, who continually challenged me to push through the mental barriers I placed in front of myself. The guidance, support, and encouragement she so readily gave made this paper possible. I would also like to thank the participants of this study, who graciously took time away from their prep periods to willingly participate in the interview process. I would also like to thank my parents, who have always supported and encouraged my many endeavors throughout life, this being the latest and perhaps most challenging. Finally, none of this would have been possible without my wife, Laura Gatti. Laura was the first and most ardent supporter throughout this process; if it wasn't for her, none of this is possible. Thank you.

Chapter 1 Introduction

Last year was the most challenging of the five years I have been teaching middle school Physical Education (PE). I vividly recall feelings of frustration and helplessness as students inescapably slipped by without having the opportunity of receiving a fulfilling and appropriate PE experience. These feelings were centered on the fact that students were placed in a position where it would be increasingly difficult for them to gain meaningful instruction and constructive feedback because of the number of students in the class. In a district which tries to maintain small class sizes, the reality for me was that both my sixth and eighth grade PE classes had an average class size of 35 and reached a maximum of 40 students. Limited facilities and multiple PE classes being taught during the same class period compounded these challenges. I remember specific moments of providing direct instruction to a small group of students who desperately needed the positive attention, guidance, and support of the teacher, only to realize that numerous students were off task while my attention was diverted. This became routine, and I realized that much of my time was spent on classroom and behavior management, while the time for instruction, practice, and application decreased. This resulted in fewer opportunities for all students to experience the powerful feelings of success and recognition, moments which are extremely important for those students who normally dislike PE.

Entering my fifth year of teaching PE, with time spent at two different middle schools in the San Francisco Bay Area, I have encountered, observed, and taught hundreds of students. One thing I learned very early as an educator is that every student has a distinctly unique learning style. To further the challenge of meeting these diverse

learning needs, each student brings to class their own behavior habits, social needs, and desire or lack of desire to succeed. According to Frisette (2010), the educator needs to take the time to learn and understand each of their students' needs in order to teach the whole student and enhance positive learning experiences. For many educators, this is our ultimate objective for each student, but unfortunately, class size potentially impedes the progress because of the number and variety of personalities, learning needs, Individualized Education Programs (IEPs), behavioral needs, etc... that a teacher has to maneuver. Despite these challenges, my primary goal as a middle school physical educator is to meet my students varying needs. Through meaningful and individualized instruction, teachers are better able to provide opportunities for their students to achieve success, receive recognition of those successes, and help students to build a positive sense of self centered around their physical well-being.

According to the California Department of Education website (2017), California Education Code sections 41376 and 41378 state that the average number of students per academic class in middle school should not exceed 30 students. Middle school PE has a different set of expectations, however, as stated by the California Department of Education for Physical Education, "40 students for middle school general PE is a reasonable planning estimate" (p. 2). With a base expectation of 40 students, the California Education Code title 5, section 10060 further states that middle school general PE programs, "are to provide instruction in a developmental sequence and include activities of a vigorous nature adapted to individual capacities and designed to permit maximum individual development" (p. 2). As one can imagine, these objectives are extremely difficult to attain when teaching a class of 40 sixth, seventh, or eighth grade

students. The National Association of Sport and Physical Education (NASPE), an organization created to serve as a foundation for the creation of a quality, well-designed PE program, recommends a class to have a maximum teacher student ratio of one teacher for every 30 students (NASPE, 2006). Achieving the objectives outlined by the California Education Code 10060 becomes more manageable for the physical educator with a class size of 30 or less students. This class size also benefits the students since they would arguably be in a better position to receive individualized instruction, positive reinforcement, and have potentially more opportunities to achieve success.

The NASPE guidelines for a quality middle school PE program is to provide safe and effective instruction and recommends that classes should have a maximum teacher student ratio of one to 30, with lower numbers preferred (NASPE, 2006). The NASPE states that this ratio in middle school general PE allows physical educators to create “more opportunity-to-learn, meaningful content, and allow for appropriate instruction to meet every student's’ needs” (Keating, Lambdin, Harrison, & Dauenhauer, 2010, p.180). Despite these national guidelines, class sizes in PE remain large, and are becoming more complex due to the diversity of students according to data from the California Department of Education (2017). This development has created a progressively challenging teaching environment, where physical educators are finding it more and more difficult to provide relevant and individualized instruction for all of their students. Therefore, it is important to ask and understand how class size impacts the instructional practices and teaching processes of middle school physical educators.

Theoretical Rationale

A key element to successfully teaching middle school PE is understanding how to motivate students to perform at an acceptable level. Albert Bandura's Social Cognitive Theory (SCT) exemplifies the teacher's role in motivating students to achieve success. A SCT approach to teaching PE, "looks at the relationship between the individual, the environment, and the behavior" (Kamla, Davis-Brezette, & Larson, 2006, p. 17). SCT is centered around the teacher's role in creating a positive learning environment and as motivator in modeling correct behaviors while students actively participate in observational learning (Rosenstock, Strecher, & Becker, 1988). When the teacher positively reinforces a behavior, the student is more likely to continue the behavior independently (Kamla et al., 2006). The theory places emphasis on the teacher's ability to put students in a position where they will achieve success. Kamla et al. (2006) stated that "physical educators should provide students with different levels of difficulty for all activities so that students experience immediate success before moving onto more difficult activities" (p.18). These successes are vital in building a student's self-efficacy, another component of Bandura's SCT.

Self-efficacy is defined as the beliefs about one's personal abilities in a specific setting (Rosenstock et al., 1988). Perceived self-efficacy plays an integral role in whether students decide to participate in the learning environment (Kamla et al., 2006; Rosenstock et al., 1988). Research has shown that students who experience success and participate in a positive learning environment are more inclined to engage in class activities (Kamla et al., 2006; Rosenstock et al., 1988; Scrabis-Fletcher, Rasmussen, & Silverman, 2016; Sparks, Gimmick, Whipp, Lonsdale, & Jackson, 2015; Zhao & Li, 2016). Rosenstock et al. (1988) goes on to say that, "performance accomplishments are

the most influential sources of efficacy information because they are based on personal mastery experience” (p. 180). For the PE setting, this is an essential component to be made aware of, as students observe, learn, practice, and then apply skills in varying contexts. If students achieve success at any level, they will be more inclined to continue with their participation. Conversely, research has shown that low skilled students who experienced failure were less likely to participate in physical activity within and outside of school (Portman, 2003; Scrabis-Fletcher et al., 2016). Teachers can improve student self-efficacy by participating in quality interactions with students as these have the ability to shape students’ perceptions and may be directly associated with students’ motivation to participate in class activities (Blatchford, Bassett, & Brown, 2011; Blatchford, Bassett, & Brown, 2005; Sparks et al., 2015). Facilitating learning requires more than just following the SCT approach to teaching PE, but requires the educator to learn and understand how to effectively reach all their students through differentiating instruction.

While differentiated instruction is not commonly associated with PE, its components are essential to supporting student growth and learning. According to Colquitt, Pritchard, Johnson, & McCollum (2017), “differentiated instruction provides a conceptual model that focuses on individual student learning through a series of systematic processes” (p. 44). This model can be adapted and applied in any subject and includes modifying the content, learning activities, outcomes, and environment to meet the needs of all diverse learners (Colquitt et al., 2017; Ellis, Lieberman, & LeRoux, 2009; Rosenstock et al., 1988). For differentiated instruction to be successful, the teacher needs access to understanding how their students learn, so they are prepared to provide responsive instruction to meet their students specific learning needs (Watts-Taffe et al.,

2012). In middle school PE, this is imperative in modifying activities so that all students can achieve elements of success. Physical educators need to be constantly reflecting on their teaching practices and to be aware of the progress of their students in meeting the learning objectives. Preparation is an important component in being able to implement differentiated instruction in the classroom, as the teacher needs to be able to adjust or modify activities as they are happening in response to the class or individual performance.

While modifying activities is important, offering individualized instruction can also be applied to teaching to promote student learning in PE (An & Meaney, 2015; Hastie, Calderon, Palao, & Ortega, 2011; Marinescu, Tudor, Mujea, & Baisan, 2013). Individualized instruction provides the student with direct feedback as to their performance during call activities and shows the student that the teacher is an active participant in the class as well. In order for individualized instruction to be effective, there needs to be a level a trust, or a positive relationship, between the student and teacher (An & Meaney, 2015; Hastie et al., 2011). Research has shown that student who receive direct, individualized feedback perform at a higher level, with the largest increase seen among lower skilled students (Rikard, 1992).

The elements between Bandura's Social Cognitive Theory and differentiated instruction are closely intertwined. Within these frameworks, the teacher plays a central role in motivating student learning by meeting every student's unique learning needs, modifying activities to ensure student success, and creating a positive classroom environment where students feel supported, valued, and motivated to participate. Along those same lines, providing individualized feedback can support student learning and

growth within class, furthering the opportunity for achieving success. Unfortunately, class size impedes an educator's ability to follow and successfully implement these teaching frameworks.

Although extensive research has been conducted on class size and its impacts, much of this research has been confined to the academic classroom (Almulla, 2015; Blatchford et al., 2005; Blatchford et al., 2011; Krieger, 2003). Of the studies centering around PE and class size, many focused on its impact on physical activity and have mostly occurred at the elementary or high school level (Chen et al., 2016; Gross, 2010; Kirkham-King et al., 2017; Portman, 2003; Sparks et al., 2015). Furthermore, the research presented supports the need for physical education teachers to consider the application of differentiated instruction and social cognitive approaches to promote student self-efficacy and motivation through achievement and support. The research underlines a clear need to further our understanding of the impact of class size as it pertains to the physical educator's approach to the teaching process and their ability to promote student success within a quality middle school PE program.

