University of Wisconsin-La Crosse

Graduate Studies

# Implementing School-Sponsored Extracurricular Adapted Sport Programs for High School Students with Disabilities

A Critical Analysis Project Submitted in Partial Fulfillment of the Requirements for the Master of Science in Exercise and Sport Science-Physical Education Teaching Adapted Physical Education Teaching Concentration

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## ABSTRACT

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Sport is a universal high school extracurricular activity throughout the U.S. These opportunities should be accessible and available for all students. The physical, emotional, and social benefits can be experienced by students with and without disabilities. Creating opportunities for students with disabilities (SWD) to engage in sport is something educators, parents, and administration should work together to accomplish. Several models of extracurricular adapted sport currently exist. Special Olympics and Paralympics are two of the most popular international organizations which provide thousands of high school student's opportunities to participate in individual and team sports. Blaze Sports, the American Association of Adapted Sports Program (AAASP), and the Great Lakes Adaptive Sports Association (GLASA) are popular examples of national and regional organizations. One major purpose of this critical analysis project was to develop a video to help educators design and implement an adapted sport program in a school district. Based on a continuum of adapted sport (Winnick, 1987), national and local organizations have implemented programs that best fit the unique needs of SWD. Along with summaries of national and local adapted sport organizations, steps to implementing an adapted sport program are discussed in the video. The Mississippi Valley Conference Adapted Sport League in Western Wisconsin is presented as a sample model for local schools districts. In addition to the video, several written suggestions, procedures, and resources for creating an adapted sport programs are presented.

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# CHAPTER I

## INTRODUCTION

Organized sport participation among children and youth in the U.S. is extremely high. The Sports and Fitness Industry Association (2014) reported that over 21 million children, ages 6 to 17, are involved in a team sport on a regular basis, and an additional 5 million play sport occasionally. High school sport participation as an extracurricular activity is especially important for students who might not have the resources to properly educate themselves on the health and skill benefits that sport participation offers. Interscholastic sport participation offers student-athletes opportunities to benefit from socialization, improved teamwork and leadership skills, and physical fitness. Tsai and Fung (2009) found increased empowerment and reduced depression levels among individuals who regularly participate in physical activity. Children with disabilities are especially prone to obesity and other associated health conditions due to a lack of programs involving physical activity and sport participation. Having a disability should not be a barrier to attaining the benefits of exercise and sport participation.

While barriers exist in many school districts to initiate sport programs for students with disabilities (SWD), they need to be addressed according to the Office for Civil Rights (OCR) (U.S. Department of Education, 2013). The January 2013 document issued by the OCR entitled "Dear Colleague Letter" states, "A school district should offer SWD opportunities for athletic activities that are separate or different from those offered to students without disabilities." This "Dear Colleague Letter" provides clarification and guidance when interpreting sport provisions of the Rehabilitation Act of 1973, and reminds districts of their obligation to provide extracurricular athletic opportunities for

SWD. The Rehabilitation Act includes additional regulations that specify the requirements for schools to provide district funded athletic and intramural opportunities for SWD, if students without disabilities are offered them. The OCR clearly states the right for SWD to be provided with an equal opportunity for participation through reasonable accommodations in regular sport, or for schools to create adapted teams for SWD.

**Continuum of Adapted Sport**

Before the existing models of adapted sport are introduced, it is important to understand how Section 504 of the Rehabilitation Act impacts the most appropriate sport choice on a student-to-student basis. Meeting the mandates of Section 504 requires schools to provide extracurricular athletic opportunities in the least restrictive environment possible. To help illustrate adapted sport, Winnick (1987) created a 5-level continuum for sport participation based on the least restrictive environment concept.

Typically, only students without disabilities participate in level 1 of the continuum, which is participation in regular sport, where typically developing peers have the highest participation. However, this level may be appropriate for students with very mild disabilities. Level 2 sport participation on Winnick's (1987) continuum is regular sport with accommodation, which, for example, would allow a blind runner placement in regular sport by utilizing an aid to guide her through the course. These modifications do not alter the fundamental nature of the sport. Level 3, regular and adapted sport, allows SWD to participate in adapted sport alongside their nondisabled competitors. Examples of this level of the continuum are found in the Special Olympics Unified Sports Program, where participants with and without disabilities are playing simultaneously in regular

sport. Level 4, adapted sport integrated, can be described as the participation of students with and without disabilities in adapted sport. One example would be a collegiate wheelchair basketball team including athletes with and without spinal cord injuries. The rules and equipment of the adapted sport, in this case, wheelchairs, must be used by all participants. And finally, level 5, the most restrictive level on the continuum, is adapted sport segregated. Level 5 participation is the model that will be referenced most in the narrative and video (see Appendix A) for this project. In this example of the model, athletes must have a diagnosed cognitive and/or physical disability to participate.

