

The Effects of Choice of Activities on Student Motivation and Physical Activity Behavior in
Middle School Physical Education

Emily A. Dugger

Milligan College

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Abstract

The purpose of this study was to determine whether or not providing students with choice in a selected middle school effects students motivation to participate and engage in the lesson. The participants in this study consisted of 30 eighth grade students in a physical education class located in a semi-rural public middle school in Northeastern Tennessee. Of the 30 students who participated in the study, 18 were female and 12 were male. Prior to conducting this study, the students were divided into two groups both containing a total of 15 students per group. The students for each group were randomly selected by the instructor. The first group of students contained 8 females and 7 males and was the “choice” group. This particular group of students were allowed to have a voice in their learning experience by choosing which fitness-based stations he or she wanted to complete during the lesson. The second group of students contained 10 females and 5 males and was the “instructed” group. This group of students were not granted a choice during this lesson and had to complete the fitness-based stations that the instructor told them to. All students were required to complete at least 4 stations out of the fitness-based lesson, however the choice group got to choose which stations they wanted to complete and the instructed group did not. All the data collected for this study was collected using assessments based off of The Sport Motivation Scale and The Situational Motivation Scale. The facilitator also used student self-assessments and physical education performance-based assessments to gather data related to the research. The results of the first independent samples t-test indicated there was a significant difference between the students who were provided a choice and those who were not ($p=0.001$). The

results of the second independent samples t-test indicated there was a significant difference between male's and female's motivation to participate ($p=0.009$). The concluding independent samples t-test indicated there was not a significant difference between the students who participate in athletic teams or extra-curricular activities than those who do not.

Keywords: motivation, participation, choice, instructed, physical education, active engagement

 Exempt B

It looks like your study is exempt because it does not meet the definition of a research activity. Therefore, it does not require approval by the IRB. However, you should follow ethical practices even when just practicing or demonstrating research. Refer to 45 CFR 46.102(d). Student researchers may benefit from going through the IRB process even if they are only collecting data to learn techniques.

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Chapter 1**Introduction**

The unhealthy and harmful trends many Americans are facing each day represent the negative effects that accompany being uneducated about the importance of regular physical activity. “The purpose behind Physical Education in schools is to develop the knowledge and understanding, skills, capabilities and attributes necessary for mental, emotional, social, and physical wellbeing now and in the future” (Balfron, 2018). The rationale behind the vision of Physical Education enables children and young individuals to make informed decisions in order to improve their mental, emotional, social and physical wellbeing, apply their mental, emotional and social skills to pursue a healthy lifestyle, make a successful move to the next stage of education or work, and lastly establish a pattern of health and wellbeing which will be sustained into adult life (Balfron, 2018).

Obesity rates in the United States are currently at an all-time high and researchers have indicated the statistics only seem to be getting worse. Research has shown obesity is one of the leading causes of death in the United States killing approximately 300,000 Americans per year. Health professionals have indicated if these harmful trends continue in years to come, half of all United States teenagers will be overweight or obese by 2030 (CDC, 2018). There are several factors that contribute to the rising obesity rates in the United States, however the more prominent include: bigger portion sizes, confusing “diet” for “nutrition,” and lack of regular exercise (PublicHealth, 2018).

“Lack of exercise is a major culprit in the obesity epidemic. It’s been decades since most Americans have worked in the fields or on factory floors. Most Americans are sitting throughout their work day which means little to no exercise each day” (PublicHealth, 2018). When adults fail to recognize the importance of physical activity on a daily basis, they are also failing many generations to come. Physical activity and life-long wellness begins at an early age. “A growing body of research suggests that physical activity in early childhood may have beneficial health outcomes in both the short and long term. Evidence suggests children with higher physical activity levels in early childhood are more likely to be active later in childhood and even into adulthood” (PublicHealth, 2018).

Audre Lorde, an American writer and civil rights activist once stated, “transformation of silence into language and action is an act of self-revelation” (Lorde, A., 1980). For physical educators especially, it can often times be a difficult task trying to get the “unmotivated” motivated. In other words, physical education instructors are constantly dealing with situations where students chose not to participate or engage in the lesson and would rather take a “zero” for the day. As certified physical education specialists, it is our job to ensure all students are taught the importance of physical activity and life-long wellness at an early age as well as ensuring students are actively engaged during each lesson. Therefore, we as teachers must dig deeper to find various strategies and teaching techniques that reach out to students who are unmotivated and chose not to participate.

