SCHOOL SPONSORED SPORT PARTICIPATION AND STUDENT ACADEMIC ACHIEVEMENT: RELATIONSHIPS BETWEEN HIGH SCHOOL STUDENTS PARTICIPATION IN ATHLETICS AND OVERALL GRADE POINT AVERAGE

By

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High School Athletics and GPA

Abstract:

The purpose of this study was to determine the affect of school sponsored sport participation in high school students and overall academic performance; noted by the individuals grade point average. Student involvement in school sponsored athletics is believed to promote a sense of belonging and pride in the school. Will this sense of school ownership and involvement show an improvement in academic achievement, for the students who contributed to this research project? If a student is involved in multiple school sponsored athletics will they excel even more academically? A total of 100 Junior and Senior class students were chosen randomly for this research project. Of the 100 randomly chosen students, 50 were male, and 50 were female. A total of 50 students were surveyed at Lafayette High School in St. Joseph, Missouri. Of the 50 students surveyed at Lafayette, 25 were male students who participated in at least one school sponsored athletic event while, 25 were female students who were not involved in a school sponsored athletic activities the prior school year. The other group of students surveyed came from Maryville High School, in Maryville, Missouri. A reversal of roles took place when surveying the students at Maryville High School. Of the 50 students surveyed at Maryville High School, 25 were female students who participated in at least one school sponsored athletic event while, 25 were male students who were not involved in a school sponsored athletic activities the prior school year.

According to the results from the study female students who participate in school sponsored sports perform better academically than those that do not. Females who do not participate in a school sponsored sport have an average grade point average of 2.78, but females that do participate have a grade point average of 3.68. The average grade point
average for a male who does not participate in school sponsored sports is 2.77, while the average grade point average of a male who participates is 2.88. Overall, the mean grade point average for male students was 2.83, while the overall grade point average of female students was 3.28. In conclusion is can be suggested that female students perform better academically than male students. It can also be concluded that female students who are involved in school sponsored sports will likely have more academic success than males or females regardless of their participation in school sponsored sports. The results do not display a significant difference when comparing male students who do and do not participate to suggest participating in a school sponsored sport has a effect on academic achievement

**INTRODUCTION TO THE STUDY**

*Background:*

High School athletics are a major part of many schools around the United States. Students who participate in these school sponsored sports may not only benefit physically, but as well as academically. Is there a connection between school sponsored athletics and student academic performance? Researching the amount time students participate in athletics and their overall grade point average will help educators understand the correlation between the two, if there happens to be one. It is also important to examine the results of male vs. female in this study. The partaking in athletics could have a different effect on the sexes. It is important to determine if there is a correlation between participation in high school athletics and overall academic grade point average. Determining the importance of school athletics and academic achievement allows educators innovative ways to assist in student learning.
Conceptual Underpinnings for the Study:

I will be looking at this research project with the mindset and focus on improving student learning in the K-12 setting. It is essential to research all techniques, styles and programs that can have a positive impact on student improvement. For many students, participating in school sponsored sports is a major part of their overall schooling experience. It is important for educators to understand the potential academic benefits that may be associated with participation.

Data from this research will be interpreted by using the program known as ASP (A Statistical Program). Data will be calculated to help determine if a relationship exists between participating in school sponsored sports and academic achievement. A survey will be given to junior and senior class students that allow the researcher to determine who is involved and who is not involved in school sponsored sports. The completed surveys are then taken to the school counselor, where grade point averages can be calculated confidentially.

A student’s grade point average will be measured using a standard 4.0 grading scale. Utilizing this standard grading scale allows for easy ability to read data. Interpreting the data obtained and finding any correlations should be identified easily. Having the ability to identify areas of strength or concern make the process of putting a plan of action together easier.

Researches continue to struggle with determining if there is a true relationship between school sponsored sport participation and grade point average. Many who have explored the topic have found a strong correlation between the two, while others would
argue academic performance is regulated through the home environment and given ability.

School sponsored sports will be defined using the MSHSAA (Missouri State High School Activities Association) definition for sports. I feel that students who participate in school sponsored sports are more likely to achieve academic success than those who do not participate. I believe a sense of community is established for those who participate, and a sense of ownership aimed at the school’s success is developed. Strong character building skills learned from participating in school sponsored sports can also help a student be successful in the classroom.