**Existing Adapted Sport Programs**

Adapted sport programs exist at the local, state, national, and international levels. From Special Olympics and Paralympics, to Minnesota's Association for Adapted Athletics (MAAA), each program is designed to meet specific needs of eligible athletes of all skill levels with all disabilities. It is important to be aware of some of the organizations that are pioneers in adapted sport in order to get a perspective on the components that lead to an effective program. As the scope narrows to more local programs, the Mississippi Valley Conference Adapted Sport League (MVC-ASL) in Western Wisconsin will be discussed to show how it utilized the MAAA model to create a program to meet the needs of three school districts.

Special Olympics is unique in that it offers an extensive array of programs for individual state and local needs for sport and other activities. For example, Special Olympics Wisconsin offers 17 Olympic-type sports for training and competition for individuals with intellectual disabilities, ages 8 and older. For a school or district with a high population of students with intellectual disabilities, this program may be a viable

option. However, most public schools nationwide educate students with a variety of disabilities.

Paralympics is another well-known program that has evolved into an international organization. Paralympics is unique because it provides high levels of competition to top tier athletes with physical disabilities. Athletes recruited for this program may go on to participate in competitive sport around the world. Even though competition is an important aspect of adapted sport, not all SWD may benefit from a program that focuses on high-level competition as opposed to equal opportunity recreational sport. Successful programs, such as Special Olympics and Paralympics, don't always meet the needs of a broad range of disabilities and severity levels of disabilities represented in most public high schools.

The MAAA is a very successful high school adapted sport program that has been in place for over 30 years to meet the needs of SWD. This model was originally designed for individuals with physical disabilities (IWPD), but in 1990, students with cognitive disabilities were included. By 1992, advocates were successful in gaining MAAA acceptance into the Minnesota State High School League. The extensive resources this program provides are online rulebooks, easy to follow coaching videos, and valuable information about adapted athletics. Several sports are offered throughout the academic school year, including indoor soccer in the fall, floor hockey in the winter, and either indoor softball or bowling in the spring.

The success of the MAAA led adapted physical education and special education teachers in Western Wisconsin to the decision that the Minnesota model meet the needs of students in their schools. Creation of the MVC-ASL is an excellent example of how

local adapted physical education and special education teachers used an established adapted sport model, such as the MAAA, to create a program to benefit their students. The MVC-ASL currently offers three sports throughout the school year to high school students with a broad range of disabilities. Indoor soccer, floor hockey, and whiffle-ball provide students in the La Crosse, Holmen, and Onalaska school districts with meaningful school-sponsored extracurricular athletic opportunities. Practices range from 45-90 minutes and take place two to four times per week depending on the school district. Weekly games and an end of season tournament for each sport season attract family, friends, fellow students, school administrators, and members of the community, adding to the benefits of this program.

## Need for Project

Despite the benefits and legal precedence, very few school-sponsored adapted sport programs exist to provide extracurricular sport opportunities for SWD. There is a need for this critical analysis project due to the lack of practical information, knowledge of adapted sport, and sport programming for SWD in most public high schools. Even though some programs, such as Special Olympics, offer individual and team sport opportunities and few eligibility restrictions travel for competition may be barriers for many school districts. Another barrier to implementing a Special Olympics adapted sport model is the shortage of information available for educators to develop effective sport programs for a very diverse population of SWD.

For most schools looking to offer extracurricular athletics to SWD, mainstream high school sport would not provide a safe or appropriate environment. According to Durstine, Painter, Franklin, Morgan, Pitetti, and Roberts (2000), programs

that are longer in duration and lower in intensity are necessary to maximize the benefits for this population. Therefore, this project is important for school districts seeking guidance in the field of adapted sport for their unique population of SWD.

## Purpose of Project

The primary purpose of this project is to develop resources to assist schools in implementing adapted sport programs. National and local adapted sport programs are examined. Through review of current literature and the examination of existing adapted sport frameworks, recommendations and strategies are presented for implementing an adapted sport league that meets the needs of students in a school or district. This project was developed for adapted and general physical education teachers, special education teachers, and other school staff who work with SWD.