Statement of Purpose

The NASPE defines a quality middle school PE program as one which has a class size under 30 students, provides students with safe and effective instruction, and spends at least 35% of class time engaged in moderate to vigorous physical activity, with a goal of 50% (2006). While physical activity is an important element to middle school PE, Keating et al. (2010) understand that “promoting physical activity should accompany rigorous content-based instruction to increase understanding of the need for physical activity and health related fitness” (p.180). Smaller class sizes have been shown to have a

positive impact on the physical activity of students as well as their skill acquisition (Chen, Zhu, Mason, Hammond-Bennett, & Colombo-Dougovito, 2016; Keating et al., 2010; Kirkham-King et al., 2017). Successfully implementing a quality PE program details more than just increasing the physical activity of students, but requires the educator to understand their role as motivator and modeler in the teaching process and to differentiate instruction to meet their students learning needs. Therefore, the purpose of this study is to examine the impact of class size on the instructional practices and teaching processes of a sample of middle school physical educators.

Significance of Study for Audiences

A study centered around the impact of class size on the instructional practices of middle school physical educators is important for several reasons. First, understanding the unique challenges that physical educators face during instruction creates awareness and validates physical education as a legitimate subject. Too often, physical education is regarded as glorified recess without any meaningful content other than exercise. At my current school, there are numerous days where we lose our facilities for other subjects such as Science, English, Drama, and Music. In my five years as a middle school PE teacher, there have been numerous instances when a substitute request has not been filled, and the school has required physical educators to teach multiple PE classes at the same time to cover for the absent PE teacher. My colleagues and I have personal experiences of individually teaching multiple PE classes without any support; in many instances with a teacher student ratio of one to 75. The perception of PE as a subject of lesser importance has led to the dramatic difference between class sizes in core academic subjects and PE. With a state mandated cap of 30 students for academic classes and a “reasonable planning

estimate” of 40 students for middle school PE, the difference clearly entails where priorities lie within the California Education Code (California Department of Education, 2017).

Second, this study will provide physical educators with relevant evidence about a growing issue. Too often teachers are not provided a voice in the scheduling decisions of their school. By illuminating the evidence for a developing problem, physical educators will be empowered to validate their work by discussing the impact that class size has on their teaching practice. Engaging physical education teachers, and providing them with the opportunity to reflect and discuss their professional challenges within a research process can result in meaningful evidence and solutions to instructional problems. This study also proposes an invitation for physical educators to discuss new alternative curriculums that could mitigate the effects of large classes on the teaching process. The addition of cooperative based activities, professional development opportunities, and additional time for collaboration are all relevant findings to this study and require future research within the framework of this topic.

This study is also significant for our students. The results of this study are particularly important for students who generally struggle in middle school PE, such as those with a dislike of or lack of confidence in sports or fitness. These are the students who would most benefit from smaller classes because of the increase in opportunities for positive reinforcement and individualized instruction. If class sizes were reduced, these students would be placed in a position where they would have more opportunity to achieve success, receive recognition of those successes, and build their self-efficacy through accomplishment. Physical education is the bridge to learning about lifelong

physical well-being and it is imperative that all students receive equal and equitable access to quality PE instruction.

Finally, this study aims to provide the district with evidence that class size is impeding our PE program and limiting its quality. As a physical educator, I strive to effectively reach all of my students and place every student in a position where they can continually achieve success and build their self-confidence. The goal is to ensure that every student receives quality PE instruction so that every student has the opportunity to develop a positive image towards their physical well-being and are equipped with the skills and knowledge to lead a healthy, fulfilling lifestyle.

Summary of Methods

This study examined teacher perspectives on how class size impacted the teaching process and their instructional practice in middle school PE. This study utilized a qualitative research methodology including interviews and observations to gather data for analysis. Participants for this study included seven middle school PE teachers from three different school sites in the Greater San Francisco Bay Area. This study collected data from three in class observations from three different PE teachers as they taught classes of 30 students or more. Data collected was reviewed, coded, and categorized following Creswell's coding guidelines (2014, p.198). Codes were organized into emerging themes between the two data sets.

Summary of Findings and Implications of the Study

The findings of this study reveal that large classes negatively impact the teaching process for middle school physical educators. Larger classes were shown to have a

negative impact on the number of opportunities for teacher-student interaction in class, as teachers were focused on ensuring students were following directions, behaving appropriately, and engaged in class activities. Teachers were aware that in large classes they were more focused on the whole group rather than supporting individual student progress because of the need to have their head on a swivel and eyes on the whole class. Teachers also tended to facilitate activities instead of instructing because large classes created more classroom and behavior management issues, which negatively impacted the amount of time for instruction during each class period and limited their ability to provide individualized feedback to students. The physical and emotional cost of teaching large classes was seen to affect teacher self-efficacy. Teachers were seen to become apathetic to the teaching process when teaching classes in the mid-thirties or above.

The results of this study support the need for school districts to reevaluate their student cap size limits in general PE classes. The current practice of PE classes being larger than their core academic counterparts is negatively affecting the teaching and learning environment. Physical educators also need to work with administrators to find relevant professional development opportunities that provide frameworks for new curriculum, teaching strategies, and materials. Ensuring time for follow up curriculum meetings allows the physical educators opportunities to discuss the professional development workshop and collaborate its implementation. With increased class sizes, PE should have access to additional facilities, classrooms or fitness center, to support alternative curriculums such as yoga, exercise physiology, and adventure or cooperative based activities.

Chapter 2 Review of the Literature

This chapter is an examination of the academic literature focusing on class size and its impacts on the classroom, with an emphasis in PE. The reviewed literature was gathered from academic library searches using online databases, with the scholarship ranging from the year 1988 to 2017. An extensive review of the relevant scholarship served to identify and categorize key themes within the literature, which include components of a quality PE program, the effect of class size on a quality PE program, the educators' role in the class setting, teacher-student interactions, and whether providing individualized instruction improves student learning. The key themes are connected with the overarching purpose of the study, which is to understand the impact of class size on the teaching process for middle school Physical Education teachers.

Components of a Quality Physical Education Program

Physical Education is more than just physical activity, and providing quality teaching can have a genuine impact on student self-efficacy through student success and positive engagement. A quality middle school PE program focuses on maintaining a student teacher ratio of thirty to one, providing opportunities for participation in moderate to vigorous physical activity (MVPA) at least 35% of class time with a goal of 50% participation in MVPA, and leading quality and sequentially appropriate instruction (Keating et al., 2010; NASPE, 2006). Kirkham-King, Brusseau, Hannon, Castelli, Hilton, and Burns (2017) led a study of 281 students from first through fifth grade, looking into the impact of class size on the students' MVPA. For elementary PE, the NASPE guidelines for student teacher ratio is even lower, at twenty-five to one. The study clearly indicated that smaller class size led to more productive physical activity time, as

demonstrated by a ten percent increase of MVPA compared to students in classes of over twenty-five. A ten percent difference is substantial, and when spread out over the entire school year, the difference compounds. Students in smaller PE classes were more active because less time was spent on transitioning between class activities and teacher led instruction. Physical educators in smaller classes spent less time on classroom management and as a result students were able to participate in class activities for longer periods of time. The results would indicate that class size has an impact on how teachers are able to manage their classes and their ability to provide sufficient time for students to participate in MVPA.

Following Bandura's Social Cognitive Theory, and understanding the teacher's role as motivator for engagement and learning, Chen, Zhu, Mason, Hammond-Bennett, & Colombo-Dougovito (2016), conducted a study looking into the extent to which quality physical education teaching enhanced student skill competency. The authors used physical education metrics assessment rubrics to determine the skill competency of fourth and fifth grade students. Four dimensions to quality teaching in PE were used for assessment of instruction: task design, task presentation, class management, and instructional guidance. The results of the study proved that the four dimensions of quality physical education teaching were significant contributors to skill acquisition and competency. The results validate the importance of quality physical education teaching as it relates to student success in physical education because it proves the importance of the role of the teacher in engaging student learning, demonstrating and verbalizing correct technique, and providing specific individualized instruction to meet the learning needs of all students. This is further supported by the data which indicated that of the four

dimensions, task presentation was shown to have had the biggest impact on student skill competency.

An exploratory case study following four PE teachers and their classes for one year, sought to understand the factors associated to the amount of physical activity that students receive in middle school PE. The results of the study by Senne, Rowe, Boswell, Decker, and Douglas (2009), showed that students spent an average of 25 percent of their class time involved in MVPA, which is below the NASPE guidelines of 50 percent. Through observations and interviews, the researchers discovered that time spent on whole group instruction and classroom management totaled 73.9 percent of class time, which was shown to have reduced student activity significantly. Student activity was seen to be highest when the teacher actively demonstrates and promotes lesson contexts and was able to provide instant, individualized feedback. These findings support the role the teacher plays in encouraging their students' motivation and confidence to complete tasks. Conversely, when the teacher was engaged in classroom and behavior management, student activity rates lowered. These results support the social cognitive approach to teaching physical education because the behavior of the teacher was shown to have direct impact on student participation.

The question then remains as to the benefits for student health when participating in a quality PE program that places emphasis on participation, activity, and constructive instruction. Kahan and McKenzie (2015) reviewed data from a NASPE report titled "Shape of the Nation." The authors questioned the potential of a quality physical education program following the NASPE's guidelines in fighting childhood obesity and scrutinized the results from the "Shape of the Nation" report to understand the reality.

The researchers, using the NASPE guidelines for a quality physical education program, suggest that students should participate in MVPA for at least 50% of class time. Results reveal that teaching a quality physical education program would effectively reduce childhood obesity as measured by energy expenditure per class unit; which results in an average loss of 2.2 pounds of body fat per year for boys, and a loss of 2.15 pounds of body fat per year for girls (Kahan & McKenzie, 2015). The reality of the report, however, illustrated that students were not receiving the sufficient allotted time towards moderate to vigorous physical activity during class, with a majority of students receiving less than 30% of class time involved in physical activity. The unfortunate reality, as described by Kahan and McKenzie (2016) suggests that despite the proven benefit of quality physical education teaching, barriers exist limiting the effectiveness of physical education and as a result are negatively impacting student physical activity, engagement, and learning.

