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Increasing Student Participation in Elementary Physical Education

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Northwestern College

An Action Research Project Presented
in Partial Fulfillment of the Requirements
For the Degree of Master of Education

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Abstract

The purpose of this action research is to gain a better understanding of why a significant number of elementary physical education students choose not to participate. In addition, the intended outcome of the study is to identify an effective intervention that increases student participation in elementary physical education. This 12-week long study used the mixed-methods approach as students were observed, surveys were collected, and data was analyzed. Furthermore, an intervention was tested to determine a way in which student participation would be increased. Over the course of the action research project, 70 students were observed and asked to complete a student survey. Based off of their responses, an intervention was applied to the setting and further observational data was collected. Using correlation statistical testing, it was determined that the implementation of a break area successfully increased student participation in elementary physical education. In addition to the study, this paper will share the related literature, the methodology, and the findings of the action research.

Keywords: physical education, participation, break area, social climate

Increasing Student Participation in Physical Education

Elementary physical education is more than just a time for student run around and release energy. Physical education is a class designed to teach students how to live a healthy and active lifestyle. Teaching students motor development skills, games and activities, and the importance of fueling their bodies in a healthy way are all life-long skills that can be developed in the physical education setting. In addition to the physical aspects of the class, social-emotional skills can also be taught. Teamwork, sportsmanship, and self-control are three examples of social skills taught in physical education. The benefits of physical education are vast, and when students are willing to participate and learn the physical and social-emotional skills offered in the class, their life can be impacted in a positive way.

The problem allies in the fact that elementary students are becoming more reluctant to participate in physical education. One study conducted by Xiang, et al. (2013), suggests that as students get older their motivation to participate in physical education decreases. Identifying ways in which educators can motivate their students and implement interventions that positively influence their students is the purpose of this action research study. Finding ways to encourage students to be active, even if the activity is not their favorite, is a key piece to this study.

Knowing and understanding the problem of decreasing student participation in elementary physical education is an essential part to the action research study. Through student surveys and analyzing their responses that explain why students are reluctant to participate, further research will be conducted to pinpoint an intervention that positively encourages young students to participate in elementary physical education. With the numerous benefits that physical education has to offer, this study is necessary to help all students develop both motor skills and social-emotional skills.

Literature Review

Introduction

Engagement, motivation, and participation are topics constantly being studied in education; these concepts are also important pieces in elementary physical education. There are many benefits physical education offers to students. Being active in physical education can help lower blood pressure, foster a healthy heart, and build strong bones and muscles. Furthermore, social-emotional benefits are present such as cooperation, teamwork, honesty, and respect. Knowing this, it is important for physical educators to ensure that their students are active during class. However, for various reasons, students are demonstrating an increased lack of motivation in physical education (Sotosek, 2016; Zourbanos & Papiouannou, 2014). Without engagement, motivation, and participation in physical education, students will not achieve the benefits the educational setting has to offer. The following literature review examines various research studies, theories, strategies, interventions, and social behaviors of elementary physical education students.

The purpose of the literature review is to enhance the educators understanding of student engagement and motivation in relation to elementary student physical education. In addition, strategies and interventions will be thoroughly reviewed; which will provide physical educators with a number of tools they can use in the physical education setting.

Peer reviewed research articles that have been published within the last ten years were gathered from the Northwestern College DeWitt database and the ERIC database. Themes explored centered around student participation, motivation, engagement, and social-emotional climate. The research studies used a variety of research methods to support their findings; from mixed-methods, qualitative, quantitative, and quasi-experimental research. Much similarity can

be found through the researchers' methodologies. Observations and variations of Likert-Scales were the leading methods used by researchers. Other methodologies included questionnaires and dividing students into focus groups that measured different variables.

Current research identifies three leading factors that influence student participation in physical education: student autonomy in relation to the Self-Determination Theory, social-emotional climate, and specific feedback (Drost, 2018; Wadsworth & Robinson, 2013; Sotosek, 2016). Evidence proves that intentionality in implementing these three factors can significantly improve the class culture, which then in turn increases student's willingness to participate. When conducting motor movements, many students may feel vulnerable and nervous to perform in front of their peers, which can result in reluctance to participate. Providing autonomy and feedback to students, they can gain confidence in their motor abilities and be more willing to participate. For physical educators, it is important to create a positive environment where students feel safe to perform motor skills and without fear of being ridiculed by their classmates.

This literature review is structured into five sections, which are focused around the three leading factors influencing student participation in physical education. The first section discusses the importance of student autonomy, which is centered around the self-determination theory. The second section of the literature review focuses on creating a positive social climate followed by intervention ideas. The third section of the literature review presents insight into engaging students through positive, specific feedback. The fourth section relates to disagreements among the research. The final section of the literature review presents ideas on how to improve student participation in the elementary physical education classroom.

Self-Determination Theory

Motivational climates in physical education can significantly increase student participation (Chang, et al., 2016; Wadsworth, et al., 2013). The Self-Determination Theory encompasses three motivational components, perceived competence, autonomy, and relatedness (Chang & Chen, 2016; Erwin & Stellino, 2013; Harvey & Gil-Arias, 2017; Kokkonen & Yli-Piipari, 2019; Ulstad & Halvari, 2018; Zourbanos & Papaioannou, 2014). One study conducted by Chang, et al., (2016), focused on student autonomy. Chang's research used a quantitative study approach. He divided the students into an intervention group and a control group. The intervention group was provided opportunities to have autonomy, while the control group was solely teacher directed. Based off of student surveys, the intervention group displayed more willingness to participate than the control group. The results determine that when students are given autonomy, control of their learning experience, they are more willing to participate in the activities (Chang, et al., (2016).

Providing autonomy is a vital part to the Self-Determination Theory. When provided more choice and control, student engagement and motivation will increase (Chang & Chen, 2016). Students no longer feel forced to participate in an activity that does not interest them. Instead, one of the activities may grab attention as they notice that it is a task in which they can be successful. Students may be interested in performing a skill they can gain more knowledge in; therefore, providing them with the opportunity to independently choose to conduct the activity. Researchers Danielle Wadsworth and Leah Robinson (2013), conducted a mixed methods research study examining the topic of student autonomy in relations to physical education. The research study took place in a small town, located in Alabama, 127 elementary students participated in the study and were divided into two groups, mastery and performance. The students in the mastery group were provided opportunities to make choices based on their skill

level in order to reach mastery of the specific physical education skills, whereas the performance group focused on performing repetitions of specific physical education skills as a whole class. Results from the study indicated that the mastery group significantly outperformed the performance group; subsequently, students were much more motivated to participate and work on the desired skill when they were provided more independence to choose an activity that interested them (Wadsworth & Robinson, 2013). Researchers believe that the increase in student motivation, based off of the study, is due to providing autonomy for the students, choice and control, over their learning.

Secondly, perceived competence in physical education and motor skills can also create a motivational climate in which students are more willing to participate. Perceived competence is another component in the self-determination theory, which can further student learning and increase participation in educational settings. In order for perceived competence to be achieved, students must feel as though they have the necessary skills to complete a task. Without a sense of perceived competence students may feel defeated before the game or activity begins. Physical educators play an important role in instilling perceived competence in their students. Through explaining, modeling, and providing practice, students can gain the confidence they need to feel competent in the task at hand. By providing feedback and increase students' knowledge of games, sports, and activities, their willingness to participate can increase. This can be seen through a study conducted by Harvey, et al., (2017), in which he used the quasi-experimental research methods to conclude that student engagement increases with knowledge and understanding of games, skills, and activities.

The third component of the Self-Determination Theory focuses on relatedness or connection of the activity, meaning that students need to see the connection of the activity to

their everyday life. Lack of this connection decreases student engagement and motivation for participation. In a 2019 Finnish study, researchers found that when creative lessons were conducted in an elementary physical education setting, student's overall physical activity increased significantly, both in class and outside of school. Creative physical education is a framework that centers around student perceptions and understanding of physical activity (Kokkonen, et al., 2019). The framework specifically relates to their experiences. Intentionally regarding connecting learning to student's everyday life presents a feeling of purpose which enhances student engagement. Creative physical education is directly connected to relatedness as the framework encourages teamwork and improving game skills and strategies (Kokkonen, et al., (2019). Teamwork, game skills, and game strategies can all be used outside of the physical education classroom. Students can take their newfound knowledge of games and activities and apply them to activities that they play with friends.

