THE RELATIONSHIP OF SIZE, WEALTH, AND DISTRICT TYPE TO THE ATHLETIC SUCCESS OF GEORGIA SCHOOLS

by

TIMOTHY LEE VICK

C. JOHN TARTER, COMMITTEE CHAIR
JOHN DANTZLER
FOSTER WATKINS
BEVERLY DYER
DAVID DAGLEY

A DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the Department of Educational Leadership,
Policy, and Technology Studies
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2013

ABSTRACT

This study investigated the relationship of size, wealth, and district type to athletic success and found that wealth and size were important predictors of athletic performance. The relationship of these variables to performance was anticipated in a theory of differentiation propounded by Blau and Schoenerr (1971). The authors theorized that increases in organizational size would be accompanied by increases in specialization, that is, the unique skills possessed by organizational incumbents and thus foster success.

Data describing school size, wealth, district type, number of coaches, and athletic success were gathered. Success was defined as the points garnered in the Georgia Athletic Directors Association's Regions Directors Cup race. The independent variables were measured as student enrollment for size, the percentage of Free and Reduced Lunch for wealth, and proximity to urban centers for district type. Because schools in Georgia are classified by size, the hypothesis that wealth, size, and district type would predict athletic success was tested in each of the five divisions. Size and wealth individually were positively correlated with athletic performance in all divisions. District type had no effect on athletic performance. All relationships were tested in five divisions comprising 376 secondary public schools, a sample of virtually every public high school in Georgia. When athletic performance was regressed on the independent variables, wealth made a significant contribution in each division. When controlling for wealth and district type, size made a significant contribution in the smallest school division and the largest school division. When the coaches were added to the set of independent variables, the number of coaches made a significant contribution to athletic success in all the divisions. Although

not hypothesized, size and wealth made contributions to academic performance that mirrored their relationship in athletic performances. Theoretically, the study confirms the importance of wealth and size. However, if the idea of different divisions is to level the playing field in competitive athletics then this finding presents some practical challenges to sports officials.

ACKNOWLEDGMENTS

The journey has come to an end and my dream now realized. My deepest desire is to express my gratitude to those who have enabled me to make this journey. The journey of my dreams could not have begun had family friend, Malinda Martin, not introduced me to the members of the Gwinnett County Cohort and their subsequent acceptance of me as if I were one of them. The efforts of The University of Alabama to send professors to Gwinnett County, Georgia, allowed individuals like me to take required courses during convenient days and hours outside of our regular work hours. I could never have begun this journey had that long distance learning program not been in place. For that I am thankful.

I have attended several universities but not one has been more helpful, more caring, and more accommodating to me in reaching my academic goals than The University of Alabama. The personnel working in The University of Alabama Gadsden Center are as friendly and supportive as any you would ever meet. I am particularly grateful for the help Roger Woodard has given me along the way. He seemed to always have a solution to every problem that I encountered. I am also grateful that Sherri Edwards was willing to be my typist and proofreader. I found the professors at The University of Alabama Gadsden Center to be most intriguing and certainly ones that challenged my thinking. So, to Dr. Tarter, Dr. Dagley, Dr. Rudder, Dr. Dantzler, Dr. Newton, Dr. Godfrey, Dr. Rice, and Dr. Bauch, I say thank you for insisting that I give you my very best.

My gratitude also extends to family members who have encouraged me along the way. I will never know how to adequately express my appreciation to my wife, Kim, who has persevered along with me on this journey. During times of disappointment, she found just the right words to reassure me and her joy was as great as mine when the title of ED.D. was conferred. I also wish to thank each of my three children, Craig, Kelsey, and Caroline, for the encouragement they have given me throughout this process. I am most grateful to them for being aware of the times I was on the road, to and from Gadsden, and choosing those times to call so as to keep me awake on those long drives.

I could not have continued on this journey of my dreams without the aid and encouragement of those associated with Greater Atlanta Christian School. I am indebted to the GAC administration and board who had the wisdom and foresight to establish a plan to encourage educators to continue their pursuit of higher education. Without their assistance, my dreams would have been dashed along the way. To all my friends and fellow workers at GAC, I say thank you for all the times you encouraged me. I am especially grateful to my administrative assistant, Kathy Sisco, who has endured every deadline, every stressful moment, and every obstacle with me. Her ability to limit the flow of traffic to my office during times of greatest academic tension was most helpful.

I would also like to express my gratefulness to Dr. John Dantzler, Dr. Foster Watkins, Dr. Beverly Dyer, and Dr. David Dagley for their willingness to serve on my dissertation committee. The suggestions, advice, and encouragement they provided was invaluable. Dr. C. John Tarter, who served as the committee chair, will always hold a special place in my heart. I found him to be one of the finest and yet most demanding professors I have ever had. It was Dr. Tarter who I first shared, over lunch, my idea for a dissertation topic. In spite of my feeble attempts to answer

his probing questions, he assured me the topic was worth pursuing. It was Dr. Tarter that gave me the confidence to pursue my dream. When I reflect on my dream journey, my thoughts of Dr. Tarter will not end with his initial vote of confidence, but I will remember the amount of his personal time and effort he invested in me so that my dream could be fulfilled. Dr. C. John Tarter is a man who has had a profound influence on my life and I shall never forget his efforts to help me be successful in this venture.

Finally, I wish to thank my God for answering my prayers for safety and for no speeding tickets on my many trips to The University of Alabama Gadsden Center. I am convinced that HE has placed people in my life that have enabled me to accomplish my goals. I have but to reflect on the efforts of the individuals already mentioned in my academic voyage to know that HE continues to work in my life to accomplish good. To HIM I owe it all.

CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

In the world of Georgia public high schools, some schools achieve more athletic success than others. Athletic success may be a narrow outcome of school, but it is an effectiveness indicator that is explainable by a group of organizational properties. In a way similar to academic success, victory on the playing field may also be a consequence of a district's wealth. However, schools are categorized by size as well as wealth, so it would seem reasonable to consider the relationship of both wealth and size to a school's success. In Georgia, there is an additional conception of size that may well capture an element of social capital. District type measured as the population of the district and the district's relative distance from a population center may contribute to the resources available to the school. This study intends to look at the relationship of wealth, size, and district type, to athletic success.

Significance

Kerlinger (1986) defined scientific research as a "systematic, controlled, empirical, and critical investigation of natural phenomena guided by theory and hypotheses about the presumed relations among such phenomena" (p. 10). Theories are made based upon the curiosity of an individual concerning observable phenomena. That curiosity leads to questions of why these things occur, eventually yielding explanations that may be tested. Hypotheses allow for the testing of theoretical explanations and therefore contribute to the current body of knowledge. This study is valuable because the results will serve to answer a research question and fill a gap

in the research literature. It could also provide helpful information to those decision-making school leaders who may be curious as to the effect variables such as size, wealth, and district type have on the athletic success of their local schools.

School leaders desire to do all in their power to develop the total child. Students involved in extracurricular activities, such as sports, experience benefits (Harrison & Narayan, 2003; Vannatta, Gartstein, Zeller, & Noll, 2009) that can enhance the child's educational experience. Even a student's ability to fit in with a group (Lopez-Williams, Chacko, Wymbs, Fabiano, Seymour, Gnagy, Chronis, Burrows-Maclean, Pelham, Morris, & Morris, 2005) can be predicted by the student's ability to perform athletically. So, because "those involved in sports, perform better academically than those who are not involved" (Stephens & Schaben, 2002, p. 39) in sports, academics and athletics are connected. Much is known about academics but little about athletics. One does not have to look far to realize the impact of wealth, the size of the school, and the type of district when it comes to the academic success of students. As important as athletics are, one would expect more studies of the organizational antecedent of sports performance in schools in a way parallel to the attention given to academic performance.

Problem

There is a substantial gap in the literature studying the organizational relationships of wealth, size of school, and influence of district types to athletic performance. Academics represent just one important dimension in educating the whole child. Because athletics and academics are so closely connected, these same variables of wealth, size, and district type should also influence athletic performance.

Purpose

There is great interest in high school athletics. The National High School Athletics Participation Survey indicated that, "approximately 510 million fans attended high school sporting events" in America, during the 2009-2010 year (Reynolds, 2011, pp. 18-19). Considering the money that is spent to host major sporting events (Mondello & Rishe, 2004), the time, effort, and money invested by individuals (Taks, Renson, & VanReusel, 1994) and by parents to involve their children in athletics, the accessibility of sports viewed on television (Whannel, 2009), the thousands of dollars distributed by colleges and universities to provide athletic scholarships (Brown, 2011; Pine, 2010), the cost of building sports facilities (Brown & Paul, 2002; Rosentraub, 2006), the incredible amount of money paid to professional athletes (Morrison, 1996), the cost of facilities (Brown & Paul, 2002; Rosentraub, 2006), and the amount of entertainment dollars spent attending sporting events (Hefner, 1990), one can only surmise that the world of athletics is important to many.

There is substantial literature arguing (Covay & Carbonaro, 2010 Harrison & Narayan, 2003) that athletics are an integral aspect of educating the total person. Yet there is virtually no research addressing the relationship of wealth, size of school, and district type to athletic performance, in a fashion similar to academic achievement. As important as athletics are, one would expect more studies of the organizational antecedents of sports performance in schools in a way that is parallel to the attention given to academic performance. "Educational value has always been determined based upon the potential meaning an experience holds for students" (Staurowsky, 1996, p. 207). A study conducted by Gee (2010) provided evidence that the negative mindset of an individual could limit the athlete's ability to perform effectively. Lopez-Williams et al. (2005) established a connection between a student's performance in athletics and

his or her acceptance by other students. The better they were able to perform athletically the "less likely they were to be rejected by peers" (p. 177). Covay and Carbonaro (2010) suggested that extracurricular activities such as sports can aid in students' academic development by "providing them with a site to practice and develop their non-cognitive skills (p. 34). Non-cognitive skills such as teamwork, collaboration, leadership, attitude and work ethic, though not measured by standardized tests, would always be considered to be marketable characteristics in any industrialized society--and thus a useful extension to the total education of an individual. In a study conducted of Ivy League schools, Kotlyarenko and Ehrenbert (2000) took the position that wealth was a factor in a school's ability to establish winning athletic programs. However, in spite of the results of these studies showing a connection between academics and athletics, an area which needs to be explored, is the organizational relationships of wealth, size of secondary schools, and influence of secondary school district types to athletic performance.

I am a member of the board for the Georgia Athletic Directors Association (GADA). I assign points for the GADA Regions Directors Cup. Through a decade of tabulating the results of the Georgia Athletic Directors Association's Regions Directors Cup, questions arose in my mind as to why some schools seemed to achieve athletic success from year to year when others did not. Did it have something to do with wealth? Or size? Or might this success be connected to a school's geographical location? The purpose of this study was to determine what, if any, was the relationship between wealth, size of school, and district type on a school's athletic success.

Definition of Terms

In order to answer this research question, a brief research history of the concepts is necessary to expand the question and consider a possible answer.

Size

Size in this study refers to the number of students in a school. It is logical to assume that the number of students in a school would positively influence the athletic performance of that school. The very numbers themselves represent advantage. At the very least it would seem that the larger the school the greater the pool of student athletes one would have from which to draw. The greater the pool of student athletes from which to choose, the greater a school's chance of fielding a team with better athletes. One would theorize that it takes quality athletes to make good teams. Yet the chances of finding more quality athletes in a small school compared with the number of quality athletes in a very large school are slim.

Studies conducted by Blau (1974) and by Blau and Schoenherr (1971) provide pertinent perspectives into the dynamics of large organizations. Their assertion was that larger organizations become more differentiated than smaller organizations. Blau (1974) defined differentiation as the term used to describe the "number of structural components that are formally distinguished" in an organization. The larger organizations demonstrated a marked increase over the smaller organizations, in sub-units, employees, regulations, positions, job titles, and even employee salaries. The increase in job titles clearly demonstrated that large organizations were able to gain a greater number of specialized employees than a smaller organization, which provided the larger organizations the greater advantage in accomplishing tough assignments. This advantage with increased specialization occurs because it is usually

accompanied by greater expertise. Increasing specialization is accompanied by the likely consequence of greater expertise. Minor (2002, pp. 65-66) listed the first of 14 principles of management found in Henri Fayol's study of organizational behavior, which stated " division of labor or specialization . . . reduces the number of objects to which attention must be given and therefore yields increased quality and quantity of output for the same amount of overall effort." It seems to reason that if one does the same thing repeatedly, one gets better at doing it. This role of specialization should also hold true for coaching positions in school organizations. If so, then one could surmise that larger schools have the capability of providing not only more coaches per team but also more specialized coaching per team than a smaller school. This added specialization in coaching would likely be considered an advantage for a larger school.

These works by Blau (1974) and Blau and Schoenerr (1971) provided a framework by which these questions could be addressed. They concluded that size was an important condition affecting the structure of organizations and size gave rise to a number of distinct positions within the organization, which they referred to as differentiation. Differentiation became evident in the organization by the production of more sub-units, personnel procedures, regulations and better salaries. They advanced the notion of a connection between size and the various aspects of differentiation in the structure. Differentiation was a reason they believed large organizations accomplish difficult tasks through the development of specialists. Blau and Schoenherr believed that this association between size and differentiation could not only be observed in the federal agencies they were studying but also would be seen in other organizations should one pursue such research. Their assertion became the catalyst for this exploration. The present study will replicate and extend that of Blau and Schoenherr's with a focus on the structure of schools and its relationship to athletic success.