Effects of Class Size on a Quality Physical Education Program

Research has proven that a quality PE program increases student physical activity levels resulting in higher engagement and more opportunities for students to achieve success in class activities. An unfortunate reality is that there are barriers in place which limit the implementation of a quality PE program and which are adversely affecting student learning and activity during PE class. Gross (2010) researched teacher perceptions towards teaching large classes in elementary PE and how class size had an impact on instruction. All participants in the study taught classes larger than 25 students, and the results indicate that teachers believe the large class size hinders their ability to provide quality physical education instruction, provide adequate equipment, limits the delivery of individualized feedback, and increases the time spent on classroom

management. These elements are all in conflict to the guidelines for what a quality PE program should be as defined by the NASPE. Gross believes that class size has a negative impact on a teacher's ability to provide quality instruction at the elementary PE level.

In a similar study, Barroso, McCullum-Gomez, Hoelscher, Kelder, and Murray (2005) investigated the barriers to quality physical education instruction as reported by physical education specialists in Texas. The study was using The Coordinated Approach to Child Health (CATCH) framework, which is a coordinated school health program centered around preventing risk factors for cardiovascular disease, type 2 diabetes, and childhood obesity as well as promoting awareness towards the benefits of living a healthy, physically active lifestyle (2005, p. 314). Results of the study revealed that class size was shown to have the largest impact on quality physical education instruction. Of note, the low priority that physical education has relative to other academic subjects was also shown to have been represented as a significant barrier to quality physical education. This perception of PE as 'glorified recess' or a subject of lesser importance is thought to be one of the reasons why PE classes are typically larger than academic subjects. These results prove that teachers are aware of the difficulties of teaching large classes and presume that large classes will impede their ability to provide quality physical education instruction. Large class size in PE impacts student learning, student engagement, and the opportunities for students to have fulfilling and successful experiences with physical activity.

An exploration into how to best maximize student opportunity for a fulfilling and active physical education experience was the motivation behind the study by Bevans, Fitzpatrick, Sanchez, Riley, and Forrest (2010). The researchers examined various

contextual factors associated with activity level during physical education class. The results indicate that one of the main inhibitors of physical activity levels is student to teacher ratio. A lower student to teacher ratio allowed for teachers to spend less time on classroom management and transitions between activities resulting in more opportunity for students to engage in the class activities. Access to adequate material resources was also shown to provide greater levels of MVPA for students within their classes. The authors suggest that policy change needs to occur at the federal, state, and local levels to ensure that all students are provided the opportunity to participate in a quality physical education program, where class sizes are appropriate, adequate resources are supported, and sufficient class time is allotted.

Educators Role in the Class Setting

While different in nature, these studies all show the impact that student perception has towards their engagement with physical education class and the role the teacher plays in this perception. Physical educators play an integral role in providing individualized instruction which supports the needs of all students, and leading activities which are engaging but also achievable, ensuring that students gain mastery and build a positive perception towards physical education and physical activity. Perception of competence and the relationship with skill acquisition and student engagement were key elements a study by Scrabis-Fletcher, Rasmussen, and Silverman (2017). The authors framed the study around Bandura's Social Cognitive Theory by examining the behavior of the teacher and subsequent student engagement during skill instruction and practice trials. A significant association was observed between the number of practice trials and student perception to competence, but the socio cognitive relationship was inconclusive. For

students to feel comfortable and confident with a skill, they need opportunities to apply it along with opportunities for constructive, individualized feedback from the teacher.

Modifying activities to student levels can increase participation and lead to the development of positive self-efficacy through achievement.

Educators play a key role in this element of class, as they are responsible for placing students in positions where they will achieve success, through modification and recognition. When students achieve success, they will be more inclined to participate. Understanding the factors which influence student perception to PE and whether PE classes promote or hinder a student's desire to participate in physical activity outside of school was the motive for a study conducted by Portman (2003). To gain a deep understanding for this study, the researcher interviewed forty-six ninth grade students of varying skill levels as described by their physical education teachers. The results indicate a very real need to learn how to positively impact all students. Portman discovered that physical education negatively impacted students of low perceived skill and hindered their motivation to participate in physical activity. Failure at a skill was associated with feelings of personal failure which resulted in developing resentment towards the activity. Students of low skill were also aware of their skill deficiency, especially when partnered with high skilled students. The results show that their negative feelings compounded when they were the cause of failure during an activity.

These results are concerning and indicative of the need for physical educators to be aware of their responsibility in making all students feel supported, valued, and positively engaged in class activities. All students, regardless of skill, were shown to enjoy participating in an activity when they perceived they were good at it.

Understanding this aspect of the learning process allows physical educators insight into how the importance of student success leads to the development of positive self-efficacy, which promotes student engagement and learning.

A study examining the link between these positive caring behaviors and student response in middle school PE was conducted by Zhao and Li (2016). Caring behavior of the teacher is conceptualized as involving different dimensions, including differentiating instruction, providing constructive individualized feedback, interpersonal rapport, and a positive motivated learning climate (2016, p. 522). The outcome of the study reveals that participants who reported high levels of perceptions of teacher caring behavior were more likely to have a positive attitude towards physical education. Positive attitude towards physical education results in a greater desire to participate, engage, and apply effort during physical education class. A significant find in the research shows a declining trend in attitude towards physical education from sixth grade to eighth grade. Physical educators, following Bandura's Social Cognitive Theory, would formulate the teaching process to create elements of caring behavior since they are responsible as a modeler of correct behaviors while students participate in observational learning. This study suggests physical educators in middle and high school should take the time to learn about student interests and be willing to develop innovative curriculum to maintain interest and spark engagement in class activities.

Almulla (2015) inquired into teacher perceptions as to the effect that class size had on teaching practices. The results from the study indicated that class size had an impact on how teachers taught, with large classes having more teacher led large group instruction. On the opposite spectrum, smaller classes tended to have more inclusive,

small group and individually focused instruction, with the teacher playing a more active role in student learning. Time spent on managing student behavior was seen as a major deterrent for large class teachers when preparing student activities. Large class teachers were also more inclined to use closed type questions when leading lecture style teaching because they felt that preparing students for cooperative activities took too long and led to a propensity for student off task behavior. This study supports the notion that teachers alter their teaching practices around class size, and revert to practices which may lead to some students not receiving the support they need to access the content and achieve success. All of these studies underscore the need for physical educators to employ effective teaching strategies which engage, support, and foster success to promote student self-efficacy and effort among students.

Class Size on Teacher-Student Interactions

The personal and individualized interactions which occur in a class can be as valuable as the actual instruction. These studies all provide evidence to the power of positive teacher-student interaction towards student learning and engagement. They also show the potential negative impact that class size can have on the instructional practice as well as on the amount of opportunity for positive interaction between teachers and students. Large classes limit a teacher's ability to get to know the unique learning needs of their students, which can have an impact on instruction and student learning. A study conducted by Blachford, Bassett, and Brown (2005) investigated the impact of class size on classroom interactions. The researchers examined the difference in amount of teacher student interactions in classes below twenty-five students and those above twenty-six students. The results of the study support that small classes allow for more individualized

task related contact between teacher and pupil. Students within small classes were able to attain more active interaction with the teacher allowing for more individualized attention. Students within large classes were subject to more teacher led activities and held a more passive role within the class. Not all students desire individualized attention, however, with more opportunities available in smaller classes for the teacher to learn about the unique learning needs of their students, then the teacher will be in a position to effectively differentiate instruction to meet those specific learning needs. In PE, this is modification of activities with the goal of encouraging active engagement while also offering students opportunities to experience success in the application or development of a skill. This study supports the clear benefits that an increase in positive teacher student interactions has towards a teacher's ability to differentiate instruction to meet their student's needs, while also creating more distinct moments for the teacher to promote whole student growth through modeling and supporting correct behavior.

Blatchford, Bassett, and Brown (2011) extended previous research by examining the effect that class size had on teacher - student interactions as well as its impact on classroom engagement in academic classrooms with a focus on low attaining students. The researchers found that smaller classes led to more individualized instruction from teachers. They also discovered that smaller classes led to more active interactions between the teacher and the students, which was shown to have led to increased engagement from all students, but particularly among previously low attainment students. Interaction is a valuable tool that physical educators have in learning about and supporting student growth. Smaller class sizes increase the opportunities for the teachers

to individually interact with their students, leading to a more positive learning environment where the teacher is able to support their student's needs.

Other factors contributing to successful learning and a positive learning environment include positive teacher student interactions. Claret (2010) identified that teachers of smaller classes had more direct interaction with their students, with more individualized instruction occurring during these in class interactions. Smaller classes were observed to have a more positive learning environment, which facilitated student engagement and initiation of on task behavior. These findings are relevant to physical education because they support adapting a social cognitive approach to teaching PE. Small class size offers more opportunity for the teacher to learn about their students, allowing for teachers to be able to differentiate instruction to meet their needs. The creation of a positive learning environment that facilitates student engagement is an underlying principle of the SCT approach. Teacher behavior was shown to directly affect student behavior. Small classes provide more moments for the teacher to correctly model appropriate behavior, skill technique, and provide constructive feedback which helps to put students in a position to achieve success, further promoting positive participation and student growth.

Sparks, Dimmock, Whipp, Lonsdale, & Jackson (2015) sought to explore the relationship between physical educators' social interactions with students and whether positive interaction increased student engagement through positive student perception of learning environment. Centering their research on identifying specific instructional behaviors performed by teachers, the authors discovered a significant positive association between teacher behaviors of relatedness and student engagement, efficacy, motivation,

and participation. Specific behaviors identified to have been commonly discussed as positive among all focus groups were: individualized conversation, teacher enthusiasm, task-related support, promoting cooperation and teamwork, awareness to student mood, and caring about student outcome (2015, p. 230). These specific behaviors by physical educators were all discussed to have had a positive impact on students and their own behavior within class. This study reinforces the importance for physical educators to be aware of how they are teaching and the interactions they have with all of their students. The development of a positive classroom environment is attainable through responsible teaching practices focusing on differentiating instruction to support student learning, and positive interaction to build student self-efficacy. When teachers are able to effectively and constructively interact with all students, then a positive reciprocal relationship is created. Teachers better understand their students, students feel valued and supported, and both are in an environment that supports learning, growth, risk taking, and success.