The Self-Determination Theory, when applied, meets the psychological needs of the individuals involved (Chang & Chen, 2016). In a quasi-experimental research study, conducted by Chang, et al. (2016), the data results of 126 elementary students, concluded that student autonomy, perceived competence, and relatedness increases student's participation. Meeting the psychological needs of the students instills confidence and intrinsic motivation in the students. Understanding these three components, and how they all tie in together, can create an environment where students feel capable of performing the skill, independent as they have a choice, and value to the subject matter being taught.

Social Climate

Creating a positive social climate is essential to ensure maximum student participation in the physical education setting. In a study focused on the Teaching Personal and Social

Responsibility (TPSR) model, 222 second and third grade students were asked to fill out questionnaires pertaining to the social environment of their physical education class. The findings concluded that when students experienced enjoyment, they had an increased sense of appreciation for the curriculum (Simonton & Shiver, 2021). A debate between researchers allies among the concept of social climate and strategies for creating a positive classroom atmosphere. Teaching students how to cooperate with each other and training social responsibility is one aspect researchers support in creating a positive environment (New Findings, 2021; Rivera-Perez, 2020; Simonton & Shiver, 2021). Other researchers suggest that building motor and skill development can cultivate a positive social climate (Sotosek, 2016; Usher, Keegan, & Edwards, 2016). Each argument centers around creating a positive culture; however, there is a significant theoretical difference of how to achieve this environment.

First, cooperation is a necessary skill not only in physical education but also in life. As students work together to achieve a common goal the social climate is improved. Physical educators are provided the opportunity to strengthen cooperation and teamwork skills through games and activities; this is a setting unlike any other in the school system. Rivera-Perez (2020) suggests that there are five components physical educators can use to teach students how to cooperate. Through teaching students how to work in learning teams, achieve a common goal, work with a partner, share ideas and perform a task, and whole class collaboration, students can learn how to respect others' ideas and opinions and respectfully communicate with each other. In an eight-week study, Riveria-Perez (2020), implemented a cooperative learning intervention in two different elementary classes. He used the previously stated five components and tested the results of each one. The findings concluded that teaching cooperative skills in physical education not only strengthens teamwork skills, but also enhances students social-emotional skills (Riveria-

Perez, (2020). While these social skills do not happen overnight, if social skills are implemented properly, the social climate can become more positive over time; which encourages more students to participate.

In addition, the Teaching Personal and Social Responsibility model is a set curriculum that helps educators target personal and social skills (New Findings, 2021; Simonton, 2021). The curriculum is not limited to physical education; however, physical education offers an effective climate for students to learn social responsibility concepts. The TPSR curriculum, when taught effectively, enhances the social climate in a positive way. In one quantitative study conducted by Simonton (2021), the Teaching Personal and Social Responsibility model was tested in an elementary physical education class. The findings showed that students who enjoyed physical education were not affected by the model; however, students who felt frustrated and angry in physical education were positively affected by the model. The students who experienced anger and frustration were able to manage their emotions through strategies taught from the Teaching Personal and Social Responsibility curriculum (Simonton, 2021).

Contrary to the previously stated research, other researchers believe that in order to develop a positive social climate, motor development should be improved. Most students are aware of their motor skills and abilities; they know how they compare to other students in their class. Students are more likely to demonstrate reluctance to participate if their skill and ability level is significantly below others around them. In order to improve this, physical educators should focus on skill development. As students gain confidence and see improvement their motivation to participate increases; this creates a positive and enjoyable social climate (Sotosek, 2016; Usher, Keegan, & Edwards, 2016). The findings from Sotosek's (2016) study concurred that students with low motor development, in relation to their peers, are often times ridiculed and

teased. As a result, these individuals become reluctant to participate. In addition, as students get older, motor skills and abilities become more widespread between students (Sotosek, 2016). Spending more time developing motor skills, can help students gain more confidence in their abilities, and overtime they may be more willing to participate in the game or activity.

Moreover, the researchers suggest specific ways in which motor and skill development can be improved. One suggestion is to implement more fitness teaching. Rather than playing games, students first need to learn the fundamental skills first (Usher, Keegan, & Edwards, 2016). Once the skills are in place then games can occur. This teaching strategy allows students to receive specific feedback on skills, make corrections and adjustments, see improvement, and as a result, become more motivated to play the game. Incorporating an increase in skill development can help students gain confidence in the skills necessary to play the game. Their confidence can be improved through skill development resulting in excitement to play the game.

All in all, the arguments made to build a positive social culture are enticing from each perspective. While each provide different ways in which a positive culture can be established, both come to the same conclusion, that their research proves to enhance student motivation and creates a positive social environment. Components from each argument can be taken and implemented into the physical education setting. Teaching social responsibility skills tied together with an increase in skill and motor development can result in a positive and enjoyable climate for the students. Confidence in students can be improved developmentally, socially, and emotionally with the implementation of the Teaching Personal and Social Responsibility curriculum paired with an increase in skill development lessons.

Engaging Students

To engage students in physical education means that they are able to learn the skills necessary to live a healthy and active lifestyle. In an effort to increase student motivation and engagement, several articles provide insightful suggestions in ways this can be achieved. In order for an increase in student participation to occur, identifying ways in which students can be motivated and engaged in the games and activities is discussed in the following research. Lacking the engagement factor in physical education, reluctance to participate is bound to happen. From implementing specific classroom management strategies to teaching students how to construct positive self-talk, researchers make compelling statements to help increase student engagement.

As mentioned previously, creating a positive social climate can increase student engagement. When students feel safe, cared for, and respected they are more willing to partake in the activity. For educators, providing students with well-balanced lessons that give them the opportunity to be competitive and teaching them how to handle frustration and conflict when it arises is all in part of creating a positive classroom atmosphere (Gagnon, 2016). Amy Gagnon explains in her journal article entitled, Creating a Positive Social-Emotional Climate in Your Elementary Physical Education Program, that there are various teaching strategies that can be implemented into the physical education setting that will establish a positive social-climate. Strategies such as creating lessons that directly meet the needs of the students, teaching student how to organize themselves into teams, teaching students how to find a partner, and teaching students how to socialize with each other during game play (Gagnon, 2016). These simple teaching strategies can help increase student engagement in the physical education setting.

In addition to specific teaching strategies, helping students learn how to cope with their emotions is an important life skill that can easily be taught in physical education. Playing

competitive games may include emotional outbursts, and these emotions will be something that students face in their everyday lives even as they get older. Physical education offers the opportunity for teachers to embrace these emotions and can teach students how to overcome adversity in a positive way. Creating a place that is enjoyable for students, where they learn to handle conflict in a respectful way, can become an engaging place allowing students to feel more willing to participate in the games and activities. In a study conducted by Alcaraz-Munoz, et al., (2020), 152 elementary student's emotions were tested in the physical education setting. The results concluded that emotions run high when the games are competitive. Depending on the nature of the games in correlation with the student's emotions, students may quit playing the game when they become too frustrated (Alcaraz-Munoz, et al., 2020). Establishing a positive class culture and creating engaging activities for the students can help them cope with their emotions and continue to play the games.

In addition to a positive social climate, classroom management strategies are also necessary and important in the physical education setting (Gagnon, 2016). Unlike in the traditional classroom, students may feel that there is less structure in physical education. With more movement and activities, if structure is not enforced, chaos can occur. Classroom management strategies are important to implement as they allow students to gain better understanding of skills and game concepts. One study showed that disruptive behavior is evident in the physical education setting; in particular talking when the teacher is talking (Lopez Jimenez, et al., 2016). It was discovered in the study that the talking out of turn was caused by lack of student interest or having previous knowledge of the game or activity resulting in boredom. If the student feels that they already know the rules and expectations of the game, they may not feel inclined to listen, which then results in disruptive behavior (Lopez Jimenez, et al.,

2016). In order for all students to understand the games and activities, implementing effective classroom management strategies, which will be further discussed, can increase student engagement.

