The Effects of an Institution’s Athletic Success on the Future Freshmen Application Pool at NCAA Division II Universities

Joshua Castle  
*Indiana University of Pennsylvania*

Robert Kostelnik  
*Indiana University of Pennsylvania*

This exploratory study investigated the relationship of intercollegiate athletic success to the quantity of the freshmen application pool and the quality of first time enrolled freshmen at National Collegiate Athletic Association (NCAA) Division II institutions. Aggregate data from the fourteen member institutions of the Pennsylvania State Athletic Conference (PSAC) and the Pennsylvania State System of Higher Education (PASSHE) served as the subjects for this study. All the institutions included in this study are members of the NCAA and classified as Division II universities. A correlation model was used to analyze the relationships between athletic success and the quantity of the freshmen application pool and the quality of the enrolled first time freshmen. The results indicated that there was an impact on the quantity of the freshman application pool and the quality of the first time enrolled freshmen class due to athletic success at all fourteen institutions in the study.

Introduction

Since the late 1800’s, sports have been a part of the higher education system in the United States (Caughron, 2001; Crowley, 2006; Ridpath, 2008). Intercollegiate athletics have played a major role in universities for decades. They are an essential part of collegiate life (Toma & Cross, 1996). College athletics have a noted value to current students, alumni, and the general public. For some alumni and spectators a sense of pride, community, and school spirit is produced by a connection to their universities’ sports teams (Beyer & Hannah, 2000). For students, sporting events provide a venue for one of the main social functions at universities. Spectators from outside the community pour thousands of dollars into local economies, which in some cases is the main revenue source for many local merchants (Beyer & Hannah, 2000).

Students consider a multitude of factors when making the major life decision of which college or university to attend. It is a difficult decision that every high school junior and senior faces. The question that arises is to what effect does the success of universities’ athletic programs have in that decision? The purpose of this study was to investigate the impact of...
overall athletic success at NCAA Division II institutions on the quality and quantity of freshmen applications. In addition, this study analyzed the effect specific sport programs had on the quantity and quality of freshmen applications.

Athletics-A Marketing Tool for University Admissions

There are several influencing factors that students consider when making their college selection. Galotti and Mark (1994) found that family and friends have the most influence in the college selection process. But, there are multiple factors that a student considers when making the final decision. Sevier (1993) found that a desired major and cost were the most important factors that students used in choosing an institution of higher education. Canala and Dunlap (1996) later reported that academic reputation, areas of study and teacher quality were among the important factors for students selecting a college. Their results also indicated that 75% of students felt that sports/extracurricular programs were either very important or somewhat important in choosing an institution to attend (Canale and Dunlap, 1996). This factor was higher than geographic location and student population at the institution. Other studies have indicated students are more apt to choose an institution of higher education primarily on academic and institutional reputation, with cost and location being the next two most important factors (The Brand Called U, 2003). However, Stinson and Howard (2007) indicated that institutional academic reputation is often shaped by institutional athletic reputation.

Whatever the influence, it is vital for colleges and universities to successful recruit students for the overall success of the institution (Letawsky, N., Schneider, R., Pedersen, P. & Palmer, C., 2003). It is essential that those involved in the recruitment of students understand the factors that are most influential in selecting an institution and the methodology that college bound students utilize in their search process (Letawsky et al., 2003).

Universities use a variety of marketing techniques in order to attract prospective students. Until recently, marketing efforts for higher education institutions focused on using public relations and name recognition as their main avenue to attract prospective students (Lorenzetti, 2005). The positive effects from athletic success drawing more media and sponsor attention to universities is difficult to ignore. The primary form of media exposure (and advertising) for higher education institutions derive from a non-academic enterprise--intercollegiate sports (Bremmer and Kesselring, 1993). With an increase in athletic success, studies have shown an increase in media attention. Since media attention on athletic programs is essentially free marketing for the university, it must be seen as a positive influence on the university (Bremmer and Kesselring, 1993). Examples of this effect can be seen as far back as 1870, when Harry Barnard, President of Columbia University, stated after a crew team victory that the team did more to make Columbia known than any of their predecessors (Leifer, 1995). In 1995, Northwestern University was involved in an undefeated football season and a trip to the Rose Bowl. National news articles about the university increased by 185 percent.