Providing individualized instruction can improve student learning

The idea of providing individualized instruction to improve student learning is not a new concept, however, most research has been focused on the academic subject areas. The studies presented all differed in purpose, but had similar conclusions that differentiating instruction allowed every student, despite their specific learning needs, greater opportunities to achieve success. In all studies, the results indicated greater student achievement, engagement, and growth when tasks were refined to meet their needs. With this, however, comes a greater need to understand how class size impacts a teacher's ability to meet all students learning needs, whether that is through modifying activities, individualized feedback, or class interactions.

Rikard (1992) examined the relationship between the teacher's instructional practices in organizing activities and feedback with student practice success. The study, conducted in rural North Carolina, followed eight fourth grade physical education students, four high skilled and four low skilled, through a seven lesson unit on striking. The results varied in that both high and low skilled students experienced the same amount of success relative to their skill levels regardless of teacher feedback. The low skilled students did experience greater practice success when the teacher intervened and provided immediate, corrective feedback; however, these students regressed when the teacher left. When the teacher adjusted the tasks, greater practice success was seen by both skill level groups. This lends to the idea that differentiating instruction to meet the learning needs of all students offers greater opportunity for growth and success. Another result that is important to note is student engagement when the teacher leaves an interaction. Class size would impede not only the teachers' ability to effectively reach all students, but would also limit the amount of time spent on each student. According to this study, this would result in lower student engagement and success in an activity.

An and Meaney (2015) performed a phenomenological exploration of inclusion practices through the experiences of four elementary PE teachers. The researchers used Bandura's Social Cognitive Theory as a framework to interpret the findings of the study. Participants were shown to have made real efforts in modifying activities and adapting programs to ensure that all students were able to achieve success and then used these to create a supportive and fun learning environment. When teachers are provided with the support to differentiate instruction and are motivated to learn about how to best support their students with disabilities, then they feel more effective as educators. Observing

student growth through the teachers' ability to differentiate instruction encourages teachers to continue to seek strategies which will increase their effectiveness and support student learning. Differentiation of instruction is important in the teaching process. In this study, there were instances where teachers had to separate their students with disabilities from their peers so they could provide more individualized feedback or set up an alternate activity to meet their specific learning needs. This modification of activities is essential in student growth within PE because through successful completion of an activity, student confidence grows, which facilitates student engagement. The authors concluded inclusive teaching practices encouraged teachers quest for knowledge of their student's specific learning needs. This allows the physical educator the opportunity to better differentiate the content to meet their learning needs while creating a supportive learning environment for all students.

In a similar study, Marinescu, Tudor, Mujea, & Baisan (2014), sought to determine whether differentiated instruction practices improved the muscular strength and endurance of students with learning disabilities in Romania. The researchers implemented a differentiated instructional approach where teachers utilized individual, partner, small group, and large groupings while also emphasizing modeling correct technique and behavior. The teachers also offered more time for class discussions with the goal of offering opportunities for positive teacher-student interaction to increase the social and emotional support for students. The results on the fitness assessments show that the group achieved higher scores across all four muscular strength tests. These results indicate the effectiveness that utilizing a differentiated approach to physical education can have on all students, but especially for students with learning or physical disabilities.

The benefit of an increase in teacher student interactions was also seen to have helped promote student engagement and motivation to succeed. Class size was not documented in this study, so while it helps to validate a differentiated instruction approach, the challenges of implementing this approach in large classes was not broached.

Understanding that many variables contribute to student success and achievement in physical education, Hastie, Calderon, Palao, & Ortega (2011) wanted to investigate the connection between task organization and student skill level in secondary physical education. The purpose of the study was to determine if student outcomes are improved if they participate in different organizational formats within lessons. The study, conducted in southern Spain, had an average class size of 27 and focused on three events: hurdles, high jump, and shot put. Results showed that the greatest improvement in student skill level occurred in the circuit format of instruction. The authors believe that this method of teaching allows teachers the opportunity to modify activities to fit student skill level and allow for skill variation within each circuit. Also noted was the development of reciprocal teaching, as higher skilled students were seen to help lower skill students within their groups. One negative with circuit instruction that the researchers noted from their videotaped observations, was that the teacher had less of an impact on individualized feedback and acted more as an overall manager of the class. A key variable within this study was the average class size, which at 27 students is well below the expectation for middle school PE, which is around 40 students according to the California Department of Education. This significant difference in class size raises the question as to the effectiveness of this type of teaching in larger classes, as educators will have more circuits of students to observe, potentially increasing student off task behavior.

Summary

Extensive research has been conducted on class size and its impacts on various aspects of the classroom. As presented in this chapter, past literature has been examined throughout K-12 education, although the focus has primarily been on the elementary grades or in core academic subjects. The previous studies concluded that an increase in teacher student interaction in small classes was beneficial to the student and helped to increase engagement and achievement. Although a common barrier as reported by these studies was seen to be class size, a deeper understanding as to why this is a commonly reported barrier remains to be researched. The results of these studies do detail, however, that class size plays a significant role in how physical education is being taught and how students are responding to instruction. It is also important to note that a majority of these studies were performed in elementary PE, which concludes that more understanding of this topic is needed at the secondary physical education levels.

We need to acquire a deeper understanding of how and why these impacts occur in middle school physical education to help educators provide a fulfilling and appropriate physical education experience where all students learning needs are met. Despite the growing issue, limited research has looked into how and why class size impacts the teaching process from a teaching perspective. In order for educators to provide a fulfilling and appropriate physical education experience where all students learning needs are met, a deeper understanding of how class size impacts the middle school PE classroom is needed. Hence the significance of this study, which focused on further understanding the impact of class size on the teaching process and instructional practices of middle school physical education.

Chapter 3 Method

This study aimed to explore and further our understanding of the impact of class size on the teaching process and instructional practices of middle school PE teachers in the greater San Francisco Bay Area. Specifically, the study seeks to understand the unique relationship between class size and teacher-student interaction, type of instruction, and perceived teacher efficacy.

To achieve a deeper understanding of this topic, a qualitative research approach was utilized. A qualitative research approach allows the researcher an opportunity to explore and develop a greater understanding on how individuals view a social or human problem (Creswell, 2014). According to Bazely (2013), a key component of qualitative research is that it “tends to focus on the qualities of things rather than the quantity” (p. 3). For qualitative researchers, this is achieved through “observing, describing, interpreting, and analyzing the way that people experience, act on, or think about themselves and the world around them” (2013, p. 4). This type of research design allows the researcher to examine the “why” and “how” of a certain phenomenon or situation.

To enhance the research, Creswell (2014) supports the collection of multiple forms of qualitative data within the natural setting (p. 190). Gathering multiple forms of data furthers the researcher’s ability to identify, interpret, and explain the central phenomenon of the study. Qualitative interviews can consist of face-to-face, telephone, online, or within a focus group setting; with a central theme of these interviews being that they are generally unstructured with an open ended approach to elicit views and opinions from the participants. This method allows the researcher greater control over the questions being asked as dictated by the participant’s responses, which offers opportunity

for a more in-depth understanding of the situation. With the researcher conducting the interview, the data gathered provides insight into how each individual participant views, understands, and reacts to the phenomenon being studied. Using a qualitative research approach focusing on gathering data from multiple sources offers the opportunity for a greater understanding of the situation being studied through the unique perspectives and observations of the participants.

Research Sites

This study occurred at three suburban schools in the Greater San Francisco Bay Area. Site A is a public middle school with an enrollment of 593 students. Of these students, 70% are Caucasian, 11% are Hispanic, 5% are Asian, 1% African-American, and 13% are identified as being of multiple ethnicities. From this student population, 55% of students are male and 45% are female, while 4% of the student population is on free or reduced lunch. The student to teacher ratio at this school is fifteen to one, with a whole school average class size of twenty-four. The largest PE class this year consists of thirty-seven students.

Site B is a public middle school with an enrollment of 1,095 students. Of these students, 61% are Hispanic, 32% are Caucasian, 5% are Asian, and 2% are African-American. From this student population, 52% are male and 48% are female, while 63% of students are on free or reduced lunch. The student to teacher ratio at this school is twenty-one to one, with a whole school average class size of twenty-eight. The largest PE class this year consists of forty-six students.

Site C is a private K-8 school with a total enrollment of 595 students. Of these students, 67% are Caucasian, 11% are Asian, 5% are Hispanic, 5% are African-American, and 12% are identified as being of multiple ethnicities. From this student population, 51% are female and 49% are male, with all students being provided the option of free lunch as served in the school cafeteria and prepared by a full time chef. 22% of students who attend this school are on some form of financial aid. The student to teacher ratio at this school is eight to one, with a whole school average class size of eighteen. The largest PE class this year is co-taught by two PE teachers and consists of eighty-eight students.

Participants

The researcher conducted interviews with seven PE teachers at three different school sites in the greater San Francisco Bay Area. In addition, the principal at school site A provided permission (for the researcher to observe physical education classes on site. Observations consisted of one female and two male participants. The principal at school site B provided permission for the researcher to conduct interviews on site in the participants' offices during their prep period. The interview of Amanda from school site C occurred in her own home, off school grounds. Pseudonyms have been provided to all participants in the study.

John from school site A has been teaching for thirty years. He started his teaching career in English before moving to become a Vice Principal at an elementary school. For the last thirteen years, he has been teaching middle school PE. He has a Bachelor's degree in English, a Master's in Education Administration, and possesses three single subject teaching credentials: English, Educational Administration, and Physical

Education. His smallest class this year has twenty-three students and his largest has thirty-three students. He has noticed during his tenure at school site A that class sizes have been getting larger as school enrollment has increased.

