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The relationship between participation in extracurricular activities and Utah's proficiency assessments of students in a suburban school district

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THE RELATIONSHIP BETWEEN PARTICIPATION IN EXTRACURRICULAR
ACTIVITIES AND UTAH'S PROFICIENCY ASSESSMENTS OF
STUDENTS IN A SUBURBAN SCHOOL DISTRICT

by

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THE GRADUATE COLLEGE

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Everett N Kelepolo

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Abstract

The purpose of this study was to discover whether a relationship exists between participation in extracurricular activities and meeting Utah proficiency assessment standards. This study took place in a suburban school district in the state of Utah.

Throughout the history of public education, economic hardships have wreaked havoc on school systems that depend on public sources of income. Schools today are managing these budget restraints by reducing or eliminating extracurricular programs.

The relationship between academic success and participating in extracurricular activities is found concretely in the research data. However, schools must make budget decisions which place activities and academics in competition for those funds. This study is to learn if extracurricular activities are a support to academic success.

Numerous studies have focused on utilizing the grade point average as an indicator of academic success or failure of a student. The grade point average is a convenient barometer to utilize when using an immediate measure for academic eligibility for extracurricular participants. The Utah Criterion Reference Test (UCRT), on the other hand, is a standardized measurement in determining academic success. This study employed the UCRT along with the grade point average to clarify academic viability.

The participants in this study were 10th grade students in the districts' five high schools. The data was divided into participants in extracurricular activities and non-participants. Determining the participants' extracurricular activity was obtained through the Utah High School Activities Association eligibility rosters. Gender, ethnicity, socioeconomic status, attendance percentage, grade point average, and the Utah Criterion Reference Test scaled scores was gathered from the Student Information System database in the district. The information was analyzed through Analysis of Variance (ANOVA).

As schools cope with budgetary constraints, administrators and boards of education must consider the potential advantages and disadvantages of retaining or eliminating extracurricular activities in the school.

The results, of this study, indicated that students who participated in extracurricular activities scored higher in attendance, grade point average, and the Utah Criterion Reference Test than students who did not participate in extracurricular activities. A moderately strong correlation was also found in the grade point average and the Utah Criterion Reference Test.

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CHAPTER ONE

Introduction

Over the past century, extracurricular participation has progressively played a greater role in schools and in individual students' lives (Knox, 2007). Research supports that extracurricular activities create positive benefits in educational outcomes such as better school attendance, low rates of discipline issues, higher academic achievement, and greater sense of school loyalty or spirit. Research also supports that students participating in extracurricular activities were more likely to be in college preparatory programs, achieve higher grades, and desire to enroll in and graduate from college (Videon, 2002).

However, not all research supported uniform results between extracurricular participation and academic success. Adler and Adler (1985) found a weak positive relationship between academic achievement and athletic participation. A negative relationship was found between the two studies. This relationship is attributed to the lack of preparation for, and interest in, academics by athletes which has resulted in athletes having lower GPA's, lower persistence to graduation and lower chances of graduating (Adler & Adler, 1985; Maloney & McCormick, 1993; Miller, 2009).

Poor academic development of athletes have warranted reform among intercollegiate athletes (Ferris, Finster & McDonald, 2004). A significant negative gap emerged between the academic performance and graduation rate of African-American athletes and their Caucasian peers (Matthews & Ofobike, 2006; Sander, 2007). These gaps were more pronounced in Division I sports of men's basketball and football where more African-

American tend to participate in more frequently (Matthews & Ofobike; Sander; Miller, 2009).

Taras (2005) reviewed studies on the effects of physical activity on younger students and the relationship to academic performance. It was determined that some short-term improvements were related to physical activity, with respect to concentration, but there was no well substantiated long-term academic achievement as a result of more vigorous physical activity (Taras).

Arguments from both views have sparked interest and concern from parents to school administrators. Educating students has primarily been the goal of institutions of learning. However, the pressure of winning and the attainment of fame and fortune, in sports, has created debate in the role of the school.

In a study titled the *Well Rounded Student*, Black (2002) acknowledged extracurricular participation and academic achievement are directly linked. Participating in extracurricular activities promotes commitment from the student and that same commitment carries over to their role as a student. Brown (1999) also supported that a developmental process takes place in the connection of activity participation and school. Further support for the attachment theory is found in Crosnoe's (2002) study which recognized that higher levels of academic achievement by student-athletes are a result of their advanced rate of adaptation to the school environment. Youth receiving additional physical activity tend to show improved attributes such as increased brain function and nourishment, higher energy/concentration levels, changes in body build affecting self-esteem, and better behavior which may all support cognitive learning (Cocke, 2002).

Studies also indicate that music instruction has a positive effect on academic achievement (Friedman, 1993). Higher reading and math scores were found for those students who spent time on music instruction regularly (Trent, 1997).

Along with the development of cognitive learning through a variety of extracurricular activities, additional benefits were recognized through the research. In 1997, Eppright, Sanfacon, Beck, and Bradley investigated the importance of extracurricular participation in relation to childhood and adolescent development. The study stated that participation in extracurricular activities “encourages the development of leadership skills, self-esteem, muscle development, and overall physical health” (Eppright et al., p. 71). Research by Haensly, Lupkouski, and Ellind (1986) also found a positive relationship between participation in extracurricular activities and academic achievement. Moreover, extracurricular activities provided a context for the development of positive social characteristics.

Beside the many social advantages of extracurricular participation administrators, parents, and community members have also acknowledged that athletics play an important role in a child’s life experience. In the 1996 Gallup survey parents were asked if they would prefer their oldest child to be “a straight A student” or to be “an average student who is involved in sports and extracurricular activities”. Only 29% chose to be “a straight ‘A’ student” while 60% of parents chose the latter (Phi Delta Kappan/Gallup Poll, 1996). These parents viewed social involvement and acceptance as an integral part of adolescence.

Researchers have indicated that participation in extracurricular activities, such as athletics, minimizes delinquency (Landers & Landers, 1978), mitigates dropouts (McNeal, 1999), and has a positive effect on student achievement (Otto & Alwin, 1977). This positive impact has been a justification for the spending of a great deal of time and public money by school districts, students, and communities. Mahoney (2000) found that students were less likely to be arrested if more than half the social group in which they chose to “hang out” participated in extracurricular activities. Activities that lack structure and skill-building techniques tend to attract high-risk adolescents resulting in an environment conducive to the development of problem behavior (Mahoney, Stattin, & Lord, 2004). Thus, extracurricular activities can facilitate adolescents’ developmental need for social relatedness and can contribute to a students’ identity as an important and valued member of the school community (Eccles & Barber, 1999).

The impact of extracurricular activities on students’ adolescent development and academic achievement is as relevant and important today as it has been in the past. “Some adolescents are perfectly capable of ordering their various affairs that, with apparently no effort, they can be football captains, distinguished amateur artists, or social leaders and still maintain a ‘gentleman’s average’”(Thom, 1932, p. 159). The fundamental rationale for schools to encourage students to participate in extracurricular activities continues to be the development of the full potential of each student (Marsh & Kleitman, 2002).

Background of the Study

The debate has ensued on whether extracurricular activities help or hinder student academic progress. Mahoney, Cairns, and Farmer (2003) suggested that extracurricular activities can have a positive impact on academic achievement, educational status, and social development among students. The relationship between high school extracurricular participation and academic achievement is one of the most debated topics in schools and districts.

Research has focused on the grade point average (GPA) as a tool in presenting the relationship between athletic participation and academic success (Sitkowski, 2008; Watkins, 2004; Stencil, 2005). However, concern arises from the inconsistency of methods in determining academic viability with only one source, such as GPA (Morian, et. al., 2006). Local sites and teachers create criteria and standards for the GPA. Whereas, standards for Adequate Yearly Progress (AYP) are determined by a consistent national criteria and grading system.

Adequate Yearly Progress is used to determine if schools are successful in educating their students. The No Child Left Behind Act requires states to use a single accountability system to determine whether all students, as well as individual subgroups are making progress toward meeting state academic standards (Department of Education, 2001). It is expected that all public schools will meet proficient standards by the year 2014.

Statement of the Problem

In the midst of an economic downturn, school districts nationwide are making difficult decisions to reduce or eliminate extracurricular programs. Research has consistently touted the benefits of participating in extracurricular activities, however, cash-strapped schools are in survival mode with budget cuts and are questioning the necessity of after-school activities. In an environment of attaining academic standards, extracurricular activities are being scrutinized in terms of cost effectiveness (Schreiber & Chambers, 2002). Recently, a Gallup survey asked the question, “What do you think are the biggest problems that the public schools of your community have to deal with?” A third of those polled claimed lack of funding to be the biggest issue (Phi Delta Kappan/Gallup Poll, 2009).

School administrators, who depend on taxes, are experiencing unprecedented shortfalls in their budgets. To compensate, some school boards have terminated employees, cut back on transportation, and reduced or eliminated extracurricular programs (Sinha, 2010). Parrino (2003) states as many school districts that look for ways to reduce expenditures many systems are considering the benefits of eliminating extracurricular activities or rescheduling them throughout the day.