Thus, another study, conducted by St. Onge & Eitel in 2017, provided specific strategies to decrease the disruptive behavior. It is important for physical educators to explain the rules and expectations of the game. While some students may already know and understand the rules of the game, others may not; therefore, teacher instruction is necessary. When teaching students, the rules of the game it is suggested to conduct this with everyone sitting down in a circle formation, including the teacher. The results indicated that students were more engaged with the teacher when the teacher was sitting down because they were all at the same eye level (St. Onge & Eitel, 2017). Students felt more valued and respected and they did not feel inferior to the educator. While it is a simple classroom management strategy that can easily be implemented, the sitting circle formation can make a significant impact on reducing student disruptive behavior.

Another engagement tool that can increase student motivation is teaching students how to use positive self-talk. It is easy for children and adults to fall into the negative self-talk trap when they are faced with adversity. Again, physical educators have a great opportunity to teach students how to think positively and endure the challenges that they face. Teaching positive self-talk to students can help them to change their mindset and make an impact on their cognitive, motivational, and behavior performance in physical education (Zourbanos, et al., 2014). In order to help students think more positively, creating an achievable goal for students to work towards can help them develop this mindset skill. Teaching students' specific phrases to say to themselves can help change their thinking into a growth mindset. In a study conducted by Nikos Zourbanos (2013), the results demonstrated that students who use positive self-talk strategies

show an increased growth in motor development skills. As they reach their goal by using positive self-talk, their confidence and motivation in games and activities will increase.

Last but not least, a final strategy for physical educators to consider in the effort to increase student engagement is to provide specific and positive feedback to students. As elementary students are developing skills, most often introduced and taught in physical education, providing them feedback on ways that they can improve their skills is necessary for their engagement. If students are never provided feedback they will not know how to improve their skills and their motivation to participate will decrease. Giving students a goal and providing them feedback on what they need to do to reach that goal can increase their motivation and their desire to improve their skills (Drost, 2018). Drost's (2018) study was conducted on 170 fourth and fifth grade students. The students were divided into two groups, a mastery group and a performance group. The mastery group was given a specific goal to work towards, and throughout the physical education class, the students were constantly provided with specific feedback. On the other hand, students in the performance group were provided with time to practice their skills development, however, they were not given a goal or provided any specific feedback. As a result, Drost's (2018) study concluded, that when students are given a goal to work towards and provided specific feedback, they demonstrate an improvement in skill development. As skill development increases, students begin to show more interest and engagement in the physical education setting. Through a combination of practicing the skill, receiving feedback from educators, and goal setting student engagement in the activity will significantly increase (Kolovelonis, et al., 2013).

As has been noted, identifying ways in which student engagement can be boosted will most often result in increased participation. It is first important to create a positive atmosphere

where students do not feel demeaned by their peers, but rather respected and encouraged. Implemented behavior management strategies is an effective way to decrease student disruptive behavior. For example, when explaining rules and expectations for a game or activity, the educator should consider getting down to eye level with the students. Furthermore, teaching students the life-long skill of positive self-talk is important in creating a growth mindset. When students tell themselves that they can achieve a goal, their motivation and engagement will increase. Finally, providing students with specific and positive feedback is necessary for their improvement of skills. If students do not know how to fix or advance their skills then they may become frustrated and give up. Instead, when educators provide specific feedback, the students then know what they need to work on in order to improve; which in turn, also encourages student engagement to increase.

Disagreements

In contrast to what has been said, there are articles that promote student motivation and increased participation, however, achieving their findings in the physical education setting is extremely difficult. While there are strategies and interventions that can easily be integrated into the physical education setting, there are also suggestions made by some researchers that are nearly impossible to achieve. This section of the literature review focuses on disagreements found in research and why some educators may struggle with the suggested findings.

First, a researcher by the name of Senlin Chen (2014), determined that most elementary students demonstrate a high level of motivation for physical education. While there is outpouring agreement with this finding, further statements from the researcher suggested that there is little correlation between what students learn in physical education and their physical activity outside of school (Chen, et al., 2014). The purpose of Chen's (2014) study was to find the correlation

between student motivation and their fitness knowledge. He studied 293 elementary students and if what they learned in physical education transferred over to their physical activity outside of school. His results determined that the student's physical education class had very little effect on the student's activity outside of school. (Chen, et al., 2014). Even though the physical activity students partake in outside of school is based on activities that they are interested in, it does not mean there is no connection with physical education. The purpose and goal of physical education, especially in elementary, is to teach students fundamental skills and introduce new games and activities. The hope is that students will gain interest in a few of the activities, however, physical educators also realize that not every student will enjoy every game or activity played. As skills are developing, it is possible that as students gain more confidence in their abilities they will become more interested in numerous activities. Until then, there is nothing wrong with students participating in physical activity that is interesting to them.

Along with the disagreement about a lack of correlation between physical education and physical activity outside of school, another researcher by the name of Mandy Kirkham-King, argues that class size affects student participation. Results from Kirkham-King, et al. (2017), quantitative study concluded that students in smaller classes sizes are more physically active. However, on the contrary, creating a more positive social climate and increasing student engagement through goal setting can make a significant impact on student participation (Simonton, 2021). Moreover, there is little control over the class sizes within each school district. Class size depends on the district budget and if they are able to hire a more teachers to lower student numbers in a given class. Physical educators do not have control over the number of teachers or the number of students in a class. Even so, effective physical educators will find ways to motivate students to participate no matter how many students are in their class.

In summary, there are components in physical education that are out of the educator's control. Despite the number of students in a given class, quality physical educators will find ways to engage their students and ensure that students are being physically active. In addition, physical educators will also be proactive in teaching the correlation between activities conducted in physical education and how they relate to activities outside of school. While interest in certain activities will motivate students to participate, as their motor skills improve, their interest in other activities will improve as well.

Evident Gaps

From previous article analysis, much information has been provided on increasing student motivation. When student motivation is increased, their participation in games and activities are also increased. However, more information should be provided on what physical educators can do when students become frustrated, angry, or sad while the game or activity is being played. Discovering strategies or interventions that can be implemented to help students regulate their emotions is important in creating a positive social climate. While information has been provided on how to set up a positive social climate, every game and activity is different. Furthermore, student's reactions to various games can trigger negative emotions at any time.

Research indicates that non-competitive activities are typically enjoyable and positive, however, competitive games and activities can trigger negative emotions (Alcaraz-Munoz, et al., 2020). With this in mind, physical educators still need to teach competitive games. It is important that students learn how to regulate their emotions when they are faced with adversity. Adversity not only occurs in athletics but in everyday life, and physical education provides a great opportunity for students to learn how to face challenges when things do not go their way.

While the Teaching Personal and Social Responsibility curricular model provides adequate information and strategies that physical educators can use, educators cannot solely rely on this model. Knowing that emotions can change quickly in physical education, identifying strategies that educators can use to help students regulate their emotions in a quick and easy way is something that needs to be further researched. This brings us to the focus of this particular action research project.

Through this specific action research study, interventions will be identified to help increase student participation in elementary physical education when emotions run high. Through previous research, it has been indicated that students need increased autonomy, a positive social climate, and specific feedback, however, additional interventions need to be identified in order to help students regulate negative emotions at a moment's notice.

Methodology

Participants

This action research study takes place in an elementary physical education setting located in a small northwest Iowa school district. The school district is located in Sioux County with a low economic and diverse community of 59.8% of students identifying with the white race and 37.1% of students identifying with the Hispanic race. Of the 59.8% of students, 57.6% of those students qualify for free and reduced lunches (Iowa School Performance Profile, 2019). According to the 2019 Every Student Succeeds Act (ESSA) database, the 2nd-5th grade elementary student population consisted of 224 students in this northwest Iowa school district and seventy of those students participated in this research study. The students in 2nd-5th grade provided a wide range of responses and student perceptions on physical education. Data was collected through observations and surveys.

Data Collection

Two questions are the focal point to the entire action research project. Data was collected to specifically find answers to these questions. They are as follows:

1. Why are elementary students choosing not to participate in physical education?
2. Will implementing a strategy, based on student feedback, increase student participation in physical education?

