

# Sports Motivation and Academic Performance of Student-Athletes of Isabela State University

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**ABSTRACT:** Being a student and an athlete is very challenging. The student-athletes must learn to balance both academic and athletic responsibilities. This study ascertained the demographic profile of student-athletes of Isabela State University, their perception levels of sports motivation in terms of incentive, and award and recognition, their level of academic performance, and the demographic profile and sports motivation that significantly predict academic performance. It used the descriptive design. A semi-structured questionnaire was used to gather the primary data and the secondary data was derived from the General Weighted Average (GWA). Based on the foregoing findings, it is concluded that most of the student-athletes belong to the age range of 20-21 years old, male students. Largest portion of the respondents is taking the course BSCRIM, belong to the third academic year, and belong to the family whose monthly income falls under the range of 11000 to 15999. Likewise, majority of them engage in a team sports, stayed as 2-year varsity players, mostly had only reached regional SCUAA, and achieved first place in their respective athletic fields of interests. Majority of the student-athletes are highly motivated as athlete and at the same time as students due to incentives and in awards and recognition they received in their sports fields of interests. And among the independent variables, the variable age, incentives and awards & recognition were the significant overall predictors of academic performance of the student-athletes.

**KEYWORDS:** academic performance, awards, incentives, recognition, sports motivation

## I. INTRODUCTION

What motivate students to participate in sports? Students participate in sports because for its natural satisfaction, fulfillments and pleasures. The others participate in sports not for their own sake, but rather to achieve some separate goal like maintaining self confidence and self-esteem, avoiding punishment, and receiving a reward [2]

Traditionally, sports participation can build character, and inculcate the values of good sportsmanship in young people. As a result of this tradition, an organized sports can play a vital role in the development of children to become an educated and well-rounded students [6]

Moreover, sports participation engendered awareness on the benefits of good health, fitness and exercise, and understand the value of sportsmanship, team work and camaraderie [12]. It can also motivate student-athletes to aim higher, increase desire to have scholarship and improve academic performance [3].

Numerous research studies have been undertaken to predict the academic performance of students. Researches have shown the positive effect of sports participation and academic performance of students [18].

Nevertheless, there are studies which contradict the previous statement. Giving more attention on sport may distract attention and concern from the educational mission of the school and educational curriculum. Sports participation may decrease the studying time and learning [14], because it is difficult to handle both sports training schedules and requirements in academic subjects [11]. Consequently, student-athletes should make proper use of time management and study skills to maintain the minimum academic eligibility, and the time and obligations on their sport [17].

Being a student and an athlete is very challenging. The student-athletes must learn to balance both academic and athletic responsibilities. They must dedicate countless hours to practicing their sport and staying fit, while keeping up with the rigors of college level coursework and regular academic commitments [16]. They have to train to

perform well in their sport as well as study to satisfy their academic responsibilities. This is a difficult challenge experienced by many college student-athletes because of the dual role of student and athlete.

The Isabela State University (ISU), where this study will be conducted, is no stranger to students who juggle their time between sports and studies. As an institution of higher learning which actively promotes the development of the totality of its learners, ISU expects its athletes, colloquially known as varsity players or “varsities”, to maintain the highest standard of academic excellence while achieving optimum winnings and participations in various sports activities conducted in the university and beyond.

Therefore, the researcher conducted this study to determine the demographic profile of student-athletes, the level of sports motivation, the level of academic performance, and the demographic profile and sports motivation predict academic performance of student-athletes at Isabela State University.

## **II. OBJECTIVES**

This study aimed to determine the association between sports motivation and academic performance of student-athletes in Isabela State University.

Specifically, to determine the following:

1. The demographic profile of student-athletes such as:
  - 1.1 Age;
  - 1.2 Sex;
  - 1.3 Course;
  - 1.4 Curriculum year;
  - 1.5 Family income;
  - 1.6 Sports engaged in;
  - 1.7 Number of years as varsity player;
  - 1.8 Highest level of competition participated in; and
  - 1.9 Level of athletic performance.
2. The level of sports motivation of student-athletes in terms of:
  - 2.1 Incentives; and
  - 2.2 Awards and recognition.
3. The level of academic performance of student-athletes.
4. The demographic and sports motivations that significantly predict the academic performance of student-athletes.

**III. PROCEDURE/METHODOLOGY**

This investigation used the descriptive-inferential design. The descriptive method was used to describe the academic motivation and academic performance of the student athletes. This was conducted at Isabela State University during the First Semester of the School Year 2018-2019.

