

2013

The Effect of Organized Sports on Academic Achievement and Youth Development

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Recommended Citation

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CLAREMONT McKENNA COLLEGE

**THE EFFECT OF ORGANIZED SPORTS ON ACADEMIC ACHIEVEMENT
AND YOUTH DEVELOPMENT**

SUBMITTED TO

PROFESSOR DIANE HALPERN

BY

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FOR

SENIOR THESIS

FALL SEMESTER 2013

DECEMBER 2, 2013

Table of Contents

| | |
|---|----|
| I. Introduction | 1 |
| II. Chapter 1:Review of Athletic Research Studies | 2 |
| a. Effects of Sport Participation on Academic Achievement in 6 th -9 th Grade Students .2 | |
| b. Effects of Organized Sports on Youth Development | 4 |
| c. Importance of Sport Implementation at an Early Age | 6 |
| d. Benefits of Organized Sports for Children From Low-Income Families | 8 |
| e. Effects of Organized Sports in High School | 10 |
| f. Conclusion | 11 |
| III. Chapter 2: Rainier Athletes | 13 |
| a. Rationale for Rainier Athletes..... | 13 |
| b. Use of Token Economies | 14 |
| c. Variables Influencing Effectiveness | 15 |
| d. Rationale for Point System | 16 |
| e. History and Future Growth Plans..... | 16 |
| f. How Students Are Selected | 17 |
| g. The Point System | 18 |
| h. Strengths and Weaknesses of Rainier Athletes..... | 21 |
| i. Conclusion | 24 |
| IV. Chapter 3: Evaluation and The Future of Rainier Athletes | 25 |
| a. Design to Evaluate Rainier Athletes Program | 25 |
| b. Future Growth and Aspirations for Rainier Athletes Program | 27 |
| c. Future Funding Plan..... | 30 |

| | |
|------------------------------|----|
| d. Further Implications..... | 31 |
| V. References | 32 |

Introduction

More than thirty-five million youth participate in organized sports each year in the United States (National Survey of Children's Health, 2007). The high number of participants in organized youth sports has lead researchers to investigate the effects associated with athletic involvement on youth development and academic achievement. Research suggests that children's participation in organized sports is beneficial to academic achievement. Greater participation in organized sports is also linked with youth development, including the development of positive behavioral and social skills that cannot be obtained inside the classroom. In this thesis, I explore the relationship between sports, academics, and youth development, in 5th- 9th grade boys and girls from low-income families. This exploration includes an analysis of a non-profit organization called "Rainier Athletes." This program underwrites the cost of organized sports for low-income children with the belief that sports help empower students so that they make positive choices inside the classroom and in the future. Rainier Athletes uses the intrinsic appeal of sports in ways that aid the academic and social development of youth. This program uses a token economy design in the classroom where students earn points by fulfilling academic expectations and displaying positive behavior. They exchange these points for eligibility to play in organized youth sport leagues. Rainier Athletes empowers youth by using sports as a medium to incentivize students to succeed in school and learn crucial skills for future achievement.

Chapter 1: Review of Athletic Research Studies

Effects of Sport Participation on Academic Achievement in 6th- 9th Grade Students

Does participation in organized sports enhance academic achievement?

Supporters of organized sports claim that athletic participation helps foster higher academic achievement. Stephens and Schaben (2002) conducted a study on the effect of interscholastic sports on the academic achievement of middle school students in Omaha, Nebraska. Participants included 136 students, 73 participated in a sport and 63 did not participate in a sport, with an equal number of male and female students overall. School records were collected, which consisted of grade point average (GPA), grade in mathematics, score on the California Achievement Test in mathematics, and gender. To assess sports participation students filled out a questionnaire about their level of participation in organized school sports. The results showed that students who participated in a sport had significantly higher GPAs (mean of 3.15) than students who did not participate in a sport (mean of 2.40). These results were also consistent when comparing male and female athletes to non-athletes of the same sex. This study highlighted the benefits of sports in enhancing student's academic performance, other data collected at the same time also suggest that sports may help students build discipline, set goals, organize time, and develop self-confidence. Once athletes learn to transfer these skills to academics, they can further their success inside the classroom.

A similar study conducted by Buhrmann (1972) examined the relationship between academic achievement and boys' participation in interscholastic sports in 7th to 9th grade. This study used statistical controls for socio-economic status (SES) and previous scholarship. The participants in this longitudinal study were 158 randomly

selected boys who had attended junior high school in Southern Oregon between 1959 and 1965. There were 74 students classified as athletes and 84 non-athletes. GPAs and standardized test scores were collected at the end of each school year and socio-economic status and previous scholarship were identified for each subject. An initial analysis showed that athletics were significantly related to scholarship and both scholarship and athletics were significantly correlated with the control variables. The higher the SES of the student's family and the higher his scholarship at the end of elementary school, the greater the chances of the student being an athlete and achieving academically at a high level in junior high school. Athletes were matched with non-athletes on SES (white collar or blue collar) and previous academic achievement (within a range of .25 GPA). The results revealed that athletes significantly exceed non-athletes in all grade levels in GPA and standardized tests. Thus, when SES and previous scholarship were held constant, the positive relationship between athletic participation and academic achievement remained. The results further support the claim that athletes achieve a higher level of academic success than non-athletes regardless of their SES.