As with other options, such cuts have potential disadvantages, especially in terms of morale. Roth (2003) explored the in-depth funding crises that schools are currently facing and their effects on curriculum. From a cost standpoint, activity programs are an exceptional bargain when matched against school districts’ overall budget. The National Federation of High Schools determined through collected data from across the country

that activity programs make up only 1-3% percent of the overall education budget in a school (NFHS, 2010).

Extracurricular activities are the prime targets for elimination when education budgets become strained (Watkins, 2004). In general, extracurricular activities are considered extra or secondary to the goal of academic achievement.

Purpose of the Study

The primary purpose of this study was to examine the relationship of participation in extracurricular activities to academic progress. Participants in extracurricular activities have been held to a higher standard of academic performance through eligibility requirements than students who do not participate in extracurricular activities. For instance, under many state athletic association rules, athletes are required to maintain a 2.0 GPA before and during an athletic season. This requirement also stands true for those who participate in other extracurricular events such as marching band, choir, and orchestra.

The majority of researched studies used the GPA as an indicator for academic success (Sitkowski, 2008; Watkins, 2004; Stencil, 2005). However, the GPA from teacher to teacher and school to school is ill-defined. In comparing college GPA to the national standard Graduate Record Examination (GRE), Anaya (1999) found that although comparable results occurred, in general, both measured a different aspect of student learning.

The Utah Criterion Reference Test scores illustrate a national standardized test that all 10th graders are subject to take. The purpose of this study was to link the impact of

extracurricular activities to grade point average scores and the Utah Criterion Reference Test scaled scores in Math, English, and Science to validate academic success.

Research Questions

The review of literature strongly suggested that there is a direct correlation between extracurricular activities and academic achievement. For this research, only high school 10th graders were selected from a suburban district with five high schools. Tenth graders were selected because of the comparison data of Math, English, and Science scores with Grade Point Averages and the Utah Criterion Reference Test scaled scores. Cumulative GPA scores were used with end of year Utah Criterion Reference Test scaled scores. Therefore, the following questions were generated:

1. Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measure by their cumulative average daily attendance?
2. Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average?
3. Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their Utah Criterion Reference Test scaled scores in math, English, and science?

4. Is there a significant difference between the cumulative grade point average and the Utah Criterion Reference Test scaled scores in math, English, and science of high school 10th grade extracurricular participants and non-participants?

Null Hypotheses

To determine statistical probability within a quantitative study, null and alternative hypotheses that correspond with the research questions and objectives of the study were needed. The null and alternative hypotheses of this study were determined to be the following:

1. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative average daily attendance?
2. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average?
3. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their Utah Criterion Reference Test scaled scores in math, English, and science?
4. There is no significant difference between the cumulative Grade Point Average and the Utah Criterion Reference Test Scaled scores in math, English, and science of high school 10th grade extracurricular participants and non-participants?

Limitation and Delimitations

The data used here pose some limitations to the research conducted. This study used the data of 10th grade students from five high schools in a suburban school district in central Utah. The sample size may limit the generalizability of the results to the general population of high school students throughout the United States. The findings of this study may limit the generalization of the findings to students enrolled in public high schools and not secondary private and charter schools.

The study may be limited by certain uncontrolled differences which may exist between high school extracurricular students and non-extracurricular students identified in this study. Factors such as the income, education of parents, single parent households, etc., though not investigated, may limit generalization.

This study is strictly a data collection study with no attitudinal or longitudinal measurements. A basic data collection was used to simply identify each student for the study. Consideration was not given to the students' attitudes toward their respective sport, classes, coaches, teachers, or school. The data collected in this study was cumulative and not tracked over time. Improvement or a decrease in academic achievement did not play a part in the statistical analysis in the study.

Each school computes the number of days absent differently than other schools. Attendance is monitored by the teacher and each one places a value on whether a student is absent or not. The same issue surrounds the concept of grading. Due to the population within the school district, the conclusions identified in this study may apply only to similarly diverse populations.

Definition of Terms

Adequate Yearly Progress (AYP). The measure by which schools, districts, and states are held accountable for student performance under Title I of the No Child Left Behind Act of 2001 (NCLB) (Education Week, 2004).

Average Daily Attendance. The total number of days of student attendance divided by the total number of days in the regular school year.

Extracurricular activities. It is not part of the regular school curricular program and they are structured in a way of not just socializing, but working towards some prosocial mission or goal (Holland & Andre, 1987).

Grade Point Average (GPA). It is the mean of the numerical grades of a student. It is used as a tool to measure academic performance.

National Federation of High Schools (NFHS). An extracurricular organization that sets directions for the future by building awareness and support, improving the participation experience, establishing consistent standards and rules for competition, and helping those who oversee high school sports and activities (NFHS, 2010).

Utah Criterion-Referenced Tests (CRT). The measurement and assessment of knowledge, skills, and abilities of students in the areas of Language Arts, Mathematics, and Science (Utah State Office of Education, 2009).

Utah High School Activities Association (UHSAA). The leadership organization for high school athletics and fine art activities in Utah.

Methodology

In order to address the above research questions, a quantitative investigation was conducted into the relationship between 10th grade students participating and not participating in extracurricular activities and the academic level they attained in their GPA and AYP scores. Subjects of this study included all 10th grade male and female students from five different high schools in the same suburban district.

This study involved data collection using the Nebo School District Student Information System (SIS), school site eligibility lists, and co-curricular classroom lists. The variables selected for this study include the student's grade level (10), extracurricular activity, gender, cumulative grade point average, and Adequate Yearly Progress cut scores ending June 2010.

A non-experimental quantitative research design that employed independent Analysis of Variance was used to assess the relationship between extracurricular participation and non-participation in the academic success of high school 10th graders.

No subjects were interviewed individually rather scores submitted to the district were compiled by the district's Information Technology Department.

Significance of the Study

The research contributes to the literature on academic achievement and participation in extracurricular activities. It does so by examining differences in the academic achievement of students who did and those who did not participate in extracurricular activities.

As noted earlier, the majority of the researched studies used the grade point average as the main factor to determine academic success. However, the inconsistency of GPA scores from school to school does not give an accurate account of academic success. Involving AYP scores solidify a more accurate barometer of academic success.

Many student athletes have been documented as showing academic progress while they were involved in a sport rather than when they were not participating.

Summary

Chapter one is an introduction to the issues surrounding extracurricular participation and the impact on academic performance. The background of the study, statement of the problem, purpose of the study, research questions, and significance of the study are included in this chapter to provide a foundation for this study.

Chapter two will present literature relevant to this study. Chapter three is the methodology and research design employed to answer the research questions. Chapter four will present the results of the study and chapter five will conclude the study with a discussion of the results with respect to the literature on the subject.

CHAPTER TWO

LITERATURE REVIEW

Introduction

It has been suggested that participation in voluntary, school-based extracurricular activities increases school participation and achievement because it facilitates: a) the acquisition of interpersonal skills and positive social norms; and b) membership in pro-social peer groups and stronger emotional and social connections to one's school (Mahoney, Cairns & Farmer, 2003).

In 1904 at the annual meeting of the National Education Association's Division of Superintendents (Terzian, 2000), association President Boynton offered his views concerning extracurricular activities in high school. Boynton expressed his opinion that the public school system's main duty was to cultivate future citizens who would, in turn, respect and perpetuate existing American institutions. In order to accomplish this, all American youth needed to subscribe to a common set of social and political beliefs. Boynton's formation of democracy emphasized cultural unity. Boynton held public education in such high esteem that it was natural for him to conclude that secondary enrollments were desirable in order to mold the civic sensibilities of America's adolescents. He urged his peers to promote and guide student clubs rather than oppose their growth. Such proliferation of the "extracurriculum" would continue to attract greater numbers of adolescents to the high school. He strongly believed that teachers needed to supervise and engage in all student organizations even outside of regular school hours. This attitude coincided with his growing concern of the "leisure problem"

among Americans at the turn of the century. Boynton believed that the supervision of student activities could compensate for this trend: “While their parents are at work or amusing themselves, the children roam the streets and acquire the language and the morals of the streets. His only road to paradise regained is through the gymnasium, the athletic field, and the playground” (Terzian, 2000, p. 6).

Associating extracurricular participation with academic pursuits became an important pinnacle point for students. The purpose of this study was to investigate the relationship between students participating in extracurricular activities and how it affects students’ academic achievement through the Grade Point Average and Adequate Yearly Progress Standards. This chapter will provide an overview of the history of extracurricular activities, measuring national and local academic standards, benefits of athletics and issues threatening athletics.

History of Extracurricular Activities in Schools

Ancient Greece has been recognized as the first formal arena that created the concept of Olympic sporting competition. Robbins and Williams (1969) discovered extracurricular activities during the Platonic, Homeric, and Hellenistic eras. In ancient times students were encouraged to engage in activities which would enhance a strong mind and strengthen the body. Athletics, student government, music, debate, drama, and honor societies flourished in ancient Sparta and Athens (McKown, 1952).