The respondents were student-athletes from Isabela State University who competed in the Regional SCUAA and National SCUAA except those graduated last May, 2018. The respondents’ involvement was voluntary.

Based on the consolidated records from the sports coordinators of the respective campuses, there were 232 registered student-athletes. Using Slovin’s formula, the required research sample from the population is 147 at 5% margin of error ( $\alpha = 0.05$ ). The stratified proportional random sampling in a campus with registered students-athletes as student-respondents to achieve the required number of respondents.

The primary data gathering tool utilized in this study was semi-structured questionnaire which was validated by experts. And the secondary data were derived from the General Weighted Average (GWA) of the student-athletes. The mean distribution was used to answer the level of academic performance of the respondents.

Frequency and percent distribution was used to answer the demographic profiling. The mean distribution was used to answer the level of sports motivation and students’ performance of the respondents. The backward Multiple Linear Regression particularly backward was used to answer the problems on predictor variables of students’ performance.

In determining academic performance of the student-athletes’ General Weighted Average (GWA), the grade range was used as basis in classifying the mean of performance.

Grade Range	Percentage System Equivalent	Descriptive Equivalent
1.25 – 1.095	97, 98-100	Outstanding (O)
2.0 – 1.26 86	88, 89-91, 92-94	Very Satisfactory (VS)
2.75 – 2.01	77-79, 80-82, 83-85	Satisfactory (S)
3.0 – 2.76 75	76	Fair or Passing (P)
5.0 – 3.01	74 or below	Failed (F)

**IV. RESULTS AND DISCUSSION**

1. Demographic Profile of the Respondents

**Table 1. Distribution of respondents when grouped according to their profile variables**

Profile Variables	Frequency	Percentage
<b>Age</b>		
18-19 years	51	34.7

20-21 years	87	59.2
22-23 years	9	6.1
Total	147	100.0
<b>Sex</b>		
Male	99	67.3
Female	48	32.7
Total	147	100.0
<b>Course</b>		
ABSOCIO	2	1.4
ABLM	4	2.7
ABPOLSCI	4	2.7
BAT	25	17.0
BEED	2	1.4
BPE	4	2.7
BSAB	2	1.4
BSBA	5	3.4
BSCE	4	2.7
BSCRIM	65	44.2
BSCS	4	2.7
BSDC	2	1.4
BSE	5	3.4
BSENTREP	5	3.4
BSHRM	5	3.4
BSIA	4	2.7
BSIT	2	1.4

BSLEA	2	1.4
BTTE	1	0.7
Total	147	100.0

**Table 1. (Continued).**

<b>Profile Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Academic Year</b>		
Second Year	39	26.5
Third Year	60	40.8
Fourth Year	48	32.7
Total	147	100.0
<b>Family Income</b>		
1000-5999	35	23.8
6000-10999	20	13.6
11000-15999	59	40.1
16000-20999	24	16.3
21000-25000	5	3.4
25999-30000	2	1.4
more than 30000	2	1.4
Total	147	100.0
<b>Sports Engagement</b>		
Individual Sports	54	36.7
Dual Sports	6	4.1
Team Sports	87	59.2

Total	147	100.0
<b>Varsity Year</b>		
One year	30	20.4
Two years	56	38.1
Three years	11	7.5
Four years	50	34.0
Total	147	100.0
<b>Level of Competition</b>		
Regional SCUAA	90	61.2
National SCUAA	57	38.8
Total	147	100.0
<b>Athletic Performance</b>		
First Place	78	53.1
Second Place	29	19.7
Third Place	40	27.2
Total	147	100.0

*Age.* The table shows the percent and frequency distribution of the respondents according to their age. It shows that 87 out of the 147 (59.2%) respondents belong to the age range 20-21 years old while 51 (34.7%) respondents having the age range 18-19 years old and only 9 (6.1%) respondents having the age range 22-23 years old.

Hence, the table implies that the respondents' age is in the normal educational level. Majority of the college students today are from 18 – 21 years old accounting on the revision brought about by the K – 12 education system of the country.

*Sex.* The majority of the respondents are male students with 67.3 percent of the total number of respondents while there are forty-eight females comprising the remaining 32.7 percent.

While it may be shown that the male respondents overwhelmingly dominate the female ones, this account only on the matter of the sampling method used in the study. This does not show in any way that male athletes are superior than female athletes.