Wealth

Wealth affects school performance. Numerous studies (Caldas & Bankston, 1997; Duncan et al., 2005; Easton-Brooks & Davis, 2007; Fram et al., 2007; Sirin, 2005; Yang, 2003) argued that resources affect the academic performance of students in schools. Just as with the academic performance we might hypothesize that wealth should affect athletic performance. Kotlyarenko and Ehrenberg (2000) concluded that the generosity of a university's financial aid policy had much to do with the number of athletic titles that schools won. If a university improved its financial aid program it would lead to better athletic team performances. The question arises in this study as to whether there is a relationship of wealth to athletic performance in secondary schools.

Wealth will be defined in this study as the percentage of students on the Free and Reduced Lunch (FRL) program as provided in the annual report by the Georgia Department of Education. Sirin (2005) noted that a student whose family income falls at or below 130% of the poverty level is allowed to have a free lunch at school. Other students whose family income lies between 130% and 185% of the poverty level becomes eligible for a reduced rate on their meals. The FRL program is a good indicator of wealth within a community as it provides an objective method by which one can make accurate comparisons for wealth in a given locale. Even though state and local governments take into consideration the wealth of a community when providing funds for the students' academic development, there is no such consideration from the state and local governments when it comes to funding athletics. In fact, except in circuitous ways, no public funds are supposed to be used to support athletic participation of students.

Funding for secondary sports teams must come from other outside sources. These outside sources include booster clubs, business sponsorships, donations, gate receipts, and

fundraisers. In recent years, because of limited resources, school leaders have been forced to "rely on corporations to supplement existing resources, provide new equipment, or sponsor student activities" (McFarland, 2002, p. 14) only to realize there are also negative ramifications for commercializing the educational process. One, however, would expect that even if they chose to do so, the poorer communities would not have the same kind of revenue generating resources as the wealthier communities to support athletic programs or to build first class athletic facilities. One should not take the value of possessing great facilities lightly, when it comes to creating successful athletic programs. In the summer of 2012, the National Strength and Conditioning Association named my co-worker, Gary Schofield, as the best high school strength and conditioning coach in the nation. He has often confirmed what other people say anecdotally that a school's strength and conditioning program will have an effect on the strength and the endurance of the athletes in the latter stages of the competitions. The strength and conditioning training center used by Schofield on the campus of Greater Atlanta Christian School not only possesses the most up-to-date equipment but is also turfed for speed and agility drills and can accommodate 48 athletes at a time. In a seven-period day, 270 athletes utilize the facility representing 22 sports. It should surprise no one that having the resources to create such a facility and to hire such expertise provides a great advantage over lower income schools who do not possess such luxuries.

Universities take the athletic facilities problem seriously. In formulating their strategic plan (Unrivaled Ambition: A Strategic Plan For Duke Athletics--April 26, 2008--as found at http://news.duke.edu/reports/athleticsstrategyfinal.pdf**),** Duke University leaders described themselves in what they referred to as a

> facilities arms race in which institutions are playing a perpetual game of leap frog in response to facilities upgrades by their competitors. Successful recruiting is the engine

> that drives Division I programs and attractive, modern facilities are central to recruiting. The facilities message is simple: more or less continuous improvement is central to attract the best coaches and athletes and thus to win. (p. 11)

While there is no scholarship about the attractiveness of high school sports programs, what occurs on the university level eventually filters down into our secondary schools. Excellent facilities provide opportunities that cannot be attained by less fortunate communities and the attractiveness and availability of such fine buildings, stadiums, and athletic fields entice those families who have the wherewithal to move their families into districts capable of providing such amenities.

Most state athletic associations (http://www.ghsa.net; http://www.ahsaa.com/Portals/0/pdf/Publications/2011-12%20MASTER%20Handbook%20bylaws.pdf; http://www.fhsaa.org/sites/default/files/attachments/2010/09/16/node-235/1011_handbook2.pdf) have strict guidelines within their Constitution and By-Laws to ensure that school officials or those connected with the schools do not recruit student athletes from other school districts. However, providing the finest athletic facilities for one's athletes is certainly a subtle yet effective inducement. There is an absence of data; but anecdotally one hears that families who are interested in their children succeeding in athletics often desire to place their child in the finest environment possible, an environment that offers their child the best opportunity for skill development, competition and exposure. The Georgia High School Association (GHSA) recently added a section in its Constitution and By-Laws to prohibit student athletes from following a coach from one school to another in hopes of enhancing his or her chances for athletic success. Recruiting and undue influence is defined by the GHSA as "the use of influence by any person connected directly or indirectly with a GHSA school to induce a student of any age to transfer from one school to another" (p. 21, Section 171). Violating this rule subjects the individual to the possible loss of

his or her eligibility for one year. Even if a student athlete "who played for a coach at a former GHSA school followed that coach when he or she moved to another GHSA school" (p. 21, Section 172. C), the athlete would be considered to be in violation of the undue influence rule. The athlete would then be ineligible to participate in a varsity sport for an entire year unless a successful appeal was made through a hardship committee.

Most athletic directors and coaches that I know believe families will often relocate for athletic gain. One would prefer not to deal with anecdote but in the absence of research one must rely on conventional wisdom. Families who are financially capable also have opportunities for mobility that poorer families do not. The trend in today's high schools is for families to re-locate into other school districts based simply on the parents' perception of a school's athletic prominence. This mobility, though certainly a right of every American, only serves to decrease the resources of the poorer communities and increase the resources of the more "well-to-do" communities.

Studies (Caldas & Bankston, 1997; Duncan et al., 2005; Duncan & Magnusen, 2005; Easton-Brooks & Davis, 2007; Harris, 2007; Okpala et al., 2001; Sirin, 2005; Wenglinsky as cited by Sirin, 2005; Yang, 2003) lend support to the idea that a community's social capital plays a vital role in school performance. Family SES may often dictate where a child goes to school, what resources at home a child has at his disposal to add to his knowledge, and what connections he has to aid him in the development of social skills (Sirin, 2005). These influences, although outside the physical school, have much to do with a child's ability to perform successfully within the school walls. With wealth comes advantages in the academic world, and this benefit may hold true in the world of athletics. It is reasonable to assume that families who are a part of affluent communities have the ability to provide outside services (e.g., personal trainers) and

opportunities (e.g., instructional camping experiences, club and travel teams) for their children and access to better than adequate facilities that many disadvantaged families cannot. Access to these various outside resources should prove to be advantageous.

Sirin's (2005) meta-analysis looked at 101,157 students enrolled in 6,871 schools, which supported the connection of socioeconomic status at the school level as a predictor for academic performance. His study presented evidence of a correlation to a family's financial standing, resources available at home, and even a school's district location to a child's academic performance. The present study was designed to expand that of Sirin's by examining the connection between a school's wealth and athletic performance.

District Type

A third dimension to this study was the exploration of the possible relationship and implied influence to district type or location of the school itself on a school's athletic performance. The district types that were considered were those defined as city, suburban, town, or rural by the National Center for Education Statistics based on the school's proximity to an urbanized area (Appendix A). The supposition is that suburban school districts will probably have better athletic performances than urban or rural districts. Ponessa (1992) explored the effect of district type on extracurricular activities in 15 of the largest urban districts in New Jersey. She was concerned specifically with the differences in the availability of sports programs between the various districts and determined that location did make a difference. Urban districts offered fewer athletic programs than other types of districts, had fewer participants, and offered fewer opportunities for participation. Anecdotal evidence would lead one to believe then that suburban school districts have more resources available to them than do urban or rural

communities. Sirin (2005) stated that the results of his review "suggest that for urban students, SES-achievement relationships were not as strong as they were for suburban students" (p. 445). He encouraged future researchers to consider the effect that location of schools has when determining a connection between SES and academic performance. Given the preceding context, it is reasonable to assume that disparity in resources could exist between district types. The Lubienskis' (2006) reached a similar conclusion about the influence of a school's district type on academic performance when they noted, "rural schools scored slightly but significantly lower . . . than schools with equivalent demographics" (p. 675) in another region of the United States. However, there is a distinct void in the literature as to the effects of district types on athletic performance. It is possible that there are more incentives (e.g., booster club bonuses) found in suburban school districts than found in the rural or urban districts. There is a possibility that families could perceive that greater media exposure can be found in suburban communities and consequently greater opportunities for a suburban athlete. An example of such an opportunity might be the likelihood of the suburban athlete gaining a college or university education by means of an athletic scholarship.

All three of these variables, wealth, size, and district type, have been considered in studies regarding academic success but few studies have been advanced to consider the effects of these three variables and a composite of the three on athletic success.

Athletic Success

Athletic success in this study was measured by the results of the rankings from the Georgia Athletic Directors Association (GADA) Regions Director's Cup contest (Appendix B). Its purpose was to recognize the athletic programs in all classifications that demonstrated overall

excellence. The recognition process began during the 1999-2000 school year and has honored 64 schools as overall winners in their classification from the year of inception through the 2011-2012 school year. In 2008-2010 the GADA board revised the scoring system to more closely resemble the U.S. Sports Academy Director's Cup system used by the NCAA. This instrument measures every Georgia High School Association member school and considers all 25 sports in its rankings. The GADA requires a minimum of 65 schools participating in a given sport in order to receive the full allotment of Director's Cup points. Those sports under the minimum number of 65 schools participating will receive only half the normal allotment of points for each position. The Director Cup points will be awarded to the 'bracketed sports" (baseball, basketball, football, lacrosse, soccer, softball, tennis, volleyball and wrestling-duals) as follows: 1st place = 100, 2nd place = 90, 3rd and 4th places = 83, 5th - 8th places = 70, 9th - 16th places = 53, 17th - 32nd places = 25 points. The Director Cup points will be awarded to the "non-bracketed sports (cheerleading, cross-country, golf, gymnastics, riflery, swimming, and wrestling) as follows: 1st = 100, 2nd = 90, 3rd = 85, 4th = 80, 5th = 75, 6th = 72, 7th = 69, 8th = 66, 9th = 63, 10th = 60, 11th = 57, 12th = 54, 13th = 51, 14th = 48, 15th = 45, 16th = 42, 17th = 40, 18th = 38, 19th = 36, 20th = 34, 21st = 32, 22nd = 30, 23rd = 28, 24th = 26, 25th = 24, 26th = 22, 27th = 20, 28th = 18, 29th = 16, 30th = 14, 31st = 12, and 32nd = 10 points.

If a tie occurred in the final ranking positions, the total number of points earned by those schools involved in the tie were divided equally among all the schools in the tie. If a tie occurred for the final Director's Cup championship in any classification, the researcher broke the tie based upon the following priorities in order: (1) the number of state championships won, then (2) the number of state runners-up won, then (3) the number of 3rd or 4th place finishes. This process continued until the winner was decided.

It is the only assessment tool that is recognized in Georgia each year for measuring the overall strength of a school's athletic program. In June 2011, the Regions Director Cup Winners Reception hosted by Georgia Public Broadcasting was held at their headquarters in Midtown Atlanta. This televised statewide event would be one indication of the statewide acceptance, the validity, and importance of the GADA's Region Director Cup race as the appropriate instrument to use in measuring the overall athletic success of schools.

Athletic success is defined as a school's score on the GADA Regions Directors Cup race. While some might consider the ultimate mark of success on the high school level as the team state championship, only five teams in almost every sport in the state of Georgia can wear that championship label. This does not mean that all other school teams failed or should be considered unsuccessful. Just reaching the level of state competition is certainly a measure of success and should not be discounted. To the degree that a school can send numerous athletic teams, from various sports, to compete in the state and place in the rankings should be a clear indication of the strength of that school's athletic program.

Research Question

This study sought the answer to "what is the relationship of wealth, size, and district type to athletic success?"

Scope and Limitations

There are 432 secondary schools registered as members of the Georgia High School Association (GHSA). The GHSA membership is comprised of both public and private school members. All of the public schools that are members of the GHSA were included in the study

when collecting the statistics for wealth, size, and district type. No consideration was given to any private, independent, or home schools because their inclusion would bring too many confounding variables.

The study was limited by geographical region of the state of Georgia and included only Georgia public schools. The results, however, should not be generalized to neighboring states as these neighbors, though close in geographical proximity, may be quite foreign in the ways they measure athletic success and in the ways their school systems are structured. Theoretical limitations should also be acknowledged. The theoretical explanation expressed in this study that athletic success is influenced by wealth, size, and district type may not be the right one. It could very well be true that other elements not considered or even known to the researcher could be found to predict athletic success. There seems to be no doubt that wealth is a predictor of academic success. In academic achievement there are variables such as the previous achievement of the student and the collective efficacy of the faculty, for example, which predict academic success (Hoy, Tarter, & Woolfolk Hoy, 2006). Another point of view has been discussed by Heck (2000), suggesting student performance or academic outcomes are impacted by school characteristics that are simply out of control of school leaders. He insisted that school leaders need to adjust their assessments to account for a school's size and SES. It is possible that wealth, size, and location could be a predictor of athletic success or, just as in the academic realm, there are other variables that factor into that equation.

Finally, one must wonder whether the use of the GADA Regions Director Cup race results is the best standard one could use to determine athletic success. It is not a perfect measuring tool and there could be other measurement devices that would more accurately gauge athletic achievement.