Various local, national, and international adapted sport programs are offered to SWD, but finding the most appropriate model for a school or district may be difficult. Based on Winnick's five-level sport integration continuum (1987), adapted sport, whether local or international, can be broken down into levels of restrictiveness. The project video, which can be accessed with the URL: https://goo.gl/mqKw2F, along with the narrative included in this project, offer practical steps to implementing an adapted sport program, and common procedures in some existing models of adapted sport, such as the MVC-ASL in Western Wisconsin. Other considerations are addressed in this document and video, including determining appropriate programming based on a district's size, its population, the types of disabilities in the district, student skill levels, and administrative support within each school.

## Definition of Terms

The following terms are defined for use in this project.

**Adapted Sport Continuum:** A five-level integration continuum of sport settings ranging from the most restrictive (segregated) to the least restrictive (regular sport) environment (Winnick, 1987).

**Adapted Sport:** Refers to sport modified or created to meet the needs of individuals with disabilities. For example, basketball is a regular sport, and wheelchair basketball is an adapted sport (Winnick, 2011).

**Inclusive Sport:** Ensures every participant, regardless of age, gender, ability level, disability, and ethnic background has the opportunity to participate if they choose to (Australian Sports commission, 2014).

**Nonacademic Extracurricular Services and Activities:** Such services may include counseling services, athletics, transportation, health services, recreational activities, and special interest groups or clubs (U.S. Department of Education, 2013).

**Office of Civil Rights "Dear Colleague Letter":** On January 25, 2013, the Office for Civil Rights (OCR) released a "Dear Colleague Letter" ("Guidance") clarifying the existing obligations of school districts to provide SWD an equal opportunity to participate in extracurricular athletics (U.S. Department of Education, 2013).

**Segregated Sport:** Athletes participate in adapted or regular sport in a totally segregated setting from individuals without disabilities (Thomas & Smith, 2009).

**Student with a Disability:** According to IDEA 2014, this includes a child with mental retardation (now intellectual disabilities), hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; and who, by reason thereof, needs special education and related services (IDEA, 2004).

## Summary

Sport is a universal high school extracurricular activity that should be accessible for all students. The physical, emotional, and social benefits of sport can be experienced by students with and without disabilities. Creating opportunities for SWD to engage in sport is something for which educators, parents, and administrators should advocate. The next chapter will review the various benefits of sport participation and physical activity for individuals with disabilities (IWD). Several existing adapted sport programs will be reveiwed to provide examples of the types of programs available to SWD. The examples will outline important aspects of adapted sport which a district can use to develop an adapted sport program to best meet the needs of their SWD. Finally, the current literature is summarized to identify best practices for coaching and implementing adapted sport programs for SWD.

# CHAPTER II

## Review of Related Literature

## Introduction

With a growing appreciation for extracurricular activities in school districts, students are being exposed to a variety of skills and health related physical activities to increase their overall health. Sport programs have often been a part of many high school students' educational experiences, and should not be solely limited to students without disabilities. The benefits of being physically active and involved in a positive social environment are especially important for students with disabilities (SWD), due to their elevated risk for health related illness from leading sedentary lifestyles (World Health Organization, 2015). This review of literature includes research studies highlighting the physical, social, and emotional benefits of physical activity and sport, as well as teaching strategies, programmatic literature, frameworks for disability sport, and implementation strategies for teachers and coaches when working with SWD in extracurricular sports.

### Physical Benefits of Sport Participation and Physical Activity

Consistent and meaningful physical activity (PA) for wheelchair users is a challenge, especially when the wheelchair is powered by a battery and not by the user. Introducing individuals with physical disabilities (IWPD) to wheelchair manipulation early in their life can open avenues for participation in meaningful PA for a lifetime of health. Taking part in wheelchair sports, such as wheelchair team handball, wheelchair tennis, and wheelchair basketball, can enhance multiple dimensions of wellness.

Abel, Platen, Rojas, Schneider, and Struder (2008) studied the benefits of increasing energy expenditure (EE) in relation to decreasing the risk of cardiovascular

disease, and chose to evaluate the EE of individuals with spinal cord injuries in three types of ball games. Thirty-six adult male athletes with spinal cord injuries participated in the study; 14 played tennis, 12 rugby, and 10 basketball, with all having lesion levels between cervical areas (C5) and lumbar areas (L3). Participants played in the first and second national German league of their specific sport, and the testing was performed during a typical skill and gameplay practice session. The 36 participants were tested separately, resulting in 32 total measured training sessions. Lactate concentrations and heart rate were taken to compare metabolic rate training intensities, using X-Trainer heart rate monitors and blood samples.

Researchers used the Borg Scale (1970) to rate subjective exertion. A one-way analysis of variance was used to measure effects between the groups, and post hoc analysis (least significant difference test) to test whether the interactions were significant. Finally, correlation between lesion levels and EE was made using Spearman rank correlation coefficient.