From ancient times to the turn of the nineteenth century education and extracurricular activities catered to the wealthy. Organized athletics did not play a role in public education until after the mid 1800’s in the United States (NFHS, 2007). During

the turn of the twentieth century America began to recognize athletics as an important tool to enhance education and develop character in its participants (NFHS, 2007).

Interscholastic activities received qualified status after the release of the Cardinal Principals of Secondary Education, published in 1918 by the Commission on the Reorganization of Secondary Education (Gholson, 1985; Raubinger, et. al., 1969). The seven principles include; 1) health, 2) command of fundamental processes, 3) worthy home membership, 4) vocation, 5) civic education, 6) worthy of leisure and 7) ethical character. The commission implemented these principles because of the increasing enrollment in secondary schools and in creating a standard for a student's education and well being.

Gholson (1985) recapped the history of extracurricular activities in the United States by dividing it into three eras. The first era, approximately 1870-1900, was a period labeled a period of rejection. Educational leaders concluded that few benefits could be derived from the school program, which they labeled the "extracurriculum." Era two, approximately 1900-1920, was labeled the period of passive acceptance. Educational leaders concluded that student clubs and organizations were indeed capable of providing learning experiences for young people. Era three, approximately 1920-1956 was described as a period of active acceptance and encouragement. During this era, state and national "parent" organizations provided direction and assistance to the local school club or chapter.

Since the mid nineteen-fifties, the line between school-sponsored and non-sponsored activities, to a large degree, has been fused. The school, however, continues to be the

primary center for social life and socialization among young people. The degree to which the school offers a variety of learning experiences remains a critical issue.

Impact of Extracurricular Activities on Academic Success

In the era of accountability and standardized testing, an added concern has been brought to high school extracurricular activities. Academic expectations have increased for those who desire to participate. Griffith (2004) argued that “there is remarkably little research on the interplay of sports and academic achievement” (p. 1). Research continues to struggle to prove what has been a basic belief surrounding sports, that participation in sports improves such non-cognitive areas of personal growth as self-motivation and may have a positive impact on academics as well.

The primary theoretical concept facing student-athletes is whether or not sports, as an activity, has a positive impact on other endeavors in life, including academics (Coleman, 2006). Researchers have looked for both indirect and direct connections. Indirect connections consist of ways in which sports improve various non-cognitive aspects of an athlete’s personality—self-esteem, motivation—and how that improvement leads to better academic achievement. Direct connections consist of ways in which competition in sports helps student-athletes perform in similar competitive events such as academic tests and courses. In both cases, the problem remains how to build a construct that allows one to envision how impact is felt across the perceived gap between mind and body (Sitkowski, 2008).

James Coleman characterized adolescent culture as distinct from adult culture because of a focus on “cars, dates, sports, popular music, and other matter....unrelated to

school” (Coleman, 2006, p.1). In Coleman’s (2006) research he found adolescents pay little attention to scholastic achievement in relation to a questionnaire and their responses. He asked students, “If you could be remembered here at school for one of the three things below, which one would you want it to be: brilliant student, star athlete or most popular?” (p. 2). Forty percent of boys responded that they would want to be remembered as a star athlete and less than thirty percent wanted to be remembered as a brilliant student. When inquired about the results, Coleman related that in institutional contexts, the group holds down all students to a “level which can be maintained by all” (Coleman p. 3). Coleman also concluded, that if anyone is a “curve-buster,” then other students tend to ridicule or exclude him or her in order to return the curve back to a normal level. So, “in a high school, the norms act to hold down the achievements of those who are above average, so that the school’s demands will be a level easily maintained by the majority” (Coleman, p. 3).

In essence, high school culture, according to Coleman, tends to validate sports achievement and limit academic success. Coleman’s solution to the issue was to provide schools with both interscholastic and intramural competition so that students can come to see academic achievement as comparably representative of the group, as in sports achievement. Thus, the response to the current imbalance between sports and academics in high school is to instrument the “shift in the competitive structure of high schools” that changes the norms of the school, so that academics are valued and even encouraged (Coleman, p. 5). According to Coleman, achievement influences on academic achievement is simple: achievement is what counts, and the competitive structure of the school alone accounts for which type of achievement in sports or academics is valued. If

the competitive structure of the high school is balanced, sports and academic achievement are likely to intermix; if imbalanced, sports achievement may come at the expense of academic achievement (Coleman, 2006).

Another study explored a similar issue related to the structure of thinking in high schools: prejudice against athletes. The study took place in a college context where the perception of “incompatibility between the goals of big-time college athletic programs and the basic values of integrity and academic excellence in higher education” (Baucom & Lantz, 2000, p. 256). Thus, a common stereotype that athletes were seen as “less intelligent than their non-athletic student peers and may harbor prejudices based on their perception that student-athletes receive special benefits due to their status on campus (Baucom & Lantz, p. 265).

Other studies have shown that prejudice against athletes also occurs in Division III schools known for their academic prowess (Baucom & Lantz, 2000), even when student-athletes at these schools are more representative of the student body as a whole. Baucom and Lantz’s study to determine the presence of faculty prejudice against student-athletes found that such prejudice does exist, but that it is often based on faculty misconceptions regarding the nature of the scholarship a student-athlete is on, and whether or not his or her presence at the school is perceived to compromise the academic status of the school as a whole. The result of this finding is that faculty prejudice reinforces the perceived gap between athletics and academics and, once athletes enter the classroom, reinforces the gap, contributing to the negative perception of athletes in the classroom. Faculty prejudice is thus one more aspect of the overall competitive structure of a school, in this

case contributing to the poor performance of student athletes in the classroom (Baucom & Lantz).

Though academic achievement may not be improved through extracurricular participation, there is evidence that participation does not hinder academic achievement. Students who had participated in numerous after-school activities had higher levels of academic achievement than students who participated in one or less activities (Stegman and Stephens, 2002).

Researchers Snyder and Spreitzer (1992) found a positive relationship between participation in athletic and academic achievement, self-esteem, locus of control, and involvement in school activities. The findings also suggested that students who were involved in multiple school activities had more positive social and psychological characteristics than students who participated in fewer or no activities. From the perspective of the participants, they believed that athletic participation “builds character, discipline, self-esteem, and other achievement related qualities and results in deferred gratification” (Snyder & Spreitzer, 1992, p. 520). Holland and Andre (1987) found that students who experienced enhanced exposure while involved in extracurricular activities (e.g., a starter on a team) had higher self-esteem scores than non-starters and non-athletes.

According to Holland and Andre (1987), many factors influenced the development and socialization of American Adolescents including family, peers, schools, and the media. Although family and peers provided the dominant influences, the opportunities and context provided by secondary schools also influenced adolescent development.

Through the offering of extracurricular activities, schools allow or disallow, facilitate or inhibit, the pattern of tangible and intangible rewards provided for participation in activities. In addition, schools influence personality development and socialization.

Holland and Andre (1987) stressed that the value positions pertaining to schools have either an academic or developmental focus. The academic perspective focuses on intellectual competence and stresses that the purpose of the schools was the pursuit of academic excellence and transmission of formal knowledge. From this perspective, extracurricular activities provide a means of relaxation or fun, but are clearly unimportant to the primary purpose of schools. The developmental position stresses that school programs should provide experiences that further the total development of individual students. The developmental position was more equalitarian, stressing that the development of all individuals must be considered in planning a school program. To achieve this goal, non-academic programs could be as important as academic programs in facilitating the development of the individual.

Most American secondary schools exist to serve a diverse population of students. High schools not only serve as an institution that socializes adolescents, but also assist students in accomplishing the developmental tasks of adolescents in constructing a self-governing adult (Holland & Andre, 1987).

Biernat and Klesse (1998) found students who participated in co-curricular activities developed and enhanced other valuable characteristics—i.e., self-esteem, self-confidence, social cooperation, and leadership skills. Another study by Haensly, Lupkouski, and Ellind (1986) found a positive relationship between participation in extracurricular

activities and academic achievement. Furthermore, extracurricular activities provided a setting for the development of positive social characteristics.

The Office of Educational Research & Improvement of the U.S. Department of Education (1986) completed a comprehensive study on co-curricular activity participation and academic achievement. The longitudinal study was sponsored by the Center for Statistics using the “High School and Beyond” data. Assessments of GPA’s were based on high school transcripts. Researchers found a positive relationship between GPA scores and involvement in co-curricular activities. In fact, students who reported participation in at least four of the eleven activities were only one-third as likely, as students not involved in any activities, to have a GPA of 2.0 or less.

Sitkowski (2008) found that there were significant differences in mean GPA scores across various sports. In other words, the specific sport an athlete participated in could provide statically significant differences with respect to GPA compared to other sports. Also found were significant declines post season in GPA scores in some male sports. However, female athletes did not have a significant decline in post season.