Statement of the Problem:

I do not know if participation in school sponsored sports has an effect on grade point average. Major and minor concerns with this study would be the amount of students surveyed. This research project is being conducted with 100 students, due to limited time and resources. A greater sample size may be more accurate of the potential benefits that participation in school sponsored sports may have on academics. Other concerns include: the geographic location where the research was conducted, economic status of the community, family support or community support, and prior education history in the schools where the research was conducted. It is extremely important to understand the concerns addressed with this research topic for the purpose it is correctly interpreted. Readers of the study must know what has been done to accurately reflect the results of the study and what some of the limitations the researcher encountered were.
Purpose of Study:

The purpose of this study is to determine if students who participate in school sponsored sports perform better academically than those who do not participate in school sponsored sports. Independent variables for the study include: male or female students and, the actual participation in school sponsored sports. The dependent variable for the study is the cumulative, unweighted grade point average of the participating students.

Research Questions:

Do students who participate in school sponsored sports have a higher overall grade point average than those who do not participate in school sponsored sports? Do students of the same gender perform better academically, if they participate in school sponsored sports?

Null Hypotheses:

The participation of school sponsored sports will not have an impact on a student’s overall grade point average. Participating in school sponsored sports will not have an effect on academic achievement for students of the same gender.

Anticipated Benefits of Study:

If the null hypothesis is rejected when the study is complete, the value of school sponsored sports should increase. If the value of school sponsored sports increases than more students will likely participate, therefore increasing students grades.
Summary:

A total of 100 Junior and Senior class students were chosen randomly to participate in this research project. 50 were male and 50 were female. Lafayette High School in St. Joseph, Missouri was used to collect surveys from half the students, while Maryville High School, in Maryville, Missouri was used to collect the remaining half of the surveys.

According to the research conducted and data collected regarding the project there is not strong correlation between male students who participate in school sponsored sports and those that do not participate in school sponsored sports. Yes, there was a higher level of academic achievement for the males that participated in school sponsored sports compared to those that did not participate, but the difference is minute. Further analysis should be taken to determine a true reflection of the results when analyzing the grade point averages of males.

In regards to the female students surveyed in this study a significant difference in academic achievement can was identified between those that do participate and those that do not. Nearly a full letter grade difference was identified in this study when comparing female participants vs. female non participants. The null hypothesis for this research project was strongly rejected in comparison to females, but as mentioned earlier further analysis should be taken in order to determine a true reflection of the results in regards to analyzing the grade point averages of males.
Outline for Review of Literature:

1. Introduction (1 page)

2. Supporting School Sponsored Sports (3 pages)
   a. Obtaining academic success
   b. Importance of student success
   c. Studies conducted

3. A lack of support for participation (2 pages)
   a. Where does student academic success come from?
   b. Studies show

4. Summary
   a. Review of variables
   b. Importance of study
   c. What educators must do?
REVIEW OF LITERATURE

Introduction:
The importance of students being physically active, as well as healthy is becoming increasing important. Maintaining a healthy lifestyle while increasing overall academic achievement through participation in school sponsored sports has be in debate for many years. Is it beneficial academically to encourage our children to be members of school sponsored sports teams? Through detailed research some benefits are being identified. Benefits such as, keeping the students in school and raising their educational aspirations are attributed to participating in school sponsored sports (Din, 2005). Also, the participation in school sponsored sports helps students better handle adversity, while understanding team work and sportsmanship, which could have a correlation with academic achievement (Din, 2005). It is important to determine if the effect of participating in school sponsored sports reveals an impact on students academic achievement in Northwest Missouri.