It appears, however, that in the study conducted by [4], male athletes are more popular and more famous than female athletes. It is also a generally agreed upon fact that male athletes are paid more than female athletes. Feminism has been spreading across the nation, and so many aspects of American life have been changed for the better for women, but somehow women's sports and women athletes have gotten little attention from the feminist movement. From the same study, it was stated that males receive around 55% of the scholarship funds, leaving 45% to women, and that gap becomes more apparent when looking at budgets.

*Course.* Table shows that the most numbered course of the ISU system is the Bachelor of Science in Criminology (BSCRIM) with 44.2 percent of 65 out of the 147 respondents. The course with the next high number of enrollees is the Bachelor of Agricultural Technology (BAT) with 17 percent or 25 out of the 147 respondents. The other 17 courses have only the average of 2.89 percent.

This means that the preferred course of the respondents in this study are the BSCRIM and BAT. This data is supported by the data that majority of the respondents is male. It should also be noted that in the ISU system, the most popular courses are the BS Criminology and BS Agriculture, which have the highest number of enrollees.

*Academic Year.* The most of the respondents belong the third year level with 40.8 percent or 60 respondents as shown in Table 5 on the next page. Likewise, the fourth academic year is the next in rank with 32.7 percent (48 respondents), and last with the 26.5 percent (39 respondents) as the second academic year of the respondents.

Result of this study indicates that the longer the student-athletes in the school the more they involved themselves in sports. The result validates the study of [19] that if the student-athletes spent majority of their lives participating in sports were considered themselves as naturally competitive individual not just in sports but also in academic grades as well.

*Family Income.* It can be gleaned also the data about the Family income of the respondents. It can be gleaned on the table that 59 respondents (40.1%) out of the 147 belong to a family whose income falls from 11000 to 15999 pesos. The next group with a high number of respondents is the family income from 1000 to 6999 pesos.

This implies that respondents in this group would do a deeper sense of budgeting in order for them to finance their school needs and demands. And a very few, 2 respondents or 1.4 percent belong to family whose income is from either 25999 to 30000 or more than 30000 pesos. It also implies that only few among the respondents can have a finance beyond on their needs and wants.

*Sports Engagement.* It shows also data about the engagement of the respondents in sports. Majority of the respondents, 59.2 percent or 87 respondents engage themselves in team sports. While 36.7 percent or 54 respondents prefer individual sports. And only 6 respondents (4.1%) like dual sports.

This data also implies that among the respondents, camaraderie and belongingness are also part of their development and priorities which can be observed or gained in team sports. Result of this study confirms the study of [12] that sports participation promoted discipline and developed friendship to every athletes.

*Varsity Year.* Table shows the length of years of a respondent as varsity player. It can be gleaned on Table 8 that 38.1 percent or 56 respondents have stayed two (2) years as varsity players followed by four (4) years as varsity players with 34.0 percent.

This means that most of the respondents nurture their skills as players in their choice bounded by their talents and skills. Thus, there appears to be an inverse relation between the number of years as varsity and the frequency.

*Level of Competition.* Table shows the level of competition attended by the respondents. It shows that majority of the respondents attended the regional SCUAA with 61.2 percent while 38.8 percent only experienced attending the national SCUAA.

The result implies that as the level of competitions becomes higher, the athletes competing before it become fewer. This is naturally expected since the higher the level of competition, the tougher it becomes; hence, only those who were able to emerge victorious can proceed to the next higher level.

*Athletic Performance.* Table shows the achievement of the respondents in athletic meet. It shows that majority of the respondents, 53.1 percent experienced garnering the first place. Forty (40) respondents or 27.2 percent received third place as their awards as the second most numbered athletic performance. And the last is the second place which has only 29 respondents or 19.7 percent.

Hence, this implies that the ISU system may be said to have committed itself to nurturing student-athletes to give their best in every athletic performance. The result supports the findings of [5] that the longer we can keep the athlete in the performance loop, carefully encouraging them towards the next layer of adaptation, the more equipped they will be to sustain and survive the rigors of training at the elite level.