Limitations

A limitation in both of these studies includes small sample size. In addition, the first study did not control for SES. A larger sample size would give more reliable data and be more representative of the population. If SES was included in the first study it would provide a better analysis of the factors that affect academic achievement in middle school. The absence of SES data does not take away from the fact that athletes had higher GPAs than non-athletes, which suggest that students involved in interscholastic sports perform better academically than those who are not involved. However, it is important to

understand that a positive relationship does not show that participating in sports *causes* the improvement of academics because correlation does not mean causation. This is a limitation of any correlational study. One cannot make assertions about causation because the studies did not control the influence of extraneous factors, such as intelligence and motivation and they did not use a random assignment design, which is needed for causal statements.

Effects of Organized Sports on Youth Development

Additional research has shown the developmental benefits of sports participation for youth. Focus areas of youth development include personal, interpersonal, and life skills. In a qualitative case study conducted by Holt, Sehn, Spence, Newton, and Ball (2012), researchers examined school staff members' and children's perceptions of school physical education, intramural sports, and team sports with a view toward establishing factors that facilitated positive youth development. The domains of personal development that they studied were identity exploration, initiative, and emotional regulation. The domains of interpersonal development included teamwork and social skills, positive relationships, and the development of adult social networks. Life skills were defined as the skills that are required to deal with the demands and challenges of everyday life. Data were collected through observation and individual interviews with students in fifth to ninth grade. It is important to emphasize the findings in this study that were specifically associated with team sports. The researchers concluded that students were dedicated to their team and that team sports facilitated positive learning and behaviors because coaches prioritized player development ahead of winning in this study. Coaches used specific strategies to promote positive behavior, which included an activity called

“spotlighting” in which players formed a circle and shared one good thing that one of their teammates had done that day. This helped the players acknowledge one another and gain mutual respect. Another meaningful aspect that was facilitated through sport was the development of social connections. The research showed that social skills were learned fairly naturally in sport settings as a result of the social interactions that are required to play games. Four types of life skills were also associated with participating on a sports team, which included learning to take initiative, respect, teamwork, and leadership. The study showed that factors associated with positive youth development varied across different contexts, but suggested the factors promoted through team sport were viewed as the most beneficial.

Many sports psychologists argue for the importance of sport in shaping youth development. Hansen, Larson, and Dworkin (2003) attributed positive youth experiences to organized sport. The researchers claimed that organized activities help youth develop social connections with others and learn skills for cultivating these connections. Activities where youth work together to achieve goals (i.e. team sports) provide the opportunity for experiences that foster social competencies and develop leadership skills. Youth are also able to develop connections with adults in the wider community by forming meaningful relationships with coaches. Sport settings also provide a context for developing relationships with and gaining a better understanding of peers from diverse ethnic and social class groups. The researchers found that youth in sports activities reported high rates of managing emotions, physical skills, and self-knowledge (e.g. understanding one’s own abilities and limitations) compared to youth in academic and leadership activities and who did not play sports.

The growing theme in sport psychology literature is that life skills can be taught in combination with athletic skills in a sports context. The general belief is that what is learned in a sport is directly transferrable to the classroom and future life pursuits. Danish, Nellen, and Owens (1996) emphasized the positive impact of youth development through sport participation by recognizing that the activity is a metaphor for enhancing competence. In other words, it is not the game itself that facilitates youth development; the value of a sport experience comes from applying the principles learned through participation to other areas in life. The researchers claimed that the skills needed to enhance sport performance and to succeed in life are virtually the same. For instance, physical skills are similar to life skills in the way they are learned which is through demonstration and practice. Also, many of the skills learned in sport, including abilities such as performing under pressure, solving problems, managing time, setting goals, communicating, handling success and failure, working with a team, and receiving and benefitting from feedback are all transferable to other life domains. If coaches teach these skills and provide an explanation to children about how these skills will be useful, they can help children benefit from these life skills in their future.

Importance of Sport Implementation at an Early Age

In 1981, the National Research Council (NRC) concluded that middle childhood is a time of marked change in children's abilities and behaviors that have long-term implications for adolescent and adult patterns. For these reasons the NRC recommended further research on the developmental processes during middle childhood. In their book *Middle Childhood: Contexts of Development*, Huston and Ripke (2006) analyzed the key aspects of middle childhood and discussed research on how this period contributes to

later development. After reviewing the research, the authors concluded that the middle childhood years are a pivotal developmental and transitional period for children. Children in middle childhood form identities and interact with peers and adults outside the family. Huston and Ripke discussed the importance of out-of-school activities, such as organized sports, because children can learn many skills beyond those taught in school. They highlighted the need for structured activities in order for children to learn group goals and organization at an early age. Through participation in these activities, children can experience mentoring relationships with adults (e.g., coaches), incorporate group value systems, and start to develop their own identity as they move gradually to a larger world outside their families. Youths' experiences during middle childhood have an impact on what they will participate in during early adolescence. Therefore, the research suggested that if children do not become involved in sports during middle childhood, they are less likely to participate in adolescence.