In many ways athletics is the main source of marketing for Division I institutions (Bremmer & Kesselring, 1993; Davies, 1994). Athletics produces publicity over large areas through newspaper and television coverage of athletic events. A university would be hard pressed to find a more efficient and effective way of spreading its name and identity to the masses. Many administrators have made the realization that a winning team can provide an effective means of advertising their institution and securing much needed additional funding (Davies, 1994).
Relationship between “Athletics as a Marketing Tool” and Freshmen Applications

The effect of intercollegiate athletic success on increasing the number of freshmen applications is an important topic. Some studies have shown minimal or no significant effects, while others have shown a correlation between the two factors. There are many variables that could account for increases and decreases in the quantity of freshmen applications. It is hard to pinpoint one deciding factor and say that it has a lone impact on enrollment (Frank, 2004). Frank (2004) also discusses how this effect is a short term phenomenon and the increase in applications is just a spike. However is that not the point, a spike in admissions applications allows the institutions to be more selective in their acceptance process and should drive the school to have a higher overall SAT average.

The correlation between football success and an increase in freshmen applications has been giving an identifying name among admissions officers. “The Flutie Spike” refers to a phenomenon that happened at Boston College in 1984. Doug Flutie capped a dramatic comeback with a touchdown in the last play of the game to lift Boston College over the University of Miami. The game was nationally televised and replayed countless times. This incident produced a large increase in the number of freshmen applications received for the following fall semester. Applications went from just over 14,000 in 1984 to over 16,000 in 1985 (Honan, 1996).

Borland, Goff and Pulsinelli (1992) found at Western Kentucky University that an improvement from .500 to .750 in basketball winning percentage saw an increase of about 430 applications. Georgia Southern University had a 500 student enrollment increase after adding football as a varsity sport. One hundred students can be accounted for as incoming student-athletes, but that does not explain the additional 400 students.

In 1995, when the University of Connecticut won the National Women’s Basketball National Championship and their men’s basketball team made it to the quarter-finals of the NCAA Tournament, Andrew Yiannakis conducted a study that found that twenty-two percent of all people aged sixteen and over said they would like to apply for admission because of the success of the basketball teams. That fall, applications increased by 4.2 percent (Honan, 1996).

However the debate over athletic success and its relationship to academics still remains unsettled. Some studies indicate that there is little or no relationship between the two (Shulman and Bowen, 2001; Bremmer and Kesselring, 1993), while others show that there is a relationship (Mixon, Trevino, and Minto, 2004; Pope & Pope, 2009).

Pope and Pope’s (2009) results indicated that athletic success in athletics primarily in football and basketball increased the quantity of applications to the school, private schools saw increases two-four times that of public schools, extra applications were composed of both higher and lower SAT scores, and schools exploit these increases by increasing the number of students accepted and the quality that they accept. The question then remains is there any indication that athletic success at the Division II level impacts the quality and/or the quantity of the freshmen applications to institutions of higher education.

Description of NCAA Division II Athletics

The NCAA divides colleges into five categories: Division I-FBS, I-FCS, I-AAA, II and III. In order for an institution to be classified as a Division II institution, they have to sponsor at least eight sports (four for men and four for women), with two team sports for each gender, and each season must be represented by a team of each gender. There are contest and participation
minimums for each sport, as well as scheduling criteria for football, men’s basketball, and women’s basketball. There are no fan attendance requirements for football, as there are at the Division I level. There are maximum financial aid award guidelines for each sport that cannot be exceeded. Division II teams usually feature a number of local or in-state student-athletes (NCAA, 2005). NCAA member institutions self choose which classification that they want to compete in.