Research design

Through this action research study, the data collected will use the mixed-methods approach. Qualitative data will be collected through observation of student participation. Observations of student participation will be conducted as it pertains to the qualitative data component. These observations will remain anonymous, however, the grade, date, and gender, of the students will be documented to identify patterns amongst students who choose not to participate.

Quantitative data will be collected through student surveys. Obtaining responses from the students themselves is essential in gaining a better understanding of reasons why some students may be choosing not to participate. The student survey will focus on student enjoyment, frustration in physical education, and the causes of frustration in physical education.

Description of variables

First, the dependent variable is student participation. Participation demonstrates that it is influenced by other sources from either other people or implemented incentives. Therefore, student participation will be the dependent variable studied throughout the action research study.

Data will be collected through observations based on the following variables:

Two independent variables will be reviewed in this study. The first independent variable is student enjoyment. The first independent in this study is student enjoyment because the research by, New Findings in Physical Education (2021), found that students are much more motivated to participate if they enjoy the games and activities. Based on the student survey, data will be collected and reviewed to analyze student's enjoyment in physical education.

Quantitative analysis will be provided based on this independent variable to provide the necessary insight to the educator in order to increase student participation in their class.

The second independent variable includes effective incentives that encourage student participation. Data will be collected through observation and student feedback through a mixed methods approach. Data collection will reveal if effective incentives are truly effective and meaningful for increasing student participation.

Description of the treatment or intervention

The focal point of this action research study is to increase student participation in elementary physical education. From the data collected thus far, student non-compliance to participate is a pressing issue in the physical education setting. Therefore, based upon student survey data, common responses to reluctance to participation in physical education will be studied and analyzed. After reviewing the data with a teacher leader member, an incentive will be identified and applied to the physical education classroom. Then, over the course of two-weeks, the educator will collect data again on student participation in addition to the use of the implemented incentive.

Intervention

After reviewing the observational data and analyzing the student surveys with a teacher leader, an intervention to improve student participation in physical education was identified. The

implementation of a break area was chosen as the incentive. The break area is offered to all students and may be used one time during the forty-five-minute class period and will not affect the students class grade. There are, however, expectations that students are required to follow when using the break area. One expectation is that students may only use the break area for a maximum of two minutes. There is a timer available for students to use that is set for the two minutes. Another expectation that students are required to follow is that the break area may only be used one time during a physical education class. If a student uses the break area more than once or is asked to sit out by the teacher, their grade will then be affected as they have not participated enough during the forty-five-minute class period.

In an effort to provide students with an opportunity to express their frustrations, anger, or sadness, the break area allows students to write out their feelings. Paper and pencils are available for students to write their frustrations and either leave their writing for the educator to read or for the student to take with them. Writing is not a requirement, however, it is an option available for students who prefer writing as a way to express their feelings.

The purpose of implementing a break area is to offer a safe place for students to go when they feel frustrated, angry, or sad during physical education. The break area is a place that students may use for a total of two minutes, one time during the forty-five-minute class period. This space provides the opportunity for students to regulate their emotions and take a few minutes to relax. Students are able to write out their frustrations and feelings with the paper and pencil provided. After class, if students still feel frustrated, they are encouraged to talk with the physical educator before exiting the gym and returning to their homeroom class.

Plan for collecting data

The first form of a measurement instrument used in the action research study is observational data. This data will be collected on a document that identifies the date, grade, and gender of the students choosing not to participate. After ten days of observation, this data will be converted, graphed, and analyzed onto an Excel document. The graphs will identify patterns occurring among grade and gender.

The second measurement instrument used is a questionnaire, much like a Likert Scale, which will provide quantitative data of student's thoughts and feelings towards physical education. Furthermore, by utilizing this measurement tool, reliability and validity are present creating a more accurate and trusted study.

While the observational data does not demonstrate reliability and validity, the student questionnaire does, which enhances the quality of the overall study. Through the questionnaire, educators will be able to accurately measure student enjoyment in physical education in addition to frustrations that may be present in this setting. The educator is then able to use this reliable data to incorporate an intervention to solve the problem.

With IRB and administration approval granted, the process and timeline of data collection process of this entire study spans over eight weeks with the first two weeks focusing on collecting observational data of students choosing not to participate in the physical education class activity. When a student chose not to participate, the date, grade, and gender of the student was documented. Additionally, the observer took notes explaining the situation in which the student did not participate. After observational data was collected over the course of ten school days, student surveys were given to all seventy of the students. The surveys consisted of questions related to student enjoyment of physical education, frustration and anger in physical education, and student participation. The student survey data was reviewed by the teacher leader

and the physical educator as a way of identifying an intervention that would improve student participation in elementary physical education in a safe and meaningful way.

When the intervention of offering a break area had been determined, it was implemented into the physical education classroom for a ten-day time period. During the intervention the educator conducted observations and made notes about any student participation changes. After the ten-day intervention, the teacher leader and physical education teacher reviewed and analyzed the collected data to determine if the intervention was effective in meeting the goal of increasing student participation.

All data collected is confidential as no names were present on any observational forms. In addition, the student surveys were remained with anonymous names. When data was shared and discussed with the teacher leader, names of students were not used, as it was important to the integrity of the study. Storage of all data collection was kept with the physical educator in a safe locked file compartment. The physical educator is the only individual who had access to the components of the study. Data collected on a server was password protected with the physical educator as the only individual with access to the contents.

Data was analyzed using the correlation statistical test. With two variables identified, student participation and an incentive, the statistics show the relationship between these two variables and if the incentive was effective in increasing student participation. The goal of the action research was to implement an intervention that shows a positive relationship between the intervention and student participation.

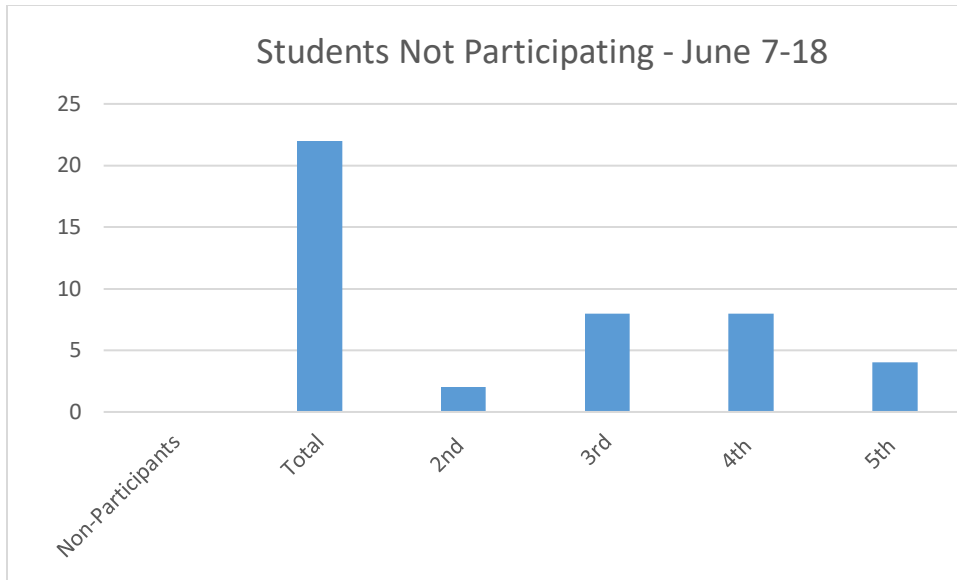
While there was minimal risk of bias present in this action research study and posed no risk to the participants; IRB approval was still necessary. The study required observations and student surveys to be conducted on minors and data collection required all safety measures to be

established. In addition, individuals involved in the study remained confidential in full effect by not releasing student names, addresses, or other information thus revealing student identity. In addition to IRB approval, permission from the building principal was attained to guarantee ethical coverage.

With IRB approval and permission granted from the building principal, signed consent forms from the student's families were obtained because the participants in this study were minors. The families are provided a detailed explanation of the study and its purpose and were free to decline being a part of the study. At the conclusion of the study, a debriefing form was sent home for the participants and their families to be aware of the findings of the study.

Raw Data

Observational data was collected on 70 students, ranging from grades 2nd-5th. The purpose of this data collection was to identify how many students do not participate in physical education during a ten-day time period spanning from June 7, 2021-June 18, 2021. The graph below shows the data collected, and demonstrates that a problem is present in elementary physical education as it pertains to student's participation in the physical education class activities and games. No specific reasons as to why students are not participating are currently identified, but that answer will hopefully arise through the student surveys.