Stencil (2005) in his study on the relationship between interscholastic participation and academic achievement found that there was no significant statistical difference in academic achievement of participants and non-participants. However, participants did fare much better in the attendance component than non-participants. This may have been due to the requirement that participants may only participate if they are in school the day of the game.

Benefits of Participation in Extracurricular Activities

In the book *21st Century Skills: Learning for life in our times*, authors Trilling and Fadel (2009) recognize a complex future for students. Diverse skill sets will be required to function in our rapid changing society. Sport psychologists have argued that life skills can be taught in combination with athletic skills in sport contexts (Danish & Nellen, 1997). They can be physical, behavioural, or cognitive, and may be transferable to other life domains (Papacharisis, Goudas, Danish, & Theodorakis, 2005; Holt, Tink, Mandigo & Fox, 2008).

Belonging helps students to identify themselves with an organization or group. Marsh and Kleitman (2003) suggested that sport participation engages the student in identifying with their school and developing a commitment to the values of the community. The academic and non-academics benefits include: academic grades, coursework selection, homework, educational aspirations, number of university applications, subsequent university enrollment and the highest level attained.

In the *Harvard Educational Review*, Marsh and Kleitman (2002) presented persuasive argument of the efficacy of extracurricular activities. They concluded:

Whereas most school activities exacerbate the already substantial gap in academic outcomes between socioeconomically advantaged and disadvantaged students, ESA's (extracurricular school activities) appear to actually reduce this inequality gap. Although the ESA benefits generalize widely, the benefits tend to be larger, certainly not smaller, for more disadvantaged students (p. 508).

Self-concept and self-esteem are critically important in developing the student athlete. Self-concept can be characterized as how an individual perceives himself, while self-esteem refers to the manner in which an individual assesses his self-worth (Harter, 1993). Braddock (1980) found a positive relationship between athletic participation and self-

esteem for adolescent participants. According to Snyder and Spreitzer (1990), status gained from participating in athletics may result in a more positive self-concept. Holland and Andre (1987) also established a positive relationship between sports participation and self-esteem for boys. Repeated successful experiences involving athletics have been found to positively impact self-concept and maturity (Marsh, 1993; Snyder and Spreitzer, 1990).

Another issue is whether or not sports participation among high school students contribute to non-cognitive attributes that support academic achievement, begins with physical activity (Fahlman & Hall, et al., 2006). Many studies have determined that adolescent students today are not physically active enough. Physical inactivity in adolescence “has been shown to be associated with a less healthy lifestyle, worse educational progression, and poor self-perceived health” (Sollerhed & Ejlertsson, et al., 2003, p. 341).

It is believed that inactivity contribute to increased rates of adolescent obesity, and may have other negative effects as well. One study found that “fewer than 2% of girls and 6% of boys” were physically active during any given school day. (Sailis & Conway, et al., 2004, p. 615). These numbers were even lower where little organized extracurricular school structure existed.

Most researchers support maintaining levels of physical education in schools because it contributes to the health of the student. Studies have shown that high blood pressure is more frequent in students aged 8 to 17 today than ten years ago, and that “much of the increase was linked to increases in the children’s weight” (Child Health,

2004, p. 3). High blood pressure in children also means that there is a greater likelihood for them to suffer a stroke or heart attack when older (Child Health, 2004).

As schools continue to work towards successful test-score standards, many of them have cut back on courses such as arts and physical education (Wilkins & Graham, et al., 2003, p. 721). A number of educators argue that spending more time on core subjects and drilling for the test will lead to better test scores. However, Wilkins & Graham, et al. (2003) compared the test scores of schools with the amount of time they allocated to non-core subjects such as physical education, and found that “the relationship between time in core areas and achievement was, for the most part, statistically null” (p. 731). There was also some indication that schools that maintained at least one hour of physical education per day did better on tests.

Another benefit of extracurricular activities is the involvement of students from every facet of life. After-school programs have long had the reputation of counteracting the tendency for adolescents to engage in high-risk behaviors such as alcohol and drug use, and even criminal behavior (NHSAW, 2001). Students who engage in no extracurricular activities such are “57% more likely to have dropped out of school by the time they would have been seniors” (NHSAW, p. 3), and are “27% more likely to have been arrested than those who spend one to four hours per week in extracurricular activities” (NHSAW, p. 3). Over 95% of high school principals believe that extracurricular activities teach valuable lessons to students and promote citizenship behavior (NHSAW, 2001). In defining yardsticks of student success, the American College Testing Service (ACT), found that participation in school activities rather than high grades was the best indicator (NHSAW).

Research perceives extracurricular participation to be a deterrent against social ills. Dawkins (2006) explored the relationship between participation in school-based sports and substance abuse. The author found that for both black and white students, participation in athletics was positively associated with “reduction in cigarette and marijuana use,” while sports served as a prevention against alcohol abuse for black girls (Dawkins, 2006, p. 1).

In order to be convincing, research must explore how participation in sports contributes to positive outcomes in young people, and how sports improve young adults’ achievement motivation and self-esteem (Jacobs & Lanza, et al., 2002). In relation to achievement motivation, it has been found that beliefs of self-competence are critical “mediators of actual achievement in various domains” (Jacobs & Lanza, et al., p. 309). According to attribution and self-efficacy theory, “children perform better and are more motivated to select increasingly challenging tasks when they believe that they have the ability to accomplish a particular task” (Jacobs & Lanza, et al., p. 309). Developing confidence through participation in extracurricular activities

It has been found that children’s competence beliefs decline when they enter middle and then high school, and most students experience some level of a decline in “perceptions of academic self-competence” as they enter junior high school (Jacobs & Lanza, et al., p. 510). Moreover, different competence beliefs are found in different subject areas, with adolescents maintaining positive beliefs about their abilities in English, but losing a sense of competence in math. Some studies show that adolescents, in general, begin to have lower competence beliefs with regard to physical abilities, even though other studies find that positive competence beliefs are maintained by carefully

choosing sports areas where they perceive themselves as competent. The fact that sports offer many more options for a young person to find a good fit than academics suggests a source of continued, positive self-perceptions in sports (Jacobs & Lanza, et al., 2002).

Social psychological research endorses a relationship between extracurricular participation and self-esteem (Miller et al. 2005). Data gathered from the High School and Beyond study, McNeal (1995) found high school extracurricular participants to be significantly less likely than non-participants to drop out of school. Researchers have indicated that participation in extracurricular activities such as athletics minimizes delinquency (Landers & Landers, 1978).

Mahoney, Cairns, and Farmer (2003) suggested that voluntary participation in school-based extracurricular activities increases overall school participation and achievement because it facilitates: a) the acquisition of interpersonal skills and positive social norms; and b) membership in pro-social peer groups and stronger emotional and social connections to one's school. In turn, those assets should increase mental health, school engagement, school achievement, and long term emotional outcomes and should decrease participation in problem behaviors, provided that the behaviors are not endorsed by the peer cultures that emerge in these activities. In line with other studies, clear evidence was found that participation in extracurricular activities during the high school years provided a protective context in terms of involvement in risky behaviors and a successful context in terms of academic performance. Participation in extracurricular activities provided better than expected educational outcomes including high school GPA, college attendance, and college graduation.

Participation in athletics can sometimes be misconstrued as a guaranteed gateway to collegiate sports and ultimately lucrative professional contracts. The National Collegiate Athletic Association (NCAA) undertook a study to determine the number of high school athletic participants actually made the next level of play. Out of the 983,000 student/athletes who played high school football only 56,000 went on to play at the collegiate level. Less than 1% of those high school student/athletes became professional football players (Knox, 2007).

In their most recent survey for the school year 2008-2009, the National Federation of High Schools (NFHS) reported an increase in sports participation for the 20th consecutive year. Over three million girls participated in athletics nationwide, while almost four and a half million boys participated. The girls number increased by 56,825 athletic participants and the boys increased by 50, 547 participants (NFHS, 2009).

Factors Threatening Extracurricular Activities in Schools

School administrators, who depend on taxes, are experiencing unprecedented shortfalls in their budgets. To compensate, some school boards have terminated employees, cut back on transportation, and reduced or eliminated extracurricular programs.

Parrino (2003) states as many school districts that look for ways to reduce expenditures many systems are considering the benefits of eliminating extracurricular activities or rescheduling them throughout the day. As with other options, such cuts have potential drawbacks, especially in terms of morale. Activity programs are an exceptional bargain when matched against school districts' overall budget. The National Federation

of State High School Association has determined through data collected from across the country that activity programs make up only one to three percent of the overall education budget in a school (NFHS, 2010).

Roth (2003) explored the funding crises that schools are facing and their effects on extracurricular activities. The resulting inadequacy in funding has been, to some observers, a primary culprit in deepening the chasm between social groups. The reduction of opportunities because of a lack of adequate funding for education is contrary to the vision held by the proponents of public education, which was to allow youth from families with less means to break the barriers of illiteracy, political passivity, and poverty.