**Sports Academy Directors’ Cup**

The National Association of Collegiate Directors of Athletics (NACDA) sponsors the Sports Academy Director’s Cup. It is an annual award that is given to the university that exhibits the highest overall intercollegiate athletic success. There are separate awards for the NCAA Division I, II, III categories and the National Association of Intercollegiate Athletics (NAIA).

In NCAA Division II points are based on the finishing position of an institution in NCAA championships. Point values are assigned for success in NCAA playoffs. At each institution the seven men’s sports with the highest point values and the seven women’s sports with the highest point values are used to determine final standings. A university may compete in more than seven sports for men and women but only the top scoring seven are used in calculating standings. Only sports that are sponsored by the NCAA are included in scoring. The NCAA determines the number of teams that enter each individual championship. Division sports that have less than ten percent of institutions sponsoring a sport in NCAA competition, only receive fifty percent of the points allocated. Universities that compete in both indoor and outdoor track and field cannot earn points for both. The track and field team that has the highest point value between the two is used. The tie breaker for first place in the Sports Academy’s Directors’ Cup is the total number of national championships won. If by chance the schools are still tied it goes to the most second place finishes and so on (NACDA, 2005).

**The PSAC & Dixon Trophy**

The athletic program in the Pennsylvania State Athletic Conference (PSAC) that has the most success either in conference championships and/or regular season standings receives the Dixon Trophy. Similar to the Sport’s Academy Director’s Cup, The Dixon Trophy measures overall athletic success in the PSAC. Points are awarded in the twenty-two conference sports. Since not all the participating universities have the same sports, only the institution best twelve finishes (six for men and six for women) are used to calculate the winner. Points awarded are dependent upon the number of universities that participate in the sport. If all fourteen institutions compete in a sport then the team that finishes in first gets fourteen points, second gets thirteen points and so on. If only seven schools participate in the sport then first place gets seven points, second place gets six points and so on.

**Methods**

**Population and Data Collection**

This study examined the relationship between the quantity of the freshmen application pool and the quality of first-time enrolled freshmen at Pennsylvania State System of Higher Education (PASSHE) universities and intercollegiate athletic success. The PASSHE is made up
of the following universities: Bloomsburg University, California University of Pennsylvania, Cheyney University, Clarion University, East Stroudsburg University, Edinboro University, Indiana University of Pennsylvania, Kutztown University, Lock Haven University, Mansfield University, Millersville University, Shippensburg University, Slippery Rock University, and West Chester University. All of the schools belong to PSAC (PSAC, 2005). This comparison was based on winning percentages, annual Dixon Cup Standings, and post-season success.

In order to obtain the necessary data for this study, the researcher gathered data from the PSAC conference office. The data included were the PSAC Dixon Cup final standings, official win/lose final records from all varsity sports and any post season accomplishments from varsity sports for each year, between 1995-2004 at all the institutions in the PSAC. In order to acquire information about NCAA post-season success for the universities in the study, the National Association of Collegiate Directors of Athletics (NACDA) Directors’ Cup for the years from 1995-2004 was utilized. As for the information regarding the number of applications and the average SAT score for each freshmen cohort from 1996-2005 was collected through the Information Technology and Research Office of the PASSHE.

Data Analysis

Each of the universities’ total number of freshmen applications received and average SAT scores for first-time enrolled freshmen were recorded in an SPSS file. Also included in the data sheet for each university were: (1) Average winning percentage of all varsity sports; (2) each individual sports winning percentage; (3) annual overall Dixon Cup standings and raw scores; (4) annual overall Directors’ Cup standings and raw scores. Average winning percentage for all varsity sports were calculated by taking the sum of all the winning percentages of each sport and then dividing that number by the number of varsity sports. Track and field, cross country, and golf do not regularly compete in head-to-head competition. Instead these sports compete in limited meets and invitationals where head-to-head competition between two universities does not take place. Winning percentages for these sports were not included. Instead of winning percentage, the placements of each of these individual sports in the Dixon Cup standings were analyzed. NCAA post-season success was quantified using the NACDA’s Sports Academy Directors’ Cup scoring structure (NACDA, 2005).