Research has suggested that providing students with choice increases their own individual intrinsic motivation. The Self- Determination Theory commonly known as “SDT”, is “a theory of motivation that is concerned with supporting individuals natural or intrinsic tendencies to behave in effective and healthy ways” (Deci, E. L., & Ryan, R.M., 2018). “The theory was first developed by Edward L. Deci and Richard M. Ryan, and has been elaborated and refined by scholars from many countries. This theory supports the idea that providing students with choice or increased autonomy positively impacts student’s motivation and participation in the classroom by increasing activity levels and overall behavior” (Deci, E. L., & Ryan, R.M., 2018). “Choice in the classroom has also been linked to increases in student effort, task performance, and subsequent learning. However, to reap these benefits, it is crucial the instructor creates choices that are robust enough for students to feel that their decision has an impact on their learning” (Marzano, 2010, pg. 14, 101). In order to appropriately incorporate choice into the classroom, research recommends teachers provide choice to students in four ways: (1) choice of tasks, (2) choice of reporting formats, (3) choice of learning goals, and (4) choice of behaviors (Marzano, 2010, pg. 14, 101).

Statement of the Problem

Several students in today’s society have been failed in terms of being adequately educated on the importance of physical activity, thus leading into the problem of this study which is physical education instructors are experiencing more and more students who chose not to participate in regular physical education classes mandated by the state. Several of these

students indicate they would rather take a “zero” and sit out than actively participate with other peers in their class. In order to resolve this issue in schools, physical education specialists must meet students in the middle and come up with new ideas and strategies that increase student’s motivation levels and accommodate their individual interests.

Purpose of the Study

The purpose of this study was to determine whether or not providing students with choice in a selected Middle School effects students motivation to participate and engage in the lesson.

Significance of the Study

Findings from this study will reveal several factors related to student motivation and overall participation in physical education classes. The issue of students not wanting to participate has gradually become more prominent overtime and is one of the main problems physical educators struggle with the most. The results from this study will be beneficial to all physical educators across the curriculum whereas it is an issue all grade level teachers experience. The findings concluded from this study will potentially provide guidance and direction for teachers whom are struggling with this issue. If the final results display providing students with choice does have a positive affect on student’s motivation to participate, teachers across the board will be able to alter his or her instructional plans in a way that accompanies student choice or autonomy.

Limitations

This study is limited due to the fact that it will be conducted in a small rural middle school located in Northeast Tennessee. The population of the students who attend this school are predominantly Caucasian. The school is considered a Title 1 school whereas more than 75 percent of the students come from low-income families. A predetermined barrier to this study is that only one 8th grade class will be include in the study.

Definition of Terms

Motivation: the reason or reasons one has for acting or behaving in a particular way; the general desire or willingness of someone to do something

Participation: the act of taking part in something

Physical Activity: any bodily movement produced by skeletal muscles that requires energy expenditure

Physical Inactivity: a term used to identify people who do not get the recommended level of regular physical activity

Physical Education: instruction in the development and care of the body ranging from simple to calisthenic exercises to a course of study providing training in hygiene, gymnastics, and the performance and management of athletic games

Choice: the act of choosing; selection

Autonomy: the quality or state of being self-governing; self-directing freedom and especially moral independence

Overview of the Study

The purpose of this study was to determine whether or not providing students with choice in a selected Middle School effects students motivation to participate and engage in the lesson. This thesis is comprised of five chapters. Chapter one consists of an introduction of the study, statement of the problem, statement of the purpose, significance of the study, limitations, definition of terms and concepts, and an overview of the study. Chapter two provides a review of the literature that is applicable to this study. Chapter three compiles together all research methods used in the study. Chapter four contains the data analysis, which includes the collection of data, research question(s) and research hypothesis'. Chapter 5 concludes the study containing the findings, recommendations, implications, and the conclusions of the research.

Chapter 2**Review of the Literature****Introduction**

Physical Education is a class that is mandated by the state of Tennessee in all public schools enabling children and young individuals to learn the importance of life-long wellness at an early age. “The purpose of Physical Education in schools is to teach students the value of health, recreation, and social interaction” (SPARK, 2016). Whereas physical educators are teaching students several skills he or she will use their entire life such as: the ability to start/stop on signal, teamwork, good sportsmanship, spatial awareness, body part identification, balance, and control, they are also introducing students to one of the most well-known goals of any physical education class which is to promote movement (SPARK, 2016). Although learning the importance of physical activity and movement might not seem as crucial as literacy or numeracy, students who fail to learn the importance and value of living a healthy life style are more likely to experience significant health problems later in life. Thus, we as physical education specialists are responsible for ensuring our students are getting the quality physical education they deserve.

The Importance of Motivation in Physical Education

Most physical education instructors in today’s society will agree that their greatest challenge is attempting to get all students up and motivated to participate in the lesson’s content or activity for the day. Physical education teachers are experiencing more circumstances where

students are unmotivated to participate and in some cases state “they would rather take a zero than participate and engage in the lesson for the day.” As physical education specialists, it is our job to ensure all students are being provided the quality physical education program that is mandated by the state of Tennessee, however what do we as educators do when our students say they would rather fail than participate? Several physical education teachers have battled this same issue and research has concluded that it all goes back to the term “motivation.” A study conducted at Ksar Said University in La Manouba, Tunisia researched several variables related to students choosing not to participate during class. A few variables included in the study are as followed: lesson content, motivation, age, physical complex, and injuries (Bali, 2016). Among these variables, motivation and age ranked the highest to reflect the student’s likelihood to participate. As the “unmotivated” students age increased, the likelihood they would participate in physical education decreased. This study backs up the idea that students need to be taught the importance of physical activity at an early age due to the likelihood their motivation to participate and engage could potentially decrease with age.