While dissecting the literature I will be looking for multiple items. I will be reviewing the information to determine: how and where studies were taken, how the participation in school sponsored sports has an effect on different genders academically, the benefits, if any, associated with participation in school sponsored sports and ways to get students involved. Ultimately, I will be searching to find the answers or reasons for peoples’ opinions on why school sport participation is non-beneficial or beneficial for a students overall academic achievement.
Supporting School Sponsored Sports:

Obtaining academic achievement in secondary school can be attributed to a variety of things. Supports who believe school sport participation plays a major role in helping students be successful in the classroom say it improves their achievement and motivation (Din, 2005). Improving the motivation of a student is cause for them to further engage themselves in the classroom and will improve commitment to schooling (Din, 2005). Having the ability to increase the motivation of students is a very helpful and beneficial to educators who look for a link to improve the academic success of students. According to the American Sports Institute a year long course based on sports that was dedicated to academic achievement helped improve the overall grade point average for the students involved. (American Sports Institute, 1996). Data that was analyzed in 2008 showed that physical education resulted in gains in grade points average (Trudeau, 2008). With the ability to positively identify physical education as a beneficial factor to improve academic success, a connection between it and school sponsored sports can easily be drawn. Another study completed by the (Physical Fitness and Academic Achievement in Elementary School Children, 2009) found a direct correlation between muscular fitness and quality math scores. The study supports a link between specific components of physical fitness and academic achievement.

Students who often participate in a single, or multiple school sponsored sports can often be given the label of being physically fit. This label is not an exact measurement and is not being tested in this study, but it is often agreed upon. According to (Shore, 2005), non-overweight students had 25 percent fewer absences and 39 percent fewer days
tardy to school, relative to overweight students. If we use this study in correlation to the current study it is easy to make a connection that a healthy lifestyle can be attributed to participating in school sponsored sports. In effect this has a direct effect on a student's overall academic achievement.

A study was taken in and around the Minneapolis, Minnesota area. This study consisted of 4746 students from 31 different schools in the area. The study was developed by a research team and used the test-retest method of questing to provide reliability. The data from this study was taken from Project EAT (Eating Among Teens). Students self reported their weekly hours of physical activity, which included sports team participation. Self reporting of one’s overall physical activity can be viewed as a flaw in certain situations, but if students were given exact details as to what physical activity consists of and how it should be objectively measures this concern can be erased.

Academic grades were also reported and recorded in this survey. The results from this study strongly support sport participation and the need to get students involved in athletics, whether it be, individual or team sports. High school girls demonstrated a higher GPA (Grade Point Average) when demonstrating physical activity and sport participation. In relevance to high school boys only sport participation was independently associated with a higher GPA. (Journal of School Health, 2010). This study did an outstanding job of collecting information from a large audience. Project EAT was able to obtain information from a wide group of socioeconomically and ethnically diverse students (Journal of School Health, 2010). This provides evidence that physical activity, especially sport participation for high school boys is a contributing factor for improved academic success.
Roger L. Whitley and James S. Pressly completed research in the state of North Carolina. Their goal was to determine the difference in the education performance of high school athletes and non athletes in the North Carolina high schools. Whitley and Pressly over 126,000 participants in grades 9-12 for their research project. Having such a large and dynamic sample size was very informative for the researchers. This pair of researchers was able to identify a noteworthy statistic. Whitley and Pressly were able to identify through their research a 4.9 percent higher graduation rate for students who participated in school sponsored sports compared to those that did not participate in a singular school sponsored sport (Whitley and Pressly, 1995). In most cases this percentage can be the difference between an outstanding and average school district, and it is supportive of the fact that participating in school sponsored is beneficial to our students overall academic achievement.

Finally, I would like to take note of research completed in Massachusetts in 2005. The objective of this study was to determine a relationship between being physically fit and academic achievement. The method used to determine the outcome of this study was the states standardized test, known as the MCAS (Massachusetts Comprehensive Assessment System. A research team used a bivariate and multivariate regression analysis to measure the results. (Journal of School Health, 2009). The research group compared the results of standardized fitness test passed in comparison to how well each child did on the MCAS. The results for this test were very encouraging and could be a great tool for educators to promote physical fitness by supporting our students in joining school sponsored athletics. Results indicated that the odds of passing both the MCAS
Mathematics test and the MCAS test English tested increased as the number of fitness test passes increased. (Journal of School Health, 2009).