A lagged data analysis was conducted to determine relationships between intercollegiate athletic success at the universities and the number of freshmen applicants. This method enabled the comparison of athletic success to the future application totals and SAT scores. In the analysis of the comparison between athletic success and the quantity of the freshmen application pool an equation from Murphy and Trandel (1994) served as the structural basis for this research. Murphy and Trandel (1994) used the following equation:

\[
\text{Apply}_{it} = \alpha_r + \alpha_t + \beta_2 \text{FBR}_{it-1} + \beta_2 \text{GRAD}_{it} + \beta_4 \text{INC}_{it} + \beta_5 \text{COST}_{it} + \beta_5 \text{SALARY}_{it-1} + \epsilon_{it}
\]

For this equation, \(i\) = the university and \(t\) = the year. In the equation, \(\beta_2 \text{GRAD}_{it}\) = high school graduation rates, \(\beta_4 \text{INC}_{it}\) = average per capita income, \(\beta_5 \text{COST}_{it}\) = in-state tuition, and \(\beta_5 \text{SALARY}_{it-1}\) = average faculty salary. However, for this study some of these variables can be eliminated. The schools that make up the PASSHE are all located in the same state, thus eliminating high school graduation rate and average per capita income. Because the institutions in this study are also controlled by the same entity (PASSHE) and are unionized under the same collective bargaining agreement, they have the same in-state tuition costs and average faculty salary.
salaries. This leaves just athletic success as a predictor and a lagged correlation statistically. In the original equation $\beta_1 FBR_{it-1}$ stands for football winning percentage. For this study, $\beta_1 FBR_{it-1}$ was substituted for: (1) average winning percentage of varsity sports; (2) each individual sports winning percentage; (3) annual overall Dixon Cup standings; (4) annual overall Directors’ Cup standing (5) annual overall Dixon Cup raw score and (6) annual overall Directors’ Cup raw score. A comparison was also conducted to analyze this relationship to gender specific sports. Since most of the previous studies involved Division I institutions that are spread out over large geographical areas, it is hard to believe that they are competing for the same students. In this study one of the assumptions is that since all of the universities are located in the same state and have similar academic standards, they are in essence competing for the same students.

**Results**

The average number of applications received each year at all fourteen universities combined was 4,646 with an average of 3,843 in-state applications and an average of 802 out-of-state applications. The average SAT score for first-time freshmen enrolled at all of the institutions was 973. In 2004, the universities in the PASSHE received a record 78,110 applications. The general trend for the institutions involved in this study has been an increase in application numbers through the years from 1993-2004. This followed the national trend which saw general increases in student applications to institutions of higher education over the same time period, which coincided with an increase in high school graduates (Collegeboard, 2011).

**Impact of Overall Athletic Success on Total Applications**

The results indicated that there was a correlation between overall athletic success and the quantity of the freshmen application pool when all the universities were grouped together. This correlation was shown in two areas, PSAC Dixon Cup standing and NCAA Directors’ Cup raw score. PSAC Dixon Cup standing had an $F=8.02, p < 0.006$. The NCAA Directors’ Cup raw score also indicated to be significant with an $F=7.61, p < 0.007$. Average winning percentage was not shown to be a significant indicator of the quantity of the freshmen application pool. The overall winning percentage was $F=2.81, p < 0.096$. The analysis also indicated that the there was not a significant correlation between the quantity of applications and Directors’ Cup standings $F= 3.68, p < 0.058$. Table 1 displays each of the variables with the F-Statistic and p-values. Significant p-values were considered at $\leq .01$ for the entire study.

| Table 1. - Correlation Table of Overall Athletic Success and Total Applications |
|---------------------------------|-----------|-----------|
| Variable                        | F-Statistic | p-value |
| Directors’ Cup Standing         | 3.68       | 0.058     |
| Directors’ Cup Raw Score        | 7.61       | 0.007     |
| Dixon Cup Standing              | 8.02       | 0.006     |
| Dixon Cup Raw Score             | 3.66       | 0.059     |