Frederick and Eccles (2008) also examined the development of children during early adolescence. They claimed that around the transition to middle school, children undergo rapid changes associated with pubertal development, establishing autonomy from parents, identity exploration, and social changes. The researchers discussed several reasons why participation in organized activities has the potential to be important in the middle school years. First, early adolescence is a time when youth begin making their own decisions about how to spend their after school time, and these choices can have important effects on future development. Research suggested that involvement in supervised and organized activities during the after school hours is associated with positive outcomes, while participation in unsupervised or unstructured activities is related

to less favorable adjustment. Second, as middle school youth begin to break away from parents they seek emotional support from caring adults outside the family. For this reason, coaches can be very influential in a child's life and act as key mentors and motivators. Third, during this time it is important for youth to feel connected with their peers. Organized sports provide a distinct environment for children to develop relationships and feelings of belonging to a group.

Benefits of Organized Sports for Children From Low-Income Families

Participation rates for low-income children are consistently lower than those of their more affluent peers; however structured activities may be especially critical for low-income children because of the risk factors associated with living in poverty (Casey, Ripke & Huston, 2005). Organized sports provide an ideal activity to expose children to a structured, safe, and an adult-supervised environment. Research has shown that children from low-income families have been characterized as having low self-esteem, lacking peer acceptance, and suffering from socio-emotional problems of anxiety and depression, compared to children from high-income families. These findings indicate a need for improving low-income youths' social skills. Organized sports provide opportunities for youth to develop social skills while reducing the likelihood of becoming involved in delinquent behaviors (Ripke & Huston, 2006). Therefore, low-income youth could especially benefit from such activities. Buhrmann (1972) claimed that athletics may be the most important means for low-socio economic status students to gain social recognition and acceptance, and through it greater academic aspirations and higher scholarship.

In a qualitative study, Holt, Kingsley, and Scherer (2011) examined low-income parents' and their children's perceptions of the benefits and challenges associated with youth sport participation. Data were collected from 35 individual interviews from 17 families (17 parents and 18 children). The purpose of the study was to establish how personal and contextual factors combined to influence sports participation and explore potential developmental and health benefits for children. Interviews were transcribed and coded into themes of benefits, challenges, and opportunities. After further interpretation and analysis, the data demonstrated clear associations between sport involvement and gaining social and personal developmental benefits for children. Holt, Kingsley, and Scherer emphasized that several of the benefits reported by parents and children appeared to transfer from sport to other areas of the children's lives.

Financial barriers and scheduling demands were some constraints reported by parents, which limited the extent to which their children could continually participate in sport. The researchers concluded that such barriers and constraints likely restricted the long-term developmental benefits children could gain from their involvement in sport. However, parents also suggested solutions to the problems of providing their children with sporting opportunities. The results suggested that sport participation may be particularly important to these family's lives because children gained personal and social benefits from activities they likely would not have otherwise experienced. It is important to emphasize that this research does not conclude that children from high socio-economic families would not benefit in the same way from organized sports, but data does suggest that involvement in organized sport may be especially important for low-income youth who have a greater number of risk factors that can negatively effect their development.

Effects of Organized Sports in High School

Sports Participation plays a major role in the lives of many adolescents. In high school, involvement in sports helps structure individual's peer groups and is linked to identity exploration. Eccles and Barber (1999) found a specific link between activity involvement and both positive and negative adolescent outcomes. Research showed that adolescents in extracurricular activities had more friends who were academically-oriented and fewer friends who skip school and use drugs than adolescents who did not participate in activities. Mahoney and Cairns (1997) also reported that high school dropout rates among at-risk students were significantly lower for students who had earlier participated in extracurricular activities compared with those who did not participate.

Eccles, Barber, and Stone (2001) assessed the link between high school activity involvement and social identities and young adult pathways of substance use, educational and occupational attainment, and psychological adjustment. The researchers conducted a longitudinal study, which began with 6th graders and followed them through 12th grade and 6 years after high school. Participants were asked to indicate which of several social groups they identified with (the Princess, the Jock, the Brain, the Basket Case or the Criminal) and to list all the activities in which they participated. Extracurricular activities were grouped into four categories: prosocial activities, school involvement, performing arts, and team sports. Data were also collected regarding substance use, academics, job characteristics and psychological adjustment. The results showed that sports participation predicted positive educational and occupational outcomes and lower levels of social isolation, but also higher rates of drinking. The identity analysis suggested that those who identified as Jocks showed the most positive adjustment but also high frequency drinking

rates. Frederick and Eccles (2005) also found that adolescents who participated in sports sometimes formed social groups with negative group dynamics, which included encouragement of alcohol use and promotion of undesirable social norms. Athletes may have a greater likelihood of associating themselves with a peer network that supports alcohol use; peer influence is a major factor that contributes to higher drinking rates in adolescence (Eccles, Barber & Stone, 2001). Although the social network of Jocks and those who participated in school sports report some risky-behaviors, the studies emphasized that sports participation was linked to more positive and long-term benefits than to negative ones.