Motivating Middle School Students

Motivating students in general can often times be a difficult task for teachers in today’s society. However, middle school students for some reason seem to be especially tough to crack. Middle school students are constantly seeking answers for the commonly used question “why.” For instance, several middle school teachers probably hear “why are we doing this” on a daily basis, or the common saying “when will we ever use this in life.” As educators, we must prepare

for these questions and circumstances in advance to help continue the learning process without distraction. “Capturing middle school students’ attention requires lesson planning that connects to their interests. Students who are 11 to 15 years old are undergoing rapid physical changes, yet their social and emotional growth tends to drive their interests, choices, and behavior” (Bycura & Darst, 2001). Students in middle school require specific curricula that meet their stages of development. “Purposeful, motivational curricula can arouse student curiosity, which in turn leads to heightened engagement. This may result in a decrease in behavior management problems and an increase in students’ active participation” (Bycura & Darst, 2001).

Measuring Student Engagement in Schools

According to the *Glossary of Education Reform*, “student engagement is defined as the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education” (Glossary of Education Reform, 2016). In education today, teachers from various content areas all obtain their own opinion and perception of student engagement based on what they experience in their own content area(s). For physical education instructors specifically, most refer to student engagement as the extent to which a student does or does not participate in the lesson’s activity or instructional task for the day. However, for many specific content area teachers, the term “student engagement” exceeds beyond independent participation in class. For teachers whose scores factor into their own individual teaching evaluations, the term “student engagement” can refer to several variations in education

involving attendance, standardized test scores, truancy, graduation rates, etc. (Taylor & Parsons, 2011). With the term “student engagement” becoming significantly broader depending on the teacher and his or her specific content area, how do we as educators measure our students’ levels of engagement and motivation in our own content areas?

The Sport Motivation Scale

For physical education instructors specifically, the Sport Motivation Scale (SMS) has been proven to be a new valid resource in the world of physical education. The Sport Motivation Scale was developed to measure an athlete’s motivation toward sport participation (Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, (1995). According to the Journal of Sport & Exercise Psychology, the Sport Motivation Scale consists of seven subscales that measure three types of Intrinsic Motivation, three forms of regulation for Extrinsic Motivation, and Amotivation (Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, (1995). The first study used in the Journal of Sport & Exercise Psychology confirmed the factor structure of the scale and revealed a satisfactory level of internal consistency. Correlations among the subscales revealed a simplex, pattern confirming the self-determination continuum and the construct validity of the scale (Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, (1995).

Situational Motivation Scale

An additional scale that research has suggested includes the Situational Motivation Scale (SIMS). “The Situational Motivation Scale (SIMS) is designed to assess the constructs of intrinsic motivation, identified regulation, external regulation, and amotivation in field and laboratory

settings” (Guay, Vallerand, & Blanchard, 2000). This scale is beneficial to the research that will be conducted in this study because it accompanies fewer limitations as opposed to traditional methods which include the free-choice measure and self-report scales. “Situational measures of motivation were developed to assess participants’ immediate or current reactions toward a specific activity in which they were engaged” (Guay, Vallerand, & Blanchard, 2000). The scale itself measures three domains: motivation, goal orientation, and perseverance. This scale has been used in previous studies by several physical education instructors and has a high validity rate. An example question from this scale that could be used is as followed: “Why are you currently engaged in this activity?” To which the student might answer, “I do this activity but I am not sure if it is worth it.”

Incorporating Student Choice in Physical Education

Since research and observation have revealed that motivation is key in getting students to participate, how do we as teachers get students motivated? Several education professionals have conducted research and experimentation and have concluded that providing students with choice can bring several benefits to the classroom including increased motivation and participation. “When teachers can tap into students’ interests and passions, they will be more joyful and invested in their learning” (Anderson, 2018) Research has also concluded that intrinsic motivation flows from ownership. For example, if you give students a writing prompt and tell them to write an essay regarding the prompt, chances are the students will do it but won’t be as motivated or excited about their own learning as they would be if they got to pick what they

wrote about. The same idea applies to physical education. When students are given a choice or “voice” in their learning, they are more motivated to engage. With that being said, several physical educators across the board are using new techniques to engage students including providing students with choice and more opportunities for autonomy.

The Importance of Student Choice and Autonomy

According to the Self-Determination Theory, “autonomy is one of the basic psychological needs that is essential for healthy human development and functioning” (Deci & Ryan, 2000). Autonomy in education is defined as self-directed learning or learning that has become the responsibility of the student (Shrader, 2003). In the Self-Determination Theory (SDT), autonomy relates to experiences of freedom and self- integration (Deci & Ryan, 2000). “The need for autonomy refers to the experience of behavior as volitional and reflectively self-endorsed” (Niemic & Ryan, 2009, p. 135). In 2002, there were two studies concluded that reported on two decades of empirical research that supports the application of the Self-Determination Theory in educational settings. The final conclusions from the results of these studies indicated that students benefit most when teachers utilize autonomy- supportive orientations.