Downloaded from http://csri-jiiia.org ©2011 College Sport Research Institute. All rights reserved. Not for commercial use or unauthorized distribution.
In the interaction analysis comparing each of the fourteen universities to one another, the correlation was not uniform between all 14 universities. In the case of Dixon Cup standing, Mansfield University and Cheyney University proved to be outliers because they had increases in total applications but did not show any change in standings in the Dixon Cup. Similarly, Edinboro University and Millersville University also showed to be outliers because no matter where they have finished in the Dixon Cup their applications have stayed relatively consistent. Therefore, there was an effect on Dixon Cup standing and freshmen applications at the majority of universities in the PSAC. These relationships can be seen in Figure 1.

**Figure 1.** Interaction model of placement Dixon Cup standings lagged
When analyzing the interaction relationship of total applications to Directors’ Cup raw score, which showed significance, there were also instances of outliers. In Figure 2, it is not quite apparent as to which universities the outliers are. But it appears that Bloomsburg University is the main outlier. Bloomsburg University’s results actually showed a reverse effect. The better that Bloomsburg University scored in the Directors’ Cup, the lower the number of total applications the university received.

*Figure 2.* Interaction model of Directors’ Cup score lagged one year to total applications.

When dividing the athletic success in men’s intercollegiate athletics and women’s intercollegiate athletics by winning percentage and comparing them to the total number of application, women’s average winning percentage had a higher correlation in relationship to the
quantity of the freshmen application pool. The women’s average winning percentage showed to be $F=3.12, p < 0.08$. While the men’s average winning percentage indicated an $F=0.68, p < 0.410$ for, but neither indicated any significance.

**Influence of Success of Individual Sports on Total Applications**

In the analysis of individual intercollegiate sports winning percentage it was determined that no individual sport had a significant correlation. Women’s tennis had the highest correlation with an $F= 6.00, p < 0.016$. Men’s swimming had the highest correlation for men’s sports with an $F=5.52, p < 0.022$. Football had a correlation of $F= 0.05, p < 0.829$. Men’s basketball had an $F= 0.63, p < 0.430$. Women’s golf was eliminated from the study due to the fact that only one school participates in it as a varsity sport. A complete breakdown of each sport can be seen in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
<td>2.19</td>
<td>0.142</td>
</tr>
<tr>
<td>Men’s Basketball</td>
<td>0.63</td>
<td>0.430</td>
</tr>
<tr>
<td>Women’s Basketball</td>
<td>0.02</td>
<td>0.894</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>0.40</td>
<td>0.530</td>
</tr>
<tr>
<td>Football</td>
<td>0.05</td>
<td>0.829</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>3.58</td>
<td>0.064</td>
</tr>
<tr>
<td>Men’s Soccer</td>
<td>0.02</td>
<td>0.885</td>
</tr>
<tr>
<td>Women’s Soccer</td>
<td>0.10</td>
<td>0.757</td>
</tr>
<tr>
<td>Men’s Swimming</td>
<td>5.52</td>
<td>0.022</td>
</tr>
<tr>
<td>Women’s Swimming</td>
<td>0.00</td>
<td>0.988</td>
</tr>
<tr>
<td>Softball</td>
<td>0.19</td>
<td>0.644</td>
</tr>
<tr>
<td>Men’s Tennis</td>
<td>0.46</td>
<td>0.502</td>
</tr>
<tr>
<td>Women’s Tennis</td>
<td>6.00</td>
<td>0.016</td>
</tr>
<tr>
<td>Volleyball</td>
<td>3.45</td>
<td>0.066</td>
</tr>
<tr>
<td>Wrestling</td>
<td>0.15</td>
<td>0.698</td>
</tr>
</tbody>
</table>
When comparing the individual universities, it was determined that all of the correlations with each sport were influenced by the characteristics of the institution and year observed. There was no uniformity to the correlations at the fourteen universities.