2. Sports Motivation of the Respondents

**Table 2. Level of sports motivation of the respondents according to incentives**

Incentives Practices	Sports Motivation	Mean	Level of Motivation
1. I do my best to win in my sports event to qualify me for a scholarship.		3.52	Agree
2. I do my best to win in my sports event to go to different places.		3.63	Strongly Agree
3. I do my best to win to participate in higher level of sports competition.		3.76	Strongly Agree
4. I am motivated to join sports competition because I received allowance and athletic uniforms.		3.55	Strongly Agree
5. I have a chance meet new friends through my participation in sports.		3.82	Strongly Agree
6. The most important reason why I am in school is to play my sport.		3.05	Strongly Agree
7. I choose to play my sport because it is something that I am interested in as a career.		3.33	Agree



8. It is important to me to learn the skills and strategies taught by my coaches.	3.63	Strongly Agree
9. I want to have a free access in the sports facilities and equipment.	3.59	Strongly Agree
10. I am motivated to give my best in my sport because I want to receive cash incentives.	3.29	Strongly Agree
<b>OVERALL</b>	<b>3.52</b>	<b>Strong Agree</b>

Table 2 shows the level of sports motivation of the athlete-respondents according to incentives. Looking at the overall mean which is 3.52, it reveals that most of the respondents strongly agree that they are highly sportily motivated due to incentives. This general findings is supported by the eight statements which are strongly agreed by the respondents. It implies and ascertains the previous findings that most of the respondents work in team sports wherein they could have the chance to meet new friends, hence, participating in sports contributes in the development of the student-athletes not only physically, mentally, emotionally but also socially.

The result of the study confirms the findings of [15] that using of an external reward like money or a medal may be perceived as a positive indicator to competence. It also confirms that an athlete achieving a personal goal provides them with a sense of achievement, this means positively influences self-determination forms of motivation [10].

Table 3. Level of Sports Motivation of the Respondents According to Awards and Recognition

Sports Motivation Practices	Mean	Level of Motivation
1. I do my best to win in my sports event to receive rewards, prize, like money, more medal and others.	3.37	Agree
2. I want to gain status and prestige for being a varsity player.	3.47	Agree
3. I feel challenged to accomplish my goal as athlete of the year.	3.64	Strongly Agree
4. I do my best to win in my sports event because I want to make my family happy and proud of me.	3.54	Strongly Agree
5. I do my best to win in my sports event because I want to be recognized during my graduation day.	3.52	Strongly Agree

6. Achieving a high level of performance in my sport is a reward for me.	3.61	Strongly Agree
7. I am confident that I can be a star performer on my team.	3.62	Agree
8. My goal is to make it to the national level in my sport event.	3.65	Strongly Agree
9. I want to achieve recognition in my sports.	3.69	Strongly Agree
10. I feel satisfied and proud of myself when I win in my sports event.	3.85	Strongly Agree
<b>OVERALL</b>	<b>3.59</b>	<b>Strongly Agree</b>

The table 3 shows the specific mean responses of the respondents to the level of sports motivation according to awards and recognition. Most of respondents strongly agree to the 10 statements related to awards and recognition with the overall mean value of 3.59. The result implies that student-athlete respondents agree that awards and recognition motivate them as students.

This result of this study is inconsistent with the findings of [13] that the athletes were really affected by the Championship Clubs reward program that athletes were not just interested in the tangible rewards, they were also interested in the social rewards as well. He revealed that there are positive and negative view on extrinsic motivation that the players could receive.

### 3. The Level of Academic Performance of the Respondents

The next table presents the level of academic performance of the respondents. The data is taken from the general weighted average given by the respective registrars of the participating campuses. This data is grouped in semester and the overall mean represents the academic performance of the respondents.

Table 4. Level of academic performance of the athlete-respondents

Category	Mean	Remarks
First Semester	2.32	Satisfactory
Second Semester	2.15	Satisfactory

OVERALL WEIGHTED  
 AVERAGE 2.24 Satisfactory

Table 4 shows the level of academic performance of the athlete-respondents. It can be seen on the table the general performance of the respondents is 2.24 which is categorized as satisfactory performance. This performance is actually the weighted average of the overall performance of the athlete-respondents in both semesters, i.e. both in the two semesters, they have satisfactory academic performance with the mean values of 2.32 and 2.15 respectively. These findings about the academic performance of the respondents mean that all of the respondents completed and successfully passed their academic subjects satisfactorily.

The general weighted averages of the respondents suggested that they belong to the middle portion of the population with respect to the general weighted average. While they do not overwhelmingly excel in academics, it cannot also be said that they are in the failing situation. More telling is the fact that under the ISU System Manual, athletes of the university may not maintain their varsity status if they cannot sustain a passing grade in all the subjects of their respective college degrees.