Summary

The literature reveals a diversity of opinions on the influence of athletics to the total development of the individual (Gee, 2010; Lopez-Williams et al., 2005; Melnick et. al, 1992; Schneider & Klotz, 2000; Stephens & Schaben, 2002; Vannatta et al., 2009). However most researchers have failed to consider the part that wealth, size, and district type might have on the success of a school's athletic program. This investigation studies the relationship of wealth, size, and district type to a school's athletic success in Georgia public secondary schools. Blau and Schoenherr (1971) provided the theoretical framework for exploring the relationship between an organization's size and performance.

Sirin's (2005) meta-analysis of SES and school performance served as the backdrop for the discussion of the effect of wealth on a school's athletic success.

Each of the independent variables of size, wealth, and district type were defined as well as the dependent variable of athletic success. Sample testing the relationships of size, wealth, and district type to athletic success was limited to the 376 public secondary schools in Georgia that were members of the Georgia High School Association.

CHAPTER 2

REVIEW OF THE LITERATURE

Overview

This section presents a research history of the concepts. Additionally, an explanatory theory linking size, wealth, and district type to athletic performance will be developed. Finally, hypotheses that test the framework will be presented.

Conceptual Framework

Size

Size in this study refers to the number of students in a school. The size of the school should promote specialization. In this study, specialization will be two-fold. It is a reference to the number of job positions that are allotted to coaches. The larger school will have more diverse designated coaching titles than the smaller schools and will possess a greater pool of student athletes from which to draw. The differentiation in job titles will be indicative of the potential for extra training that a larger school might have over one that is smaller. The differentiation that occurs in teams from schools with a larger pool of student athletes from which to draw will yield an advantage for greater specialization. Specialization should promote better performance. Therefore, it seems, if all things are equal large schools should do better athletically than smaller schools.

The Georgia High School Association (GHSA) understands this underlying principle. It has as its objective "to standardize and encourage participation in athletics . . . ."

(http://www.ghsa.net, p. 7). In its efforts to standardize, the GHSA conducts a reclassification of schools procedure every 2 years. Member schools are placed in classes and regions based upon a school's "student F.T.E. (full-time-enrollment) and geographic proximity" (http://www.ghsa.net, p. 7). The executive committee members of the GHSA realize the size of the school will influence athletic performance. So, in order to promote fairness, the reclassification committee groups schools according to the number of students that are enrolled full time. The individual schools have the choice to compete in a higher classification but are not allowed to play down in a lower classification because the GHSA understands the advantage a larger school would have competing against smaller schools.

All organizations have structure. Structure as defined by Mintzberg (as cited by Hoy & Miskel, 2005, p. 105) is "the ways in which an organization divides its labor into tasks and then achieves coordination among them." Though Mintzberg's focus centered upon the configurations (machine, entrepreneurial, diversified, professional, innovative, ideology, and missionary), effectiveness, and strategies of organizations in a very broad way, this study's focus is on the structure of a specific organization--that of schools. If this were a study across a variety of organizations, those frameworks would have been employed. Because this study looks only at the structural arrangements of schools, a narrower view would explain more of the structural features of the organization of schools.

In a single organizational study that has influenced thought in the area of organizational development over the years, Blau and Schoenherr (1971) concluded that size was an important condition affecting the structure of organizations and this size gave rise to a number of distinct positions within the organization, which they referred to as differentiation. This differentiation became evident in the organization by the production of more sub-units, personnel procedures,

regulations, and better salaries. They advanced the notion of a connection between size and the various aspects of differentiation in the structure. Differentiation was one of the reasons they believed it was possible for large organizations to accomplish such difficult tasks. Blau and Schoenherr believed that this association between size and differentiation could not only be observed in the federal agencies they were studying but also would be seen in other organizations should one pursue such research. Their assertion became the catalyst for this exploration. It is obvious that wealth, size, and district type are interrelated when examined for academic success. The objective of this study, however, is to expand that of Blau and Schoenherr with a focus on the structure of schools and its relationship to athletic success.

Blau (1974) further developed differentiation theory in his study of employment security agencies. Based on the study, he made three generalizations. The first of these generalizations inferred from the findings of his study was that "increasing size generates structural differentiation in organizations along various dimensions at decelerating rates" (p. 302). Using the number of employees as his operational definition of size, Blau observed that there was a rapid and then more gradual increase in the number of branches, levels, sections, and even positions of these employment agencies when the number of employees increased. Yet with increasing rates of size this differentiation began to decline. He clarified how this pattern might impact other organizations by explaining that adding more workers does not increase the efficiency in work output unless there are "parallel increases in equipment and space" (p. 306). In fact, there comes a point when the continued growth in size of the organizations actually causes the differentiation of that organization to shrink.

Blau (1974) also noted that the "large size of an organization raised the average size as well as the number of its structural components" (p. 307). The components to which he referred

are the various divisions, sections, levels, offices, and occupational positions that can be found in any organization. This growth in structural components would naturally lead to acquiring a greater number of employees with different gifts and specialties that could enhance the opportunities for success within that organization. He stated,

> Big organizations and their larger headquarters divisions and local branches tend to have more employees in any given position with similar duties than small organizations with their smaller subunits, thus making it possible to use supervisors more efficiently in larger units by assigning more subordinates with similar duties to each supervisor. (p. 310)

Blau concluded that large organizations were capable of assigning different tasks to different positions and there were various specialized functions assigned to the employees. One would believe that having more of these various specialties allows a larger organization to outperform a smaller one when it comes to completing the work that needs to be done. Or, as Mintzberg (1989) said, "As organizations grow in size; they are able to specialize their jobs more finely" (p. 106).

A second generalization by Blau (1974) was that "structural differentiation in organizations enlarges the administrative component" (p. 314). In other words, the administrative group increases with the increasing demand for coordination, increasing the ratio.

Kimberly (1976), being skeptical about the conceptions of size used by researchers in their studies of organizations, analyzed how various researchers defined size and its relationship to other organizational properties. Kimberly looked at the literature of physical capacity, personnel availability, organizational inputs or outputs, and discretionary resources available to the organization. He cited research that the physical capacity, or the amount of work, of an organization would be limited by its size. Thus the availability of qualified personnel would determine the amount of work that could be produced. Although the volume of work that was

produced by an organization was often used as a measure of size, most educational studies simply used the number of students enrolled. In the public schools in Georgia, the number of students drives the magnitude of the school's budget so it would seem logical to use students enrolled in school as the measurement of size. Kimberly's last observation was that increasing size increased discretionary resources, which is pertinent to this study because the number of students that are enrolled in a Georgia public school plus the proximity of that school's location to an urbanized area drives the level of discretionary resources that are available to the school.

Not only does differentiation become greater in larger schools but also a large school's ability to increase the pool of potential candidates of student athletes to participate on high school teams certainly increases the chances of securing better athletes. Only one study, however, was found to support this idea. The notion of an advantage going to football players who enrolled in larger schools in regard to skill development and recruitment possibilities was set forth by Spieler, Czech, Joyner, and Munkasy (2007). In support of the size-performance hypothesis, they empirically demonstrated that one could predict a football player's starting status based upon the size of the high school the player attended. They theorized that student athletes from larger schools consistently faced greater competition and were able to spend more practice time developing their skills. Larger schools had sufficient numbers of athletes out for the team which gave them the luxury of having individuals become skilled at only one position compared to a student athlete from a smaller school that was forced to play multiple positions. The additional time the student athlete was able to spend with the high school specialty coach "decreased the number of years needed to obtain (the) skill mastery" (p. 9) that was needed to prepare the athlete for a starting position on his college team.

There is inconclusive evidence concerning the influence of the size of schools on students' achievements. For example, Slate and Jones (2005) noted from their review of literature that even though the results of research on the effects of school size are often contrary, they are not really contradictory. The difference is the result of the intervention of other factors. However there is a body of literature suggesting a positive relationship between the size of the school and academic achievement. But which size is better? Are larger schools better than smaller schools? Or are smaller schools more effective than larger ones? There are variables that intervene in the relationship of size and performance. Weiss et al. (2010) found there is no optimum size for all students. The impact of the size of the school really depends on the needs of the individual student. Werblow and Duesbery (2009) found the greatest math gains to have occurred both in large and small schools in contrast to the gains in medium size schools. In a study conducted in West Virginia, Howley (1996) provided some insights into the relationship of size and achievement. He presented evidence indicating size does influence achievement through its interaction with SES, and large schools and districts that are associated with students in poverty will achieve much lower than students identified as more affluent. Barnett et al. (2002) argued that policymakers should direct their efforts toward increasing school size because larger schools gain greater benefits through specialization. Their study convinced them "the underperformance of smaller schools can be due to underfunding rather than to inadequacies in management or teaching." A study by Rumberg and Palardy (2005) advanced the notion that larger schools tend to be more effective in promoting student learning than a smaller or even mid-size school. But the larger schools were not as likely to keep their students enrolled. Morton's (1995) premise was students would have more opportunities for competing in a small school but fewer options of programs from which to choose. He arrived at the conclusion that

"the availability of activity offerings seems to be somewhat a function of size and resources" (p. 14). Leithwood and Jantzi (2009) gave no credence to the idea that large schools have the advantage because of the extensiveness of the curriculum. Their study caused them to conclude that "breadth of curriculum is no longer a justification for large schools" (p. 484) and, in some ways, it can be an impediment for the academic progress of some students. Gooding and Wagner (1985) discovered in their studies that larger schools are "more likely to possess munificent discretionary resources that are crucial to continued organizational performance" (p. 477). Cotton (1996) would debunk any suggestion that larger schools have an advantage over smaller schools when it comes to academic performance. After perusing 103 documents that identified a relationship between school size and school outcomes, she concluded "student achievement in small schools is at least equal--and often superior--to student achievement in large schools" (p. 5).

On the other hand Eberts et al. (1984) took the position that "large schools seem to be significantly less effective in producing student achievement." Their research motivated them to suggest larger schools would be better served by breaking them down into mini-schools in order to better facilitate the coordination of the instructional program. Eberts et al. (1990) reached a similar conclusion that "larger schools exhibit smaller gains in student achievement than comparable students in smaller schools." Walberg (1992) presented evidence indicating "states with big districts and big schools that pay more of the costs for education tend to have the lowest achievement" (p. 130). Lee and Smith (1994) reached a similar conclusion stating unequivocally that, "students learn more in schools that are restructured and in smaller high schools" (p. 30). Kuziemko (2004) would certainly agree that size does make a difference. In fact he believed there is a causal connection between school size and performance. A similar point of view was

advanced by Stewart (2009) based upon his findings from a comparison study done in Texas between small schools and large schools. He arrived at the conclusion that students in small schools score better than students in larger schools when it comes to their performance in the state's mandated test. Lee and Smith (1997) suggested that students learn more in small high schools and the learning is more equitable but it is possible that schools could become too small to meet the curriculum needs of the students. Overbay (2003) reflected this view when he wrote, "smaller schools may be linked to higher student engagement" (p. 8). Even the size of the school was found to be inversely related to school attendance (Jones, Toma, & Zimmer, 2008; Werblow & Duesbery, 2009) and attendance is a leading factor in school dropouts. Lee and Burkham (2003) found that students in medium size schools were least likely to drop out. Lee and Smith (1996) produced information to suggest that, "real professional communities of teachers develop more easily and more naturally in smaller schools" (p. 133). Johnson, Howley, and Howley (2002) suggested it is not just the size of the school that causes harm but it is the combination of being large and being poor. They established that "the poorer the community served and the bigger the school, the worse the students performed" (p. 7). The larger the schools in affluent communities, the stronger will be the effect on academic performance. They cited a need for policymakers to break up the larger school districts because there was something beneficial that could be gained by making schools smaller. In fact Roeder's (2002) findings would seem to concur: "School size has no direct effect on performance, school size does not moderate the effects of poverty on performance. Larger school size does not relate to higher performance if the larger schools also have high proportions of disadvantaged children" (p. 17). Several studies (Leithwood & Jantzi, 2009; Ready et al., 2004) pointed out that there is a huge disadvantage in learning for students from disadvantaged social backgrounds in large schools. Those who take

such a position believe students would be better served attending smaller schools. Yan (2006) was opposed to the idea that size has any influence on academic achievement. He found no evidence to indicate bigger was better or smaller was better

Lee and Smith (1996) took the position that schools need to place a restriction on the number of students attending. They found the academic performance of students in high schools above 1,000 students experienced diminishing returns as the school became larger. After examining 9,812 sets of records for the same students across grade levels, they observed school achievement dropped with increasing school size after a school's student attendance reached 900.

Coladarci (2006) cautions those who would make such claims to offer empirical evidence rather than suggesting such because of one's personal desires or informal observations. Even Abbott et al. (2002) built a strong case that size is a more complex matter and needs to be studied a bit more in order to discover its real impact on academic achievement. Finally, Lee et al. (2000) offered a caveat for us all when they said, "Making schools smaller won't necessarily make them better places for their students to learn" (p. 165). They reached this conclusion on the basis of their findings, which indicated the larger the school, the broader the curriculum. Small schools have monetary limitations (financial resources determine the quality of faculty). The smaller schools are limited in the amount of materials available, the services provided, and the courses offered. Larger schools fared much better in these areas.