Non-Participants	Total	2nd	3rd	4th	5th
	22	2	8	8	4

In addition, student surveys were conducted on June 21, 2021. The surveys will provide an explanation as to why students are not participating and will allow the educator to implement an intervention to hopefully increase student participation.

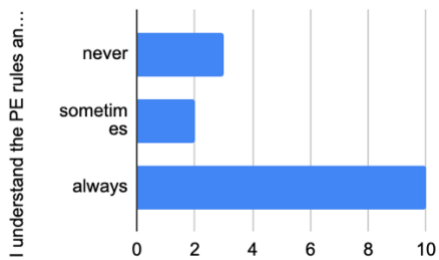
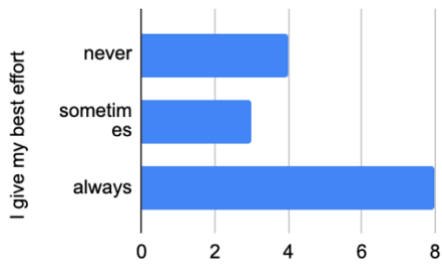
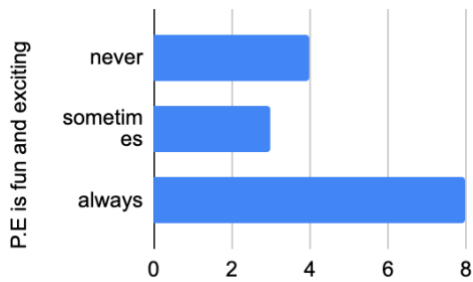
Findings

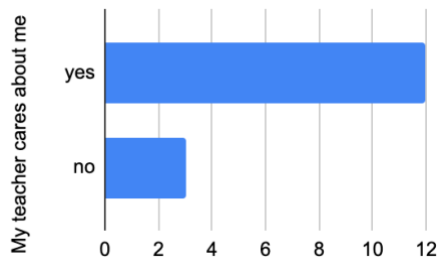
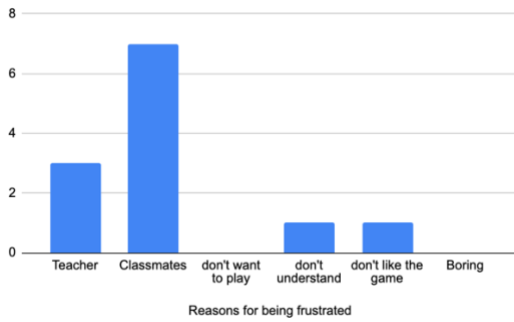
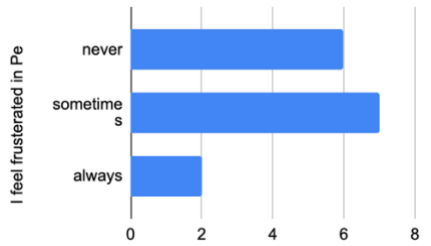
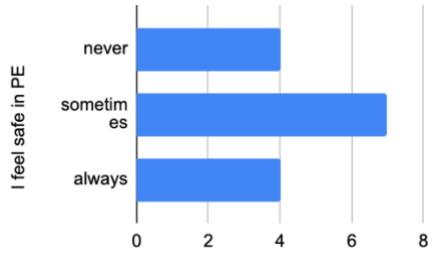
Data Analysis

With the collection of both qualitative and quantitative data, student participation was the dependent variable tested throughout the action research study. During the first two weeks of the study, observational notes were taken documenting students who refused to participate. Results of these ten days can be seen in chart 1, documented above, as the total number of students who refused to participate are documented and further broken down by grade level. The results prove that there is a need to improve student participation in physical education.

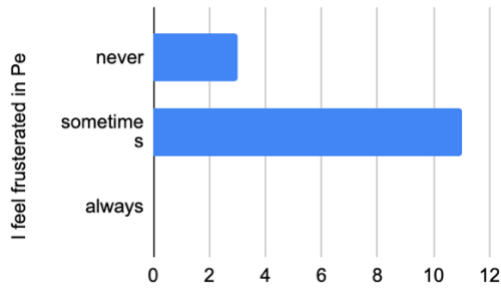
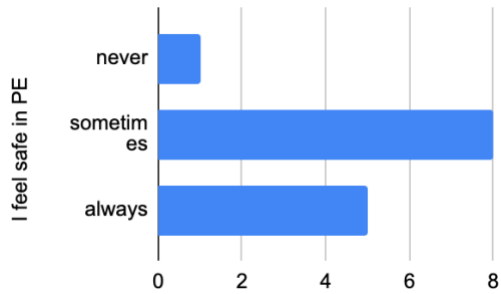
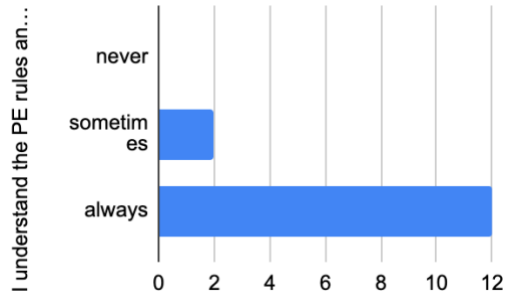
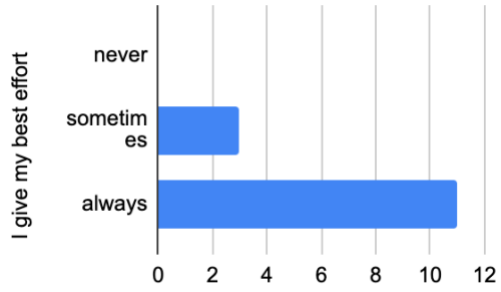
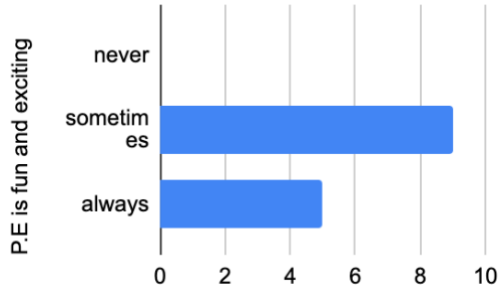
The next step was to collect quantitative data through conducting a student survey. The questions asked on the survey pertained to the social climate of the physical education setting in addition to enjoyment of the class. The results of the student responses, as seen below, are documented by the separate grade levels. On average, there were fifteen students in a class. The survey questions can be found in Appendix A. Each question is broken down so that the results can be analyzed more effectively.

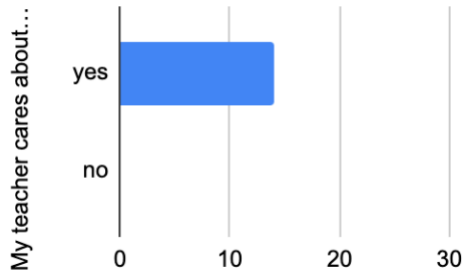
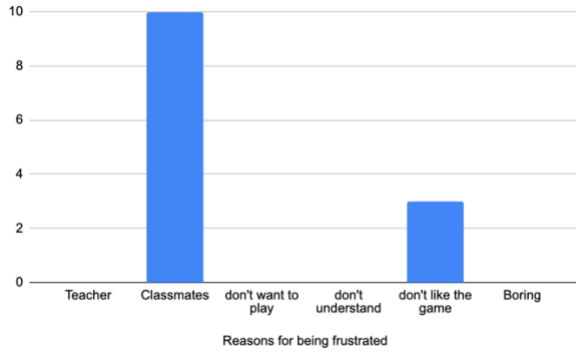
Second Grade Results