Roth (2003) also discussed one particular idea that school administrators have employed recently to address funding difficulties. Although many recreation and club groups have participated in a “pay to play” program, public schools are now looking at certain educational and sports programs, including extracurricular activities such as football and band as a way to fund activities. The concept has many concerned because of the traditionally vital role extracurricular activities have played in schools. The “pay to play” model will exclude and even discourage many students from participating.

In 1984 a Supreme Court of California case, *Hartzell v Connell*, discussed the history of the free school guarantee in California and its importance to a democratic form of government (Roth, 2003). The court found that it can no longer be denied that extracurricular activities constitute an integral part of public education, and that such activities are essential to the making of good citizens physically, mentally, and morally,

than the study of algebra and Latin. The court held that all educational activities both curricular and extracurricular, by the school district, fall within the free school guarantee (Watkins, 2004).

Other state courts have followed, at least indirectly, and supported the rationale of the Hartzell suit in holding that the place of extracurricular activities in education is not subordinate to classic classroom subject matter. For instance, an Ohio federal court stated that extracurricular activities are, in the best modern thinking, an integral and complementary part of the total school program. In a similar fashion, a New Jersey court found that, even though extracurricular activities commonly occur outside of regular classes, such activities form an integral and vital part of the educational program. In a discussion of the importance of school sports, the Supreme Court of Arizona outlined the evolution of extracurricular activities in the school setting and then made an argument that athletic games promote the proper development of the body (Watkins, 2004).

Other forms of raising monetary funds have been in place in schools such as booster clubs. However, many of these parent-driven clubs were designed to raise money for the extra items but now funds are used for necessities (Parrino, 2003). Instead of purchasing an occasional team meal or team apparel, booster clubs are being asked to purchase equipment and to help subsidize additional coaches.

The Value of the Grade Point Average

The traditional way of measuring academic achievement for high school and college students throughout the United States has been the Grade Point Average. The literature indicates that researchers have accepted the Grade Point Average as a measure of student

achievement (Barden, 2002). The standard in calculating the grade point average is assigned on a four point scale. The points awarded are four for an A, three points for a B, two points for a C, one point for a D, and zero points for an F.

A study that supported the use of grade point average with regard to academic achievement was *The High School and Beyond study*. In the study 18,500 students who participated in activities generally had a higher grade point average than students who did not participate. Dowell (2003) cited numerous studies, all of which attempted to ascertain a difference in Grade Point Average between participants and non-participants of extracurricular activities.

“Grade point average, a linear combination of assigned grades from different courses, is widely known to be an imperfect measure of student achievement” (Lei, Bassiri & Shultz, 2001). As cited by Marzano (2000) Stiggins stated, “schools exist to promote student achievement ... If students achieve, schools are seen as working effectively. Grades are supposed to reflect a student’s level of success in learning the required material” (p. 27).

In the late 18th and early 19th centuries universities began using the letter grade system which is universally used today. In the literature, several common themes and concerns arose about letter grades:

- A grade not only represents what a teacher has determined the student has learned, but it also includes things like homework, effort, participation, attitude and attendance. Therefore, there is a lack of consistency about what the grade actually represents.

- Grades are often used as a threat, which in some way is supposed to motivate students to do better. “...low grades more often cause students to withdraw from learning” (*Grading policies that work against standards...and how to fix them*).
- Naming one valedictorian. This puts student into a highly competitive situation where often the differences between their grades are a fraction of a percentage.
- Grading on a curve forces competition where there are definite winners and losers. Because of this, students may feel anger and animosity and choose not to apply themselves. Their grade most likely does not accurately demonstrate what they know and can do.
- Students may not make good grades but will achieve Adequate Yearly Progress while others may have high grades but do not meet Adequate Yearly Progress.
- Homework often plays a significant role in determining a student’s grade and not necessarily because the skills translated into other assignments, but because they either did or did not do it or do it well.
- The weighting of grades plays a dominant role in a student’s Grade Point Average.

(The Principals’ Partnership-Union Pacific Foundation, 2010)

Grade Point Averages have been used extensively to accommodate criteria for participation in athletics. The majority of state interscholastic associations have determined that a 2.0 grade point average on a 4.0 scale to be adequate as a bare minimum standard for participation in sports.

The Utah High School Activities Association (UHSAA) requires that a student athlete must have at least 2.0 GPA in the term prior to participation and during the activity to remain eligible (UHSAA, 2010). Its member schools may have higher requirements but are not allowed to go below the minimum guidelines. Individual schools may also have requirements on attendance that vary with each school.

No Child Left Behind and Adequate Yearly Progress

Adequate Yearly Progress (AYP) is the measure used by which schools are held accountable for student academic performance under Title I of the No Child Left Behind Act of 2001 (Education Week, 2004). NCLB is not a new concept, it was introduced into federal law in 1994 under the reauthorization of the Elementary and Secondary Education Act.

Adequate Yearly Progress is used to determine if schools are successful in educating their students. NCLB requires states to use a single accountability system to determine whether all students, as well as individual subgroups are making progress toward meeting state academic standards (Department of Education, 2001). It is expected that all students in public schools will meet proficient standards by the year 2014.

According to the law, states have the flexibility to define this yearly progress, but it must include the following elements:

- State tests must be the primary factor in the state's measure of AYP, but the use of at least one other academic indicator of school performance is required, and additional indicators are permitted;

- For secondary schools, the other academic indicator must be the high school graduation rate;
- States must set a baseline for measuring students' performance toward the goal of 100 percent proficiency by the spring of 2014. The baseline is based on data from the 2001-2002 school year;
- States must also create benchmarks for how students will progress each year to meet the goal of 100 percent proficiency by the spring of 2014;
- A state's AYP must include separate measures for both reading/languages arts and math. In addition, the measures must apply not only to students' on average, but also to students in four "subgroups": economically disadvantaged students, students from major racial and ethnic groups, students with disabilities, and students with limited English proficiency.
- To make AYP, at least 95 percent of students in each of the four subgroups, as well as 95 percent of students in a school as a whole, must take the state tests, and each subgroup of students must meet or exceed the measureable annual objectives set by the state for each year (Education Week, 2004).

Utilizing terms like school failure or academic success continues to be problematic because both concepts are controversial (Morian, et. al., 2006). The relationship between the two have conjured up numerous criticisms and promote different approaches to address the issue. An assessment of school failure has strong negative connotations and there are problems in drawing a separating line between failure and success (Marchesi & Hernandez, 2003).

Summary

This chapter provided an overview of the history of athletics in schools, the impact of extracurricular on academic success, the benefits of participation in extracurricular activities, factors threatening extracurricular activities in schools, the value of the grade point average, and No Child Left Behind and Adequate Yearly Progress.

The positive academic impact of participation in extracurricular activities by students is conveyed in the research presented in this chapter. The benefits of extracurricular participation on cognitive development, social expectations, and personal health have been focal points for schools to continue offering non-curricular opportunities for students. However, a basic reality of school leaders is how to effectively utilize public funds in addressing the academic needs of each student.

CHAPTER THREE

METHODOLOGY

The purpose of this study was to determine whether participating in school-sponsored extracurricular activities have an impact on the academic performance of high school 10th grade extracurricular participants. In order to determine whether participating in extracurricular events have an impact on the student's academic performance, the researcher collected existing data during the participants' 10th grade year, for each extracurricular participant and non-participant. The scores from Adequate Yearly Progress Criterion Reference Test Scaled scores were then compared to the grade point averages at the end of the school year.

“The purpose of Utah's Criterion-Referenced Tests (CRT) is to measure and assess the knowledge, skills, and abilities of students in the areas of English Language Arts, Mathematics, and Science, as outlined in the Utah Core Curriculum” (USOE, 2009, p. 1). The students' scores are categorized into four proficiency levels: Substantial, Sufficient, Partial, and Minimal. English Language Arts is grade specific and Math and Science are course specific (USOE, 2009).

In this study, participants and non-participants were treated as independent variables, and the subject's cumulative average daily attendance, cumulative grade point average, and Adequate Yearly Progress CRT Scaled scores were treated as the dependent variables. With the available data, the comparisons were analyzed and then the independent variables were analyzed.

The remainder of this chapter presents the research methods and theoretical framework that was used in order to determine the significant difference between individual cumulative average daily attendance, UCRT Scaled scores and cumulative grade point averages of students that participate in school-sponsored activities. This chapter includes a description of the research design that was used, research questions, and the hypotheses that were addressed, the target population of this study, and the statistical analysis that was implemented in order to address the objectives of this study.

Design

A non-experimental quantitative research design that employed ANOVA was appropriate for this study since the researcher determined whether there was a significant difference among cumulative average daily attendance, Utah CRT scaled scores and cumulative GPA scores (dependent variables) of students that participate in extracurricular activities and those who did not participate in extracurricular activities (independent variables). The researcher was able to determine whether an independent variable had an impact on a dependent variable by using a quantitative research design that allows one to compare the results numerically and quantitatively (Cozby, 2001).