There seems to be no consensus as to whether one size is better for the academic student than the other, probably because of intervening variables. The size-performance connection in athletics has not been developed at all. There is no literature examining the size-performance hypothesis in athletics and there should be. The intent of this study was to fill that gap.

Wealth

> Wealth bestows advantages beyond those of income, occupation and parents' education. Wealth brings security, choices of where to live, protection from the stress of short-term unemployment and other emergencies, ability to fund a college education, and a psychological, as well as, financial investment in a community. (Easton-Brooks & Davis, 2007, p. 538)

There is ample evidence of the relationship of wealth to school academic performance (Sirin, 2005). In a meta-analytic study of 74 samples, Sirin reaffirmed earlier studies demonstrating the relationship between wealth and academic performance. He cited literature arguing the positive relationship of a family's socioeconomic positioning to a student's academic achievement. According to Sirin's study, there is a close connection between a family's wealth and the kinds of resources found at home, the social capital that a student needs to be successful in school, the kind of classroom environment, school materials, teacher experience, and even the relationship between school personnel and parents.

Easton-Brooks, and Davis (2007) conceptualized wealth as household income, parents' occupation prestige, and parents' educational level as measured on a survey and found a significant relationship to student achievement in math and reading. Even after controlling for race, the relationship of wealth to academic achievement was demonstrated. Wenglinsky (as cited by Sirin, 2005) underscored the relationship between SES and instructional quality, materials, teacher experience, and teacher-student ratio. In a much earlier study Carrington (1973) determined that,

> The primary advantage of attending a higher spending school seems to be that the teachers are better paid and less harried. There are also better auxiliary services, such as more school nurses and social workers. And there is a somewhat broader program in such areas as art, music, home economics, and athletics. (p. 1242)

There is no consensus, however, on the best measures to use in determining SES. Sirin (2005) presented a convincing argument that family SES was an effective predictor of academic performance but a school's SES was even better. In this study, he reviewed the literature over a period of a decade. His samples represented by the literature he reviewed included 6,871 schools and 101,157 students. He concluded that a parent's position in the socioeconomic arrangement has a powerful impact on a student's academic performance. Based on his meta-analytical research of empirical studies, Sirin suggested that Free and Reduced Lunch is a good measurement when compared to such other measurements as education, income, and occupation.

Not all who have studied the phenomenon of SES on academic performance would agree on the usefulness of a single measure like Free and Reduced Lunch. Hampden-Thomson and Johnston (2006) combined a series of six components having to do with parents' and students' status to identify the relationship between the socioeconomic status and academic performance of students. Parents and students were selected from 20 different countries in an attempt by the authors to compare the test scores of students from diverse cultures and backgrounds. Their findings indicated that, "Students with highest levels of SES, as measured in this study, had an educational advantage over their lowest SES counterparts" (p. 15).

The challenge for uniformity in SES measurement became the catalyst for Yang's (2003) use of the aggregate SES student and school level indicators. Based on the results of his study of 17 countries, 123,031 students, and 3,148 schools, he noted the same "pattern of relationship between SES dimensions and achievement at the individual and school level" (Yang, 2003, p. 36) that was seen in previous studies.

Regardless of the measure used to determine the SES of students, a significantly high proportion of the studies in the field concluded that SES is a strong determining factor in the

academic performance of a child (Caldas & Bankston, 1997; Duncan et al., 2005; Sirin, 2005; Yang, 2003). Of relevance here is an analysis conducted by Harris (2007) of more than 60,000 schools in the United States. Harris ascertained that

> Low poverty schools are 22 times more likely to reach consistently high academic achievement compared with high poverty schools. Schools serving student populations that are both low poverty and low minority are 89 times more likely to be consistently high performing compared with high-poverty, high-minority schools. (p. 368)

Duncan and Magnusen (2005) established a connection between SES and academic achievement when they expressed the view that "reducing the racial and ethnic difference in family income by several thousand dollars would reduce achievement gaps." Easton-Brooks and Davis (2007) gave credence to this wealth-achievement relationship when they concluded that, "Although it is not possible in a correlation study to establish a causal relationship among variables, this study provides support for the likelihood that there is a causal relationship between wealth and the academic outcomes for African American students" (p. 538). Okpala et al. (2001) reported the "percentage overall of students who mastered mathematics increased tremendously from low-income to high-income schools" (p. 6). Fitzpatrick (2006), in a study done which explored the connection between music and academic performance, pointed out that, "On most grade levels examined in this study, the higher SES students outperformed the lower SES students on every subject, regardless of instrumental music participation" (p. 4). In comparing test scores of high and low poverty schools, Fram et al. (2007) summarized the evidence of this study by concluding that, "There is as we would expect a 'gap' in achievement between these types of schools" (p. 316).

Caldas and Bankston (1997) reached a similar conclusion as other researchers by recognizing the relationship between SES and academic performance. They sampled 42,041 White and African American 10th graders from the state of Louisiana using the Louisiana

Graduation Exit Examination (GEE). However, they maintained that even though race and an individual's family SES were significant, the economic status of one's fellow students had a larger impact on a student's academic performance than most realized. They also advanced the notion that "individual family poverty as indicated by participation in the federal Free and Reduced Lunch program, does have a small independent negative effect on academic achievement." Orr (2003) provided explanations for the influence of SES on academic performance but most researchers who have explored the relationship just give credence to the idea that wealth does affect academic performance.

The Easton-Brooks and Davis (2007) quote that opened this section,

> Wealth bestows advantages beyond those of income, occupation and parents' education. Wealth brings security, choices of where to live, protection from the stress of short-term unemployment and other emergencies, ability to fund a college education, and a psychological, as well as, financial investment in a community. (p. 538)

is supported by other studies. Covay and Carbanaro (2010) speak to the disparity caused by SES by stating,

> low SES students are still less likely to participate in all types of extracurricular activities, providing students with disparage access and opportunities to develop their non-cognitive skills. High SES students have access to such sites in a variety of settings, continuing to provide these students with an advantage. (p. 34)

In summary, all things being equal, the larger the school the more effective it should be. There may be an equilibrium point of the size--effectiveness relationship. As a school or any other organization increases in size, it undergoes a process of differentiation, that is, as organizations get larger they gain job titles and special functions (Blau & Schoenherr, 1971). Presumably with specialization comes expertise. Not much is known about the interaction of wealth and size but the work of Howley (1996) is provocative in that he found for low SES students the larger the school, the more dysfunctional and for the higher SES students the larger

the school, the more effective. Others (Bickel, 1999; Bickel et al., 2001; Howley & Howley, 2004; Huang & Howley, 1993; Johnson et al., 2002) who have replicated studies in various states made similar assertions concerning the connection between size and SES of schools and the academic achievement of students.

An athletic team's ability to advance far into the playoffs is determined to a large extent on how each individual and the team as a whole have been able to master the skills needed to play the game. Athletes, through repetition, master skills after being taught the proper techniques by trained coaches. The athletes that reside in the more wealthy communities certainly possess greater opportunities to secure additional help, outside the school, in the development of their skills. The ability of the wealthy to acquire the services of personal trainers and coaches and to attend high profile yet expensive camps must be considered an athletic advantage for the wealthy long before the competition even begins.

District Type

Proximity to an urbanized area becomes an important component in this study as proximity to urban areas often assures ease of access to social and cultural capital. Social capital as defined by Coleman (as cited by Hopkins, 2005) is the social networks, the interactions between children and adults within the family, and within the community. On the other hand, cultural capital as defined by Bourdieu (1977, as cited by Hopkins, 2005) takes the "form of regular theater, concert, or cinema attendance, etc. that provided an 'apprenticeship' for students that allows for more success in school" (p. 26). Bauch (2001) suggested that individuals who have achieved higher education, a higher level of employment, and possess access to other resources more easily attain social capital.

In 2006, the National Center for Education Statistics (NCES) revised its classification system to include four major local categories: city, suburban, town, and rural. The cities and suburbs were subdivided into categories titled small, midsize, or large while the towns and rural areas were subdivided by their proximity to an urbanized area and titled fringe, distant, or remote. This reclassification system was revised to create reports that relied less on population size and county boundaries rather than proximity of an address to an urbanized area.

There is an obvious disadvantage of schools in rural communities compared with those in urban and suburban locales. Stanley, Comello, Edwards, and Marquart (2008) described the great economic disparity between urban and suburban that they observed when analyzing students on the Free Lunch Program. Their findings inspired them to call for a tactic to improve the economic conditions of these low-income rural regions. Lleras (2008) advanced the notion that there is a need to take into consideration a school's location. She determined in her study that students in urban schools are at a significant disadvantage at every stage of the learning process compared to students in other school types. School location made a huge difference in math achievement. In his study of SES composition of public schools, Crosnoe (2009) found that a majority of the low-income schools had concentrated minority populations and they all tended to be located in urban areas. In trying to determine the causes for the achievement gap in some ethnic groups Verdugo (2010) discovered that the structural feature of location of schools has a significant impact on achievement. The results of his study led him to decide the academic achievement of students in large, urban, low income schools is considerably lower than schools of other locations.

In their study of the effects of open enrollment in Minnesota, Carlson et al. (2011) found that low achieving districts lost a large number of students due to the families' desire to transfer

out. As a result of this mass exit, these districts lost a significant amount of funding to the tune of $28 million. The disparity of funds available to schools in differing locations is not a new phenomenon. In an earlier study, McLean and Ross (1994) called attention to the great disadvantage of rural schools because of lack of discretionary funds and adequate facilities.

Though little literature exists to support the idea that the type (location) of a school influences athletic success, there have been a few studies that have at least implied such a relationship. Stanley et al. (2008) ascertained that schools located in rural areas provided a greater number of extracurricular activities. They also found that participation by students in rural schools was higher than the participation of students in urban schools. They attempted to convince parents that a school's size or location had very little to do with how well their children adjusted in school.

Researchers such as Noguera (2004), Goddard (2003), and Parcel and Dufur (2001) suggested that social capital has a direct relationship with the quality of education children receive. Ream (2005) tempered his initial presumption that lack of mobility of Mexican American students led to less access to social capital and concluded his study convinced that it was more the "utility of social capital" that made the difference. The inference in many of these studies is that schools that are isolated from highly urbanized cultural centers seem to be at a distinct disadvantage when it comes to their students' academic achievement. It is very likely that a similar influence of social and human capital could occur in regard to athletic success.

Community types of schools in Georgia are classified according to a code system called the "Locale Code" used by the National Center for Education Statistics (NCES). Locale codes are assigned to each school based upon the school's physical location (longitude and latitude) and are classified in four categories: (1) city, (2) suburban, (3) town, and (4) rural

(http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009081). This coding system allows one to identify not only the physical location of a particular school but also identifies the school based upon the general proximity that school is to larger urban centers. If 50% of the students attending a particular school come from a particular locale district then that school is classified as that locale. Should there not be 50% of students from a single district type then the school is generally classified according to the type of district in which the largest number of students live.

> Each major category is divided into three subcategories. Cities and suburban areas are subdivided into the categories of small, midsize, and large; towns and rural areas are subdivided by their proximity to an urbanized area into the categories of fringe, distant and remote. These 12 categories are based upon three key concepts that the Census Bureau uses to define an area's urbanicity: principal city, urbanized area, and urban cluster. A principal city is a city that contains the primary population and economic center of metropolitan statistical area. Urbanized areas and urban clusters are densely settled "cores' of Census-defined blocks with adjacent densely settled surrounding areas. Core areas with populations of 50,000 or more are designated as urbanized areas; those with populations between 25,000 and 50,000 are designated as urban clusters. (http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009081)

District type plays an important role in academic performance; however, no one knows the relationship of district type to athletic performance. It is predicted that suburban districts will have a positive relationship to performance.

Athletic Success

Athletic success in this study was defined as a school's final score on the GADA Region's Directors Cup contest. The score is a continuous variable capturing the magnitude of success. It is the only assessment tool that is recognized in Georgia each year for measuring the overall strength of a school's athletic program. It is certainly a comprehensive assessment tool in that it measures every Georgia High School Association member school and considers all 25

sports in its rankings yet includes only the top eight male scores and the top eight female scores in state competition for each school.

There is of course no higher achievement for the high school athlete or team than to win an individual or team state championship. However only five teams in almost every sport in the state of Georgia can wear that championship crown. This does not mean that all other school teams failed or should be considered unsuccessful. Reaching the level of state competition is certainly a measure of success and should not be discounted. To the degree that a school can send numerous athletic teams to compete in the state and place high in the rankings should be a very clear indication of the strength of that school's athletic program. While a school may not win a championship, placing teams high in the rankings indicates success. The GADA takes these rankings into consideration when determining the overall athletic success of schools vying for the GADA Regions Directors Cup.

There will naturally be some schools that would be considered by most to be successful in one or two athletic activities. However, the reputation of those schools in a single athletic activity could disguise the overall weakness that these schools might have in their total athletic program. Then there are some schools that might do well on the state level in some activities but just do not have the financial resources or a pool of students large enough from which to draw in order to excel in more activities. There are other ways to measure, but school leaders and coaches recognize the results of the GADA Director's Cup race across the state of Georgia as currently the most acceptable measure of a school's overall athletic program.

Theoretical Framework

Size, wealth, and location predict athletic performance. The enrollment of a school determines the number of diverse coaching positions enabling the larger schools to provide greater specialization for their athletes over smaller schools. The larger the school, the larger the pool of candidates from which a coach can draw to form his or her team. If a coach has more students in the selection process the chances will be greater to acquire the great athletes that will improve a team's chances for success.