Student’s Selection of Activities in Physical Education

In an article entitled “Student Voice: Student Choice and Participation in Physical Education,” students in a selected high school were observed and assessed on the level of significance choice and providing students with opportunities for autonomy has on student’s

motivational levels in a given physical education class. The participants included in the study expressed an interest in being able to have input into activity offerings, alluding to current teacher- directed curriculum (El-Sherif, 2014). The students preferred learning new games, skills, and activities for continued participation in adulthood (El- Sherif, 2014). Research has suggested that students input in curriculum design may lead to a more student- centered and dynamic curriculum. “Determining students’ needs and interests is the initial step to modifying a curriculum in order to offer activities that provide students with meaningful experiences” (El-Sherif, 2014). The final conclusions from the study indicated that when students selected the activities, they were more likely to participate in physical education, and the activities and the curriculum were more meaningful from the students’ perspective.

Effects of Student Perception in Physical Education

In addition to motivation being a key factor in whether or not students chose to participate in physical education, perception also plays a vital role in the student’s decision. The term perception refers to “the state of being or process of becoming aware of something through the senses” (Webster, 2018) In other words, through our senses, we can draw conclusions or opinions based on our own individual experiences. Therefore, if students have previously had a bad or traumatic experience in a previous physical education class, chances are they will likely be skeptical about participating. Perception plays a major role in students’ motivation to participate whereas some student’s perception was developed primarily from their parents or guardians’ own individual experiences. For example, students that say “I don’t like physical education and

my parents didn't either." This circumstance is a common occurrence in physical education due to the students not seeing the importance of physical activity displayed in the home.

The Impact of Perceived Competence and Autonomy on Engagement and Performance in School

A study was conducted by an elementary school to determine the impact of perceived competence and autonomy on engagement and performance in school. The study included 77 third and fourth graders who were considered above average in ability by scoring above the median on the Stanford Achievement Test (Miserandino, 1996). "Despite this high ability, children who reported experiencing a lack of competence (those less certain of their abilities) or a lack of autonomy (being externally motivated) reported more negative affect and withdrawal behaviors than did children who perceived themselves as having ability or who perceived themselves to be autonomous" (Miserandino, 1996).

Chapter 3**Methodology and Procedures**

The review of literature indicated in this thesis concerns the importance of providing middle school students with choice in order to increase their individual motivation levels enabling them to want to participate in Physical Education classes. Based on the information provided in the literature review, research was conducted at a specific Northeast Tennessee public middle school to investigate the effects of choice of activities on student motivation and physical activity behavior in a selected middle school physical education class. The research-based scales used to conduct this study were The Sport Motivation Scale and The Situational Motivation Scale. The facilitator also used student self-assessments and physical education performance assessments to gather data related to the study. This chapter contains five sections: population, sample, data collection instruments, procedure, and research questions.

Population

This research took place in a semi-rural 5-8 public middle school in Northeast Tennessee. The total number of students enrolled in the 2018 school year is 311. Among the 311 students, the percentage of students who qualify to receive special education services is 18.0 percent. The percentage of students from families that meet eligibility criteria in regard to qualifying as economically disadvantaged is 39.2 percent. The total current operating expenditures on a per pupil basis including federal, state and local funds is \$8,977.

Sample

The sample for this study included one eighth grade physical education class. The class consisted of 30 students. Of those 30 students, 18 were female and 12 were male. This class was not randomly selected. All thirty students were assigned to this class by school administration at the beginning of the school year. To conduct this study, the students were arranged in two groups both containing a total of 15 students per group. The students for each group were randomly selected. The first group of 15 students contained 8 females and 7 males. The second group of 15 students contained 10 females and 5 males.

The racial demographics of the participants in this class include 5 students that are Hispanic, 3 students that are African- American, and 22 students that are Caucasian. All 30 participants enrolled in this class were in the 8th grade. The ages of the participants in this class consisted of twenty-two 14 -year olds and eight 13 -year olds.

The athletic abilities in this selected eighth grade class vary tremendously based on the individual student and his or her individual skill competency levels. The participants performance levels in this class range on a scale from 1 to 5 including the following: Unsatisfactory (1), Needs Improvement (2), Satisfactory (3), Exceeds Expectations (4), and Exceptional (5). 12 of the participants in this class are on athletic teams sponsored by the school. 5 of the participants in this class participate in extra-curricular activities sponsored by outside organizations among the community. 13 students in this class are uninvolved in both athletic teams within the school and extra-curricular activities not sponsored by the school. 3 of

the participants in this class had an IEP (Individualized Education Program) in place. One of the 3 participants obtaining an IEP receives special education services within the school.