Conclusion

The research reviewed in this chapter examined the effects of organized sports participation on academic achievement and youth development in middle childhood and adolescence. Researchers concluded that sports participation had a beneficial effect on academic achievement in middle school and junior high school. There was a positive correlation between GPA and sports participation for students who participated in sports compared to students who did not participate in sports. Participation in sports was also beneficial in shaping personal and interpersonal youth development, as well as helping youth build life skills. Implementing sports at an early age is beneficial because middle childhood is viewed as an essential developmental and transitional period for children and experiences at this time impact children's behavior during adolescence. Therefore, if children are able to obtain the positive aspects of sports early on, they will benefit in their future development. The literature also suggested that the benefits of sports participation may be most important for children from low-income families because organized sports

provide structure and help reduce risk factors associated with living in poverty. Overall, the positive effects of sports participation were maintained throughout high school, however there were some negative outcomes of sports, such as higher alcohol use and risky behavior.

Chapter 2: Rainier Athletes

Rainier Athletes is a non-profit foundation that underwrites the cost of organized sports programs for low-income students in elementary and middle school. A holistic approach is used by engaging the student's core community, which consists of parents, teachers and coaches, to motivate students to achieve academically. The program utilizes a point system in which participating students earn daily points in the classroom through the fulfillment of specific academic objectives and participation expectations. Students accumulate points and must meet a customized threshold in order to remain eligible to play in the organized sports program of their choice.

The parents and teachers work together with the students to establish a customized points goal for each student. The students must meet their individually determined points threshold by the end of each school week in order to remain eligible to participate in their next sporting event. The goal is to help students develop confidence, perseverance, and other skills that will help them succeed in high school and other future aspects of life.

Rationale For Rainier Athletes

The organization was founded on the idea that there was a need for more programs that offered diverse learning opportunities and by providing low-income students the opportunity to participate in organized youth sports, these children would benefit in multiple ways. Rainier Athletes is dedicated to empowering students through participation in organized sports by providing financial and mentoring support to the student athletes. The founders believe that lessons learned on the athletic field will equip students with the skills they need to make positive choices towards future achievement.

They believe that youth participation in organized sports fosters irreplaceable behavioral, educational, and social skills, which enhances youth development. The point system enables self-awareness, reinforces positive behaviors, and allows students to improve in school, at home, and on the field.

Use of Token Economies

Token economies are based on the theory of reinforcement. By definition, a reinforcer is any stimulus that increases the probability that a behavior will be repeated. Token economy programs are often implemented by teachers to modify students' behaviors in the classroom (O'Leary & Drabman, 1971). A token economy is a reinforcement program that awards tokens or points that are contingent upon the performance of targeted behaviors. Later, tokens are exchanged for desired objects or activities. Token economies can be used to decrease disruptive behavior or increase desirable behavior, such as time spent studying, academic achievement, participation in class discussions, assignment completion, and attendance. After reviewing a number of token economy systems implemented in the classroom, researchers found that token reinforcement programs are effective at significantly increasing desired behavior for a variety of students (O'Leary & Drabman, 1971). Most programs use an ABAB Design, which refers to plotting the desired behavior during a base period, a treatment or token period, a return to the base period conditions, and a reinstatement of the treatment or experimental conditions. O'Leary and Drabman concluded that it is important to eventually withdraw the token program so that students do not become dependent on tokens in order to stay motivated.

Opponents of token economies believe that extrinsic rewards decrease a students' intrinsic motivation. Intrinsic motivation can be characterized by self-determination, meaning forces within the individual determine one's actions and emotions (Bowman, 2007). Extrinsic motivation occurs when the motivation comes from outside factors, such as rewards or incentives. However, after investigating teacher's attitudes towards reward systems in the classroom, Hoffman and al. (2009) found the majority of teachers thought that reward systems could increase participation and academic achievement and that the negative effects of reward systems were limited. Token economies are generally viewed as an effective means for motivating students by providing them with reinforcement.

Variables Influencing Effectiveness

There are many factors that must be considered before implementing a reinforcement program. It is essential that tokens are clearly understood and valued by the students in order to be used as reinforcers. Rewards are also most effective when students set their own goals, but it is essential that parents and teachers discuss and agree on the goals. Reinforcement must be *contingent* upon good behavior to increase its frequency. Another aspect to consider in a token economy program is the use of teacher praise. Teacher praise is often paired with the token and back-up reinforcers as a positive reinforcing stimulus. The age of the children participating in these programs must be considered because token programs are often designed for younger children. The reason why there may be a stronger effect for younger children is that they respond to inexpensive backup reinforcers, such as toys or candy, more readily than older children.