The variables were comprised of several different school sponsored extracurricular activities. These extracurricular activities included for females: volleyball, cheerleading, soccer, drill team, cross country, tennis, golf, swimming & diving, basketball, track & field, and softball; and for males: football, cross country, golf, swimming, basketball, wrestling, tennis, soccer, track & field and baseball. The dependent variable of this study was comprised of several different scores that make up the Utah Criterion Reference Test

and grade point average, namely; math, English and science. Cumulative average daily attendance, cumulative grade point averages and the Utah Criterion Reference Test scaled scores are posted at the end of the school year.

This study involved data collection using the Nebo School District Student Information System (SIS), school site eligibility lists, and co-curricular classroom lists. The variables selected for this study include the student's grade level, extracurricular activity, gender, ethnicity, cumulative average daily attendance, cumulative grade point average, and the Utah Criterion Reference Test scaled scores ending June 2010.

Directional Alternative Hypothesis

Tenth grade students who participate in extracurricular activities in the five designated high schools will have higher academic achievement scores (GPA and UCRT) than students who do not participate in extracurricular activities.

Research Questions

The research questions guiding this study are as follows:

1. Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative average daily attendance?
2. Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average?

3. Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their Utah Criterion Referenced Test scaled scores in math, English, and science?
4. Is there a significant difference between the cumulative grade point average and the Utah Criterion Referenced Test scaled scores in math, English, and science of high school 10th grade extracurricular participants and non-participants?

Null Hypotheses

To determine statistical probability within a quantitative study, null and alternative hypotheses that correspond with the research questions and objectives of the study were needed. The null and alternative hypotheses of this study were determined to be the following:

1. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative average daily attendance.
2. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average.
3. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and

non-participants as measured by their Utah Criterion Reference Test scaled scores in math, English, and science.

4. There is no significant difference between the cumulative grade point average and the Utah Criterion Reference Test scaled scores in math, English, and science of high school 10th grade extracurricular participants and non-participants.

Population and Sampling

The target population for this study included male and female high school 10th grade students that participated in high school sponsored extracurricular activities. These extracurricular and co-curricular activities included: baseball, basketball, cheerleading, cross country, drill team, football, golf, soccer, softball, swimming, tennis, track & field, volleyball, and wrestling. The target population consisted of students that vary by ethnicity and gender. The sample that was taken for this target population was from a suburban school district consisting of five high schools located in central Utah.

The final data set selected for this investigation consists of the following data for 10th grade students enrolled during the 2009-2010 school year:

- Extracurricular activity
- Gender
- Free and reduced lunch
- Cumulative average daily attendance
- Cumulative grade point average

- Adequate Yearly Progress Criterion Reference Test scaled scores

A convenience sampling was used for this study where the grades of students that participated in school-sponsored events were obtained. This information was gathered by using the Utah High School Activities Association (UHSAA) database of student/athletes that participated in the aforementioned high schools. Each year individual high school Athletic Directors are required to submit a copy of participants in each sport to the UHSAA for eligibility purposes. The names of each student were then submitted to the district office and the Information Technology department created a database with the students' gender, free and reduced lunch, cumulative average daily attendance, cumulative GPA scores, and AYP Criterion Reference Test Scaled scores.

Instrument

The participants' cumulative average daily attendance, CRT Scaled scores, and cumulative GPA scores were collected when the school year ended. The scores were transferred into the SPSS Version 19 for Windows software for analysis. The demographics were listed and named: 1-extracurricular activity, 2-gender, 3-socioeconomic status, 4-attendance rate, 5-grade point average, and 6-Criterion Reference Test scaled score.

Validity refers to whether a test truly assesses what it claims to (Gall, Gall, & Borg, 2007) and that the construct being assessed is appropriate, accurately represented, and meaningful (Rathvon, 2004). All items on the 2009-2010 CRT Scaling and Equating document were evaluated for parameter drift. Items were identified as exhibiting significant parameter drift if their associated d-square values exceeded the 95th or 99th

percentile of an empirically derived sampling distribution of this drift index. If one or more anchor items exhibited significant parameter drift, the item with the largest d-square value was excluded from the equating solution and equating constants were re-estimated (NCIEA, 2010).

Reliability refers to the consistency and precision of a measurement instrument (Thorndike, Cunningham, Thorndike & Hagen, 1991). In educational measurement, reliability is often discussed in how consistently the items of a test measure the content that the test is designed to measure. All reliability estimates in the 2009-2010 CRT Scaling and Equating document are .90 or above, indicating a high level of homogeneity among the items (NCIEA, 2009).

Data Collection

The researcher worked with the Utah High School Activities Association (UHSAA) to acquire the names and sports that each student participated in for the year 2009 to 2010. Each year school athletic directors are required to submit student eligibility rosters to the UHSAA prior to their participation in the extracurricular event. The participants' information was entered into the district database to obtain gender, socioeconomic status, attendance rate, cumulative grade point average and Criterion Reference Test scaled scores.

Data Analysis

All statistical analyses were conducted using IBM Statistical Package for the Social Services (SPSS) software program, Version 19 for Windows. Analysis of Variance and Pearson Correlation was conducted to evaluate the hypothesis for the research questions.

Significance of the Study

Studies have researched information to the relationship of participation in extracurricular activities to the grade point average score. However, this researcher found no research information that related to extracurricular participation and the Adequate Yearly Progress Criterion Referenced Test Scaled scores. This study examines the factors involved that affect the academic performance of those students who in participate in extracurricular activities.

Summary

The research methods and design were presented in this chapter. Described in this chapter were the directional alternative hypothesis, research questions, null hypotheses, population and sampling, instrument used, data collection, and analysis. A non-experimental quantitative research design that utilized existing data to determine the impact of participation or non-participation in extracurricular activities based on academic performance.

CHAPTER FOUR

RESULTS

Introduction

The purpose of this study was to discover if a relationship existed between a students' participation in extracurricular activities and the academic achievement of students with a focus on the Utah Criterion Reference Test scaled scores. The data gathered were from 10th grade students from five high schools in one school district in suburban Utah.

Students from the 3rd grade through the 11th grade are tested with the Utah Criterion Reference Test. Each test contains a series of fifty-five to seventy questions. The questions are then analyzed through a validity and reliability test to ascertain if it tests what it says it is suppose to test and check the consistency of the measurement instrument (Thorndike et. al., 1991). The raw scores from the UCRT are then given a weighted value with a general scale from 130 to 199, which become the scaled scores listed in the study (NCIEA, 2009).

The students, in this study, were chosen because they are required to enroll in math, English, and science their tenth grade year. These students are also required to take the UCRT. The balance of academic testing, high school enrollment, and participation in extracurricular activities provided a favorable group to study.

Participating in extracurricular activities is a vital part of the educational process for many youth in our schools. Determining the effect of extracurricular participation on

academic achievement can provide crucial information for all stakeholders involved. The following null hypotheses were tested:

1. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative average daily attendance.
2. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average.
3. There is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their Utah Criterion Reference Test scaled scores in math, English, and science.
4. There is no significant difference between the cumulative grade point average and the Utah Criterion Reference Test scaled scores in math, English, and science of high school 10th grade extracurricular participants and non-participants.

The data was gathered and analyzed by the researcher through IBM's SPSS version 19 software. In gathering the data, the subjects were identified as extracurricular participants and non-participants. If more than one of the scores (GPA, math scaled score, science scaled score, English scaled score) was missing, the extracurricular participant or non-participant was eliminated from the data. Many of the extracurricular participants were involved in multiple activities, however, for the purposes of this study

the multi-activity participants' data was analyzed only once. A summary of the key findings will be provided in this chapter.

Findings

To determine the difference between the average daily attendance of those who participated in extracurricular activities and those who did not participate in extracurricular activities, a comparison between and within groups was employed. A total of 1761 tenth grade students in a suburban school district were used for this study.

Table 4.1 One-way Analysis of Variance—Attendance for Participants and Non-participants

Groups	Sum of Squares	Degrees of Freedom	Mean Square	F
Between	.453	1	.453	87.710***
Within	9.368	1759	.005	
Total	9.542	1760		

*p<.05, **p<.01, ***P<.001

The results of the One-way Analysis of Variance (ANOVA) demonstrated a high statistical significant effect on the cumulative average daily attendance of those who participated in extracurricular activities compared to those who did not participate in extracurricular activities. Given this result, the null hypotheses stating that there is no significant difference between extracurricular participation and the educational

performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative average daily attendance is rejected (see table 4.1).

Extracurricular participants had a significantly higher attendance percentage than those who did not participate in extracurricular activities. Non-participants had a mean cumulative average daily attendance of 91.84% while those who participated in extracurricular activities had a mean attendance average of 95.16% (see table 4.2).