When analyzing PSAC Dixon Cup standings for cross country it was shown that women’s cross country had a strong significant correlation. Women’s cross country had an $F = 7.12, p < 0.009$. A complete breakdown of all the correlations can be seen in Table 3.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men’s Cross Country</td>
<td>0.90</td>
<td>0.346</td>
</tr>
<tr>
<td>Women’s Cross Country</td>
<td>7.12</td>
<td>0.009</td>
</tr>
<tr>
<td>Men’s Golf</td>
<td>0.78</td>
<td>0.382</td>
</tr>
<tr>
<td>Men’s Track (Indoor)</td>
<td>0.50</td>
<td>0.488</td>
</tr>
<tr>
<td>Men’s Track (Outdoor)</td>
<td>0.90</td>
<td>0.345</td>
</tr>
<tr>
<td>Women’s Track (Indoor)</td>
<td>1.02</td>
<td>0.325</td>
</tr>
<tr>
<td>Women’s Track (Outdoor)</td>
<td>0.55</td>
<td>0.461</td>
</tr>
</tbody>
</table>

In the interaction model, women’s cross country showed an interesting finding. The correlation showed an $F = 1.78, p < 0.059$. Because of the level of insignificance it shows that all fourteen universities had a similar correlation between freshmen applications and women’s cross country standings in the PSAC. This can be seen in Figure 3.
Influence of Overall Athletic Success on SAT Scores

The only significant correlation for comparing SAT scores to athletic success was shown in the annual Directors’ Cup standing. The F=7.62, \( p < 0.007 \). Dixon Cup standing, and Dixon Cup raw scoring, or Directors’ Cup raw score did not show to be a significant indicator for improvement in the average SAT scores. Table 4 illustrates the correlations and significance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directors’ Cup Standing</td>
<td>7.62</td>
<td>0.007</td>
</tr>
</tbody>
</table>

Figure 3. Interaction model of women’s cross country placement in Dixon Cup standings lagged one year to total applications.
Directors’ Cup Raw Score 0.42 0.518
Dixon Cup Standing 0.66 0.420
Dixon Cup Raw Score 1.07 0.303
Men’s Average Winning Percentage 1.92 0.168
Total Average Winning Percentage 0.75 0.388
Women’s Average Winning Percentage 0.05 0.825

When viewing the athletic success in men’s intercollegiate athletics and women’s intercollegiate athletics determined by winning percentage, men’s average winning percentage had a higher correlation in relationship to the quality of the freshmen enrolled. The F= 0.05, p < 0.825 for women and F= 1.92, p < 0.168 for men. Neither showed any significance.

Influence of Individual Sports Success on SAT Scores

When looking at the correlation of individual sports success defined by winning percentage and the SAT scores, the analysis showed no significant effect for any sport. This does not mean that some sports at some universities did not have a significant correlation. It indicates that there was no significant correlation with SAT change at all the universities. The results for each sport can be seen in Table 5.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
<td>0.35</td>
<td>0.556</td>
</tr>
<tr>
<td>Men’s Basketball</td>
<td>1.63</td>
<td>0.204</td>
</tr>
<tr>
<td>Women’s Basketball</td>
<td>0.60</td>
<td>0.440</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>2.42</td>
<td>0.124</td>
</tr>
<tr>
<td>Football</td>
<td>3.82</td>
<td>0.053</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>1.39</td>
<td>0.243</td>
</tr>
<tr>
<td>Men’s Soccer</td>
<td>0.44</td>
<td>0.511</td>
</tr>
<tr>
<td>Women’s Soccer</td>
<td>0.25</td>
<td>0.618</td>
</tr>
</tbody>
</table>
Men’s Swimming 0.14 0.705
Women’s Swimming 1.02 0.315
Softball 0.13 0.715
Men’s Tennis 0.03 0.855
Women’s Tennis 0.00 0.971
Volleyball 0.40 0.529
Wrestling 1.43 0.236

Discussion

This study was unique from previous studies conducted in this area because this study analyzed the effect of overall intercollegiate athletic success. Previous research concentrated only on football and men’s basketball. Another unique characteristic of this study was the focus on NCAA Division II universities. Previous research has been isolated to NCAA Division I universities.