This result is supported with the finding of [7] that athletes performed better in the classroom, developed impressive time management skills, felt motivated to complete their degree, were motivated to attend classes, and experienced a smoother transition into the college lifestyle. Another similar findings of [8] on the effects of student’s physical activity on their academic achievement. These researchers found out that as students’ activity levels rose, the students’ academic achievement also increased, thus participation in physical activity is associated with better academic achievement.

4. Demographic Profile and Sports Motivation as Predictors of Academic Performance

**Table 5. Independent Variables that Predict Academic Performance**

Independent Predictor Variables	Standard Coefficients	Standard Error	t-value	Prob .
(Constant)	0.149	0.113	1.316	0.190
Age	-0.020	0.011	1.756	0.081
Number of Years as Varsity Player	0.042	0.005	3.496	0.001
Level of Athletic Performance	-0.064	0.007	-4.651	0.000

Incentives as Sports Motivation Variable	0.128	0.020	6.893	0.000
Awards and Recognition as Sports Motivation Variable	0.866	0.017	53.982	0.000
Regression df	6			
Residual df	140			
F-value	1745.282**			
Multiple R	0.993			
R <sup>2</sup>	0.987			
Adjusted R <sup>2</sup>	0.986			

\* $p < .05$ . \*\* $p < .01$ .

The overall multiple linear regression analysis shows the predictors of academic performance among the independent variables. The prediction model reached in eight steps and contained only six significant predictors. The regression model is statistically significant,  $F(6, 140) = 1745.282$ ,  $p < .01$ , and accounted for approximately 99% of the variance of the academic performance ( $R^2 = 0.987$ , Adjusted  $R^2 = 0.986$ ). These set of predictor variables also have a high positive correlation to the dependent variable as being shown by the value of multiple R, ( $R = 0.993$ ).

Looking at the coefficients, the age has a negative influence to the academic performance ( $B = -0.020$ ). This means that for every change in age in year, it decreases about 2% of the academic performance. The same idea lies in the change in level of athletic performance and learning styles, i.e. for every change in this predictor, a decrease of 6.4% and 5.4% respectively in the academic performance. On the other hand, the predictor variables, incentives and award and recognition remain a set of positive predictors of the academic performance. This is shown by their coefficients,  $B = 0.128$  and  $B = 0.866$  respectively. This results strengthen the previous regression analyses about the specificity of these set of predictors. Hence, the regression equation that determines the academic performance of the students is shown below:

$$y = 0.149 - 0.020(\text{age}) + 0.042(\text{years as varsity player})$$

$$-0.064(\text{level of athletic performance})$$

$$-0.128(\text{incentives}) + 0.866(\text{awards \& recognition})$$

where:  $y$  = academic performance

The results associated with the finding of [1] on metaanalysis of effective strategies to recruit and retain youth participants into afterschool clubs indicated that financial incentives could increase program participation. In another study, [9] found that financial rewards improved academic performance among adolescents.

## V. CONCLUSION

Based on the results of the study, the following findings were obtained:

1. *Profile of the Respondents.* Most of the student-athletes belong to the age range of 20-21 years old and majority of them are male students. Largest portion of the respondents is taking the course BSCRIM and they belong mostly to the third academic year. Majority of the respondents belongs to the family whose monthly income falls under the range of 11000 to 15999. Likewise, majority of them engage in a team sports and stayed as 2-year varsity players. Most of these respondents only reached regional SCUAA and achieved first place in their respective athletic field of interests.
2. *Level of Sports Motivation.* Majority of the student-athletes are highly motivated due to incentives and due to awards & recognition as they received in their sports fields of interests.
3. *Level of Academic Performance.* The level of academic performance of the student-athletes are satisfactory both in first and second semesters. Majority of them got this satisfactory academic performance in first semester while there is a little bit of increase, very satisfactory performance in second semester.

The overall academic performance of the respondents is generally a satisfactory academic performance.

4. Among the independent variables, demographic profile and sports motivation, the *age*, *incentives* and *awards & recognition* are the only significant overall predictors of academic performance of the student-athletes. As ascertain by this set of findings, the age negatively influence the academic performance of the student-athletes while the incentives and awards & recognition have positive influence to the dependent variable.

## VI. RECOMMENDATIONS

On the basis of the conclusions, the administrators may come up with more concrete sustainable program that talks and executes proper incentives and awards to the deserving student-athletes. Also, they may allocate money in sports to hire at least one full-time Sports Academic Advisor whose primary responsibility is overseeing the academic progress of the student-athletes, as well as making sure they are effectively managing their sports and academic commitments.