Jack from school site B has been teaching for twenty-five years. He began his teaching career working part time between a middle school and a high school within the same district as a Social Studies teacher. Fifteen years ago he transferred from teaching eighth grade Social Studies to eighth grade Physical Education. He has a Bachelor's degree in History and a Master's in Education Administration and possesses three single subject teaching credentials: Social Studies, Educational Administration, and Physical Education. His smallest class this year has thirty-five students while his largest class has forty-three students. He has noticed a decrease in class sizes at his school site as in prior years it was common to have classes of fifty or more students, whereas now classes have ranged from high thirties to low forties.

Sarah from school site A has been teaching for fifteen years. She began her teaching career in Kindergarten before moving to middle school ten years ago. Sarah possesses a Bachelor's degree in Political Science but has since earned a multiple-subject and single-subject Physical Education credentials. Her smallest class this year is twenty-one students while her largest is thirty-six. She has noticed that class sizes have been growing at her school site since she began teaching PE ten years ago.

Joey from school site A has been teaching for thirty-two years. He has always taught PE at the middle school level, although he transferred to school site A twenty-eight years ago. Joey possesses a Bachelor's and Master's degree in Physical Education and has a single-subject teaching credential in Physical Education Examination. His

smallest class this year has twenty-five students while his largest class has thirty-four students. In his tenure at school site A, Joey has noticed classes have been increasing, especially within the last five years.

Katie from school site B has been teaching for twenty-six years. She began her teaching career at a K-8 school, holding various teaching positions, before moving to her current position. She has also taught PE in summer school at a local high school. Katie has a Bachelor's degree in Communications and possesses an Adaptive Physical Education teaching credential as well as a single-subject Physical Education credential. Her smallest class this year has thirty students while her largest has forty-six students. She has noticed in her time spent at school site B, that the administration is making a concerted effort to lower class sizes.

Amanda from school site C has been teaching for eight years. She has only taught at school site C and has experience teaching PE across every grade level. She has a Bachelor's degree in Animal Science and is currently in the process of acquiring her single-subject Physical Education teaching credential. Her smallest class has twenty students while her largest class, which is co-taught with another PE teacher, has eighty-eight students. In her eight years teaching at school site C, Amanda has noticed that the PE classes for the middle grades, six through eight, are increasing as the school admits new students and enrollment keeps increasing.

Robert from school site B has been teaching for eleven years. He began his teaching career at the high school level before moving to his current position four years ago. He has a Bachelor's degree in Economics and a single-subject teaching credential in Physical Education. His smallest class has thirty-three students while his largest class

consists of forty-two students. In his four years of teaching at school site B, Robert has noticed that class sizes have been pretty consistent although a new sixth grade schedule has reduced the number of students in sixth grade PE.

The participants range in teaching experience from eight to thirty-two years. Six participants have a single subject credential in secondary physical education, while Amanda is in the final stages of acquiring her credential. The wealth of experience of all participating teachers across three very different school sites enhances the perspectives of the participants in this research project and offers variation to their experiences.

Sampling Procedure

The researcher obtained permission from the principal of school site A to conduct interviews and observations on campus through a face-to-face conference resulting in a signed consent form. The researcher reached out through email to the principal of school site B and requested permission to conduct interviews on site. The principal of school site B agreed, and allowed the researcher permission to conduct three interviews on site during the participants' prep periods. The interview with Amanda from school site C occurred off school grounds in the dining room of her home.

The researcher used many methods to solicit teacher participation within this study. The researcher reached out through email to current and former coworkers seeking their participation in this study. All participants of the study were provided a Cover Letter explaining the research project and a participant Bill of Rights before each interview. Participants were asked to sign Consent Forms detailing their willingness to participate in this study.

Methods

Participants participated in a thirty to forty-minute interview that consisted of a series of demographic questions followed by seven open-ended research questions. Interviews occurred at a time, date, and location chosen by the interviewee. The interview with Amanda occurred in the dining room of her home, not on school grounds. Interviews were recorded using an audio recording device and a free online transcription service. Each recording began with the first demographic question and ended upon the answer of the last question. No identifiable information was recorded. Notes were taken during the interview but did not include any names, or identifying information (addresses, phone numbers, personal references). A script was used to dictate the beginning of the interview, following the established interview protocol as described by Creswell (2014, p. 194). Interview questions were asked in order, but the open ended approach to the qualitative interview allowed for flexibility and variance in follow up questions. The last few minutes of the interview was used to answer any questions the interviewee had and to formally thank the participant for their participation in this study.

This study also utilized observational data which provided the researcher with a first-hand experience of the situation being studied and allowed the researcher to record information as it occurred (Creswell, p. 191). Observations occurred at the researcher's school site and included one observation from each teacher in the PE department. The lesson's that were observed were in the units of street hockey, badminton, and table tennis unit and were not disruptive to the class. The researcher took active notes focusing on the teacher differentiating instruction, their role in leading the class, time spent on class and behavior management, and the structure of the class activities. Observational

protocol was established and followed as described by Creswell (2014, p. 193). The researcher divided the note taking pages into three columns, with the first column noting teacher/student behavior, the middle column containing descriptive notes of the scene with time references, and the third column which consisted of reflective notes of during and after the observation (Creswell, p. 194). The teacher noted the enrollment of each class at the start of the observation. After each interview, the researcher presented the observational notes to the participating teacher for approval.

Data Analysis

Each interview was audio recorded, transcribed by a free online service, and then using the computer generated transcription, immediately edited by the researcher for accuracy. Each transcription process began with the already transcribed document and the recorded interview which in reference to the transcribed document was carefully listened to, reviewed, and corrected to the utmost accuracy. Each participant was provided a copy of the interview transcription and provided the right to change or modify any of their responses. All participants denied this option and were satisfied with the accuracy of the transcribed interviews.

After transcription, the researcher read through each interview and began the coding process which consisted of discovering key words or phrases and setting these as data points, organizing the data into categories, and organizing these categories until common themes emerged from the data sets (Creswell, 2014). This process was accomplished by meticulously reviewing and dissecting participant responses to each individual question. The researcher created a spreadsheet through Google Sheets to organize initial codes in relation to each question of each interview. The researcher was

able to find connections of keywords and phrases through the organization within the Google Sheets. By carefully analyzing the transcriptions and initial codes, the researcher was able to identify common themes within the data and significant characteristics among the totality of the responses. After the discovery of the initial themes, the researcher reviewed each transcription and used the coding spreadsheet to find direct quotes supporting each finding.

The data from the three in-class observations were used to verify the accuracy of the emerging themes gathered from the transcribed interview data sets. Each observation contained hand recorded notes following the observation procedure as reported by Creswell (2014). After each observation, the researcher prepared data for analysis by typing up the field notes and storing electronically. Following the coding procedure of field notes, the researcher first meticulously reviewed the data as a whole. After reading through the field notes of an observation, the researcher began the coding process by documenting key moments or phrases as codes, then categorizing codes which led to an emergence of themes. To increase accuracy of the findings, the emerging themes from the observation notes were included and compared with the emerging themes of the interviews.

Validity and Reliability

The validity of this study is supported by the triangulation of multiple data sources. According to Creswell (2014), this is accomplished by “examining evidence from different data sources and using it to build a coherent justification for themes” (p.201). The use of two different data sets, qualitative interviews and class observation, allowed the researcher greater access to different types of data, improving the

trustworthiness and accuracy of the results (Creswell, 2014). The examination of the researcher's own bias to the research question and previous experience provided a level of understanding to the problem but the number of participants at three different school sites provides deeper perspective on lived experience, supporting the validity of the research.

Research Positionality

The researcher entered this study with an assumption that class size has a negative impact on classroom processes and instructional practices of physical educators. The researcher has had personal experience with teaching large classes, and understands the struggle and energy to effectively meet all students specific and unique learning needs. Past experiences of teaching classes of thirty-five or more students may cause the researcher to create pre-determined codes or themes within the data. These experiences have led the researcher to extensively think of ways to better improve the teaching environment of large classes. To limit bias, the researcher interviewed seven physical educators across three different school sites in the Greater San Francisco Bay Area with the idea of gaining various viewpoints and experiences across very different school environments. The researcher has previous and current working relationships with all participants which may have affected the findings of this research. The participants of this study may or may not have wanted to create a positive image of themselves and their teaching because of our relationship. To ensure that participants felt comfortable in being honest, the researcher provided context to the purpose of the research and discussed the anonymity of their participation. The researcher also incorporated observational data as a way to triangulate the data and improve accuracy of the research. To avoid bias in the

observation process, the researcher created and strictly followed an observation procedure, as outlined by Creswell (2014).

Ethical Standards

This paper adheres to the ethical standards for protection of human subjects of the American Psychological Association (2010). A research proposal was designed and approved by the Dominican University of California Institute Review Board for the Protection of Human Subjects (IRBPHS) and assigned number 10626 (Appendix A).

All participants understood that their participation was voluntary and were advised of their right to withdraw from this study at any time. Participants were further assured of their confidentiality, data security, and the anonymity of their participation in this study.

Chapter 4 Findings

“I feel way more accomplished teaching my smaller classes!” - Katie from school site B.

This study was focused on furthering our understanding of the various impacts that teaching large classes has on the middle school physical educator. Teacher self-efficacy plays an important role in the teachers' ability to be that positive motivating force within the classroom that many students need to be successful. If teachers feel confident about their abilities in effectively reaching all students, then they will be more motivated with their role in the teaching process.