The wealth of a school enables the student athlete to participate in an environment with better facilities, better equipment, and more opportunities to participate in the top skill development (camps) events. Athletic programs are not funded by the state or local governments but are supported by booster clubs, business partnerships, gate revenue, and donations. Poorer communities will not have the vast revenue creating types of outside support, as would a wealthier community. This financial disparity puts the student athletes from the poorer community at a great disadvantage not only in their development as athletes but also in their ability to be observed by those college and university coaches who make the decisions to offer athletic scholarships.

The location of a school community allows the student athletes to be surrounded with greater opportunities for the kinds of social and even cultural capital that could provide greater opportunities for skill development. The athletes coming from a suburban community will have opportunities to enhance their talents and their marketability that athletes coming from rural settings would not.

This interaction between size and SES probably works for athletic competition as well. Goodlad (as cited by Lee & Smith, 1997) alerted his readers of an

> issue that was of great importance to communities being served by schools; sustaining winning sports teams. Despite its importance to many constituents of U.S. high schools, we are hesitant to raise this concern to the level of theory. However, the extra-curriculum in any high school, and students' participation in it, is an important element in the high school experience. And it is surely influenced by school size. (Lee & Smith, 1997 p. 219)

Theory and Hypotheses

The purpose of this study was to determine the relationship of wealth, size, and district type to athletic success. The theory argues that there is a correlation between size, wealth, and district type to athletic performance. This should hold true because the theory presents the independent variables as rising from similar social settings. That is, poor schools, small schools, and rural schools have more in common with each other than with richer, larger, and more suburban schools. This hypothesis tests the theory by looking at the correlation of the independent variables of wealth, size, and district type to athletic performance. Each variable is important but they operate together as well as individually. Wealth, size, and district type will individually and jointly predict athletic performance.

H1: The size of the school is positively related to athletic performance.

H2: The wealth of a community is positively related to athletic performance.

H3: Suburban school districts will perform better athletically than city, town, or rural districts.

H4: Wealth, size, and district type will form a composite that will be positively related to athletic performance.

Summary

The basic assumption in this study was that there is a connection between the size, wealth, and location of a school and athletic success. This chapter contains a review of the literature that is pertinent to those variables. The aspect of size relied heavily on the foundational work done by Blau and Schoenherr (1971) in their study of organizational structure. Sirin (2005) perused a group of studies and his meta-analysis findings of a consistent relationship between wealth and academic achievement became the theoretical basis for the focus that is made in this study on a school's wealth. Though there are differing views concerning the influence of size on academic performance, there seems to be little disagreement as to the effect wealth, or even district type, has on achievement. Information was provided to demonstrate how the schools in Georgia are classified based upon their proximity to larger urban areas. The rationale was given for the use of the Georgia Athletic Directors Association Regions Directors Cup format to measure a school's overall athletic success. Finally, it is hypothesized that there is a relationship of wealth, size, and district type to the overall success of a school and the purpose of this study was to determine that connection.

CHAPTER 3

METHODOLOGY

This was a quantitative study. The unit of analysis was public schools that were members of the Georgia High School Association. The dependent variable in this study was the school's athletic success as measured by its ranking in the race for the Georgia Athletic Directors Association (GADA) Regions Directors Cup. The independent variables were the size, wealth, and district type of the school as measured by data that were archived.

Sample

All of the public schools that were members of the GHSA were included in the study when collecting the statistics for wealth, size, and district type. This study did not consider any private, independent, or home schools whether they were members of the GHSA or not.

There were 432 secondary schools registered as members of the Georgia High School Association (GHSA). The GHSA membership is comprised of both public and private school members. There are 376 (87%) public schools and 56 (13%) private schools in the GHSA. The schools are grouped into five classifications (1A, 2A, 3A, 4A, and 5A) based on the number of students that are enrolled full time. Occasionally, a school will opt to play in a higher classification than what the numbers of students in the school suggest. Though seldom done, it normally occurs because of academic, geographic, and economic reasons. For example, in order to compete against schools that are similar in size the school would have to travel great distances. This excess travel would cause the students to lose a great deal of classroom time

and the transportation costs would be exorbitant. Therefore, the leaders of those schools often choose to play in a higher classification (consisting of larger schools) in order to eliminate the extra transportation costs or the lost time out of the classroom.

The schools classified as 1A schools represent the schools with the fewest number of students in Georgia, while the schools listed as 5A represent schools with the largest enrollment. There are 61 public secondary schools representing the 1A classification with enrollments ranging from a low of 35 students at Woody Gap to a high of 515 students in Macon County. In the 2A classification there are 77 public schools. The school in 2A with the lowest full-time student enrollment is Greene County with 526 students, while the largest school is Pike County enrolling 1,014 students. The 3A classification includes 84 public schools with Shaw High School being the largest with 1,418 students and Davidson Arts School enrolling only 357 students. The 4A division contains 92 public schools. The school that has the largest enrollment in 4A is Chattahoochee with 1,891 students, while the lowest enrollment in this division is Liberty County with 1,205 students. Even though the 5A classification represents the schools with the largest enrollments it also represents the classification with the fewest number of schools. The 5A classification has 62 schools, which includes Brookwood, the largest school in Georgia with 3,433 students, and Islands (Coastal), the smallest 5A school with 600 students.

Data Collection

Data describing school wealth were available in the Georgia Department of Education's annual report. The information that was used to determine the wealth of a school was found in the archival records listing the percentage of students that were eligible for the free and reduced lunch program. Data for free and reduced lunch provides the basis to define social and economic

status (SES). SES is typically taken to mean the relative wealth and accompanying status of a person or group (Sirin, 2005). If one were to use the free and reduced lunch data directly, the result would be that larger values of SES mean smaller values of wealth, which would be a definition that contradicts the normally accepted meaning of the term. Therefore, the percentage of free and reduced lunch was subtracted from 1.00 to yield the percentage of the enrollment not on a lunch subsidy. The ensuing percentage is taken to mean that the larger the percentage of children not on lunch support, the wealthier the district. Thus, the measure of free and reduced lunch contributes to the accepted definition of SES in which higher values indicate a greater presence of the property.

The size of school variable was determined by the number of students enrolled full time (FTE) in each public school. This information was gathered from the GHSA database found in its Constitution and By-Laws. An additional measurement of size was the number of paid on staff coaching positions found in each school. These data were found in the Georgia High School Association's directory publication, which lists the names of state officers, member high schools, principals, coaches, band directors, literary coordinators, and official associations.

Public data from the most recent decennial census as noted in the National Center for Education Statistics' website were utilized to categorize each public GHSA member high school in the state of Georgia as being either city, suburban, town, or rural. This information served as demographic material to ensure that similar environmental situations were being compared.

The instrument used to measure the overall success of a school's athletic program was the scores for the Georgia Athletic Directors (GADA) Regions Directors Cup. Athletic success in this study served as a dependent variable that was also continuous as schools can score any point value from 0 to 1600 points. The program was created and controlled by the GADA to recognize

and honor those schools in the state that are considered to possess the strongest, most successful overall athletic programs. An Overall Directors Cup winner is presented to one school in each of the five classifications each year. All the other schools are ranked in their order of finish.

Statistical Treatment

A correlation analysis was conducted to determine whether there was a relationship between the three independent variables (size, wealth, district type) and the dependent variable of athletic success. A multiple regression test was then used to determine how effective the independent variables can predict athletic success. Once this was done, a path analysis was used to determine the magnitude of the relationship of the hypothesized causal connections between the sets of variables.

Summary

In this chapter, a brief overview was given describing the type of study as quantitative, the unit of analysis as the school, and providing a listing of the dependent and independent variables. All 376 public secondary schools that are members of the Georgia High School Association served as the sample group studied. Archived data found in the Georgia Department of Education's annual report (wealth), the Georgia High School Association's Constitution and By-Laws (Size), and from the National Center for Education Statistics' website (District Type) were used for the study. This data were collected and analyzed to determine a relationship between the independent variables (size, wealth, district type) to the dependent variable (athletic success). A fourth independent variable, which was a composite of size, wealth, and district type, was also analyzed to determine the effect the combination of all three independent

variables have to athletic success. Then a path analysis was used to determine the significance of those relationships.

CHAPTER 4

DATA ANALYSIS

Introduction

Chapter 4 presents an analysis of the data. Statistics describing the sample are presented, followed by an inter-correlational table. The results of hypotheses testing and unhypothesized findings are also given.

Using the school as the unit of analysis and controlling for SES, four directional hypotheses were tested.

H1: The size of the school is positively related to athletic performance.

H2: The wealth of a community is positively related to athletic performance.

H3: Suburban school districts will perform better athletically than city, town, or rural districts.

H4: Wealth, size, and district type will form a composite that will be positively related to athletic performance.

Descriptive Statistics

This section presents characteristics of the major independent and dependent variables. In addition to the variables listed in the hypotheses, ancillary variables were collected to illuminate relationships thought to exist but not specifically tested in this investigation.

Independent and Dependent Variables

The measured independent variables were size, wealth, and district type. Size was conceptualized as enrollment and, as a variable not directly dealt with in this study, the number of coaches was collected. Wealth was conceptualized as the percentage of students on free and reduced lunch programs. District type was conceptualized along a rough continuum of city, suburban, town, and rural schools (1 = city, 2 = suburban, 3 = town, and 4 = rural). The higher scores represent a leaning toward rural and the lower scores tilt toward being urbanized; the higher the mean the less population density and the further from the center of urbanization. Because of the importance of classification on size within the state athletic association, all data are broken down first by classification ranging from Class 1A, the smallest enrollment schools, to Class 5A, the largest. The outcomes are broken down by classifications. This is done because the classes are autonomous in scoring. Each group receives the same number of points for the positions that are earned in state competition yet each has an overall winner. There is no way to directly compare the independent variables with the Director Cup scores because each class competes only against others in their class. Therefore, there is no overall Directors Cup score against which to assess the athletic performance of all schools simultaneously. Dependent variable properties are given by classification in the same table as the independent variables. Although not germane to the hypotheses studied, the academic (GHSGT) data were added because of their availability and potential interest. No hypotheses used this data.

Table 1

Class 1A Descriptive Statistics for Enrollment, FRL, District Type, and Coaches

	N	Mean	SD	Low-High	Range
Size (Enrollment)	61	348.81	120.45	35-515	480
Wealth (FRL)	59	33.90	18.47	1.23-100	98.77
District Type	59	3.66	0.63	1-4	3
Coaches	61	19.87	8.27	0-34	34
Directors Cup	61	141.18	115.49	0-453	453
GHSGT	60	62.70	20.37	0-96.6	96.6

Table 2

Class 2A Descriptive Statistics for Enrollment, FRL, District Type, and Coaches

	N	Mean	SD	Low-High	Range
Size (Enrollment)	82	801.87	133.01	527-1015	488
Wealth (FRL)	77	37.76	17.46	0-82.54	82.54
District Type	77	3.21	1.09	1-4	3.00
Coaches	82	32.04	11.78	11-85	74
Directors Cup	82	299.64	256.27	0-1299.50	1299.50
GHSGT	76	64.94	13.62	30.30-94.90	64.60

Table 3

Class 3A Descriptive Statistics for Enrollment, FRL, District Type, and Coaches

	N	Mean	SD	Low-High	Range
Size (Enrollment)	86	1160.42	183.23	357-1418	1061
Wealth (FRL)	84	44.22	17.42	6.97-83.01	76.04
District Type	84	2.57	1.26	1-4	3
Coaches	86	35.34	11.39	2-78	76
Directors Cup	86	296.57	257.94	0-1243	1243
GHSGT	84	70.21	13.78	34.80-100	65.20

Table 4

Class 4A Descriptive Statistics for Enrollment, FRL, District Type, and Coaches

	N	Mean	SD	Low-High	Range
Size (Enrollment)	92	1625.41	148.58	1205.50-1891	685.50
Wealth (FRL)	92	53.05	22.06	12.15-94.38	82.23
District Type	92	2.68	1.12	1-4	3
Coaches	92	40.38	10.9	17-72	55
Directors Cup	92	282.59	224.65	0-1066.50	1066.50
GHSGT	92	74.2	11.92	41.90-96.40	54.50

Table 5

Class 5A Descriptive Statistics for Enrollment, FRL, District Type, and Coaches

	N	Mean	SD	Low-High	Range
Size (Enrollment)	62	2163.13	581.01	600-3433.50	2833.50
Wealth (FRL)	62	56.70	21.39	12.04-94.99	82.95
District Type	62	2.05	0.78	1-4	3.00
Coaches	62	47.19	18.47	11-89	78
Directors Cup	62	451.2	328.81	0-1220.50	1220.50
GHSGT	62	77.51	14.47	32.10-98.40	66.40

The standard deviation is sufficiently varied as to provide a reason for future investigation of the usefulness of the classifications. The standard deviation in class 5A was larger than the entire range in the 1A and 2A classifications, which raises the question as to whether the particular classification of 5A is workable. One must consider the aberration found in Class 5A where there is only one school with an enrollment of 600 students compared to the average of all other schools in that classification with over 2,000 students. There were 61 schools classified as 1A, 77 classified as 2A, 84 classified as 3A, 92 classified as 4A, and 62 classified as 5A for a total of 376 Georgia public secondary schools included in the study. Of the 61 total schools in Class 1A there were two schools that were eliminated from the data tabulations on wealth and

district type because of inadequate information and one school eliminated because of inadequate information on the Georgia High School Graduate Test (GHSGT) scores. In Class 2A, five schools were eliminated from the data tabulations due to inadequate information on the schools' wealth and district type while six were eliminated from the GHSGT tabulations because of missing data. Class 3A had two schools that were eliminated from the data tabulations due to insufficient data on wealth, district type, or GHSGT scores. All 92 Class 4A schools and 62 Class 5A schools were considered in the data analyses of those classifications.