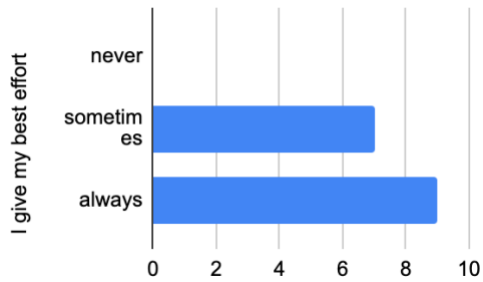
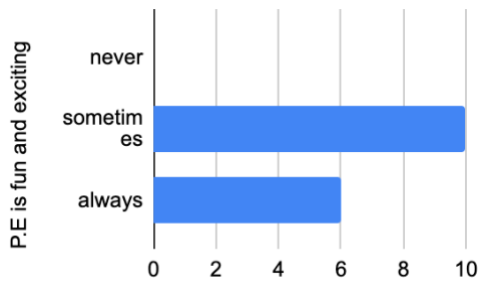


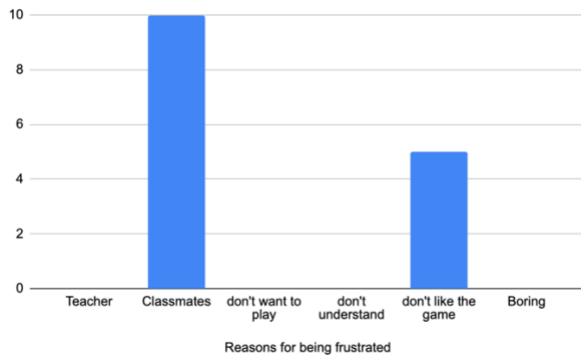
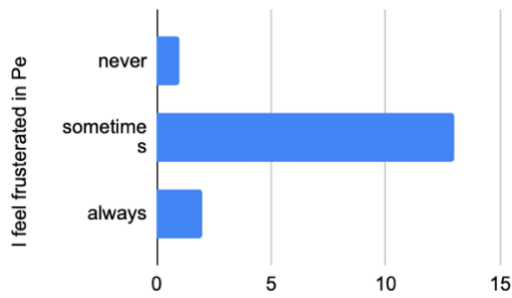
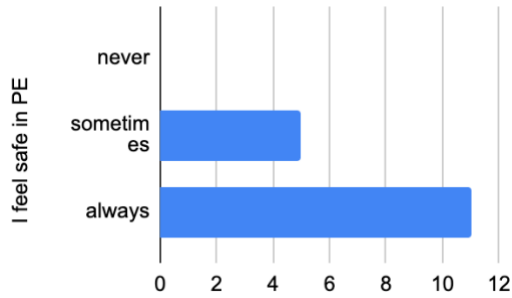
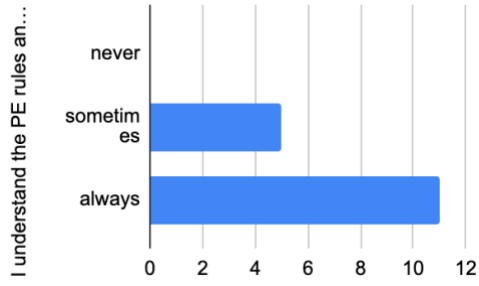
Third Grade Results

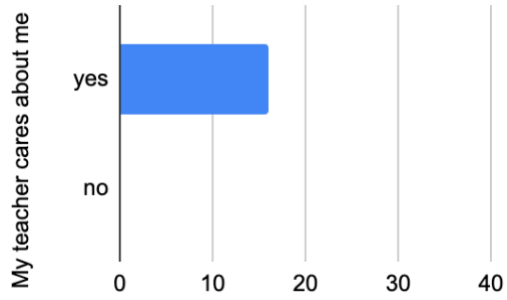




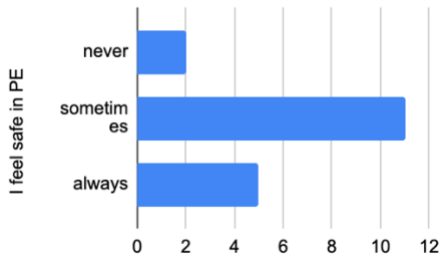
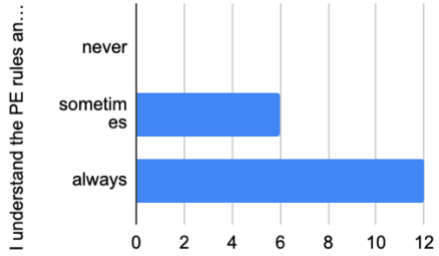
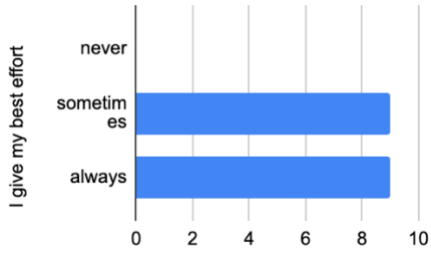
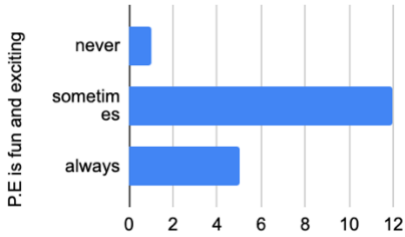
Fourth Grade Results



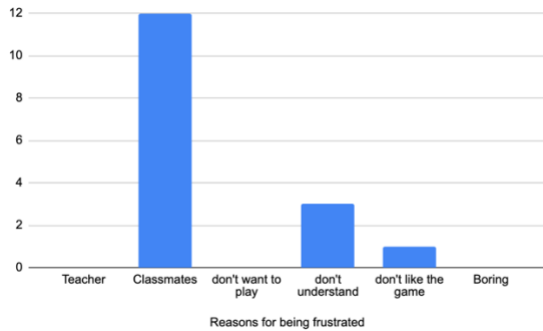
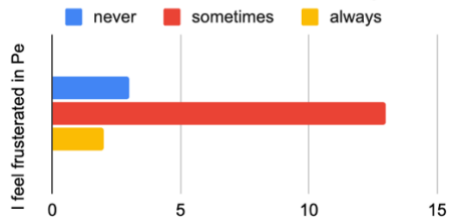




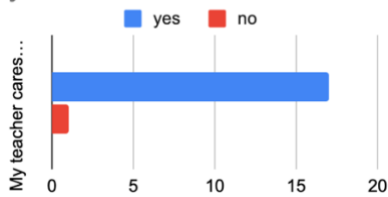
Fifth Grade Results



never , sometimes and always

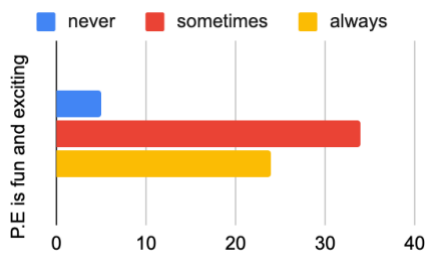


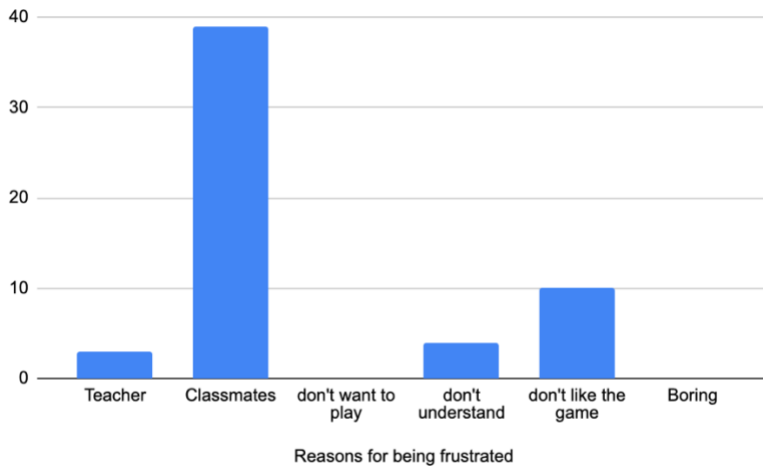
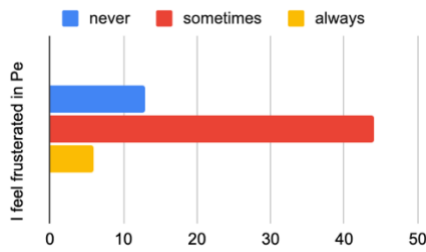
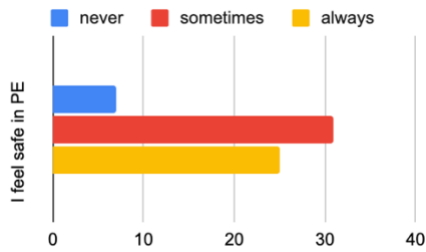
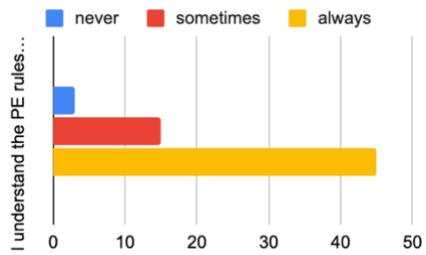
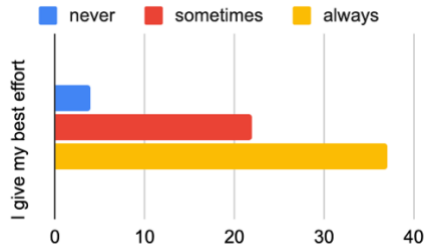
yes and no