What this research presents, however, is that teachers who do not feel they are effective in their ability to teach a large class become passive towards the teaching process. Feelings of frustration and helplessness override the desire to seek out and utilize effective teaching strategies designed for teaching large classes. The physical and emotional burden of teaching large groups of middle school students in PE was apparent in the mood shifts all participants exhibited when talking about their difficulties teaching classes of over thirty-three students. Above all else, teachers of large classes were seen to be disillusioned about the entire teaching process towards those classes, in some cases, giving up all together and simply allowing free play. Therefore, teacher apathy occurs when teachers become overwhelmed with the physical and emotional cost of teaching large classes in middle school Physical Education. All participants displayed a layer of indifference and avoidance when referencing their large classes and how they approach teaching those classes. Listening to participants articulate these frustrations and conclude with an indifferent statement such as “I just try to do the best I can,” leads to the conclusion that the teaching environment of large classes is not conducive to teacher's

perception of self-efficacy or sense of well-being and can negatively impact student learning.

An essential element to Bandura's Social Cognitive Theory is the role of the motivator, or teacher, in developing a positive learning environment, modeling correct behaviors, and to inspire students to actively participate in observational learning (Rosenstock, Strecher, & Becker, 1988). The teachers' role in the class setting was shown to be directly impacted by the number of students within the class: impacting instruction, interaction, assessment, and differentiation to meet specific student learning needs. All participating teachers shared a frustration over how class size impacted their teaching effectiveness noting the differences between their larger and smaller classes. This powerful feeling directly affects how the teacher approaches teaching their larger classes. Frustration at their own inability to effectively reach all students in a meaningful way leads to a more facilitation and management style of teaching where resentment and fatigue begin to develop. Physical educators begin to focus on the whole group rather than the individual, and most of the interaction between teacher and student is centered around classroom or behavior management. As Jack reinforces, "most of the feedback I give is unfortunately negative, it's the ones who aren't participating in the activities."

Surprisingly, the tone of every interview peaked as many participants expressed very positive attitudes when discussing their smaller groups. The participants' moods became brighter, and more upbeat when talking about their smaller classes. Katie acknowledged, "it's really noticeable to have 30 sixth graders compared to 45 like in the past, it's a lot more educational, it's more personal, more learning going on." Amanda happily stated, "with the small classes, it's actually really nice because I can walk around,

I can help kids, correct them with their form or answer questions." These comments show that these teachers felt good about their teaching, what they were doing and accomplishing in class, but the participants tone changed dramatically when talking about their largest class. As Sarah states, "with the bigger groups, it's just frustrating wasting so much time because of kids talking or waiting for them to get organized or follow direction." Amanda even goes on to call her class of 88, "glorified recess," because they had to resort to free choice because teaching was not productive. We should want our teachers feeling confident, accomplished, and motivated towards the teaching process. Research shows that when teachers reinforce positive behaviors, then students are more likely to continue the behaviors on their own (Kamla et al., 2006, Rosenstock, Strecher, & Becker, 1988). As Amanda states confidently, "with my teaching philosophy, which is to get moving, the smaller groups definitely I feel like they're able to get more specific instruction, and put it into practice, apply it, move, and get a lot of minutes in my class."

A quality Physical Education program as defined by the NASPE is one which provides students with safe and effective instruction and spends a minimum of 35% of class time engaged in moderate to vigorous physical activity (2006). The data from this research supports previous research that smaller class sizes in Physical Education lead to more student activity, participation, and skill acquisition (Chen et al., 2016; Keating et al., 2010; Kirkham-King et al., 2017). Placing teachers in positions where they feel comfortable and confident has the potential to lead to greater student learning and achievement in the classroom.

Four primary themes emerged from the data which lead to the conclusion that teacher apathy occurs when teachers become overwhelmed with the physical and

emotional cost of teaching large classes in middle school Physical Education. The four themes that emerged during data analysis and discussed below are all interconnected with each other at various levels demonstrating that class size plays an integral role in how the physical educator approaches and instructs their class.

Facilitating rather than teaching: I do the best I can with my head on a swivel

"The larger the group, the harder it is to really modify an activity effectively for those kids that really need the modification" - John from school site A

All participating teachers expressed that larger classes involved more facilitating rather than teaching due to the number of students within their classes. Participants mentioned an inability to effectively modify activities, monitor student achievement, and provide consistent instruction with large classes because of the increase of classroom management issues. Within this facilitation and management of lessons was an underlying sense that participating teachers simply did the best they could with what they got. For Amanda from school site C, the challenge of being able to provide quality instruction to a group of 88 eighth graders were too difficult for her and her co-teacher, so they decided to "just let them do what they want to do, and at least they get a lot of movement in." In essence, glorified recess. Sarah shares a similar point of view with her assessment that with her large classes, "it almost feels like we are babysitting sometimes." Jack's strategy for assessment in his large classes is allowing his students to self-monitor their progress because he struggles with being able to effectively assess 45 students. This mentality and thought process can be very detrimental to their approach towards the teaching process. Without proper support with their large classes, these teachers feel helpless in their ability to effectively reach all students, which is only

compounded with the overt risk of injury or off task behavior that can occur when teaching large classes in middle school Physical Education.

All participants discussed the importance of having their head on a swivel and eyes on everyone, especially with the larger classes due to the potential for injury or off task behavior. With more students in a class, there are more opportunities for students to get off task if the teacher does not have eyes on the whole group at all times. The impact of large classes wasn't just the number associated to the class but also the personalities and social dynamics that come with it. Sarah states that her, "eighth grade classes are larger, which leads to more personalities that are not well suited for one another to be in the same class." This situation can occur in any class, but in physical education, where identified student caps range from 37 to 45, the possibilities for students who are not well suited to be in the same class with each other increases. It may be impossible to ensure that all personalities are aligned in any class, but in a smaller class the teacher can help facilitate positive peer interactions and help to negotiate conflicts. Poor social dynamics of students can negatively impact the classroom environment and generate a level of stress that teachers must deal with. Sarah goes on to say that with her largest eighth grade class, "I feel like I'm really just constantly repeating directions, and having the kids sit down or starting over."

When teachers have to waste time on classroom management issues due to the size of the class, it impacts instruction, student activity, and most importantly student learning. John notices that with his classes of thirty students or more, "it takes longer to get things organized so that is going to reduce the amount of time they are on task." This evaluation is consistent among all participating teachers and is a direct reflection of one

of the key impacts that class size has on the teaching process. More time is spent on classroom management which means that students have less time to participate in class activities, which unfortunately means less student learning and increased teacher frustration. This keen awareness that larger classes led to more classroom and behavior management issues, lead all participants to develop an understanding of the increased responsibility of managing the whole group and reducing their ability to focus on the individual. Unfortunately, the students who are impacted the most are the ones who need the most personal and individualized attention.

Finding the time to talk: large classes limit teacher-student interactions

"I think that's one of the biggest challenges, if the class is too big or like if we are outside and they are so spread out, you just can't get to them all" - Sarah from school site

A

All participating teachers revealed struggles in being able to effectively reach all students, whether that was understanding how to meet their specific learning needs, building positive and respectful relationships with their students, or being able to provide quality instruction to the whole group or individual in an efficient and appropriate manner. The large class size along with the limited amount of time are two very real challenges towards being able to build positive, meaningful relationships with your students. As Robert explains, "Ya I mean in a class of 45 minutes, where 10 minutes is lost in the locker room, it's difficult to find the time to have personal or even constructive moments with all the students." All seven participants explained that larger classes impacted their ability to provide constructive, individualized feedback to students which led to more whole group instruction and discussion. The issue with focusing on large

group instruction and discussion that all participants identified, was that the students who need the extra support the most, don't necessarily receive it to the level that they need because the size of the class impedes teachers' ability to provide sufficient individualized instruction to those students. Joey sums this up perfectly with his explanation that, "there are kids who don't have gross and fine motor development, those are the kids who are really hard to reach because with those class sizes you just don't have the time to take them aside and they hide within the group really well." All three observations supported this assessment as a total of fifteen students were observed as not demonstrating correct technique, but due to type of activity and spacing of students, the teacher was not able to recognize or help these students. This is the unfortunate reality that many teachers face with their large classes, that no matter what they do, some students are left out of the learning process due to the type of instruction, limited amount of personal attention, and difficulty in properly assessing every student to be able to provide quality constructive feedback.

Many participants discussed the difference that they notice in their ability to interact with students between their larger and smaller classes, with "number of students," "lack of time" and "large space" as the most commonly used descriptors. Katie was all too aware of the difference in her smallest class of 30, and her largest class of 46, "...again the smaller class sizes I would say they are getting way more instructional feedback on good things they are doing, proper mechanics or the opposite and trying to work with them and I don't feel with the larger classes that I always get to every student because of the large class size." When teachers decide that they have to limit their personal interaction with students to focus on the whole group, then students are able to

slip on by. These cracks are detrimental to students because they are not able to receive the individualized constructive feedback that can be beneficial to their achievement within an activity. As John states with the large classes, "the amount of time you can spend with an individual or group is fairly limited because of the demands of maintaining order and safety and needing to check in with everybody."

The number of students within a class, along with the limited amount of class time and environmental setting of physical education, are all barriers to the development of positive relationships with all students and the teachers' ability to learn and understand the learning needs of all of their students. This is important to know because a quality physical education is particularly important for the students who normally wouldn't find much success in physical education. Joey points out that with the quieter students in his larger classes, "I cannot figure them out so I never know what the key is to unlocking their success in my class." In an observation of Sarah, four students were identified to be really struggling with the skills of street hockey did not receive any immediate or constructive feedback from Sarah because of her need to manage the whole group. In the end of class shooting activity, these four students were unable to control the ball and missed each of their shots. Two students played it off with their friends, but the other two seemed to be removed from the social groups of the class and walked back to the locker rooms by themselves. These are the students who are vulnerable to associating physical activity with negative feelings based on their experience in physical education. If students do not feel supported, comfortable, or confident in their abilities in class and do not have the appropriate feedback to support their learning and development than many students simply pass by without acquiring any skills or knowledge about personal fitness. All

participants shared similar teaching philosophies centered around every student experiencing success and enjoyment in physical education, but the regrettable reality is that too many students slip by when the class size is too large for the educator to effectively reach all students.