Data Collection and Instruments

All the data collected for this study was collected using assessments based off of the The Sport Motivation Scale and The Situational Motivation Scale. The facilitator also used student self-assessments and physical education performance-based assessments to gather data related to the research. The Sport Motivation Scale measures an athlete's motivation toward sport participation. The scale is comprised of seven subscales that measure Intrinsic Motivation, Extrinsic Motivation, and Amotivation. Intrinsic Motivation has been defined as "performing an action or behavior because you enjoy the activity itself." In other words, this form of motivation occurs when the participant chooses to participate in the activity or game because he or she enjoys the activity. Extrinsic Motivation refers to "behavior that is driven by external rewards such as money, fame, grades, and praise." In physical education specifically, this form of motivation occurs when the participant or participants participate strictly due to a reward system. For example, the student may choose to participate to receive praise or attention from the instructor. The term "Amotivation" refers to "a state of lacking any motivation to engage in an activity, characterized by a lack of perceived competence and/or failure to value the activity or its outcomes." This reference to motivation describes a participant that refuses to participate in any activity due to their lack of confidence in their individual ability to succeed.

The Situational Motivation Scale assesses the constructs of Intrinsic Motivation, Identified Regulation, External Regulation, and Amotivation in the field and in laboratory settings. Identified Regulation is referred to as a more autonomously driven form of extrinsic motivation. It involves consciously valuing a goal or regulation so that said action is accepted as personally important. External Regulation refers to “rules or behavior being practiced in order to avoid punishment or to gain rewards.” In this case, the participant chooses to participate in the lesson or activity to abstain from getting in trouble or to receive an award or recognition from the instructor. The situational measures of motivation included in this study were used to assess participants’ immediate or current reactions toward a specific activity in which they were engaged. The Situational Motivation Scale measures the following three domains: Motivation, Goal Orientation, and Perseverance. The domain “motivation” refers to the participant’s individual desire or willingness to do something.” The “goal orientation” domain portrays the degree to which the participant focuses on tasks and the end results of those tasks. The final domain which displays perseverance reveals the participant’s steadfastness in doing something despite difficulty or delay in achieving success.

The participants in this study were grouped into two different randomly selected groups, both consisting of 15 participants in each group. The lesson the students were engaging in was a “Fitness-Based Lesson.” The first group of 15 participants were allowed to choose which stations they wanted to engage in and which they did not. The second group of 15

participants did not have a choice and had to complete all of the stations instructed by the teacher. The facilitator randomly selected 3 students from each group to interview. Of the 6 participants interviewed, 3 were provided a choice in the lesson's activities and the other 3 were not. The facilitator also scored each student on a performance-based scale rating their performance in class that day from 1 to 5. 1 being the worst, 5 being the best. Students who received a 5 showed maximum effort during all activities and also displayed a positive attitude toward the lesson for the day. Students who received a 1 showed no effort and chose not to participate in the lesson. Students who received scores ranging from 2-4 showed little to no effort and displayed a good or mediocre attitude towards the lesson's content. All participants were provided with a survey at the conclusion of the lesson that assessed the following domains: Motivation, Participation, Attitude, Choice, and Individual Competency.

The data collected from the Sport Motivation Scale and the Situational Motivation Scale displayed each student's individual motivation to participate in the activity and whether their motivation levels effected their means to participate. The data collected from the randomly selected student interviews portrayed student's individual perspectives regarding whether they would like to have a choice or "voice" in their learning experience. The performance-based assessment conducted formally by the instructor displayed each participant's individual performance score from the lesson that day displaying whether or not the student participated and engaged in the lesson and how their participation reflected their attitude towards the lesson. The data collected by the survey provided at the conclusion of the lesson displayed students' perspectives and incite towards their own individual participation and motivation that

day. The data collected were analyzed statistically to determine if providing students with choice effected their motivation to participate and overall behavior towards physical activity.

Procedures

Prior to the study being conducted, permission was sought from the principal of the selected middle school. Following being granted permission from the principal, I next sought permission from the Institutional Review Board (IRB) decision tree at Milligan College. The decision tree indicated that I was exempt from obtaining permission from Milligan's IRB board. After receiving complete permission from all required domains to conduct the study, a fitness-based lesson was selected along with circuit training stations for the students to engage in cardio-respiratory exercises. All materials needed to conduct the study were further researched and gathered. The lesson plan for the study was constructed by the facilitator after acquiring all needed materials. The study was then carried out in an eighth-grade physical education class at a selected middle school.

As both groups were randomly assigned, the facilitator used a quantitative approach that displayed a control group versus a comparison group. The control group was controlled by the instructor and given direct instruction of what to do. The comparison group received no instruction and were granted the opportunity to choose their own activities. At the conclusion of the lesson, the facilitator gathered all data collected and began analyzing the data from both the control group and the comparison group. The researcher compared the two groups and

looked for significance between whether or not choice increased the students' motivation to participate in the lesson.

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Research Questions and Hypothesis

Research Question #1: Does providing students with choice of activities affect students' motivation to participate and engage in the lesson?