Rationale For Point System

The point system, which is used in the Rainier Athletes program, is a token economy. The points are reinforcers that stimulate the students to behave successfully in class, which entails completing assignments, actively participating, and showing up to class on time. The students are motivated to earn full points each week so they can exchange the points for a secondary reinforcer, which is eligibility to participate in a sport.

History and Future Growth Plans

Rainier Athletes was founded in March 2012 by a group of recent college graduates. After establishing a partnership with a Title 1 elementary school in Bellevue, Washington, and a partnership with the local Little League by negotiating discounted fees, the Rainier Athletes Foundation began their pilot season. Title 1 schools in the Bellevue School District are schools that receive financial assistance from the federal government because over 35% of their students qualify for free or reduced lunch. In its first year, The Rainier Athletes Foundation selected and sponsored a group of five fifth-grade students to participate in Little League baseball. The organization funded registration fees and then negotiated discounts with the local sporting goods stores in order to purchase the necessary sports equipment for each student. Rainier Athletes continued to sponsor the participation of the student athletes in multiple summer camps in the summer of 2013. As the pilot students progressed into sixth grade, the program further supported the students by partnering with the local middle school and then sponsoring the students so that they could participate in a fall soccer league. Looking forward at future growth, Rainier Athletes anticipates adding 12 new 5th graders during

the 2013-2014 school year. Now that the organization has partnered with a local middle school, they are piloting a modified version of the program to align with the 6th- 8th grade environment. Within the next 5 years, Rainier Athletes envisions expanding its reach to multiple elementary and middle schools across the Bellevue and Seattle area.

How Students Are Selected

The selection process begins at the start of each school year. Teachers send out a school-wide newsletter that explains the Rainier Athletes program and encourages interested families to apply. Students and parents fill out an initial application so that teachers can determine which students are interested in the program. Students who show interest are then cross-referenced with the school's list of students on free and reduced lunch. Once this group is narrowed to those who qualify for financial need, the selection committee, composed of students' teachers, counselors, and members of the family services team, interview both the selected students and their families. The family services team is a voluntary program that provides translators for families who do not speak English. The interview process is used to identify those students and families who have the greatest potential to succeed in the program. The criteria include parents' willingness to engage in the child's success in school, students' ability and desire to learn, and whether or not sports act as a motivator for the student. The foundation is selective and will only allow students and parents who show a collaborative dedication and drive towards the student's education and future success.

After the students are accepted and registered, each student receives a counselor who helps that student develop a customized "points" plan for the school year. The counselor communicates with the student's family, coaches, and teachers in order to build

the student's customized plan; students choose which sport they want to participate in each season. The students are required to sign a contract, which establishes that they will abide by their customized point system and agree to attend games even if they are ineligible to play.

The Point System

The point system was developed for both elementary and middle school students with different standards for each. The objectives of both point systems are the same. All students earn daily points and must reach their point threshold by the end of each week. The students are given weekly point calendars and they are expected to fill out how many points they think they deserve everyday. The teachers also fill in the number of points they believe the student earned that day. The scores are then discussed and points are awarded. Students need to pass every category on the scoring sheet (passing requires an average of 50%). If students do not earn a passing score at the end of the week, they are ineligible to participate in their upcoming game. However they are still required to suit up and attend the game. An example of a point-calendar sheet for elementary school students is shown in Table 1 and an example of this calendar for middle school students is displayed in Table 2.

Table 1: Elementary School Point System

| Elementary School Point System | | | | | | | | | |
|--------------------------------|---|---------|---------------|---------|----------|---------|-------------|---------|-----------------|
| | Attendance | | Participation | | Behavior | | Assignments | | Progress Report |
| | Student | Teacher | Student | Teacher | Student | Teacher | Student | Teacher | |
| Monday | | | | | | | | | |
| Tuesday | | | | | | | | | |
| Wednesday | | | | | | | | | |
| Thursday | | | | | | | | | |
| Friday | | | | | | | | | |
| Scoring | | | | | | | | | |
| Attendance: | 0- I was absent 1- I was tardy 2- I was on time (If excused do not mark points) | | | | | | | | |
| Behavior | 0-I was sent to the office 1- I needed reminder(s) 2- I self-monitored *(If absent do not mark score) | | | | | | | | |
| Participation | 0-I did not participate 1- I needed reminder(s) to participate 2- I was an active participant *(If absent do not mark score) | | | | | | | | |
| Assignments | 0-I did not turn in assignment 1- I turned in this assignment incomplete/with poor quality 2- I completed this assignment with good quality | | | | | | | | |
| Progress Report | Mark '1' in appropriate cell or keep blank if not relevant | | | | | | | | |

Table 1 shows the weekly point calendar and scoring guide for elementary school students. In each category the student has an opportunity to gain up to 2 points. Students write a score from 0-2 points in the “Student” column and teachers also fill in the “Teacher” column with a number from 0-2, however the teacher’s score is the final score. At the end of the week the scores are averaged and totaled. The student must earn an average of 1 point in each category and a total of at least 28 points in order to remain eligible to play that week.