The Teaching Front vs the Teaching Trenches: The reality of teaching large classes

"I also feel that with that rapport, kids are going to try harder if they know somebody's invested in them." - Jack from school site B

"Takeaways from Capturing Kids' Hearts is you connect with a student everyday...which in PE, that's virtually impossible to do." - Jack from school site B

All seven participating physical educators were seen to have created a teaching front, one where participants identify teaching goals and understand what they want to achieve with their classes, yet at the same time understand that these goals are not achieved in practice. The reality for all the participants, or while in the trenches, is that large classes have a negative impact on participants' ability to reach their teaching goals. All participants discussed their teaching philosophy centering around student engagement, success, and creating positive experiences; however, all participants were later to admit that they weren't meeting these goals in many of their classes due to the size and its negative impact on the learning environment.

The front was a noticeable defensive shield in the beginning of each interview, as participating teachers were stating their teaching philosophies and goals, using words such as "success," "positive experience," and "fun," among others. Participants mood was light, confident, and direct with how they approach teaching middle school physical

education and what their teaching goals are. Sarah has a philosophy where "kids are getting the work done in the beginning, and then at the end of the day they are laughing, smiling, and having fun." Similar comments were made in this section of the interview from all other participants, however, as each interview progressed, participants increasingly articulated the direct impact that class size has on their teaching. Sarah later recognized that, "I'm pretty sure I'm not going to get anything out of them in this particular unit," when speaking about her largest eighth grade group in their current unit of badminton. This battle between the front and the trenches is exhausting, frustrating, and easily lost because the reality is, as John states, "with over 150 kids, it's not the easiest thing in the world to know their exact learning needs".

Following Bandura's Social Cognitive Theory as well as understanding the positive impact of differentiated instruction on all students, it is concerning that so many teachers were exhibiting a teaching front but experiencing something completely different. The feelings that all participants shared were varying levels of frustration, avoidance, and indifference when talking about their largest classes. These are very impactful on how that person approaches how they teach. Five participants, at different moments of the interview, let slip that they simply allow more free play with their large classes and one participant resorted to showing more movies because the students were not following any of her class procedures. When teachers resort to these actions, then the learning environment becomes impacted. Students do not have the exposure to a quality physical education program, limiting access to information that is important for learning how to live and maintain a healthy lifestyle.

Emotional and physical cost of teaching large classes

"It's just more of your actually getting to instruct as opposed to manage, 20 versus 88, it's a different ballgame, I mean it's a huge difference. And I love to teach, but I find it difficult and exhausting to manage" - Amanda from school site C

The emotional and physical cost of teaching large classes emerged from the research, as well, with all participating physical educators expressing varying levels of frustration, fatigue, and indifference in regards to teaching large classes. As each interview progressed, the participants became more reflective about their frustrations and limitations when teaching their larger classes and the impacts that the size of the class had on their teaching effectiveness. This awareness led to deeper reflection on the differences that they notice when teaching their smaller classes compared to their larger classes. Amanda notices this difference, "with the bigger groups, it's just frustrating wasting so much time because of kids talking or waiting for them to get organized or follow directions" while "when its smaller, it's just more intimate, easier to connect, the kids know that you're focused on them because there is only, you know, 20 something kids." This is a genuine assessment of the difference between the class sizes and is consistent among all participating teachers. Participants began to recognize their feelings associated to teaching the larger classes. Katie states, "I feel way more accomplished teaching my smaller classes," while also acknowledging "it is very difficult and exhausting trying to reach all the kids when you have a class of 45 or 46." These feelings are associated with the teaching trenches, as the reality of teaching large classes begins to wear away the front of the physical educator.

While observing Joey teach his seventh grade class of 34 table tennis, moments of visible frustration were easily apparent from Joey as students were routinely off task and not following directions in regards to proper handling of equipment. In a 44-minute period, two students were sent out of class for slamming their paddles on the table and Joey had to blow the whistle and lead large group instruction on behavior three separate occasions. Having to resort to these options is physically and emotionally exhausting, and it does not benefit anyone. After the observation, Joey had a resigned look and simply shrugged his shoulders as he walked past. The struggles that teachers face while teaching large classes are taxing, especially when students are socially not well suited to one another. To make matters worse, teachers often compare their smaller classes and their larger classes with a helpless shrug.

Conclusion

The four primary themes which emerged from the data were all intertwined and connected with each other, further leading to the consideration that class size plays an integral role in how the physical educator approaches and instructs their class. The teachers' role in the class setting is shown to be directly impacted by the number of students within the class, impacting instruction, interaction, assessment, and differentiation to meet specific student learning needs. All participating teachers shared a frustration over how class size impacted their teaching effectiveness noting the differences between their larger and smaller classes. Sarah states, "I feel like with that low number, I can get to them easier, much easier. That's the one class this year where I have actually felt like I have been teaching rather than facilitating." Educators entered into this profession to become teachers, to instruct students in their subject matter, not to

facilitate or manage large groups of students. In response to a follow up question about student success in the larger classes, Robert says, "so what tends to be the case...is the sportier kids or really driven kids do really well, and the kids that don't usually like PE just pass on by." Ironically, the students who might most benefit from PE are the students who are typically overlooked, while those who already possess strong fitness abilities are provided additional opportunities to strengthen their skills. This bitter truth is an unfortunate reality brought upon by a group of students that is simply too large to effectively teach resulting in teacher apathy towards the teaching process.

Physical Education is an extremely important subject matter where positive life skills are taught, practiced, refined, and applied; but it can be an equally polarizing subject area. Not every student enjoys physical activity or applying skills in various sports or activities, so it is essential that all students feel welcome and supported to ensure that they would be more willing to participate. If the teacher is unable to provide positive and supportive interaction to all students, then the learning environment is impacted. As John states with the large classes, "the amount of time you can spend with an individual or group is fairly limited because of the demands of maintaining order and safety and needing to check in with everybody." Research supports that low skilled students who experienced failure were less likely to participate in physical activity within and outside of school (Portman, 2003; Scrabis-Fletcher et al., 2016), so it is necessary that these students don't just "pass on by." Logistically, however, the size of the class impacts the teachers' ability to ensure this doesn't happen, and as teachers begin to understand this harsh truth, their efficacy and motivation is adversely affected.

Chapter 5 Discussion

This study was conducted to further our understanding of the various impacts that class size has on the teaching process for middle school physical educators. The results of this study conclude that class size not only impacts the instructional practices of middle school PE teachers, but there is also a physical and emotional cost to teaching large classes. The findings show that large class sizes impact various elements of instruction in middle school PE. First, teachers noted that their interactions with students are impacted as there are less opportunities for genuine constructive interactions when class sizes exceed 33 students. In large classes, teachers focus more on the whole group rather than supporting individual student progress because of the need to have your head on a swivel and eyes on the whole class. Teachers also tend to be the facilitator of activities instead of being the teacher because of the perceived difficulty in teaching classes larger than 33 students. Teachers noted that classroom and behavior management issues were the leading cause for this change of roles. These findings indicate that teacher apathy occurs when teachers become indifferent and overwhelmed towards the teaching process when teaching classes larger than 33 students in middle school PE.

Implications for the Literature

The results of this study support elements of previous research on this topic. Although much of the previous research centered around class size and its impact on the PE classroom were directed at the elementary or high school levels, the findings of this study support that class size is a barrier to a quality physical education program (Barroso et al., 2005; Bevans et al., 2010; & Gross, 2010). The results from this study are aligned with the literature that class size impacts the amount of teacher-student interaction that

occur within a PE class (Clanet, 2010). In addition, the amount of individualized instruction that the teacher can provide to students was impacted, with participants noting that they frequently focused on whole group discussion rather than individualized instruction, which research has shown can negatively impact student learning (An and Meaney, 2015; Marinescu et al., 2014; & Rikard, 1992).

The qualitative nature of this research allowed the researcher access to a deeper level of understanding on this topic. While results of this study support previous literature, the researcher was able to discover subtler impacts on the teaching process that were consistent among all participants and supported by observations of three participants. Each participating teacher created a teaching front, where they said all the right words and popular teaching terminology when discussing their teaching philosophies and goals for their classes. As each interview progressed and was supported by data from in class observations, the reality of teaching large classes superseded this 'front'. The reality was that teachers were facilitating activities rather than actually instructing students on proper technique, physical mechanics, or skill development. When teachers noted that when they attempted to provide focused instruction, time was lost because of an increase in classroom management issues. There was also a mention of student safety with large classes as teacher stress was increased due to the amount of students, the manipulative objects used in PE, and the open nature of the PE class environment. Finally, the results indicate that there is an emotional and physical cost to teaching large classes which can lead to teacher apathy towards the teaching process when physical educators become overwhelmed with the difficulties and stress of instructing large classes.

This study supplements findings from prior research by focusing on the teacher perspective of class size and its impacts on the teaching process. The significance of these findings is important to understand as student enrollment is increasing while many districts are trying to cut costs by increasing class size. While the teachers struggle with teaching large classes, the students within these classes are also impacted. Observational data indicated that many students simply passed through each class without attaining any skills, genuine knowledge on physical fitness, or access to a quality PE program. As teachers become apathetic to the teaching process, so do their students as they understand and perceive their teachers' indifference.

Implications for Practice and Policy

One important element to understand with this topic is that PE teachers do not have the flexibility of changing lessons according to class size for each class. The outside nature of the PE class, along with the materials and set up needed, limits the educators' ability to adapt and change each lesson for each class period. Therefore, all participants indicated that they teach the same lessons for their largest classes as they do with their smallest classes.

With this understanding, the results of this study support the need for school districts to reevaluate their student cap size limits in all PE classes. Currently our district has a student cap limit of 28 in the 'academic' classes, but PE has a grey area of around 35, although in the three years teaching at my current school, I have taught three classes larger than the 35 student cap limit. This was common among the other two schools as well. Each school had a defined cap for academic classes but all PE classes far exceeded those numbers. By reducing class sizes, the district will reduce teacher stress and

indifference towards teaching their classes of 33 or more students. All participants talked freely of the joy of teaching their smaller classes and how it was more instructional, there were more positive interactions, students experienced more success, and how productive whole group discussions were integrated. Large classes impact all these important elements to a quality PE program and it needs to be addressed at the district level.