Research Hypothesis #1: Providing students with choice of activities does affect students' motivation to participate and engage in the lesson.

Null Hypothesis #1: Providing students with choice of activities does not affect students' motivation to participate and engage in the lesson.

Research Question #2: Does gender significantly influence students' motivation to participate and engage in the lesson?

Research Hypothesis #2: Gender does influence students' motivation to participate and engage in the lesson.

Null Hypothesis #2: Gender does not influence students' motivation to participate and engage in the lesson.

Research Question #3: Are students who participate in athletic teams or extra-curricular opportunities more likely to participate and engage in a physical education lesson?

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Research Hypothesis #3: Students who participate in athletic teams or extra-curricular opportunities are more likely to participate and engage in a physical education lesson.

Null Hypothesis #3: Students who participate in athletic teams or extra-curricular opportunities are not more likely to participate and engage in a physical education lesson.

Chapter 4**Results****Data Analysis**

It is often a difficult task to get students up and motivated to participate during a physical education lesson. Physical Educators are seeing more students who would rather take a failing grade in the class than participate and engage in the lesson. With that being said, it is crucial that teachers among all content areas research and find what components influence students' willingness to participate and engage in each lesson effectively. The purpose of this study was to determine whether providing middle school students with different choices of activities effects their motivation, participation, and engagement in the physical education lesson facilitated by the instructor. The study was conducted at a specific Northeast Tennessee public middle school. Student performance and participation was measured using a rubric assessment created by the instructor that accompanies components and ideas from that of the Sport Motivation Scale and the Situational Motivation Scale. After all necessary data was collected, the instructor used a t-test as a resource to determine the validity and reliability of what components were observed. This chapter displays the data organization and analysis.

Collection of Data

The data for this research were collected from an eighth-grade physical education class in a semi-rural public middle school located in Northeast Tennessee. The participants for this

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study consisted of a total of 30 students all who were assigned to the class by school administration. Of the 30 students who participated in the study, 18 were female and 12 were male. Prior to conducting this study, the students were divided into two groups both containing a total of 15 students per group. The students for each group were randomly selected by the instructor. The first group of students contained 8 females and 7 males and was the “choice” group. This particular group of students were allowed to have a voice in their learning experience by choosing which fitness-based stations he or she wanted to complete during the lesson. The second group of students contained 10 females and 5 males and was the “instructed” group. This group of students were not granted a choice during this lesson and had to complete the fitness-based stations that the instructor told them to. All students were required to complete at least 4 stations out of the fitness-based lesson, however the choice group got to choose which stations they wanted to complete and the instructed group did not. Data was first collected by the instructor as she walked around and observed students’ participation and engagement levels using a rubric constructed by components and variables of the ones that accompany the Sport Motivation Scale and the Situational Motivation Scale. The teacher first gave students a score ranging from 1-5 depending on what she felt they deserved. At the conclusion of the lesson, the students got the opportunity to score themselves by

completing a self- evaluation rubric constructed by the facilitator. Included below is the assessment rubric the instructor used to measure students’ performance on a scale ranging 1-5.

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Physical Education Performance Assessment Rubric

Student #: _____

Student Grade Level: _____

Physical Education Outcomes	Exceptional (5)	Exceeds Expectations (4)	Satisfactory (3)	Needs Improvement (2)	Unsatisfactory (1)
Participates Appropriately in Activities	Always listens and follows directions. Displays a positive attitude in class. Demonstrates a high level of cooperation and sportsmanship. Willingly helps others. Shows interest, enthusiasm and a excellent overall effort.	Usually listens and follows directions. Displays a positive attitude. Demonstrates cooperation and sportsmanship. Shows interest, enthusiasm and a good overall effort.	Needs some reminders to listen and follow directions. Periodically lacks cooperation and sportsmanship. Demonstrates some lack of interest, enthusiasm, and effort.	Often needs several prompts when given directions. Has a difficult time showing cooperation and sportsmanship. Lacks interest and effort.	Consistently off-task and not following directions. Refuses to cooperate and demonstrate good sportsmanship. Lacks both interest and effort.
Motor Skills	Demonstrates competency in all gross and fine motor skills, and proficiency in a few, relative to grade level.	Demonstrates, or is moving towards, competency in all gross and fine motor skills and proficiency in a few, relative to grade level.	Lacks competency in some gross and/or fine motor skill, relative to grade level.	Has difficulty demonstrating age appropriate competency in most gross and fine motor skills.	Is unable to demonstrate age appropriate competency in gross and fine motor skills.