**A Lack of Support for Participation:**

Where do our students gain the academic strength, knowledge and ability to be successful in the classroom? This topic has been continuously debated for dozens or years by researchers and educators throughout the county. Does it come from strong classroom teachers? Are great parents the people who should be given credit or blame for how well their children perform academically; due to the amount of support the child receives at home? Maybe, it’s genetic; maybe, it is all of the above. According to many it can be agreed upon that strong academic performance is not specifically related to school sponsored sport participation. Many people also believe that the focus on school sponsored sports can actually have a negative impact on a student’s ability to perform well academically in the classroom.

According to BUGS (Bringing Up Girls in Science), a program for young girls and their parents at the University of North Texas, “the home environment is among the most important influences on academics performance”. In the study conducted by BUGS it makes note that the viewing of television has a more significant impact on a child’s academic achievement than the amount of physical activity they partake in. BUGS makes note that watching quality television programs and having a positive family home life are major keys to academic success (Fujita, 2005). Research conducted by (Broh, 2002 in Fujits, 2005) showed a negative correlation between the participation in high school sports and overall academic achievement for both males and females had no direct impact on academic performance. It is hard for me to view this statement and fully agree with
what it is saying. In my personal opinion both quality television viewing and school
sponsored sport participation can be positive contributing factors and both should can be
looked at as strong dependant variables in certain studies.

(Marsh, 1988 in Din 2005) reported that the participation in too many sport
activities produced diminishing academic returns. We want our students to be involved,
but how much involvement is too much involvement? According the (National Health
Institution, 2005) : Gender, race, age and socioeconomic status are all powerful
predictors of adolescent academic performance. It’s is important the we take all of the
measurable into consideration before determining a conclusion that school sponsored
athletic participation is a major key factor to making our student perform better in the
classroom. Also according the (National Health Institution 2005) the highest predictor of
strong academic success in their study was not school sponsored sport participation, but
other factors mentioned earlier, such as, gender, race and socioeconomic status.
Caucasian females from wealthy family displayed the strongest academic success in
terms of Grade Point Average in school. Neither jock identity nor athletic participation
significantly predicted student grade point average.

(Fisher, Juszczyk, and Friedman, in National Institute of Health, 1996) found no
association at all between athletics and the academic performance of inner-city
adolescents. It is very interesting that no correlation can be drawn from their study. It
may be possible that the study was taken from a school where high academic success is
prevalent among all students; or it may have been taken from a school where the majority
of students fail academically, and many failed attempts geared toward helping the
students succeed have occurred. Academic achievement can be credited to a variety to
things, but many believe one’s participation in school sponsored sports has little effect on
the students’ academic success.

**Summary:**

Independent and dependant variables varied for studies, but were typically related
to student success. In general the independent variable was participating in team
sponsored sports, while the dependent variable was academic achievement. Perhaps the
correlation between academic achievement and school sponsored sport participation is
strictly a personal issue that ranges greatly from one student athlete to another no student
athlete. This topic continues to be a great discussion piece for the educators around the
country and to the families with questions on to help their child be more successful in the
classroom. It can be agreed on that genetics do play a role in the amount of success a
students displays in the classroom, but it should not stop with genetics. There are many
ways we as parents and educators can help our youth continue to grow academically.
Promoting and encouraging the participation in school sponsored sports may not be the
way, but could undoubtedly be a way to help students be successful in the classroom.

A wide variety of research studies are continuously being completed in order to
determine the true effects associated with the participation in school sponsored sports and
the effects it has on our students academic achievement. As educators we should be
compelled to use data driven information and strategies that help our students be
successful. It is important to make note that studies may not occur in your direct area, but
it is importation to reflect on data and evaluate all studies that are related to your
surroundings. There are many determining factors that can be attributed to student
success, and through this research many studies have been widely inconsistent regarding
the topic of school sponsored sport participation and academic achievement. It is our job as educators to help dissect the current information to determine what factors are the most predominate in regards to student success in the classroom.

**RESEARCH METHODOLOGY**

*Research Design:*

The survey will consist of questions such as gender, if the student is a participant of school sponsored sports, how many school sponsored sports they participate in and what their overall high school grade point average is. The t-Test will be used to evaluate and assess all of the data collected. The researcher has set the Alpha level at .10 to determine the effect of school sponsored sport participation and academic achievement.