Unfortunately, the way public school funding in California is set up, many school districts don't have the option or ability to simply cut student cap size in a class like PE. Therefore, the researcher proposes that districts should set up more time for collaboration and support in the form of curriculum meetings. This increase in time for support and collaboration should coincide with a more specific and rigorous schedule of professional development workshops focused on new strategies for teaching PE. Ensuring that these two programs work together provides physical educators access to new curriculum, instructional strategies, materials, and curricular follow up meetings necessary to design and review the implementation of new PE pedagogy. Too often professional development is a district wide event and is focused on the academic classroom with little follow up. In most cases, physical educators are left with nothing tangible to bring to their own classrooms. Allowing the opportunity for the PE department to work with the administration and district to develop a professional development workshop schedule with the follow up curriculum meetings will enhance teacher preparedness for teaching large classes, ensure the proper support is in place to maintain motivation towards the teaching process, and offer tangible strategies to use, helping alleviate the indifference that was rampant among participating teachers.

Following the current trends of enrollment at the participating schools, class sizes will likely continue to grow. Therefore, the researcher believes that school districts should be open and willing to provide PE more access to facilities for alternative activities and units in PE. For many school districts, including the researcher's, PE classes have access to a field, blacktop, and gymnasium. Exasperating the situation is that there are routinely multiple classes going on in the same period, which really limits what teachers are able to teach, and results in the same repetitive units. Based on the results of this study, the researcher proposes opening up more facilities for alternative units which can spark student interest, maintain teacher motivation, and offer more opportunities for all students to access a wide range of physical fitness activities. Examples would be a yoga room that could combine into a fitness center, or a classroom devoted solely for use by PE teachers and can be used by teachers for a unit on health, exercise physiology, first aid, or the development of a personal fitness plan.

Coinciding with access to additional facilities, the researcher proposes that districts and PE departments inquire into alternative curriculums centered around cooperative activities and student leadership within a PE curriculum framework. An example would be an adventure based curriculum which focuses more on a variety of cooperative activities with an emphasis on consistent student activity, engagement, while offering students various leadership roles within the structure of the curriculum. Cooperative activities require student buy in, however, they are designed to challenge groups to work together to achieve success together. The collective group design allows the teacher freedom to place students effectively within supportive groups while having student leaders monitor the groups progress. Student leaders would change with every

unit of study, allowing all students to experience the responsibility of every role. With all students organized into groups, the teacher can more readily observe group participation in the activity and offer advice to any groups which need it. To ensure that teachers are ready and supported in this curriculum switch, the researcher believes this should be done in accordance with an increase in PD to learn the curriculum and then an established number of curriculum meetings and follow up of PD to review implementation and reflect on the overall process. This shift in curriculum development will also place increased responsibility on the teacher to remain engaged in the teaching and learning process, so they are able to effectively implement any new curriculum.

The findings of this study, in support with previous literature on the subject, is worrisome and indicate a real need for change. Class size of over 33 students in middle school PE is shown to have a negative impact on the amount of individualized interactions and instruction that students receive and an equally concerning development of teacher indifference towards the teaching process. The researcher's proposals are based off the findings of this study and will empower physical educators in the teaching process while providing the necessary support to encourage teacher efficacy and motivation.

Limitations of the Study

This study gathered data from a small sample size of seven participants across three different school sites located within a ten-mile radius in the San Francisco Bay Area. Due to time and work restraints, the researcher was only able to observe three of the seven participating teachers as they taught various lessons to classes over 32 students. By only observing three participants, the researcher was not able to get a more complete

picture of how the other four participants approached teaching a lesson. At the same time, the researcher was only able to conduct one round of qualitative interviews, each lasting between 30 to 40 minutes. While all participants signed off on the completed transcript, the single round of interviews limits the amount of in depth reflection that can occur in a more phenomenological approach to interviewing.

In addition to the single round of interviews, all participants have been teaching at their current school site for more than six years, with six of the seven participants teaching middle school PE for more than 15 years, which arguably skews their perspective and willingness to maintain a level of motivation towards the teaching process when teaching large classes. While the qualitative approach to this study allowed the researcher access to a deeper sense of the data allowing for a more thorough analysis of the issue, the small sample size limits the universal impact of the data because the perspectives could be attributed to a small group rather than the broader teaching community. Furthermore, the researcher had a previous working relationship with six of the seven participants which could potentially have impacted the participants' willingness to answer honestly. While the researcher has a great relationship with all participants, and a level of trust had been established, the participants could have been hesitant to share any experiences that may have looked poorly on them.

The scope of the research is also limited due to the small sample size as well as the three different school sites. While each school site was demographically and socially different from each other, the close radius and location of each school site results in a limited scope. It was assumed that all teachers within the school sites and the overall area were experiencing the same issues of growing class sizes. The participation of more

physical educators across a wider range of school sites would ensure a more universal validity to the research because it would bring more perspective, experiences, and strategies resulting in a more extensive analysis.

Directions for Future Research

This research has uncovered that physical educators become apathetic to the teaching process when they become physically and emotionally overwhelmed with teaching large classes. Future research is needed to develop a deeper understanding of this issue by expanding the scope of the research to further validate conclusions. All the participants of the study had all been teaching for multiple years, but the perspectives of first or second year PE teachers and their experiences teaching large classes should be uncovered. Teacher burnout is a growing phenomenon and class size may have an impact for PE teachers leaving the profession early. In support of this, research should also be focused on determining effective support strategies to ensure that teachers feel supported, motivated, and valued in their profession.

The author implies that physical educators should be willing to adopt new curriculum and deviate away from the standards based units of basketball, soccer, football, etc... While limited research is available on the implementation of an adventure based activity or cooperative activity curriculum, further research is needed as to the impact of class size on these new programs. Expanding the research to not only investigate class size on these new programs but also student experience within would further enhance the findings and conclusions from the research.

Future research is also needed to understand the impact that class size plays on the student perspective and approach towards their own role in a PE class of more than thirty

students. Understanding how students feel and learn in large PE classes would offer physical educators an opportunity to better adjust teaching strategies which support student learning. This unique perspective in alignment with the results of this study would ensure a complete perspective on the impacts of class size in middle school PE and enhance the data allowing for stronger conclusions and implications.

Chapter 6 Conclusion

Class size is a contentious issue that has been endlessly discussed at all levels of education. The reality for PE teachers is that class sizes are generally much higher as student cap limits only pertain to ‘academic’ classes. With a general expectation of 40 students per class, physical educators are tasked with an extremely challenging job of effectively instructing all students while at the same time managing class dynamics, offering positive reinforcement, and recognizing success of all students. Understanding the role of the educator in leading the teaching and learning process was a guiding principle of this study. The educator is invaluable in setting the tone of the class as motivator and modeler of correct behavior and technique.

This study investigated how class size impacts the teaching process for seven middle school PE teachers in the San Francisco Bay Area. The researcher sought to further the understanding of the teacher perspective to this issue and identify viable solutions to a growing problem. The findings suggest that class size impacts varying elements of instruction for middle school PE teachers. The physical educators’ ability to interact individually with students is negatively affected as class sizes increase into the mid-thirties and above. Teachers discussed that with their large classes, they focused their instruction on the whole group, rather than ensuring equitable access to instruction by all students. Additionally, educators freely discussed the difficulty in modifying activities to meet all students specific learning needs while at the same time finding the time to offer students constructive, individualized feedback during class activities. Classroom and behavior management was also seen to have increased as class sizes increased, creating further stress for the teacher. These negative impacts culminated into the discovery that

physical educators became apathetic to the teaching process when teaching large classes of middle school students.

Physical Education is an incredibly valuable class for students of every age. The time allotted for physical activity is important for their health, while the knowledge gained about personal fitness, skill development, and exposure to new and unique activities can be carried with the student through their lifetime. Unfortunately, many physical educators are in the unenviable position of teaching classes in the thirties and above. The findings of this study support and build upon previous research demonstrating that class size negatively impacts varying elements of the middle school PE class. More attention at the school, district, and state levels should be focused upon reducing student cap limits in PE to assure all students are provided equitable access to instruction in PE. At the same time, the researcher argues that physical educators should have more access to quality professional development with appropriate follow up and support in the form of curriculum meetings.

From the teaching perspective, the need for change is evident and by continuing to ignore the present challenges, we are providing a disservice to our teachers and even more concerning, to our students. The implications for practice and policy are achievable only by a concerted effort from physical educators, administrators, and policy makers.

About the Author

Jason Gatti has been a middle school physical education teacher since 2013. He earned a Bachelor's degree in Regional Development from the University of Arizona in 2009. Struggling to find consistent employment, he decided to travel to New Zealand where he spent more than half the year volunteering at various capacities, one of which

was working with at risk youth. Upon returning stateside, Jason went back to school and earned his Single Subject Teaching credential from Dominican University in May 2013.

Jason currently lives in the San Francisco Bay Area and loves maintaining an active lifestyle and teaching middle school Physical Education.

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Appendix A

IRB Approval Letter



December 1, 2017

Jason Gatti
50 Acacia Ave.
San Rafael, CA 94901

Dear Jason:

I have reviewed your proposal entitled *Understanding the Impact of Class Size on Instructional Practices in Middle School Physical Education* submitted to the Dominican University Institutional Review Board for the Protection of Human Participants (IRBPHP Application, #10626). I am approving it as having met the requirements for minimizing risk and protecting the rights of the participants in your research.

In your final report or paper please indicate that your project was approved by the IRBPHP and indicate the identification number.

I wish you well in your very interesting research effort.

Sincerely,

Randall Hall, Ph.D.
Chair, IRBPHP

Cc: Jennifer Lucko