Table 2: Middle School Point System

| Instructions | | | | | | | | | |
|-------------------------|---|--|--|--|--|--|--|--|--|
| For Students: | In the "Student" column, please write a score of "1" in each category you successfully completed (for each period); otherwise, write a score of "0" | | | | | | | | |
| For Teachers: | Please initial the "Teacher" column for each metric you believe the student has successfully completed ; otherwise, place an "X" indicating that no points were earned for that metric. Additionally, please sign your corresponding row if the student was present in your tutorial. | | | | | | | | |

| Monday | | | | | | | | | |
|----------|---------|---------|---------------|---------|---------|---------|------------|---------|----------|
| | HW | | Participation | | Planner | | Leadership | | Tutorial |
| | Student | Teacher | Student | Teacher | Student | Teacher | Student | Teacher | |
| Period 1 | | | | | | | | | |
| Period 2 | | | | | | | | | |
| Period 3 | | | | | | | | | |
| Period 4 | | | | | | | | | |
| Period 5 | | | | | | | | | |
| Period 6 | | | | | | | | | |
| Period 7 | | | | | | | | | |

Table 2¹ shows the daily point calendar and instructions for middle school students. Middle school students are required to earn points in each period. For each category (metric) students mark a score of "1" for completion and a score of "0" if the task was not successfully completed. Teachers initial each column that they believe the student has successfully completed or an "X" if no points were earned in a category. The teacher's score is the final score that the student earns. In order to pass the student must earn an average of 2 points in each period and earn a 70% or higher in each class.

The metric definitions for the token economy system:

Participation: Participation means that the student gets off to a quick start, is an active and engaging member during group work, completes in-class assignments, asks appropriate questions, keeps the conversation about the content, stays on task, puts in effort, takes appropriate risks, and challenges themselves.

HW (Homework) – Student has completed his/her homework assignment(s) before the bell rings to start the class (if no homework was assigned then student receives the point).

¹ Tables 1 and 2 are currently in use at participating Rainier Athlete elementary and middle schools

Planner- Student effectively fills out planner with his/her homework assignments and/or the class objective for the day. (If nothing is expected to be recorded then student receives the point).

Leadership- This student is focusing on leadership skills. Leadership means that the student is leading as a positive example for his or her classmates. Student controls impulses, takes responsibility for his or her actions, and calmly makes the smart decision when faced with a challenge.

Strengths and Weaknesses of Rainier Athletes

Based on a review of the literature there are many beneficial aspects of the Rainier Athletes program. The organization provides a structured and supervised environment for low-income students who are at a greater risk for academic failure than students from high-income families. At-risk youth are provided with an opportunity to build positive social skills and gain social recognition that the students may not have otherwise experienced at home or at school. Coaches act as mentors for students and the students are able to develop social networks with responsible adults outside the family. The program helps parents of low-income youth overcome financial barriers by underwriting the costs their child's organized sports.

Another beneficial aspect of Rainier athletes is that the program is implemented during middle childhood, which the literature suggests is a fundamental developmental and transitional period for children (Huston & Ripke, 2006). At this age there is a need for structured activities that teach children about setting goals and organization. It is advantageous that Rainier Athletes begin the program in 5th grade because students are

able to learn skills for achievement early on, which can positively impact their later development in adolescence.

The program effectively applies a token economy through the point system model. The competitive screening process establishes sports as an effective reinforcer for students because during the interview process students acknowledge that sports act as a motivator. Teachers are actively involved in the program and communicate to students how the point system works and provide praise to encourage students. Another effective application of the token economy is that reinforcement is contingent on students demonstrating positive social behaviors, which means the student will not be eligible to play a sport until after the individual achieves their personalized point's goals.

Additional strengths of the program include active communication, the weekly point system, and continuity of the program. Constant communication is established with the students by providing support and mentorship to students through daily check-ins with student athletes and monitoring of the weekly point system. Communication and collaboration between teachers and parents creates a fundamental support system for students and enhances parent-teacher interactions. The weekly point system gives students the responsibility of setting their own goals and becoming self-driven to meet their individual expectations. The system holds student's accountable for their actions by reinforcing the idea that students must attend games even if they are ineligible to play. The students must earn the right to play sports by achieving personalized goals in the classroom. Continuity through middle school is another key factor for success of the program. Rainier Athletes maintain relationships with student athletes throughout the

middle school years. Continuity is important for students to preserve the skills they learn in 5th grade and transfer these skills to middle school and in the future.

One weakness of the Rainier Athletes program is that the program does not offer a wide variety of secondary reinforcers. The literature suggests that tokens will acquire reinforcing value by association with a variety of secondary reinforcers (O'Leary & Drabman, 1971). When there are a large variety of secondary reinforcers it is likely that at least one reinforcer will be desired by each child at any time. Therefore, Rainier Athletes should create more secondary reinforcers, such as earning sports equipment. The program has established that underwriting the costs also includes supplying necessary equipment for the student athletes. Thus, the program should require the students to set and reach benchmark goals in addition to the student's final goal at the end of the week, in order to earn sports equipment. Each time the student reaches one of their benchmark goals they should be able to earn one article of sports gear. Benchmark goals will help keep students motivated throughout the week.