*Independent variable:*

Independent variables- male, female, a participant or non participant of school sponsored sports

*Dependent variables:*

Dependent variable- Grade point average.
Study Group:

100 high school students will be surveyed during this research project. 50 students will be male, while 50 students will be female. Between the two genders, a total of 25 male and 25 female students will be participants of school sponsored sports while 25 male and 25 female students will not participate in school sponsored sports.

Data Collection and Instrumentation:

Data will be collected through information collected from surveying participants. I will be working hand-in-hand with the school counselors, at both Lafayette High School and Maryville High School. The school counselors will help me accurately recorded students academic achievement in-order for the data collected to be correctly evaluated.

Data Analysis Methods:

T Test

Research Methods Narrative

RESEARCH DESIGN AND METHODOLOGY

Research Design:

A voluntary survey was given to two different groups of students. The survey was designed to interpret a students’ academic performance, compared to their involvement in school sponsored sports. A group of 50 students, both Juniors and Seniors, half male and
half female, who do not partake in school sponsored sports, were surveyed. Their cumulative, non-weighted grade point average was recorded and analyzed. Also, a group of 50 students, both Juniors and Seniors, half male and half female who do participate in school sponsored sports were surveyed. Their cumulative, non-weighted grade point average was recorded and analyzed. The t-Test was used to determine significance at the 0.10 Alpha level to challenge the null hypothesis. The cause for this research is to identify the important academic benefits of school sponsored sports; if there happens to be an actual academic benefit.

Study Group:

The data for this research project was collected from a 100 Junior and Senior class students. Of the 100 randomly chosen students, 50 were male, and 50 were female. A total of 50 students were surveyed at Lafayette High School in St. Joseph, Missouri. Of the 50 students surveyed at Lafayette, 25 were male students who participated in at least one school sponsored athletic event while, 25 were female students who were not involved in a school sponsored athletic activities the prior school year. The other group of students surveyed came from Maryville High School, in Maryville, Missouri. A reversal of roles took place when surveying the students at Maryville High School. Of the 50 students surveyed at Maryville High School, 25 were female students who participated in at least one school sponsored athletic event while, 25 were male students who were not involved in a school sponsored athletic activities the prior school year.
Data Collection:

Throughout the year, students are offered and invited to compete and many types of school sponsored sports. These school sponsored sports include team and individual events. Participation in school sponsored sports can help build a foundation for the students involved, while giving them a sense of accomplishment and belonging.

The information gathered for this research project will be collected through surveys completed by the students involved. Also, the information provided by the students will be taking to the school counselor to be further analyzed. The school counselor and I will review the responses of the students’ answers and record their cumulative non-weighted grade point averages.

Grade point averages will be based on a 4.0 scale. This scale evaluates students' academic achievement using the numbering scale 0-4; 0 being complete failure and 4 being complete success. On average a 0.0 grade point average (GPA) reflects a 0% academic satisfactory rate. A 1.0 (GPA) reflects a 60% academic satisfactory rate. A 2.0 (GPA) reflects a 70% academic satisfactory rate. A 3.0 (GPA) reflects an 80% academic satisfactory rate. While a 4.0 (GPA) reflects a 100% academic satisfactory rate.

Findings Outline

FINDINGS AND RESULTS FROM DATA ANALYSIS

Do students who participate in school sponsored sports have a higher overall grade point average than those who do not participate in school sponsored sports? Do
students of the same gender perform better academically, if they participate in school sponsored sports?

In this specific research study it was determined that participation did have an impact on student academic success. Students who participated in school sponsored sports had a higher cumulative grade point average than those that did not participate. When comparing results of genders, only a slight difference was noticed between males but a significant difference in academic performance was identified between female students who participate in school sponsored sports.