Content Knowledge and/or Application	Applies teacher feedback to improve skill performance. Identifies characteristics of correct motor skill performance and gives feedback to others. Applies movements, concepts, and strategies in an activity setting.	Applies teacher feedback to improve skill performance. Identifies characteristics of correct motor skill performance. Applies movements, concepts, and strategies in an activity setting.	Applies some teacher feedback to improve skill performance. Is able to identify most characteristics of correct motor skill performance. Applies some movements, concepts, and strategies in an activity setting.	Has difficulty applying teacher feedback to improve skills. Unable to identify some components of correct motor skill performance. Not able to apply knowledge in an activity setting.	Refuses/ does not apply teacher feedback to improve skills. Unable to identify and demonstrate components of correct motor skill performance. Not able to apply knowledge learned in an activity setting.
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The rubric indicated above was one of the many resources the instructor used to collect and analyze data. The performance assessment rubric indicated above was strictly used for evaluating students' active participation and engagement in the lesson. The results collected from the instructor were compared to those previously collected during two other physical education lessons where students did not have the opportunity to chose his or her activity station. The objective of this data resource was to evaluate whether or not providing the first group with choice had a positive effect on students' motivation to actively participate and engage in the lesson. This resource also served as an indicator to establish if there was a decrease in participation among those students who were in the instructed group and did not have a choice in his or her station rotations.

The second resource used by the instructor to collect and analyze data was a self-evaluation survey where students got the opportunity to provide feedback on their own learning experiences during the lesson. The instructor used this assessment as a tool to

compare the scores given by the instructor to the scores students gave themselves. These scores were also compared to previous student self -evaluation rubrics to determine whether choice effects student’s motivation and drive to participate in the lesson. The self- evaluation rubric given to students is as shown below.

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Fitness-Based Physical Education Lesson

Self- Evaluation Rubric

Student #: _____

Student Grade Level: _____

<ul style="list-style-type: none"> • I actively participated in each station to the best of my abilities whether I had a choice in the station or not. 	Definitely	Sometimes	Never
<ul style="list-style-type: none"> • I displayed a positive attitude towards my peers and demonstrated good sportsmanship. 	Definitely	Sometimes	Never
<ul style="list-style-type: none"> • I feel that having a choice in my learning motivates me to participate and engage in the lesson. 	Definitely	Sometimes	I don't mind either way

<ul style="list-style-type: none"> • I feel that not having a choice in my learning makes me less likely to participate and engage in the lesson. 	<p align="center">Definitely</p>	<p align="center">Sometimes</p>	<p align="center">I don't mind either way</p>
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Results for Research Question 1

Research Question 1: Does providing students with choice of activities affect students' motivation to participate and engage in the lesson?

In order to answer Research Question 1, a t-test was conducted comparing the teacher's scores for both the choice group students and the instructed group of students. A second t-test was conducted and compared the previous test with the scores the students in both groups gave themselves. Lastly, a third t-test was conducted and compared to the previous two tests comparing both the teacher's scores and the student's scores with previous scores for the same students given in prior physical education classes using the same rubric used during this study.

Research Hypothesis 1: Providing students with choice of activities does affect students' motivation to participate and engage in the lesson.

Null Hypothesis 1: Providing students with choice of activities does not affect students' motivation to participate and engage in the lesson.

To determine whether or not choice influenced student's participation and engagement in the lesson, an independent samples t-test was conducted. The test variable was motivation. The grouping variable was if the student was given a choice or not during the lesson. The average level of motivation for students who were given a choice was significantly higher ($p=0.001$) than students who were not given a choice. Therefore, the null

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hypothesis was rejected. Students who were given a choice in their activity tended to show more motivation and active participation.

Results for Research Question 2

Research Question 2: Does gender significantly influence students' motivation to participate and engage in the lesson?

In order to answer Research Question 2, a t-test was conducted that compared both the male and female scores collected.

Research Hypothesis 2: Gender does influence students' motivation to participate and engage in the lesson.

Null Hypothesis 2: Gender does not influence students' motivation to participate and engage in the lesson.

To determine whether or not gender influences student's motivation and willingness to participate and engage in the lesson, an independent samples t-test was conducted. The test

variable was motivation. The grouping variable was if the student was male or female. The average level of motivation for students who were males was significantly higher ($p=0.009$) than the females. Therefore, the null hypothesis was rejected. Students in the study who were males tended to display higher motivation during the lesson than students who were females.

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Results for Research Question 3

Research Question 3: Are students who participate in athletic teams or extra-curricular opportunities more likely to participate and engage in a physical education lesson?

In order to answer Research Question 3, a t-test was conducted that compared the student's scores of those who are on athletic teams or participate in extra-curricular activities and those students scores that do not.

Research Hypothesis 3: Students who participate in athletic teams or extra-curricular opportunities are more likely to participate and engage in a physical education lesson.

Null Hypothesis 3: Students who participate in athletic teams or extra-curricular opportunities are not more likely to participate and engage in a physical education lesson.

To determine whether or not the student participated in athletic teams or extra-curricular activities influenced their means to participate in the lesson, an independent samples t-test was conducted. The test variable was motivation. The grouping variable was if the student participated in any kind of athletic team or extra-curricular activity or did not participate in

anything at all. The results concluded that there is not a significant influence ($p=0.407$) between the students who participate in athletic teams or extra-curricular activities than those who do not. Therefore, we can fail to reject the null hypothesis. There seemed to be no significant variation or difference between those students who participate in athletic teams or extra-curricular activities and those who do not.