In this study, it was predicted that there would not be a significant correlation between the freshmen application pool at the universities in the PSAC and the combined winning percentage of their varsity sports. The findings from this study indicated that this hypothesis was shown to be correct. This does not mean that there is not a correlation between these two variables at selected universities. It is possible at selected universities that there is a correlation between winning percentage and the number of applicants to a university in the PSAC.

It was hypothesized in this study that there would be no significant correlation between the total freshmen applications and PSAC Dixon Cup standings or raw score. While there was no significant correlation between PSAC Dixon Cup raw score, there was however a significant correlation for Dixon Cup standings. When combining all fourteen universities it was determined that there was a relationship between placement in PSAC Dixon Cup standings and freshmen application totals. When universities placed higher in the Dixon Cup standings, the institutions application pool increased. However, in the analysis of each university, this relationship was not shown to be uniform. Cheyney University, Edinboro University, Mansfield University, and Millersville University proved to be outliers in this relationship. Mansfield University and Cheyney University proved to be outliers because they have never finished higher than thirteenth or fourteenth in the standings, yet their applications showed a steady increase over the years. Similarly, Edinboro University and Millersville University also showed to be outliers because no matter where they have finished in the Dixon Cup the number applications received has stayed relatively consistent through the years. This indicates that there is an effect on Dixon Cup placement and freshmen applications at selected universities in the PSAC. However, with these findings there is a contradiction. While there was a correlation with the Dixon Cup Standings there was no correlation with Dixon Cup raw score. Statistically, this could occur due to a lack of range in Dixon Cup standings. The lowest a team can place is 14th, thus the range is only 1-14. With a larger range of scores there may not have been a correlation.
The results for the relationship between Sports Academy’s Directors’ Cup standings or raw score and the freshmen application pool saw the exact opposite results from that of the Dixon Cup. In this analysis, NCAA Directors’ Cup raw score saw a significant correlation while Directors’ Cup standings did not show to have a significant correlation. In Directors’ Cup raw scoring, we see Edinboro University and Millersville University repeated as outliers. Again, due to the limited range of Directors’ Cup standings, statistically this could result in the contradiction between standings and raw score results. The range for standings goes from 1-172, while the range in raw scores goes from 1-857.

When looking at the relationship between intercollegiate athletic success and the quality of students, as seen through SAT scores of first year students actually enrolled, there was only one variable that showed a significant correlation. Placement in the NCAA Directors’ Cup standings showed a significant correlation, while Dixon Cup standings, Dixon Cup raw scores, and Directors’ Cup raw scores did not show a significant correlation. The outlier for this correlation is Cheyney University. Cheyney University has only scored points in Directors’ Cup in one year since the inception of the Directors’ Cup and with the lowest average SAT score in the conference, this accounts for the discrepancy and Cheyney University being an outlier.

These results were interesting because they were different from the results of the quantity of the total application pool. One might speculate that the results from the quantity and quality might have similar significant correlations. In this study, however, this did not show to be true. As discussed earlier, Directors’ Cup standings had no significant correlation on the freshmen application pool. So the question arises, why was an effect seen on the quality of the first time enrolled student population in relationship to placement in Directors’ Cup standings and not on the quantity of applications?

It was also hypothesized in this study that the average winning percentage of men’s intercollegiate sports would have a higher correlation than that of the average winning percentage of women’s intercollegiate sports. While the results of both men’s or women’s average winning percentage proved not to be significant in relationship to the total number of applications, the women’s winning percentage showed a higher correlation. However, the opposite was shown for the quality of first time enrolled freshmen in relationship to men’s and women’s average winning percentage. Again, neither men’s nor women’s average winning percentage showed to be significant, but in this situation the average winning percentage of men’s intercollegiate sports had a higher correlation than that of the average winning percentage of women’s intercollegiate sports.