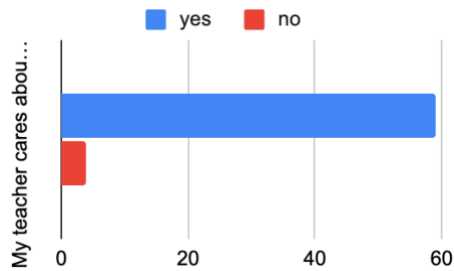


Knowing the breakdown of each grade can help the educator understand the underlying issue in each individual grade level. However, the next step is then to identify the patterns across the grade levels. To achieve this, a combination of all grade levels was compiled and can be seen in the graphs below. This provides information needed to see what the overall issue may be.

Combination of Grades 2-5





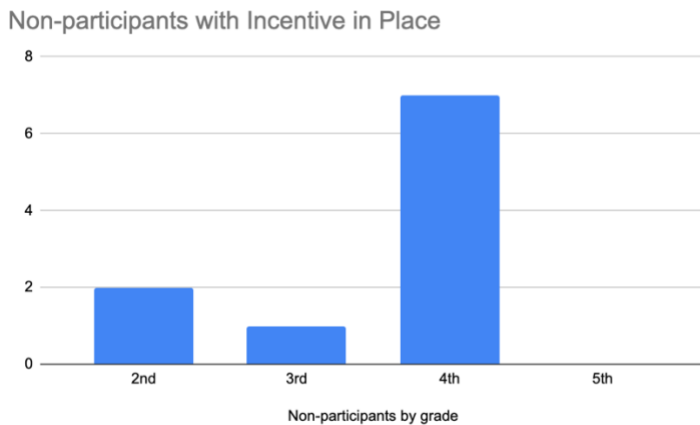


Looking over the results of the data from the student survey, it is evident that the overwhelming factor of student's frustration is the relationships with their own classmates. Students, 79% to be exact, expressed that they sometimes or always feel frustrated in physical education, and 62% of their frustration is caused by their peers. Students expressed that when this frustration occurs, they do not want to participate in the activity. After discussing solutions with a teacher leader member, it was determined that a break area would be implemented into the physical education setting. Understanding that at times students need a time and a place to decompress when their emotions run high, the physical educator and teacher leader concluded that offering a safe space for the students may help improve student participation. This break area is offered to every student in the class, however, there are expectations that need to be followed. Student may only use the break area one time during the forty-five-minute class. If they choose to use this space, their grade will not be affected in anyway. Furthermore, when using the break area, there is a two-minute time limit; a timer is available for students to use to keep track of the time spent in this space. Once the time is up, students have two choices. One, they may reenter the game immediately, or if they are still feeling frustrated, they may use the conflict corner that is available to talk about their feelings with the individual student that upset them. In addition, when using the break area, students are able to write out their feelings and concerns. Writing can be an outlet for students to express their feelings in a calm manner. The overall goal of the break area is to provide a safe space for students to go when they are feeling

frustrated or angry. This space allows them to decompress for two minutes without the fear of failing the class; thus, improving the social climate of the class and increasing student participation.

Intervention Results

The break area was implemented into the elementary physical education setting for a span of ten days from the dates of June 22, 2021-July 5, 2021. The break area offered a safe space for students to go when they felt overwhelmed, frustrated, angry, or sad. With the break area in place, observational data was collected on students who still refused to participate even with the break area as an option. Furthermore, data was also collected on students who chose to use the break area.



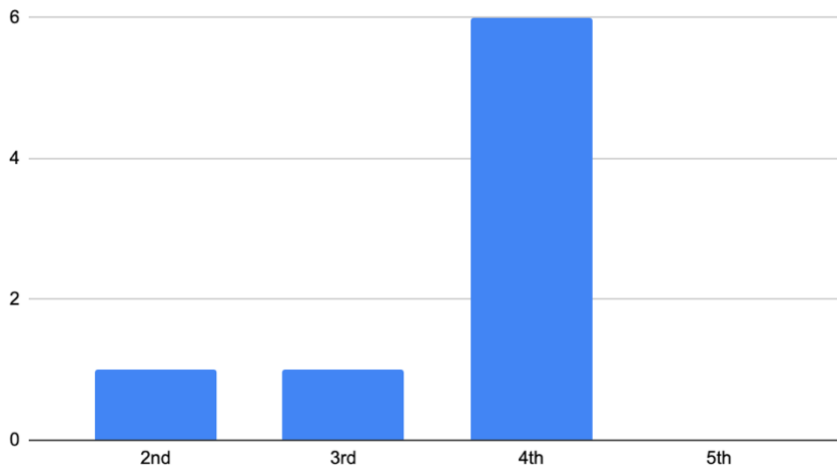
2nd	3rd	4th	5th	Total
2	1	7	0	10

The data provided above demonstrates that participation increased significantly with the implementation of the break area. At the beginning of the study 22 students refused to participate in a span of ten days; with the break area in place, only 10 students refused to participate in

physical education over the span of ten days. Therefore, it can be determined that the break area was effective in improving student participation.

In addition, observational data was collected on how many students chose to use the break area. During the ten days, eight students utilized the break area. After using the break area for the two minutes, the students rejoined the game or activity and participated for the remainder of the class. It should also be noted that of the eight students who used the break area, six of the students chose the writing option to express their feelings of frustration.

Use of Break Area by Grade



2nd	3rd	4th	5th	Total
1	1	6	0	8

Statistical Data

In order to determine the relationship between student participation and the implemented incentive of a break area, correlation analysis was conducted. Data of students refusing to participate from the dates of June 7, 2021- June 18, 2021 was compared to students refusing to participate from the dates of June 22, 2021-July 5, 2021. The latter dates occurred with the

intervention of a break area in place. The results of the correlation data determine that there is a positive influence of the break area as, $r(68) = .46, p < .0062$. With the implementation of the break area, student participation increased as the statistical data validates.

Discussion

Summary of Major Findings

The results from the action research, mixed methods study conclude that implementing a break area was effective in increasing student participation. Providing students with a safe place to regulate their emotions improved the social climate of the elementary physical education setting. Students were able to collect their thoughts and manage their emotions by sitting in a designated area of the gym for two minutes. During that time, they had the opportunity to write out their thoughts and feelings; by doing so students were able to express their emotions in a healthy way. The increase in participation was evident across all grade levels, 2nd-5th, with 46% overall improvement.

Limitations of the Study

In this action research, potential limitations can be identified. These limitations can result in and create hinderances that affect the results of the data. Based on previous experience teaching in the physical education setting, personal bias may be reflected in the survey that was given to students. Interactions with students and their previous behavior may have factored in on the wording of the survey. The researcher must refrain from implementing any previous interactions, thoughts, or acknowledgment of past student behavior that may persuade the results of the survey.

Second, the teacher may have pre-perceived notions of past student behavior that impacted the field notes and the observational data. From previous interactions with students, the

researcher may be able to predict certain student behavior and may further be more susceptible to observing certain students. The researcher should put all previous knowledge aside and make observations without singling out specific students.