The average number of students enrolled in Class 1A schools was 349, ranging from 35 students in one school to 515 in the largest school. In Class 2A, the average number of students was 807, with a low of 526 students, to a high of 1,014 students. Class 3A schools averaged 1,163 students, ranging from a school with 357 students enrolled to 1,418 students in the largest school. There was an average of 1,625 students enrolled in Class 4A schools, which had enrollments ranging from 1,205 to 1,891. The average size of Class 5A schools was 2,163 students ranging from the smallest school having 600 students to the largest school having 3,433.

There is a big jump in the number of coaches found in 2A schools compared with those in the smaller 1A classification. The data were collected for the 2010-2011 school year.

Hypotheses Testing

H1: The size of the school is positively related to athletic performance. Correlational statistics support the first hypothesis (see Tables 6-10). Within each class, size matters: 1A (r =.53; $p < .01$), 2A ($r = .17$; $p < .05$), 3A ($r = .22$; $p < .05$), 4A ($r = .30$; $p < .01$), and 5A ($r = .57$; $p < .01$).

H2: As wealth increases, athletic success increases. Correlational statistics support the second hypothesis (see Tables 6-10). Wealth was positively and significantly correlated to the Director Cup scores in all classes: 1A ($r = .36$; $p < .01$), 2A ($r = .41$; $p < .01$), 3A ($r = .46$; $p < .01$), 4A ($r = .68$; $p < .01$), and 5A ($r = .64$; $p < .01$).

H3: Suburban school districts will perform better athletically than city, town, or rural districts. There is no significant relationship between district type and the Director Cup Points in classifications 1A through 4A (see Tables 6-9). This hypothesis for those classes was rejected. There was, however, supporting evidence for this hypothesis found in the largest school division, the class 5A division ($r = .27$; $p < .05$) (see Table 10).

Table 6

The Inter-correlational Matrix gives a Bivariate Correlation for Class 1A

	Size	Wealth	Type	Coaches	Director Cup
Size	---	0.24	-0.08	.45**	.35**
Wealth	---	---	-0.18	.31*	.39**
Type	---	---	---	0.20	0.00
Coaches	---	---	---	---	.77**

Note. *$p < .05$; **$p < .01$

Table 7

The Inter-correlational Matrix gives a Bivariate Correlation for Class 2A

	Size	Wealth	Type	Coaches	Director Cup
Size	---	0.24	-0.08	.45**	.17*
Wealth	---	---	-0.18	.31**	.40**
Type	---	---	---	0.20	0.10
Coaches	---	---	---	---	.60**

Note. *$p < .05$; **$p < .01$

Table 8

The Inter-correlational Matrix gives a Bivariate Correlation for Class 3A

	Size	Wealth	Type	Coaches	Director Cup
Size	---	-0.04	0.13	.36**	.22*
Wealth	---	---	0.14	.28*	.46**
Type	---	---	---	.44**	0.09
Coaches	---	---	---	---	.67**

Note. *$p < .05$; **$p < .01$

Table 9

The Inter-correlational Matrix gives a Bivariate Correlation for Class 4A

	Size	Wealth	Type	Coaches	Director Cup
Size	---	.28*	-0.03	.30**	.30**
Wealth	---	---	.25*	.56**	.68**
Type	---	---	---	0.14	0.01
Coaches	---	---	---	---	.44**

Note. *$p < .05$; **$p < .01$

Table 10

The Inter-correlational Matrix gives a Bivariate Correlation for Class 5A

	Size	Wealth	Type	Coaches	Director Cup
Size	---	0.15	.44**	.74**	.57**
Wealth	---	---	0.05	.48**	.64**
Type	---	---	---	.39**	.27*
Coaches	---	---	---	---	.72**

Note. *$p < .05$; **$p < .01$

H4: Size, wealth, and district type will form a composite that will be positively related to athletic performance. In all cases, size, wealth, and district type were jointly predictors of athletic success (see Table 11).

Multiple regression analysis statistical techniques were utilized in testing the hypotheses and supported Hypothesis 4. Measurements of the Directors Cup Points were regressed on size, wealth, and district type to test the prediction of Hypothesis 4 for each class. Results describing the individual and joint effects of the three independent variables on the Director Cup Points are presented.

Table 11

Composite of Classification of 1A-5A: Regression of Directors Cup upon Size, Wealth, and District Type

	Class 1A	Class 2A	Class 3A	Class 4A	Class 5A
	β	β	β	β	β
Size	0.50*	0.09	0.12	0.10	.47**
Wealth	.26*	.46**	.34**	.69**	.57**
District Type	0.03	-0.12	-.22*	-.16	0.04
	R = .61**	R = .44**	R = .64**	R = .70**	R = .80**
	R^2 = .34**	R^2 = .16**	R^2 = .39**	R^2 = .47**	R^2 = .62**

Note. *p < .05; **p < .01

In Class 1A (see Table 6), a zero-order of correlation was done on the three independent variables of size (r = .53; p < .01), wealth (r = .38; p < .01), and district type (r = .08), which was not significant, and yet they combined (see table 11) to relate positively to athletic performance (R = .69, p < .01; Adjusted R^2 = .45, p < .01). An analysis of the unique influence of each independent variable on athletic performance found that size (β = .50, p < .01) was the strongest predictor of athletic success in this smallest classification, wealth (β = .26, p < .05) was significant, and district type by itself had no significant effect on athletic performance.

In Class 2A (See Table 11), wealth was the strongest predictor of athletic success. Wealth made a unique contribution to the results of the Director Cup points (β = .46, p < .01)

while controlling for both size and district type. Size (β = .09) and district type (β = -.12) had no significant influence on a school's ability to amass Director Cup points. The combined effects of the three independent variables significantly affected the athletic success of schools (R = .44; p < .01; Adj. R^2 = .16; p < .01) yet only explained 16% (Adjusted R = .159) variance for success.

In Class 3A (see Table 11), wealth again was a strong and unique predictor of athletic success (β = .34; p < .01). District type had no effect on athletic success in Class 1A or 2A, and district type in Class 3A was inversely correlated (β = -.22; p < .05). The combined effects of the three independent variables of size, wealth, and district type in Class 3A explained 39% (Adjusted R^2 = .39) of the variance for athletic success.

In Class 4A (see Table 11), wealth (β = .69; p < .01) was a strong predictor for athletic success. District type (β = -.16) had a slight effect on the results of the Director Cup Points, demonstrating the importance of population density. Size (β = .10) was not significant toward athletic success. The composite of the three independent variables, however, explained 47% (Adjusted R^2 = .47) of the variance for athletic success.

In Class 5A (see Table 11), it is evident that just as in the other four classes, wealth (β = .57, p < .01) becomes a dominant predictor of athletic success. However, the independent variable of size (β = .47, p < .01) in this class becomes more of a predictor for athletic success than it does in any of the previous classes, with the exception of Class 1A. The district type again has no significance (β = .01 ns). The combined effect of the three variables of size, wealth, and district type on the Director Cup points is significant (R = .64). The composite explains 62% (Adjusted R^2 = .621) of the variance for athletic success.

In the individual classes there are variations in the effect of the independent variables. Wealth consistently made significant and unique contributions in all five classifications while size contributed substantially in the smallest class (1A) and the largest class (5A).

In a further demonstration of Blau's (1971) theory of greater differentiation associated with large organizations, the Director Cup points were regressed on the number of coaches found in schools (see Table 12). There is a significant correlation in all five classifications between the number of coaches working at a school and the school's athletic success.

Table 12

Correlation of Classification of 1A-5A: By Coaches with Directors Cup

	Class 1A	Class 2A	Class 3A	Class 4A	Class 5A
	r	*r*	*r*	*r*	*r*
Coaches	.77*	.77**	.67**	.44**	.72**

Note. *$p < .05$; **$p < .01$

Other Findings

The data for the Georgia High School Graduate Test (GHSGT) scores were collected from the Georgia Department of Education. The scores represent the percentage of students in school that passed the GHSGT. Though not a part of the hypotheses, they were collected to consider the obvious question of relationship between academic success and athletic success.

Summary

This section has provided a statistical description of the sample. Additionally, hypothesized results and even results that were not hypothesized were given. In the main, the hypotheses linking wealth and size were demonstrated. District type provided mixed results in the explanation of athletic success. In a fashion similar to athletics, wealth and size played a part in academic success.

Table 13

Correlation of Predictors of Directors Cup with Georgia High School Graduate Test Scores for Classifications 1A-5A

	DC		GHSGT	
Classification 1A	*r*	β	*r*	β
Size	.35**	0.22	.38**	.37*
Wealth	.39**	-0.19	.55**	.52**
District Type	0.002	-0.04	-0.13	0.06
	R = .70**	R^2 = .50**	R = 62**	R^2 = .38**
Classification 2A				
Size	.35**	0.22	.40**	.37*
Wealth	.39**	-0.19	.55**	.52**
District Type	0.002	-0.04	-0.13	0.06
	R = .70**	R^2 = .46**	R = .62**	R^2 = .34**
Classification 3A				
Size	.29*	0.12	-0.03	-0.01
Wealth	.46**	.34**	.75**	.74**
District Type	0.09	-0.22	0.17	0.05
	R = .70**	R^2 = .46**	R = .75**	R^2 = .55**
Classification 4A				
Size	.30*	0.09	.25*	-0.02
Wealth	.68**	.65**	.86**	.78**
District Type	0.01	-0.16	0.18	-0.04
	R = 70**	R^2 = 47**	R = .87**	R^2 = .75**
Classification 5A				
Size	.57**	.30*	.51**	.36*
Wealth	.64**	.46**	.74**	.65**
District Type	.27*	.01*	0.21	-0.02
	R = .81**	R^2 = .64**	R = 85**	R^2 = 70**

Note. *p < .05; **p < .05.

Table 14

Correlation of Directors Cup with Georgia High School Graduation Test by Class

Division	Correlation
1A	.30*
2A	.30*
3A	.42**
4A	.64**
5A	.62**

CHAPTER 5

RESULTS

Chapter V presents a summary of the findings. Additionally, theoretical and practical implications are discussed and limitations are recognized. Finally recommendations for future studies are given.

Summary of Findings

The general relationship of size, wealth, and district type to athletic success was established, though there were some important exceptions. Socioeconomic status made the anticipated effect on the Director's Cup in all five classifications, but there was evidence to show that size also matters. In Class 5A size had a substantial effect ($\beta = .47$, $p < .01$), suggesting that perhaps this class with the number of students in schools ranging from 600 to 3,433 was too broad. In fact, the Georgia High School Association's executive committee added a sixth classification (6A) in the fall of 2011. This was done in part because they perceived such a disparity in the number of students found in schools in Class 5A would pose a disadvantage in competition for the smaller schools. The data in this study support the GHSA's decision.

The location of the school (district type) had little influence on the outcome of the Director Cup points in Classes 1A - 4A. The influence of district type on athletic success in Class 5A ($r = .270$, $p < .05$) departed from the trend of no influence seen in Classes 1A – 4A. In Class 4A, district type narrowly missed significance ($p = .05$) in the negative correlation (-.16), suggesting that size had some effect because a negative beta indicates a larger population.

Theoretical Implications

The works by Blau (1974) and Blau and Schoenherr (1971) provided the framework upon which the concept of the effects of size could be addressed. They reached the conclusion that the size of an organization was an important condition affecting the structure of that organization. Size gave rise to an increase of distinct positions they referred to as differentiation. It was this differentiation that allowed those larger organizations to accomplish tasks that smaller organizations could not. This dissertation replicated and extended Blau and Schoenherr's work by focusing on the structure of schools and its relationship to athletic success. Data provided by this study tend to support Blau and Schoenherr's theory about the consequences of differentiation in an organization. Differentiation in athletic programs could be readily observed in the number of coaches found on a coaching staff. There was a significant correlation in all five classifications between the number of coaches working at a school and the school's success. One can readily deduce, as did Blau and Schoenherr, that the greater number of personnel, in this case coaches, the more specialization can occur. An increase in specialized coaching allows for greater learning opportunities and skill development for the student athletes in the larger schools. Given the preceding context there has to be a distinct advantage afforded the wealthier schools in that they have the means by which to hire a greater number of coaches than does a less wealthy school.

The Free and Reduced Lunch program has often been used as an indicator of a community's wealth because it is easily attainable and provides an objective method by which researchers could make accurate comparisons for wealth in local communities. In his meta-analysis of SES studies, Sirin (2005) found that "more commonly used SES components such as education, occupation, income, and eligibility for school lunch programs produced similar

results" (p. 439) as neighborhood characteristics and resources found in homes. When the school serves as the unit of analysis, "school SES is usually measured on the basis of the proportion of students at each school who are eligible for reduced-price or free lunch programs at school during the school year" (p. 419). It is important to note that the wealth of a school was positively and significantly related to athletic success in all five classifications. Affluence makes a difference in a school's ability to compete with other schools for athletic success. Wealth allows for the hiring of more specialized personnel to serve as coaches, higher quality facilities, and for student athletes to take advantage of additional opportunities for training and skill development.