There is also a need for the development of a plan to phase out the program as the students become older. One problem that can occur with students who are involved in a token program for 3 or 4 years, where tangible reinforcers are delivered on a frequent basis, is that the student will become dependent on receiving rewards for good behavior. If students suddenly stop receiving rewards they may lose the incentive to continue to display positive behaviors. This problem can be minimized if the program decreases the use of reinforcers as the students progress through high school. As of now Rainier Athletes has not created a modified version of the program to implement in high school, but this is planned as the program grows.

Conclusion

Rainier Athletes has an effective design and the potential to foster the development of at-risk students by helping the students gain useful skills and display positive social behaviors. Through the program students learn to develop a positive mind-set, self-management, creativity and critical thinking, interpersonal skills, problem solving, and valuable work and study habits. The Rainier Athletes program has many strengths and with future growth will be able to make improvements for a long-lasting program.

Chapter 3: Evaluation and The Future of Rainier Athletes

Success in the Rainier Athletes program is defined by student athletes continuing the program through middle school, improving behavioral and social skills inside the classroom and on the sports field, and increasing success in the high school environment. An effective program is also exhibited through students' academic achievement, such as receiving higher grades, and students displaying positive behavior, such as fewer disruptions in class and better attendance. In order to evaluate the progress and accomplishments of the program there is a need for quantitative and qualitative data.

Design to Evaluate Rainier Athletes Program

The first step in evaluating the effectiveness of Rainier Athletes is to collect baseline data before the program is implemented in elementary school. These data will be used to compare the participants on multiple dimensions before, during, and after completing the Rainier Athlete program at the end of high school. Baseline data will be collected from the students who are accepted into the program and will include GPA, standardized math and reading scores, number of tardies, number of absents, and number of office referrals per semester. A control group will also be established, which will be composed of students who applied, but were not accepted into the program. This group of students will match the Rainier Athletes on age and gender and have a similar GPA as the accepted Rainier Athlete students. The comparison group should also be composed of students from the same school. Once the Rainier Athletes program has begun, GPA, standardized test scores, number of tardies, absents, and office referrals will be collected every 3 months from both accepted and non-accepted students. Data will also be collected from the Rainier Athletes on completion rates of student's weekly point

calendars. Each year, the number of new students enrolled in the program and the number of students who continue the program will be recorded. Questionnaires will also be distributed to students, teachers, parents, and coaches to obtain qualitative information about the value and effectiveness of the program. Student will be asked questions involving personal development, interpersonal development, and satisfaction with the program. Teachers will be asked to evaluate students' behavior in class, work ethic, and satisfaction level. Parents will also be asked similar questions, but related to students' behavior at home. Coaches will be asked to evaluate the students' behavior as well as the students' interactions with teammates. Below are examples of sample questions that will be used to assess participants during participation in the program, the actual questions will be tested for ease of understanding by the students, teachers, parents, and coaches before the surveys are administered.

Sample Questions:

Students:

1. Do you enjoy participating in Rainier Athletes? Why or why not?
2. What have you learned from this program? Please explain.
3. Do you feel motivated to complete homework assignments and class work after joining Rainier Athletes? If so, please explain.

Teachers:

1. Since participating in Rainier Athletes, have your students developed skills to help them succeed in class? If yes, which types of skills?
2. Have your Rainier Athlete students become more productive and motivated, since participating in the program? If yes, how so?
3. Is Rainier Athletes a beneficial program for your students?
4. Have your students' attendance increased? Are these students less disruptive? Do they participate more often?

Parents:

1. Does your child complete homework regularly?
2. How has Rainier Athletes affected your child?
3. Do you think your child is more motivated to achieve in school after becoming a Rainier Athlete?

Coaches:

1. Do the Rainier Athletes demonstrate leadership qualities? If yes, please explain.
2. Do these players work hard at practice? Set goals? Listen and follow instructions?
3. How do the Rainier Athletes interact with their teammates?
4. Do these players attend practice regularly and on-time?

Future Growth and Aspirations for Rainier Athletes Program

The Rainier Athletes program has many outcome goals and objectives for their students. The most significant goal is increasing high school graduation rates. In order to accomplish this goal it is necessary to continue supporting the student-athletes through high school. However, as the students age it is harder to incentivize and motivate them in school. It is necessary to develop a new model of the program that will appeal to high school students as well as build on the skills they have already developed by participating in the Rainier Athletes program throughout elementary and middle school.