The schools may have a sports academic advisor whose primary responsibility is to oversee the academic progress of the student-athletes, and at the same time make sure that they are effectively managing their sports and academic commitments.

Lastly, other researchers may conduct a qualitative research that could focus more on determining how incentives, and rewards and recognition affect student-athletes' motivation.

## VII. REFERENCES

- [1] Arbetron, A. J. A., Sheldon, J., & Herrera, C. (2005). Beyond safe havens: A synthesis of 20 years of research on boys & girls clubs. Full report. Philadelphia, PA: Boys & Girls Clubs of America.

- [2] Deci, E. L., & Ryan, R. M. (2002). Overview of self-determination theory: An organismic dialectical perspective. *Handbook of self-determination research*, 3-33. (Din, 2005). Din, F. S. (2005). Sport activities versus academic achievement for rural high school students. In *National Forum of Applied Educational Research Journal-Electronic* (Vol. 19, No. 3E, pp. 1-11).
- [3] Din, F. S. (2005). Sport activities versus academic achievement for rural high school students. In *National Forum of Applied Educational Research Journal-Electronic* (Vol. 19, No. 3E, pp. 1-11).
- [4] Geraghty, A.W.A., Wood, A.M., & Hyland, M.E. (2010). Attrition from self-directed interventions: Investigating the relationship between psychological predictors, intervention content and dropout from a body dissatisfaction intervention. *Social Science & Medicine*, 71, 30–37. PubMed doi:10.1016/j.socscimed.2010.03.007
- [5] Giles, K., Penfold, L., & Giorgi, A. (2005). A guide to Developing physical Qualities in young athletes. *Queensland, Australia: Movement Dynamics Pty Ltd.*
- [6] Griffith, J. (2004). Relation of principal transformational leadership to school staff job satisfaction, staff turnover, and school performance. *Journal of educational administration*.
- [7] Gritmit, N. (2014). Effects of student athletics on academic performance. *The Journal of Undergraduate Research*, 12(1), 5.
- [8] Kristjansson, A. L., & Sigfúsdóttir, I. D. (2009). The role of parental support, parental monitoring, and time spent with parents in adolescent academic achievement in Iceland: A structural model of gender differences. *Scandinavian journal of educational research*, 53(5), 481-496.
- [9] Levitt, S. D., List, J. A., Neckermann, S., & Sadoff, S. (2016). The behavioralist goes to school: Leveraging behavioral economics to improve educational performance. *American Economic Journal: Economic Policy*, 8(4), 183-219.
- [10] Mallett, C. J., & Hanrahan, S. J. (2004). Elite athletes: why does the ‘fire’burn so brightly?. *Psychology of sport and exercise*, 5(2), 183-200.
- [11] Montecalbo, R. C., & Cardenas, R. C. (2015). Nutritional knowledge and dietary habits of Philippine collegiate athletes. *International Journal of Sports Science*, 5(2), 45-50.
- [12] Rasmussen, K. (2000). The changing sports scene. *Educational Leadership*, 57(4), 26-29.
- [13] Readdy, T., Raabe, J., & Harding, J. S. (2014). Student-athletes’ perceptions of an extrinsic reward program: A mixed-methods exploration of self-determination theory in the context of college football. *Journal of Applied Sport Psychology*, 26(2), 157-171.
- [14] Rees & Sabia, 2010 Rees, D. I., & Sabia, J. J. (2010). Sports participation and academic performance: Evidence from the National Longitudinal Study of Adolescent Health. *Economics of Education Review*, 29(5), 751-759.
- [15] Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.
- [16] Shuman, 2009). Shuman, M. P. (2009). *Academic, athletic, and career athletic motivation as predictors of academic performance in student athletes at a division I university*. The University of North Carolina at Greensboro.
- [17] Simons & Rheenen, 2000). Simons, H. D., & Van Rheenen, D. (2000). Noncognitive predictors of student athletes' academic performance. *Journal of College Reading and Learning*, 30(2), 167-181.
- [18] Trudeau, F., & Shephard, R. J. (2008). Physical education, school physical activity, school sports and academic performance. *International Journal of Behavioral Nutrition and Physical Activity*, 5(1), 10
- [19] Tower, D. (2008). Relationship between Athletic and Academic Success: A Pilot Study. Honors Scholar Theses.48.[http://digitalcommons.uconn.edu/srhonors\\_theses/48](http://digitalcommons.uconn.edu/srhonors_theses/48).