The third dimension to the study was the exploration of the possible relationship and influence of the location of the school to a school's athletic performance. There was no relationship between district type and athletic success in Classes 1A – 4A, but location was influential in athletic success in Class 5A ($r = .27$, $p < .05$).

Practical Implications

Generally, size is a factor in athletic success. However, its effect is greatest in both the smallest and the largest classifications. In Class 1A ($\beta = .50$, $p < .05$) and in Class 5A ($\beta = .47$, $p < .01$), size had a substantial effect in Director Cup Points. This suggests that these two classifications are too broad, posing as a disadvantage for the smaller schools competing against the larger schools. In fact, in the recent GHSA reclassification session (2011-2012) the GHSA executive committee decided to adjust the classification structure from five classifications to an additional sixth class in an effort to address the perception, and as supported by these data, that size differences of that magnitude do matter. Their policy is supported by these findings.

It is possible that size does not demonstrate a larger effect on athletic success in this study because the schools are automatically grouped according to like size by the GHSA. This grouping occurs because the GHSA decision makers sense that the size of a school can dramatically affect the athletic outcome between schools.

In all five classifications wealth (SES), as measured by the Free and Reduced Lunch program, made the anticipated effect on the Director Cup Points. There was a significant relationship between wealth and the results of the Director Cup points. The wealthier schools placed higher in the rankings of the GADA's Director Cup race than those schools with less wealth. Getting more coaches supports Blau's (1971) theory for the advantage of differentiation in large organizations. Bigger and wealthier schools have more coaches than smaller and poorer schools. Larger schools get more coaches and do better in the Director's Cup.

The findings of this study determined that where a school was located (district type) had little effect on the number of points scored by the school in the Director Cup race.

Limitations

Just as with wealth, there are variables other than size that influence academic achievement. Lee and Smith (1994) argued that size is a factor that has an indirect effect on student achievement. They contended that size can only aid or impede other desirable practices such as "collegiality among teachers, personalized relationships, and less differentiation of instruction by ability" (p. 37). The authors concluded their study, however, by acknowledging the disadvantage faced by low SES students when attending a school that is considered larger. The same could hold true with athletic success. There could be variables other than size and wealth that influence a school's athletic performance.

The study was also limited geographically. This study was completed in the state of Georgia and concentrated on Georgia public secondary schools. Though surrounding states had similar state associations, which provided direction and oversight of the public school's athletic programs, none of them were exactly like Georgia's in how they classified schools or how overall athletic success was measured.

Research Recommendations

Though not a part of the hypotheses proposed in this study, data were presented indicating a strong connection between academic success, using the Georgia High School Graduate Test (GHSGT) scores--Class 1A ($r = .31$, $p < .05$), Class 2A ($r = .48$, $p < .01$), Class 3A ($r = .42$, $p < .01$), Class 4A ($r = .64$, $p < .01$), Class 5A ($r = .62$, $p < .01$)--and athletic success as measured by the Director Cup points. If the GHSGT scores represent the academic success of schools then it is conceivable based on the findings of this study that there is a connection between academic success and athletic success.

There is a national debate occurring at the present time concerning whether private and public schools compete on a level playing field. There are many who suggest the private schools have an advantage over their public school colleagues when it comes to success in athletics. The research question that needs to be addressed is, "Do private or independent schools have an advantage over public schools in regard to athletic success?"

It was found in this study that wealth has its advantages when it comes to athletic success. However, there are other measurements or indications of wealth than the Free and Reduced Lunch percentage used in this study. Another wealth resource, which might contribute to athletic success, is booster club funds. Though not documented, there are often conversations

between the coaches or directors of athletic programs concerning the disparity of money available to various schools for athletic purposes from the support of their booster clubs. During one such conversation, I learned that a school in the county had half a million dollars at its disposal from their booster club, while another school in the same county, class, and region was fortunate to work with less than $50,000. The school with the greater booster funds is well known for its athletic success while the school with fewer booster funds available has never been known for its success in any sport. The research question that begs to be addressed is, "Does the balance of funds found in the booster club account relate to the overall athletic success of the school?"

It was determined in this study that differentiation and specialization in coaching was influential in determining athletic success. A school with a greater number of coaches will produce a greater degree of athletic success in that school. What about the influence of the coach to athletic success (e.g., a coach's experience, success record)? The hypothesis could be, "The coaches' years' of experience are positively related to a team or school's athletic success."

We know from this study that the composite of the variables size, wealth, and district type have a significant relationship with athletic success. So how do these same independent variables of size, wealth, and location effect specific sports? Example: Are the wealthier schools more inclined or likely to win what are referred to as the "country club" sports (e.g., golf, tennis, swimming)?

REFERENCES

Abbott, M. L., Joireman, J., & Stroh, H. R. (2002). The influence of district size, school size, and socioeconomic status on student achievement in Washington: A replication study using hierarchical linear modeling. *A technical report for The Washington School Research Center.* Lynnwood, WA: Seattle Pacific University.

Alabama High School Association Constitution and By-Laws. (2011-2012). Retrieved November 23, 2011, from http://www.ahsaa.com/Portals/0/pdf/Publications/2011-12%20MASTER%20Handbook%20bylaws.pdf

Bauch, P. A., (2001). School-community partnerships in rural schools: Leadership, renewal, and a sense of place. *Peabody Journal of Education, 76*(2), 204-221.

Barnett, R. R., Glass, C. J., Snowdon, R. I., & Stringer, Karl, S. (2002). Size, performance and effectiveness: cost-constrained measures of best-practice performance and secondary-school size. *Education Economics*, 10, 291-311.

Blau, P. M., (1974). *On the nature of organizations.* New York, London, Sydney, Toronto: John Wiley & Sons

Blau, P. M., & Schoenherr, R. A. (1971). *The structure of organizations*. New York, London: Basic Books.

Bickel, R. (1999). *School size, socioeconomic status, and achievement: A Georgia replication of inequity in education*. (Doctoral dissertation, Marshall University, 1999).

Bickel, R., Howley, C., Williams, T., & Glascock, C. (2001). High school size, achievement equity, and cost: Robust interaction effects and tentative results. *Education Policy Analysis Archives*, 9(40). Retrieved on March 6, 2011 from http://epaa.asu.edu/epaa/v9n40.html

Brown, R. (2011). Research note: Estimates of college football player rents. *Journal of Sports Economics, 12*(2), 200-212.

Brown, C., & Paul, D. M. (2002). The political scorecard of professional sports facility referendums in the United States, 1984-2000. *Journal of Sport and Social Issues, 26*, 248-267.

Carlson, D., Lavery, L., & Witte, J. F. (2011). The determinants of interdistrict open enrollment flows: Evidence from two states. *Educational Evaluation and Policy Analysis*, 76-94.

Carrington, P. D., (1973). Financing the American Dream: Equality and School Taxes. *Columbia Law Review,* 73, 1227-1260.

Caldas, S. J. & Bankston, C. (1997). Effect of school population socioeconomic status on individual academic achievement. *Journal of Educational Research, 90*, 269-277. Retrieved April 7, 2008 from Ebsco Host.

Coladarci, T., (2006). School size, student achievement, and the "power rating" of poverty: Substantive finding or statistical artifact? *Educational Policy Analysis Archives, 14,* 1-26.

Cotton, K. (1996). School size, school climate, and student performance. Retrieved from http://www.apexsql.com/_brian/school%20Size%20Matters.pdf

Covay, E., & Carbonaro, W. (2010). After the bell: Participation in extracurricular activities, classroom behavior, and academic achievement. *Sociology of Education, 83*, 20-45.

Crosnoe, R. (2009). Low-income students and the socioeconomic composition of public high schools. *American Sociological Review, 74*, 709-730.

Duke University. (2008). *Unrivaled ambition: A strategic plan for Duke athletics.* Retrieved November 24, 2011, from http://www.goduke.com//pdf2/127971.pdf?DB_ OEM_ID=4200

Duncan, G. J., & Magnuson, K. A. (2005). Can family socioeconomic resources account for racial and ethnic test score gaps? *The Future of Children,* 15, 35-54.

Easton-Brooks, D., & Davis, A., (2007). Wealth, traditional socioeconomic indicators, and the achievement debt. *The Journal of Negro Education, 76,* 530-541.

Eberts, R. W., Schwartz, E. K., & Stone, J. A., (1984). *The effect of school size on student outcomes*. Report for the National Institute of Education, Washington, DC. Eugene, OR: Center for Educational Policy and Management.

Eberts, R. W., Schwartz, E. K., Stone, J. A., (1990). School reform, school size, and student achievement. *Economic Review- Federal Reserve Bank of Cleveland, 26*, 2-15.

Florida High School Athletic Association Constitution and By-Laws, 2010-11. Retrieved November 23, 2011 from http://www.fhsaa.org/sites/default/files/attachments/2010/09/ 16/node-235/1011_handbook2.pdf

Fitzpatrick, K. R., (2006). The effect of instrumental music participation and socioeconomic status on Ohio fourth, sixth, and ninth grade proficiency test performance. *Journal of Research in Music Education,* 54, 73-84.

Fram, M. S., Miller-Cribbs, J. E., & Van Horn, L., (2007). Poverty, race, and the contexts of achievement: Examining educational experiences of children in the U.S. south. *Social Work, 52,* 309-319.

Gee, C. J. (2010). How does sport psychology actually improve athletic performance? A framework to facilitate athletes' and coaches' understanding. *Behavior Modification, 34*, 386-402.

Georgia High School Association Constitution and By-Laws 2010-11. Retrieved November 23, 2011, from http://www.ghsa.net

Goddard, R. D. (2003). Relational networks, social trust, and norms: A social capital perspective on students' chances of academic success. *Educational Evaluation and Policy Analysis*, 25(1), pp. 59-74.

Gooding, R. Z., & Wagner, J. A., III, (1985). A meta-analytic review of the relationship between size and performance: The productivity and efficiency of organizations and their subunits. *Administrative Science Quarterly, 30*, 462-481.

Hampden-Thompson, G., & Johnston, J. S., (2006). Variation in the relationship between nonschool factors and student achievement on international assessments. *National Center for Educational Statistics*, 1-35.

Harris, D. N. (2007). High-flying schools, student disadvantage, and the logic of NCLB. *American Journal of Education, 113*, 367-394.

Harrison, P. A., & Narayan, G. (2003). Differences in behavior, psychological factors, and environmental factors associated with participation in school sports and other activities in adolescence. *Journal of School Health, 73*, 113-130.

Heck, R. H. (2000). Examining the impact of school quality on school outcomes and improvement: A value-added approach. *Educational Administration Quarterly*, *36*, 513-552.

Hefner, F. L. (1990). Using economic models to measure the impact of sports on local economies. *Journal of Sport and Social Issues, 14*, 1-13.

Hopkins, T. (2005). If you are poor, it is better to be rural: A study of mathematics achievement in Tennessee. *The Rural Educator*, *27*(1), 21-28.

Howley, C. (1996). Compounding disadvantage: The effects of school and district size on student achievement in West Virginia. *Journal of Research in Rural Education, 12*, 25-32.

Howley, C. B., & Howley, A. A. (2004). School size and the influence of socioeconomic status on student achievement: Confronting the threat of size bias in national data sets. *Education Policy Analysis Archives*, *12*(52), pp. 1-35.

Hoy, W. K., & Miskel, C. G. (2005) *Educational administration: Theory, research, and practice* (7th ed). New York: McGraw-Hill.

Hoy, W. K., Tarter, J. C., Hoy, A., & Hoy Woolfolk, A. (2006). Academic optimism of schools: A force for student achievement. *American Educational Research Journal*, *43*(3), 425-446.

Huang, G., & Howley, C. (1993). Mitigating disadvantage: Effects of small-scale schooling on student achievement in Alaska. *Journal of Research in Rural Education, 9*(3), 137-149.

Johnson, J. D., Howley, C. B., & Howley, A. A. (2002). Small works in Arkansas: How poverty and the size of schools and school districts affect school performance in Arkansas. Summary of recent research. 14 pages. Retrieved September 14, 2009 from ERIC.

Jones, J. T., Toma, E. F., & Zimmer, R. W. (2008). School attendance and district and school size. *Economics of Education Review, 27,* 140-148.

Kerlinger, F. N. (1986). *Foundations of behavioral research.* Fort Worth, Chicago, San Francisco, Philadelphia, Montreal, Toronto, London, Sydney, Tokyo: Holt, Rinehart and Winston.

Kimberly, J. R. (1976). Organizational size and the structuralist perspective: A review, critique, and proposal. *Administrative Science Quarterly*, *21*(4), 571-597.

Kotlyarenko, D., & Ehrenberg, R. G. (2000). Ivy league athletic performance: Do brains win? *Journal of Sports Economics, 1*, 139-150.

Kuziemko, I. (2004). Using shocks to school enrollment to estimate the effect of school size on student achievement. *Economics of Education Review*, *25*, 63-75.

Lee, V. E. (2004). Effects of high-school size on student outcomes: Response to Howley and Howley. *Education Policy Analysis Archives, 12*, 11.