When looking at the results of specific sports, the results from this study were just as unique as the study itself. In previous research involving the Division I level, Borland et al. (1992), Chressanthis and Grimes (1993), Honan (1996), Mixon, Trevino, and Minto (2004) and Pope and Pope (2009), found that success in football and men’s basketball had a positive effect on the quantity of next year’s freshmen application pool. In this study, these effects did not translate to the Division II level at all of the fourteen universities in the PSAC. This study hypothesized that football and men’s basketball would have the highest correlation on the quality of the first time enrolled freshmen and quantity of the freshmen application pool. After the analysis, football had one of the lowest overall correlations while men’s basketball was in the middle of the pack in relationship to the quantity of application pool. Neither, football and men’s basketball had any significant correlation. This could be due to the lack of media exposure that NCAA Division II sports obtain from local and national news and television agencies. On the other hand, when looking at the quality of the first-time enrolled freshmen
determined by SAT scores based upon a single sport, football had the highest correlation of any of the sports. This correlation did not prove to be significant. Men’s basketball was in the middle of the pack when looking at this relationship.

One of the most interesting results from this study showed that the success of the universities’ women’s cross country teams had a significant correlation to the quantity of the freshmen application pool. What made this unique was that there were no outliers. All of the fourteen universities in the PSAC had a similar relationship between women’s cross country and the quantity of the freshmen application pool. This is interesting for two reasons; first, because the significant correlation came within a women’s sport, and women’s sports do not generally receive as much publicity as men’s sports. The second reason is because cross country is not generally considered a revenue generating sport and therefore does not draw the attention that more visible sports such as football or men’s basketball do. This could be and probably is an anomaly, however because it happened at all fourteen institutions it is an interesting one.

Conclusions

Over the years there has been a strong debate over the effects of intercollegiate athletics on the universities that sponsor these extra-curricular activities. Previous studies conducted in this area have had mixed results as to whether or not there is a correlation and whether that correlation is positive or negative for the university. Historically this has been a difficult area to study due to the numerous factors high school juniors and seniors use to determine their choice of higher education institution.

This study indicated that with some variables, success in athletics had a significant positive effect at selected universities in terms of attracting more students to apply to the university and improving the quality of the students that enroll to the university as first time freshmen. Intercollegiate athletics only accounts for one of the many variables that students could use when choosing an institution of higher learning. If institutions want to attract as many students as possible and raise the quality of those students, they need to be aware of all the possibilities in doing so. This includes utilizing intercollegiate athletics as a marketing tool. Based on the results from this study, admission officers at NCAA Division II universities, particularly the institutions in the PSAC, need to include their intercollegiate athletic programs as a part of their student recruitment efforts. It also might be advised for these institutions to increase media exposure opportunities for their intercollegiate athletic events.

Although it was the intention of this study to analyze the effects of overall intercollegiate athletic success, it is hard to ignore the results from the individual sport analysis. With women’s cross country showing such a strong significant correlation, it would be irresponsible for this researcher not to take these results into account. Are we witnessing the first effects of Title IX in sports on institutions of higher education? With sixty percent of the student body at PASSHE being female it could be a possibility. It also should be taken into account, when looking at Title IX, that this study showed that the women’s average winning percentage had higher correlations than that of the men’s average winning percentage in relationship to the number of application to the institution.

While the results from this study may be deemed as inconclusive, it is important to consider that this study could serve as the beginning to further studies into the relationship of effects of athletics on NCAA Division II universities. Previous studies have strictly focused on the effects at the Division I level. It is the hope that this study will serve as a catalyst for
continued research in this area and demographic. Future research needs to be conducted that would survey students that attend Division II institutions to see what role, if any athletic success had on their college chose decision. In addition this topic needs to be analyzed over a larger geographic area or in other geographic locations. The authors however, would caution any future researcher in choosing to large of geographic location, in that NCAA Division II athletics do not receive the same national media exposure that their Division I counterparts do, thus limiting the impact that athletic success on applications.

References