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Chapter 5

Findings, Recommendations, and Implications

The purpose of this study was to determine whether providing middle school students with different choices of activities effects their motivation, participation, and engagement in the physical education lesson facilitated by the instructor. The data from this study determined whether or not choice is an important component of motivation and active participation among students in the classroom. The results were analyzed and examined using independent samples t-test. This chapter contains a summary of the findings, conclusion, recommendations, and implications from the study.

Summary of the Findings

Research Question 1: Does providing students with choice of activities affect students' motivation to participate and engage in the lesson?

To answer research question 1, an independent t-test was conducted to determine if choice effects students' motivation and willingness to participate in the lesson. There was a

significant difference found whereas the average level of motivation for students who were given a choice was significantly higher ($p=0.001$) than students who were not given a choice. Therefore, the null hypothesis was rejected and the findings for this study indicate that choice does influence student's motivation and willingness to participate in a lesson.

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As previously discussed in Chapter 2, "The purpose of Physical Education in schools is to teach students the value of health, recreation, and social interaction." However, how can that goal and purpose be effectively attained if students are not willing to participate and engage in the lesson planned by instructors? It is research such as finding components that influence motivation and participation in the classroom that are crucial for teachers to be successful and fulfill their ultimate goal. The findings in this study were able to determine a significant difference between the motivation of those students who were offered a choice and the students who were not. When choices or "options" were offered, many students seemed more motivated or willing to participate in the lesson whereas they seemed to appreciate the independence given to them by the instructor. On the other hand, when choice was not offered to students, the students seemed to be discouraged and frustrated and often times displayed a lack of enthusiasm and appreciation of the lesson and its content. When given a survey and asked whether or not they preferred being provided choices or not, the majority of students stated they enjoyed the lesson more when choices were involved. Nevertheless, a significant difference was determined between students who were provided with a choice and students who were not.

Research Question 2: Does gender significantly influence students' motivation to participate and engage in the lesson?

To answer Research Question 2, an independent t-test was conducted to determine whether or not gender influences students' motivation and willingness to participate and

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engage in a lesson. There was a significant difference found whereas the average level of motivation for students who were males was significantly higher than those who were females. ($p=0.009$) Therefore, the null hypothesis was rejected and the findings for this study indicate that gender does influence student's motivation and willingness to participate in a lesson.

In the study conducted, most males seemed to be more motivated to participate in the fitness-based lesson than the females. This very easily could have been since the lesson was a fitness-based lesson where several stations focused on cardio and endurance and could potentially be less appealing to females. However, when asked verbally several females stated they didn't enjoy stations that accompanied a lot of continuous cardio and would rather engage in activities that were more team focused. In conclusion, a significant difference was determined between the male's motivation and the female's motivation to participate.

Research Question 3: Are students who participate in athletic teams or extra-curricular opportunities more likely to participate and engage in a physical education lesson?

To answer Research Question 3, an independent t-test was conducted to determine if students who participate in athletic teams or extra-curricular activities are more motivated to

participate in a lesson than students who do not participate in any athletic teams or extra-curricular activities. There was not a significant difference found between the students who participate in athletic teams or extra-curricular activities and those who do not. ($p=0.407$) Therefore, the researcher failed to reject the null hypothesis and the findings

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for this study indicated that there was no significant difference between students who participate in athletic teams or extra-curricular activities and those who do not.

While observing both the choice group students and the instructed group of students, the researcher noticed that several students who are on athletic teams or participate in extra-curricular activities surprisingly displayed little to no effort during the lesson. When asking the students why he or she chose not to participate or demonstrate the effort expected, several students responded “they had a game later that day and did not want to get worn out.” This could decrease the validity of the findings concluded in the study whereas several students may not have wanted to participate that certain day due to the fear of potentially getting “worn out” before their game. It is not evident whether or not that was the actual reasoning behind why they showed little to no effort in class, however the final results for this research question indicated that there was no significant difference regarding motivation in class between those students who are on athletic teams or participate in extra-curricular activities and those who do not.

Conclusion

In conclusion, results from this study reveal a significant increase in students' participation and engagement levels in a given physical education lesson when given a "choice" in their learning. Results from this study also display that gender can positively impact whether or not the student participates in the lesson. Lastly, results from this study indicate there is no

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apparent significance in motivational levels between students who are on athletic teams and that participate in extra-curricular activities and those who do not.

Recommendations

The following are recommendations for this study:

1. Future research should focus on what other factors influence students' participation and engagement levels in a physical education class.
2. Future research should evaluate various age groups/grades to see if there is any variation in participation among different age groups.

Implications

1. Educators in the physical education content area should focus on implementing various activities into their lessons that include more opportunities for choice and students having a voice in their learning.
2. Educators should take notes on activities that interest students and get them motivated to participate to assist future lessons to come.

3. Educators should provide students with the opportunity to voice what components he or she feels the lesson lacks that would potentially get them more engaged and motivated to participate.

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