One way to adapt the program would be to create a system in which the older Rainier Athletes become role models and teachers for the younger students. As the students enter high school they should transition away from the point system model and instead become coaches for younger Rainier Athletes. Intrator and Siegel (2008) investigated how to effectively harness the power and intrinsic appeal of sports in ways that aid the academic and social development of children. Their solution was to design experiences in which youth practice and engage in behavior related to cognitive development. This design involved teaching, which in the context of sports, means coaching. Coaching is a way to develop skills, behaviors, and attitudes that lead to academic achievement and social development. Coaching, by nature requires a variety of cognitive skills, such as goal setting, communication, initiative-taking, self-control, and planning. Effective coaches practice and deploy many of the skills essential for success in

the classroom and the workplace. A coaching curriculum that teaches this indispensable skill set and attempts to help youth internalize achievement behaviors and values, can hypothetically promote success in a variety of settings.

The Rainier Athletes program has the opportunity to implement a coaching curriculum as a medium to foster cognitive development (Intrator & Siegel, 2008). Coaching provides a unique opportunity for older Rainier Athletes to demonstrate the skills they have developed to succeed in the primary levels of school and apply these skills outside the classroom by teaching their peers. Coaches must motivate themselves and inspire others if they want to build a successful team. Consequently, coaching will give Rainier Athletes a chance to develop a new skill set that they can continue to utilize in the classroom.

There are a variety of other programs that also utilize coaching as a means of fostering youth development. SUPER (Sports United to Promote Education and Recreation) is a community-based intervention program that uses well-trained high school student-athletes to teach life skills to younger adolescents (Danish, Nellen & Owens, 1996). This program uses sports as a way of teaching goal setting, problem solving, and positive thinking. Danish, Nellen and Owens (1996) examine the many advantages to youth teaching their peers. First, by using older peers there is a potential for choosing natural leaders as role models. Younger adolescents look up to successful high school students who are similar to them as examples of who they can become. The high school students relate to the younger students as they have grown up in the same neighborhoods, attended the same schools, and confronted similar setbacks, thus they serve as effective role models and are in an ideal position to teach. Second, there are

mutual benefits to the peer leaders and the younger students. Teaching is an essential way of learning; by teaching others how to succeed, the teacher's ability to succeed is enhanced. Third, leaders not only instruct but they also must observe and analyze participants, in order to give constructive feedback to the youth and further explore what these observations mean. When conducting practices, the leaders must focus on *how* the youth are participating as opposed to only *how well* they are performing. SUPER leaders must communicate with youth about what they have observed and how the students can improve. Requiring the coaches to give feedback holds the coaches accountable for organizing effective practices.

Currently there has been little evaluation of the effectiveness of the SUPER program, however, Papacharisis et al. (2005) evaluated a modified version of SUPER with Greek children. Young athletes who received the intervention program reported higher goal setting, problem solving, and positive thinking skills than children who did not receive the intervention. The students who participated in the program also demonstrated greater knowledge of life skills compared to the students who did not participate.

Allowing Rainier Athletes to coach in high school would give students the opportunity to move away from the point system and find other ways to reinforce positive behaviors inside the classroom. The students need a system in which they are given more responsibility and increase their motivation to succeed. If the students maintain high grades and display appropriate behaviors in school they should earn the opportunity to become a coach.

Future Funding Plan

As a non-profit organization it is essential for Rainier Athletes to actively seek donors and more funding resources. There are multiple avenues in which the foundation plans on obtaining funding. The revenue pool contains a variety of funding outlets, such as grants, private donations, and community fundraising events.

Rainier Athletes plans to apply for grants from local institutions in the Seattle, Washington area. The Raikes Foundation is a privately owned family establishment based in Seattle with a mission of providing opportunities and support for adolescents. The foundation invests in Washington State organizations that help strengthen the quality of out-of-school time programs that serve adolescents. The Seattle Foundation is another group that believes in enhancing the King County Community by supporting local nonprofit organizations that focus on reducing educational and economic disparities. Rainier Athletes also seeks to receive sponsorship from Nike, which donates products to nonprofit organizations dedicated to creating social change through sport.

The organization has also been successful in receiving private donations through Rainier Athletes' website and an ongoing email campaign. Rainier Athletes is constantly reaching out to local investors through email and setting up personal meetings in order to receive sponsorship. Rainier Athletes has also organized a number of community fundraising events, such as a professional cooking class, auction, and fitness boot camps. The founders have also been invited to set up information booths at local charity events and speak on behalf of the foundation in order to develop more support for the cause.

Further Implications

As a sports-based incentive program it is important to assess the effectiveness of Rainier Athletes in helping youth achieve higher standards in school. There is a constant need to find different ways to motivate children and organized sports may be the solution. Finding a connection between sports involvement, academic achievement, and youth development broadens the opportunities to further support children in the future. The success of Rainier Athletes demonstrates the potential of using organized sports to positively impact children in school and in other domains of life. Providing the opportunity for youth to play sports is not a difficult endeavor, but one that may be overlooked by society. Although Rainier Athletes is geared to providing low-income children the opportunity to participate in organized sports, the design and objectives of the program has the potential to benefit all children. Rainier Athletes is only one of many types of incentive programs that can be implemented inside the classroom. The strengths of this program should be used to develop more programs that can be integrated into the curriculum. There is further need to discuss how to fund, design, and implement such programs in the future.

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