Table 4.2 Descriptive Statistics—Attendance for Participants and Non-Participants

Groups	<i>N</i>	Mean	SD
Non-Participants	1107	.9184	.08502
Participants	654	.9516	.04093

Table 4.3 Descriptive Statistics—Attendance for Male and Female Participants and Non-participants

	Groups					
	<i>Participants</i>			<i>Non-Participants</i>		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Female	285	.9507	.04099	576	.9173	.08551
Male	369	.9523	.04092	531	.9196	.08455

Presented in Table 4.3 are the number of female and male participants and non-participants, their cumulative average daily attendance by mean score, and the standard deviation between each group. The tenth grade male participants had a higher attendance rate at 95.23% in comparison to male non-participants at 91.96% with a 3.27% mean difference. Female 10th grade participants also had a higher attendance rate of 95.07% versus female non-participants with 91.73% with a 3.34% mean difference.

Table 4.4 One-way Analysis of Variance—Grade Point Average for Participants and Non-participants

Groups	Sum of Squares	Degrees of Freedom	Mean Square	F
Between	136.157	1	136.157	232.572***
Within	1029.791	1759	.585	
Total	1165.948	1760		

*p<.05, **p<.01, ***P<.001

ANOVA displayed a highly significant difference on the cumulative grade point average at .000 for students who participated in extracurricular activities in comparison to students who did not participate in extracurricular activities. The null hypotheses stating that there is no significant difference between participants and non-participants by their cumulative grade point average in math, science, and English is rejected (see table 4.4)

Table 4.5 Descriptive Statistics—Grade Point Average for Participants and Non-participants

Groups	Mean GPA	GPA Range	Mean Difference
Non-Participants	2.95	0.14-4.00	
Participants	3.53	1.31-4.00	.58

Tenth grade high school students who participated in extracurricular activities demonstrated a significantly higher mean cumulative grade point average in comparison to those tenth students who did not participate in extracurricular activities. The grade point average of non-participants displayed a low range beginning at 0.14 to 4.00 while those who participated in extracurricular activities began the range at 1.31 and ending at a 4.00 grade point average. The mean cumulative grade point average for students who participated in extracurricular activities was 3.53, while the mean cumulative grade point average for non-participants was 2.95. The mean difference of .58 was significant at a level of $p = .000$ (see table 4.5). Thus, the null hypotheses stating that there is no significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average in math, English, and science is rejected. The following two tables show the descriptive statistics results pertaining to the grade point average of male and female participants and non-participants.

Table 4.6 Descriptive Statistics—Grade Point Average for female Participants and Non-participants

Groups	Mean GPA	GPA Range	Mean Difference
Non-Participants	3.07	0.30-4.00	.54
Participants	3.61	1.89-4.00	

When comparing females, extracurricular participants had a significantly higher mean cumulative grade point average when compared to female non-participants with a mean difference of .54 (see table 4.6). The cumulative grade point average range for female non-participants was from the minimum range of 0.30 to a maximum range of 4.00 on a 4.00 scale. The female extracurricular participants' cumulative grade point average was from a minimum range of 1.89 to a maximum range of 4.00 on a 4.00 range scale.

Table 4.7 Descriptive Statistics—Grade Point Average for male Participants and Non-participants

Groups	Mean GPA	GPA Range	Mean Difference
Non-Participants	2.67	0.14-4.00	.70
Participants	3.37	1.31-4.00	

The mean difference grade point average of the male extracurricular participants in comparison with non-participants was .70 (see table 4.7) showing a larger gap between male extracurricular participants and non-participants grade point average than the female extracurricular participants and non-participants cumulative grade point average. A significant difference was found between the two groups when cumulative grade point average scores were used.

The cumulative grade point average range for male non-participants was from the minimum range of 0.14 to a maximum range of 4.00 on a 4.00 scale. The male extracurricular participants' cumulative grade point average was from a minimum range of 1.31 to a maximum range of 4.00 on a 4.00 range scale.

Table 4.8 One-way Analysis of Variance—Math, Science and English Scaled Scores for Participants and Non-participants

Groups	Sum of Squares	Degrees of Freedom	Mean Square	F
Between				
Math SS	8073.913	1	8073.913	36.942***
Science SS	5038.626	1	5038.626	46.983***
English SS	8973.495	1	8973.495	77.993***
Within				
Math SS	347937.895	1592	218.554	
Science SS	183707.998	1713	107.243	
English SS	199046.175	1730	115.056	
Total				
Math SS	356011.807	1593		
Science SS	188746.624	1714		
English SS	208019.948	1731		

*p<.05, **p<.01, ***P<.001

Presented in Table 4.8 is the result of the One-way ANOVA for the math, science, and English scaled scores. Extracurricular participants demonstrated a significant difference in the math, English, and science scaled scores when compared to those who did not participate in extracurricular activities.

Table 4.9 Descriptive Statistics—Scaled Scores for Participants and Non-participants

	Groups					
	<i>Participants</i>			<i>Non-Participants</i>		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Math SS	589	160.67	12.91	1005	156.01	15.77
English SS	651	172.46	8.89	1081	167.76	11.69
Science SS	646	164.76	10.27	1069	161.22	10.40

In Table 4.9 the descriptive statistics are presented for the scaled scores of extracurricular participants and non-participants. Extracurricular participants scored higher in math with a mean difference of 4.66, in English with a mean difference of 4.70, and in science with a mean difference of 3.54, than their non-participant counterparts. The most significant difference existed in the scaled scores of extracurricular participants in English at 172.46 in comparison to those who did not participate in extracurricular activities at 167.76 on the scaled score. The following two tables display the scaled scores by male and female grouping.

Table 4.10 Descriptive Statistics—Scaled Scores by Male Group

	Male Group					
	<i>Participants</i>			<i>Non-Participants</i>		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Math SS	330	161.02	12.88	477	154.75	18.47
English SS	366	171.68	9.11	519	165.96	11.81
Science SS	364	165.86	8.39	512	161.50	10.90

Male 10th grade students who participated in extracurricular activities scored higher than male non-participants in math, English, and science. The mean scaled scores for the male participants were 161.02 in math, 171.68 in English, and 165.86 in science. The mean difference between the participants and non-participants scores was 6.27 in math, 5.72 in English, and 4.36 in science (see table 4.10).

Table 4.11 Descriptive Statistics—Scaled Scores by Female Group

	Female Group					
	<i>Participants</i>			<i>Non-Participants</i>		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Math SS	259	160.22	12.95	528	157.15	12.76
English SS	285	173.46	8.51	562	169.41	11.33
Science SS	282	163.34	12.15	557	160.96	9.92

Female 10th grade students, who participated in extracurricular activities, also scored higher than the female non-participants in math, English, and science. The mean scaled scores for female participants were 160.22 in math, 173.46 in English, and 163.34 in science. The mean difference between the participants and non-participants scores was 3.07 in math, 4.05 in English, and 2.38 in science (see table 4.11).

The purpose of this research question was to compare a standardized measurement (UCRT) against the traditional cumulative grade point average to determine academic viability for extracurricular participants and non-participants.

Table 4.12 Pearson Correlation (1-tailed)

Groups	N	Pearson Correlation	Significance (1-tailed)
GPA	1761	1	
Math SS	1594	.414	.000
Science SS	1715	.422	.000
English SS	1732	.546	.000

Correlation is significant at the 0.01 level (1-tailed)

To investigate the answer to this question, the Pearson Correlation (1-tailed) was conducted with the variables of GPA, math scaled scores, science scaled scores, and English scaled scores. A significant correlation was discovered between the scaled scores and the cumulative grade point average. The null hypothesis was affirmed, finding a moderately strong correlation was found between the cumulative grade point average and the scaled scores (see table 4.12).

Summary

For the Analyses of Variance it was found that there was a significant difference between extracurricular participants and non-participants in attendance, cumulative grade point average, and the Utah Criterion Reference Test in math, science, and English. This information substantiated the research that students who participate in extracurricular activities perform better academically than those who do not.

The population of the males outnumbered the female population in this study. The total number of males was 900 subjects with 861 female subjects. Out of the 900 male subjects 369 were participants, whereas 531 males were non-participants. Concerning the female subjects, 285 were extracurricular participants and 576 were non-participants. In each of the groupings participants in extracurricular activities outperformed students who did not participate in extracurricular activities.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

Introduction

This research study was conducted in the state of Utah in a suburban school district which contains five traditional education high schools. The data acquired pertained to 10th grade students enrolled in the aforementioned high schools. This chapter will highlight the discussion points, conclusions, suggestions for future research, implications and recommendations.

Discussion

This purpose of this study was to discover if a relationship existed between extracurricular participation and academic achievement. Schools are mandated to raise the standard in academic performance or risk the title of failing school or even the loss of funding. The pressure to meet the requirements of the No Child Left Behind Act takes a toll on educators and schools, but are passed on to the individual student.

Even with the demands and focus to succeed academically, the National Federation of High Schools is consistently reporting substantial increases in student participation in extracurricular activities (NFHS, 2010). However, Aries et al. (2004) found that extracurricular participants are struggling with the time demands in completing academic requirements. The authors found that the pressure to perform on the field caused participants to perform below their abilities academically (Aries et al., 2004).