Lee, V. E., & Burkam, D. T. (2003). Dropping out of high school: The role of school organization and structure. *American Educational Research Journal, 40*, 353-393.

Lee, V. E., & Smith, J. B. (1994). *Effects of high school restructuring and size on gains in achievement and engagement for early secondary school students*. Paper prepared for the Center on Organization and Restructuring of Schools supported by the U.S. Department of Education, Office of Educational Research and Improvement and by the Wisconsin Center for Education Research. Madison, WI: School of Education, University of Wisconsin-Madison.

Lee, V. E., & Smith, J. B. (1996). Collective responsibility for learning and its effects on gains in achievement for early secondary school students. *American Journal of Education, 104*, 133.

Lee, V. E., & Smith, J. B. (1997). High school size: Which works best and for whom? *Educational Evaluation and Policy Analysis*, *19,* 205-227.

Lee, V. E., Smerden, B. A., Alfeld-Liro, C., & Brown, S. L. (2000). Inside large and small high schools: Curriculum and social relations. *Educational Evaluation and Policy Analysis, 22*, 147-171.

Leithwood, K., & Jantzi, D. (2009) A review of empirical evidence about school size effects: A policy perspective. *Review of Educational Research, 79*, 464-490.

Lleras, C. (2008). Race, racial concentration, and the dynamics of educational inequity across urban and suburban schools. *American Educational Research Journal*, *20*(10), 1-27.

Lopez-Williams, A., Chacko, A., Wymbs, B. T., Fabiano, G. A., Seymour, K. E., Gnagy, E. M., Chronis, A. M., Burrows-Maclean, L., Pelham, W. E., Morris, J. R., & Morris, T. L. (2005). Athletic performance and social behavior as predictors of peer acceptance in children diagnosed attention-deficit/hyperactivity disorder. *Journal of Emotional and Behavioral Disorders, 13*, 173-180.

Lubienski, S., Theule, & Lubienski, C. (2006). School sector and academic achievement: A multilevel analysis of NAEP mathematics data. *American Educational Research Journal*, *43*, 651-698.

McFarland, A. J. (2002). What's in it for us? Rethinking corporate sponsorships in interscholastic athletics. Retrieved July 15, 2011, from ERIC.

McLean, J. E., & Ross, S. M. (1994, October). *The urban-rural funding disparity*. Paper presented at the annual convention of the National Rural Education Association, Tuscaloosa, AL.

Melnick, M. J., Sabo, D. F., & Vanfossen, B. (1992). Educational effects of interscholastic athletic participation on African-American and Hispanic youth. *Adolescence, 27*, 295-308.

Minor, J. B. (2002). *Organizational behavior: Foundations, theories, and analyses.* New York: Oxford University Press.

Mintzberg, H. (1989). *Mintzberg on management: Inside our strange world of organizations.* New York: The Free Press.

Mondello, M. J., & Rische, P. (2004). Comparative economic impact analyses: Differences across cities, events, and demographics. *Economic Development Quarterly, 18*, 331-342.

Morrison, R. J. (1996). Sports fans, athletes' salaries, and economic rent. *International Review for the Sociology of Sport, 31*, 257-270.

Morton, C. (1995). *Creativity versus dollars: How rural schools in one state have maintained or improved their extra-curricular programs in the face of funding cuts*. Paper presented at the 1995 Research Forum of the National Rural Education Association, p. 20. (need month and location)

National Center for Education Statistics. (2006). Identification of rural locales. Retrieved on November 23, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009081

Noguera, P. A. (2004). Racial isolation, poverty, and the limits of local control in Oakland. *Teachers College Record, 106*(11), 2146-2170.

Okpala, C. O., Okpala, A. O., Smith, F. E. (2001). Parental involvement, instructional expenditures, family socioeconomic attributes, and student achievement. *Journal of Educational Research, 95*, 110-115.

Orr, A. J. (2003). Black-white differences in achievement: The importance of wealth. *Sociology of Education, 76,* 281-304.

Overbay, A. (2003). *School size: A review of the literature*. Research watch. Information Analysis by the Wake County Public School System. Raleigh, NC: Department of Evaluation and Research.

Parcel, T. L., & Dufur, M. J. (2001). Capital at home and at school: Effects on student achievement. *Social Forces, 79*(3), 881-911.

Pine, N. (2010). The role of athletics in the academy: An alternative approach to financial investment. *Journal of Sport & Social Issues, 34*, 475-480.

Ponessa, J. M. (1992). Student access to extracurricular activities. *Public Affairs Focus, 23*, 2-11.

Ready, D. D., Lee, V. E., & Welner, K. G., (2004). Educational equity and school structure: School size, overcrowding, and schools-within-schools. *Teachers College Record*, *106*(10), 1989-2014.

Ream, R. K. (2005). Toward understanding how social capital mediates the impact of mobility on Mexican American achievement. *Social Forces, 84*(1), 201-224.

Reynolds, E. (2011). 510 million fans attend high school sporting events. *High School Today, September 11*, 18-19.

Roeder, P. W. (2002). *Resisting the urge to merge: Does school size matter?* [Research Report]. Bowling Green, KY: University of Kentucky, Department of Political Science.

Rosentraub, M. S. (2006). The local context of a sports strategy for economic development. *Economic Development Quarterly, 20*, 278-291.

Rumberger, R. W., & Palardy, G. J. (2005). Test scores, dropout rates, and transfer rates as alternative indicators of high school performance. *American Educational Research Journal, 42*, 3-42.

Schneider, T. W., & Klotz, J. (2000, November). The impact of music education and athletic participation on academic achievement. Paper presented at the 28th Annual Meeting of the Mid-South Educational Research Association, Bowling Green, KY.

Slate, J. R., & Jones, C. H. (2005). Effects of school size: A review of the literature with recommendations. *Essays in Education*. Retrieved March 6, 2011, from http://www.usca.edu/essays/vol132005/slate.pdf

Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research, 75*, 417-453.

Spieler, M., Czech, D. R., Joyner, A. B., & Munkasy, B. (2007). Predicting athletic success: Factors contributing to the success of NCAA division I AA collegiate football players. *Athletic Insight, 9,* Discussion ¶ 4. Retrieved July 7, 2008, from www.athleticinsight.com

Stanley, L. R., Comello, M. L., Edwards, R. W., & Marquart, B. S. (2008). School adjustment in rural and urban communities: Do students from "Timbuktu" differ from their "city slicker" peers? *Journal of Youth Adolescence, 37,* 225-238.

Staurowsky, E. J. (1996). Blaming the victim: Resistance in the battle over gender equity in intercollegiate athletics. *Journal of Sport & Social Issues, 20*, 194-210.

Stephens, L. J., & Schaben, L. A. (2002). The effect of interscholastic sports participation on academic achievement of middle level school students. *NASSP Bulletin, 86*, 34-41.

Stewart, L. (2009). Achievement differences between large and small schools in Texas. *The Rural Educator, 30*(2), 20-28.

Taks, M., Renson, R., & VanReusel, B. (1994, June/July). *Of sport, time and money: An economic approach to sport participation*. Paper presented at the ICSS-Seminar "Sport in Space and Time," Vienna, Austria.

Unrivaled Ambition: A strategic plan for Duke athletics-April 26, 2008. Retrieved August 22, 2012, from http://news.duke.edu/reports/athleticsstrategyfinal.pdf

Vannatta, K., Gartstein, M. A., Zeller, M., & Noll, R. B. (2009). Peer acceptance and social behavior during childhood and adolescence: How important are appearance, athleticism, and academic competence? *International Journal of Behavioral Development, 33*, 303-311.

Verdugo, R. R. (2010). The heavens may fall: School dropouts, the achievement gap, and statistical bias. *Education and Urban Society, 43*, 184-204.

Walberg, H. J. (1992). On local control: Is bigger better? *In source book on school and district size, cost and quality*. ERIC 118-134.

Weiss, C. C., Carolan, B. V., & Baker-Smith, C. (2010). Big school, small school: (Re)testing assumptions about high school size, school engagement, and mathematics achievement. *Youth Adolescence, 39*, 163-176.

Werblow, J., & Duesbery, L. (2009). The impact of high school size on math achievement and dropout rate. *The High School Journal, Feb/Mar*, 14-23.

Whannel, G. (2009). Television and the transformation of sport. *The Annals of the American Academy of Political and Social Science, 625*, 205-218.

Yan, W. (2006). *Is bigger better? A comparison of rural school districts*. A project that was sponsored by a grant from the Center for Rural Pennsylvania, a legislative agency of the Pennsylvania General Assembly. Page 13

Yang, Y. (2003). Dimensions of socio-economic status and their relationship to mathematics and science achievement at individual and collective levels. *Scandinavian Journal of Educational Research, 47*, 21-41.

APPENDIX A

DISTRICTS

For the purpose of this study the term "urban" school will be used to identify any school that can be found in a large (250,000 or more), a midsize (100,000 to 250,000), or a small (less than 100,000) territory inside an urbanized area and inside a principal city. The designation of a "suburban" school will be used to identify any school that can be found in a large (250,000 or more), a midsize (100,000 to 250,000), or a small (less than 100,000) territory outside a principal city and inside an urbanized area. The term "town" will refer to "fringe" (less than or equal to 10 miles from an urbanized area), "distant" (more than 10 miles yet less than 35 miles from an urbanized area), and "remote" (more than 35 miles from an urbanized area) territories inside an urban cluster. And finally the term "rural" schools will refer to those schools that are located in the "fringe" (less than 5 miles from and urbanized area or less than 2.5 miles from an urban cluster), "distant" (more than 5 miles but less than 25 miles from an urbanized area or more than 2.5 miles but less than or equal to 10 miles from an urban cluster), and "remote" (more than 25 miles from an urbanized area and also more than 10 miles from an urbanized cluster) territories in Georgia.

APPENDIX B

GADA REGIONS DIRECTORS CUP

Each year the GADA recognizes those schools in the state of Georgia that experienced the most athletic success during the course of the school year. The researcher will count 25 sports for this study. The male sports, which will be included, are as follows: football, cross-country, basketball, wrestling (dual or traditional), riflery, swimming, track and field, golf, baseball, soccer, lacrosse, and tennis. The female sports which will be included by the researcher are: volleyball, cross-country, softball (fast-pitch), softball (slow-pitch), basketball, competition cheerleading, gymnastics, swimming, track and field, golf, soccer, lacrosse, and tennis. The researcher will consider using only the teams that earn positions at the GHSA state play-offs to determine points in the GADA Regions Directors Cup standings. The results from region tournaments or competitions will not be included in the tabulations. The GADA requires a minimum of 65 schools participating in a given sport in order to receive the full allotment of Director's Cup points. Those sports under the minimum number of 65 schools participating will receive only half the normal allotment of points for each position. The Director Cup points will be awarded to the 'bracketed sports" (baseball, basketball, football, lacrosse, soccer, softball, tennis, volleyball and wrestling-duals) as follows: 1^{st} place - 100, 2^{nd} place - 90, 3^{rd} and 4^{th} places – 83, 5^{th} -8^{th} places - 70, 9^{th}-16^{th} places – 53, 17^{th} – 32^{nd} places – 25 points. The Director Cup points will be awarded to the "non-bracketed sports (cheerleading, cross-country, golf, gymnastics, riflery, swimming and wrestling) as follows: 1^{st} – 100, 2^{nd} – 90, 3^{rd} – 85, 4^{th} – 80, 5^{th} -75, 6^{th} -72, 7^{th} – 69, 8^{th} – 66, 9^{th} – 63, 10^{th} – 60, 11^{th} – 57, 12^{th} – 54, 13^{th} – 51, 14^{th} – 48, 15^{th} – 45, 16^{th} – 42, 17^{th} – 40, 18^{th} – 38, 19^{th} – 36, 20^{th} – 34, 21^{st} – 32, 22^{nd} – 30, 23^{rd} – 28, 24^{th} – 26, 25^{th} – 24, 26^{th} – 22, 27^{th} – 20, 28^{th} – 18, 29^{th} – 16, 30^{th} – 14, 31^{st} – 12, 32^{nd} – 10 points.

Should a tie occur in the final ranking positions, the total number of points earned by those schools involved in the tie will be divided equally among all the schools in the tie. Should

a tie occur for the final Director's Cup championship in any classification, the researcher will break the tie based upon the following priorities in order: (1) the number of state championships won, then (2) the number of state runners-up won, then (3) the number of 3rd or 4th place finishes. This process will continue until the winner is decided.

APPENDIX C

IRB APPROVAL

Office for Research

Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
RESEARCH

August 18, 2011

Tim Vick
Department of Higher Education Administration
College of Education
The University of Alabama

Re: IRB Requirement for "The Relationship of Size, Wealth, and District Type to the Athletic Success of Georgia Schools"

Mr. Vick:

This letter comes as a response to your communication received August 17, 2011. According to the Office for Human Research Protection (OHRP) under policy 45 CFR 46.101 the proposed work is not human subjects research.

Because the work is not considered human subjects research, it does not require IRB approval and is therefore excluded from review by the IRB.

If you have any questions or if I can be of further assistance please do not hesitate to contact me.

Sincerely,

Carpantato T. Myles, MSM, CIM
Director of Research Compliance & Research Compliance Officer
Office of Research Compliance
The University of Alabama

358 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-0127
(205) 348-8461
FAX (205) 348-7189
TOLL FREE (877) 820-3066