**Findings Narrative**

**FINDINGS AND RESULTS FROM DATA ANALYSIS**

Using the ASP computer software program, data was able to be dissected. According to the results shown in Table 1, the average grade point average for a male who does not participate in school sponsored sports is 2.77. While the average grade point average of a male who does participate is 2.88. The results regarding females varied significantly more, when comparing participants and nonparticipants. Females who do not participate in a school sponsored sport have an average grade point average of 2.78, but females that do participate have a grade point average of 3.68. Although, the results do not display a significant difference for male students who do and do not participate, it can be concluded that academic performance is improved by sport participation. With these finding the null hypothesis for this research study was rejected.
High School Athletics and GPA

Table 1:

DEPENDENT VARIABLE: GPA (Grade Point Average)

FACTORS: Gender Involvement

<table>
<thead>
<tr>
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<th>Effect Variance</th>
<th>Mean Variance</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0.2041</td>
<td>0.004331</td>
<td>2.831 0.008661 2</td>
</tr>
<tr>
<td>Female</td>
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<td>0.004331</td>
<td>3.2392 0.008661 2</td>
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<tr>
<td>Non-Participant</td>
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<td>2.7834 0.008661 2</td>
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<tr>
<td>Participant</td>
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<td>0.004331</td>
<td>3.2868 0.008661 2</td>
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<tr>
<td>Male Non-Participant</td>
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<td>0.004331</td>
<td>2.778 0.017322 25</td>
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<tr>
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<td>Female Participant</td>
<td>0.1987</td>
<td>0.004331</td>
<td>3.6896 0.017322 25</td>
</tr>
</tbody>
</table>

Grade Point Average

![Bar Chart](chart.png)
Analyzing the information shown on Table 2 one is able to identify the effect participating in a school sponsored sport has on an individual’s academic achievement. It can be identified and interpreted that participating in a school sponsored sport is
academically beneficial for students. Female students who participate in school sponsored sports accounted for the highest accumulative grade point average of all students surveyed. Females who participate in a school sponsored sport are nearly a full letter grade (90%) ahead of females who do not participate. The gap between male students who do and do not participate was much slimmer. Males who participate are only 1/10 (10%) of a letter grade ahead of males that do not participate.

Table 3:

<table>
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<th>P-VALUE Summary</th>
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<tbody>
<tr>
<td>MALE NON-PARTICIPANT vs. FEMALE PARTICIPANT</td>
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<tr>
<td>MALE PARTICIPANT vs. FEMALE PARTICIPANT</td>
</tr>
<tr>
<td>FEMALE NON-PARTICIPANT vs. FEMALE PARTICIPANT</td>
</tr>
</tbody>
</table>

For this study the Alpha level was set at (.10), in order to determine the effect school sponsored sport participation has on a students’ academic achievement. As you can see from the P-Value Summary, each category displays a significant difference. The most significant difference in positive academic achievement occurs between female students who participate compared to male students who do not participate. When comparing female participants to female non participants another significant difference in academic achievement can be identified.

Gender and gender involvement both display a measurable difference in academic achievement, but it is involvement that is key is in the findings. Involvement becomes less of an indicating factor of academic achievement for all male students, but regarding
female students being involved is a sure indicator of how well one may perform academically in the classroom.

**Conclusions and Recommendations**

**Conclusions**

It can be determined that students who participate in school sponsored sports perform better academically than those that do not participate in school sponsored sports. This statement can be easily identified in regards to female students, but is less noticeable in male students. The results of this study can be attributed to a variety of reasons, including, but not limited to: academic achievement standards put in-place by the district, parent involvement, school involvement, or a competitive drive to be successful.

**Recommendations**

According to the information collected for this study school districts should search for ways to get high school students involved in school sponsored sports, especially females. Females who participated demonstrated nearly a full letter grade more progress than those that did not. Female students who are involved are likely to be more competitive and goal oriented. The drive to be successful on the court or field can be easily transferred into the classroom.

It can also be suggested school districts bring coaching into the classroom. Often times teachers simply teacher, with no passion or inspiration. Coaches display a sense of ownership and pride when teaching new strategies and techniques, while working hard to help individuals be successful. As a researcher of academic achievement and school sponsored sport participation; I would suggest teachers and athletic coaches’ work
together to develop and implement a peer coaching technique to be used in the classroom. Implementing such a program would promote a team environment within the school and develop chemistry among teachers. Also, this type of program could promote and help develop teacher student relationship that would likely be beneficial for academic achievement.
References