Another limitation that may be present is language limitations. In a district where significant portions of students are secondary English speakers, the results of the survey could potentially be impacted if the student(s) do not understand what the question is asking. The researcher must be proactive in either providing a translator or clarifying any words and their meanings on the survey to get accurate results.

Finally, time may also be a factor in the results of the study. With the study only lasting a total of 12 weeks, not enough data may have been collected to gather accurate results of student participation. Furthermore, students are only seen one time throughout the week. This limitation is out of the researcher's control; however, the researcher must then be sure that observational data is collected thoroughly.

Future Research

In order to gain a better understanding and the effectiveness of the intervention, a longer study of this action research is recommended. While significant data was concluded from this 12-week study, the results are over a short span of time. Therefore, conducting the study again, but over the course of an entire school year is suggested. Furthermore, collecting data over the entire elementary student body is also recommended; doing so would provide adequate information that would enhance the validity of the study. With a student population of 224, 2nd-5th grade students, only 70 students took part in the action research study. Conducting the study again with all 224 students would provide more reliable results in the aspect of student participation.

Conclusion

The main goal from this action research study was to identify ways in which elementary student participation can be increased in physical education. Physical education offers many benefits such as motor skill development, cardiovascular and brain health, as well as emotional health. However, in order for these benefits to occur, students must participate in physical education class. With the decline of student participation in physical education, implementing an intervention that would help increase participation was imperative. The action research study concluded that implementing a break area was effective in achieving the goal of increasing student participation. The break area offered a safe space for students to go when they felt frustrated, mad, or sad. The students were able to stay in the break area for a total of two minutes without the fear of failing the class. In addition, the students had the opportunity to express their feelings through writing. The break area determined that students were able to regulate their emotions and rejoin the activity or game when the two minutes was completed. The data from the action research study concluded that offering a break area increased student participation.

References

- Alcaraz-Muñoz V, Cifo, I. M. I., Gea García GM, Alonso, R. J. I., & Yuste, L. J. L. (2020). Joy in movement: traditional sporting games and emotional experience in elementary physical education. *Frontiers in Psychology, 11*, 588640–588640. <https://doi.org/10.3389/fpsyg.2020.588640>.
- Chang, Y. K., Chen, S., Tu, K. W., & Chi, L. K. (2016). Effect of Autonomy Support on Self-Determined Motivation in Elementary Physical Education. *Journal of sports science & medicine, 15*(3), 460–466.
- Chen, S., Sun, H., Zhu, X., & Chen, A. (2014). Relationship Between Motivation and Learning in Physical Education and After-School Physical Activity. *Research Quarterly for Exercise and Sport, 85*(4), 468–477. <https://doi.org/10.1080/02701367.2014.961054>.
- Drost, D. K. (2018). Manipulating feedback during physical education climates: immediate effects on motivation and skill performance. *Ichper-Sd Journal of Research, 9*(2), 46–54.
- Erwin, H. E., Stellino, M. B., Beets, M. W., Beighle, A., & Johnson, C. E. (2013). Physical education lesson content and teacher style and elementary students' motivation and physical activity levels. *Journal of Teaching in Physical Education, 32*(3), 321–334.
- Gagnon, A. G. (2016). Creating a positive social-emotional climate in your elementary physical education program. *Strategies: A Journal for Physical and Sport Educators, 29*(3), 21–27.

Harvey, S., Gil-Arias, A., Smith, M. L., & Smith, L. R. (2017). Middle and elementary school

students' changes in self-determined motivation in a basketball unit taught using the

tactical games model. *Journal of Human Kinetics*, 59(1), 39–53.

<https://doi.org/10.1515/hukin-2017-0146>.

Iowa School Performance Profile. (2019). Iowa.Gov.

<https://www.iaschoolperformance.gov/ECP/StateDistrictSchool/SchoolSummary?k=1057>

[2&y=2019](https://www.iaschoolperformance.gov/ECP/StateDistrictSchool/SchoolSummary?k=1057).

Kirkham-King, M., Brusseau, T. A., Hannon, J. C., Castelli, D. M., Hilton, K., & Burns, R. D.

(2017). Elementary physical education: a focus on fitness activities and smaller class

sizes are associated with higher levels of physical activity. *Preventive Medicine*

Reports, 8, 135–139. <https://doi.org/10.1016/j.pmedr.2017.09.007>.

Kokkonen, J., Yli-Piipari, S., Kokkonen, M., & Quay, J. (2019). Effectiveness of a creative

physical education intervention on elementary school students' leisure-time physical

activity motivation and overall physical activity in finland. *European Physical Education*

Review, 25(3), 796–815. <https://doi.org/10.1177/1356336X18775009>.

Kolovelonis, A., Goudas, M., Dermitzaki, I., & Kitsantas, A. (2013). Self-regulated learning and

performance calibration among elementary physical education students. *European*

Journal of Psychology of Education, 28(3), 685–701.

López Jiménez José, Valero-Valenzuela, A., Anguera, M. T., & Díaz Suárez Arturo. (2016).

- Disruptive behavior among elementary students in physical education. *Springerplus*, 5(1), 1–10. <https://doi.org/10.1186/s40064-016-2764-6>.
- New findings in physical education described from university of memphis (examination of elementary students' emotions and personal and social responsibility in physical education). (report). (2021). *Mental Health Weekly Digest*, 341, 341–341.
- Rivera-Pérez S, Fernandez-Rio, J., & Iglesias, G. D. (2020). Effects of an 8-week cooperative learning intervention on physical education students' task and self-approach goals, and emotional intelligence. *International Journal of Environmental Research and Public Health*, 18(1). <https://doi.org/10.3390/ijerph18010061>.
- Simonton, K. L., & Shiver, V. N. (2021). Examination of elementary students' emotions and personal and social responsibility in physical education. *European Physical Education Review*, (20210326). <https://doi.org/10.1177/1356336X211001398>.
- Sotosek, G. (2016). Peer Exclusion at Physical Education. *National Education Institute*. <https://doi.org/https://files.eric.ed.gov/fulltext/ED568116.pdf>.
- St. Onge, J., & Eitel, K. (2017). Increasing Active Participation and Engagement of Students in Circle Formations. *Networks: An Online Journal for Teacher Research*, 19(1). <https://doi.org/10.4148/2470-6353.1014>.
- Ulstad, S. O., Halvari, H., Sørenbø, Ø., & Deci, E. L. (2018). Motivational predictors of learning

strategies, participation, exertion, and performance in physical education: a randomized controlled trial. *Motivation and Emotion*, 42(4), 497–512.

<https://doi.org/10.1007/s11031-018-9694-2>.

Usher, W., Keegan, R., & Edwards, A. (2016). Taking the 'physical' out of physical education. *Cogent Education*, 3(2016).

Wadsworth, D. D., Robinson, L. E., Rudisill, M. E., & Gell, N. (2013). The effect of physical education climates on elementary students' physical activity behaviors. *Journal of School Health*, 83(5), 306–313. <https://doi.org/10.1111/josh.12032>.

Xiang, P., McBride, R., Guan, J., & Solmon, M. (2013). *Children's Motivation in Elementary Physical Education: An Expectancy-Value Model of Achievement Choice*. Taylor & Francis.

<https://shapeamerica.tandfonline.com/doi/abs/10.1080/02701367.2003.10609061#.YNSs4xNKi3I>.

Zourbanos, N., Papaioannou, A., Argyropoulou, E., & Hatzigeorgiadis, A. (2014). Achievement goals and self-talk in physical education: the moderating role of perceived competence. *Motivation and Emotion*, 38(2), 235–251. <https://doi.org/10.1007/s11031-013-9378-x>.

Appendix A

2nd-5th Grade P.E. Survey**1. P.E. is fun and exciting.**

Never Sometimes Always

2. I give my best effort in P.E.

Never Sometimes Always

3. I understand the P.E. rules and expectations.

Never Sometimes Always

4. I feel safe in P.E.

Never Sometimes Always

5. I feel frustrated in P.E.

Never Sometimes Always

6. What makes you feel frustrated/angry in P.E.?**7. I like to work with partners or in a group.**

Never

Sometimes

Always

8. My teacher cares about me.

Yes

No

9. I sometimes do not participate in P.E. because.....

10. My favorite game or activity is....