Some research found a weak positive relationship between academic achievement and athletic participation (Adler & Adler, 1985). This relationship is attributed to the lack of preparation for, and interest in, academics by athletes (Adler & Adler; Maloney & McCormick, 1993). Sinha (2010) found no significant difference between GPA scores of extracurricular participant and non-participants in a middle level school. However, the author did find that participants scored higher on standardized testing in comparison to non-participants. As school leaders continue to struggle with increasing learning, many may find that “extracurricular activities may be a solution to our educational problems, rather than distraction from academics” (Sinha, 2010, p. 63).

The findings, of this study, were consistent with research which link higher academic achievement for those who participate in extracurricular activities in comparison to those who do not. Mahoney, Cairns, and Farmer (2003) suggested that extracurricular activities can have a positive impact on academic achievement, educational status, and social development among students. This link is an important aspect to understanding the essential goal of educating students. Din (2005) indicated that extracurricular participation academically benefited both males and females. The author found that high school boys performed better in school because of their increased desire to attend college (Din). It was also found that girls, who participated in extracurricular activities, performed better on achievement tests than females who did not participate in extracurricular activities (Din). Spady (1970) concluded that extracurricular activities are not a diversion, but rather an extension of a good educational program.

Conclusions

The analysis of data for the year 2009-2010 of 10th grade students demonstrate that students who participated in extracurricular activities consistently performed better in attendance, cumulative grade point average, and in the Utah Criterion Reference Test, than students who did not participate in extracurricular activities. The one-way Analysis of Variance was conducted, on the data, for questions one through three. Regarding question four, the Pearson Correlation displayed a strong relationship between the academic performance of students between their cumulative grade point average and Utah Criterion Reference Test scaled scores.

Research question 1 asked: Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative average daily attendance?

The average daily attendance was significantly higher for those who participated in extracurricular activities than those who did not participate in extracurricular activities. Both male and female participants had significantly higher attendance rates than non-participants.

The result of this research question was not surprising, due to the higher expectation that extracurricular participants are generally required to attend school the day of competition or risk not playing for the day missed. Also, extracurricular participants are normally scheduled to attend practices before or after school on a daily basis. This regiment more than likely promotes higher attendance rates than those who do not

participate in extracurricular activities. Another reason for the higher attendance percentages may be due to a general monitoring of extracurricular participants by their respective coaches in school and in classrooms.

Research question 2 asked: Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their cumulative grade point average?

A significant difference exists between extracurricular participants and non-participants in the cumulative grade point average scores. Non-participants (2.95) had a .58 difference from participants (3.53). Female non-participants (3.07) had a .54 difference from females that participated in extracurricular activities (3.61). The largest gap existed between male participants (3.37) than male non-participants (2.67) at a difference of .70 on a 4.0 scale. This statistic verifies the study of Silliker and Quirk (1997) whose research revealed the academic success of female student-athletes in comparison to their male counterparts.

GPA Gap

Research has consistently demonstrated higher grade point averages for females in comparison to males (Kafir, 2007). The interesting statistic was to observe the gap that existed between male extracurricular participants and male non-participants. The gap that exists is .70 on a 4.0 scale.

Under the Utah High School Activities Association rules and by-laws, student-athletes are required to carry a 2.0 grade point average with no more than one failing grade before and during the competition season (UHSAA, 2011). The raw data revealed

that out of the 654 extracurricular participants, only 11 participants did not meet the 2.0 cumulative grade point average during the length of the full year. On the other hand, out of the 1,107 non-participants, 191 were at a 1.99 cumulative grade point average and below.

Research question 3 asked: Is there a significant difference between extracurricular participation and the educational performance of high school 10th grade extracurricular participants and non-participants as measured by their Utah Criterion Reference Test scaled scores in math, English, and science?

Consistent with the gaps between extracurricular participants and non-participants in the grade point average, the results of the Utah Criterion Reference Test also displayed gaps between participants and non-participants. Again, the gaps were significant for male participants in comparison to male non-participants in math (6.27), English (5.72), and science (4.36). These statistics compared to the female UCRT Scaled Score gaps, math (3.07), English (4.05), and science (2.38), showed a greater gap for the male counterparts.

UCRT Scaled Scores by Gender

An interesting note in this data was that the mean UCRT scaled score of male participants was slightly higher in math and science than the female participants in the same subject areas. Whereas, the female scores in English were slightly higher than the male extracurricular participants. Female non-participants, on the other hand, scored higher in math and English in comparison to male non-participants. However, male non-participants scored higher in the science scaled scores than the female non-participants.

Although the research questions did not approach the comparison of gender as a topic, the results were interesting when comparing academic achievement of males and females.

Another interesting note is that the UCRT is not a requirement for participation in extracurricular activities, nor is it a requirement for graduation. Yet, the scores displayed a significant difference for those who participated in extracurricular activities in comparison to those who did not participate.

Research question 4 asked: Is there a significant difference between the cumulative grade point average and the Utah Criterion Referenced scaled scores in math, English, and science of high school 10th grade extracurricular participants and non-participants?

This question was designed to discover if there was a relationship between the grade point average and the Utah Criterion Reference Scaled scores. Under the No Child Left Behind Act each state has been federally mandated to be in compliance with Adequate Yearly Progress testing. The state of Utah has developed the UCRT which has passed through the validity and reliability tests to be administered to the students of Utah. The UCRT scaled score is a substantial measure when determining a school as passing or failing.

Correlation of Scaled Scores and GPA

The Pearson Correlation 1-tailed test was administered and an unexpected result, which displayed a moderately strong relationship between the grade point average and the Utah Criterion Reference Test.

The grade point average has been perceived as inconsistent between schools and teachers on any grade level. Teachers are granted latitude in developing grading scales and placing a value, of each assignment, on that scale. Since each teacher is given that opportunity, it is assumed that conflicting results would occur between teachers. The standardized Utah Criterion Reference Test, on the other hand, is consistent with calculated precautions when administering the test. The result of this research question provides evidence that the grade point average and the UCRT have a moderately strong relationship among 10th students in this school district.

Limitations

The findings of this study were limited by a number of factors. The first limitation was that the participants in the study came from five high schools in one school district in Utah. As a result, the study may be limited to schools with similar demographics. Further, the study was limited to 10th grade students in the five high schools in the one school district. Also the extracurricular activities were pre-determined and limited to those under the auspices of the Utah High School Athletic Association.

In terms of analytic limitations, this study focused on attendance, grade point average, and the Utah Criterion Reference Test scores.

Suggestions for Further Research

As a result of this study, parents, administrators, and governing boards must consider the value of extracurricular programs to social and academic pursuits when facing monetary constraints. In-depth research into the relationship between activity and academics will benefit schools and communities. Future research should include:

1. A replication of this study for non-athletic activities.
2. Studying a larger sample size (multiple districts and multiple states) on the relationship between athletic participation and academic achievement.
3. A study into an ethnically diverse community to observe if a significant relationship exists between extracurricular participation and academic success in relation to standardized testing.
4. A look into the background of families with socioeconomic hardships and the deterrents or influences to whether their child participates in extracurricular activities or not.
5. A longitudinal study into the long term effects of athletic participation and the relationship to academic success.
6. Understanding if student athletes with higher or lower academic scores are attracted to particular extracurricular activities.
7. Student participation in intramural activities and the relationship and effect on academic performance.
8. Data regarding attendance, student discipline and dropout rates of students who participate and do not participate in extracurricular activities.

Implications and Recommendations

The purpose of this study was to investigate the effects of participation in extracurricular activities on academic success specifically relating to attendance, cumulative grade point average, and the Utah Criterion Reference Test.

The implications of this study are important to students, parents, teachers, and administrators concerning extracurricular participation and academic achievement. Government laws and policies are demanding higher accountability of the school system in educating children. In meeting the academic demands, administrators are also struggling with budgetary constraints that are affecting academic programs. Often extracurricular programs are the first to be cut because some may not fit the core curriculum programs of schools. This study substantiates the strong relationship between extracurricular participation and academic achievement.

Another implication may lie in the negative views of the term student-athletes. According to Baucom & Lantz (2000), a perceived incompatibility exists between academic achievement and the goal of athletic programs. Quite simply the majority of extracurricular coaches tend to be trained as educators. The National Federation of High Schools, the National Interscholastic Athletic Administrators, state athletic associations, and many other organizations that support extracurricular activities continue to teach and train coaches on the ideology of “student first, athlete second” (NFHS, 2011).

In light of this study, the following are recommended:

1. The results of this study should be made available to parents, teachers, and administrators.
2. Schools should re-evaluate the role of extracurricular activities as a tool to connect students to the school.
3. A plan should be initiated to expand extracurricular activities that are cost effective for the school.
4. This study was limited to a small population, therefore, additional research is required to include diverse populations and environments.
5. Research should be initiated to consider ethnically diverse populations in relation to academic achievement, dropout rates, discipline, and opportunities to participate in extracurricular activities.
6. Administrators should consider available research before deciding to reduce or eliminate extracurricular activities and evaluate the return on investment in student learning.

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