Caloric expenditure results from the study ranked rugby the lowest at an average of 1,489 kcals expended per week, basketball second at 1,913 kcals per week, and tennis had the highest EE at 2,199 kcals/week. While tennis elicited the greatest weekly caloric expenditure, time spent engaged in PA varies from sport to sport. For example, it took tennis players 64 minutes to expend 350 kcals, but only 56 minutes to reach the same for basketball. Rugby took the longest, at 84 minutes to reach 350 kcals, the recommended expenditure required to decrease mortality in normal-weight, overweight, and obese men (Wei et al., 1999).

Implications from this study relate to the length and intensity of sport participation required to significantly reduce the chances of heart disease in IWPD. While the type of sport did play a role in how many kcals were expended, the results indicated a close comparison between sports. The study noted that training sessions generally depicted a moderate intensity of PA, and found that competitive play would significantly increase the results. The sport choice, as well as the level of competition, are two factors that can be used when evaluating or creating an inclusive or segregated adapted sport program for SWD.

Competition levels during inclusive sport have not been compared to segregated sport studied in this research. Knowing that sport type and practice intensity are large contributors to total EE, research on individual sports, as well as inclusive versus segregated sport, are all areas where future research is needed. The study specifically recommended the need for research on negative factors that influence group contact theory, suggesting that most research has been geared toward the positive factors affecting group contact prejudice.

Sport participation is not limited to team sports, but can also include individual sport such as handbiking. The effectiveness of individualized sport on PA and workload intensity is important for those athletes seeking a more individualized form of sport. Abel, Bleicher, Platen, and Vega (2003) studied 35 male and female handbike athletes to assess the workload of two types of handbike designs (synchronous and asynchronous). Seventeen of the participants were members of the national handbike team, and 18 were performance or leisure time sport-oriented athletes training for a city marathon event. Of the 35 athletes, all had a spinal cord injury. Thirty-two were paraplegic, and three were

quadriplegic. Prior to participation, subjects received a medical checkup including physical examination, blood sampling, and a 12-channel ECG test. The subjects performed two multistage incremental exercise tests until voluntary exhaustion, with 2 hours rest in between tests. Participants used their personal handbike, which was fixed to an ergometer. An open-spirometric system was used to measure respiratory gas exchange throughout the test, as well as capillary blood samples within the last 30 seconds of each load (increase of load every 3 minutes), measuring lactate concentration.

Results revealed that individuals training with synchronous crank form on a handbike experienced improvements in inter and intramuscular coordination. Daily training loads of these athletes led to a better economy of movements and a higher maximal workload. Researchers suggested that the synchronous crank montage is the ideal position for handbiking.

Implications from this study encourage young IWPD to begin handbiking with a synchronous style crank, and furthermore, reveal this activity to be a high intensity form of PA, along with having inter and intramuscular gains. Further research was not suggested in this study. Researchers might find that using a portable means of measuring workload in a more realistic environment (outdoors) produce varied results from those found in this study.

Research investigating the use of field instruments to measure PA among athletes involved in adapted sport may provide more realistic results than those that isolate athletes from their natural environment. Unlike the previous study of physiological responses to handbiking, Bernardi, et al. (2010) chose to examine the acute respiratory and metabolic responses of athletes in the field. The study compared five Paralympic

sports to determine the differences among sport selection (individual versus team) and environmental setting. The five sports were: Nordic skiing, wheelchair distance racing, wheelchair basketball, wheelchair fencing, and wheelchair tennis. The 34 participants were compromised of male Italian Paralympic athletes with various physical disabilities, each meeting minimum requirements for participation in their sport.

Participants completed an incremental arm cranking exercise test to determine ventilatory threshold and peak oxygen uptake. Field assessments were completed to assess each athlete's cardiorespiratory responses in their respective sports. Measurement methods varied from sport to sport for the field assessments, however, overlying directions were given to all athletes prior to participation. Participants were told to provide their best efforts and each completed the event in a competitive setting specific to the sport.

The results revealed that Nordic skiing and wheelchair racing elicited the greatest amount of PA. Researchers also found peak VO2 during field-testing to be similar when compared with the ventilatory threshold test. Implications can be made, based on the data, that the intensity of each of the five Paralympic sports elicited sufficient intensity within the range recommended by the American College of Sports Medicine to improve cardiorespiratory fitness. Further research on a larger number of athletes in both genders could establish a strong database for elite Paralympic sport. While elite Paralympic sport may not be the goal for school-aged students with PD participating in wheelchair sports, this study established reliable data to confirm multiple sports to be beneficial for cardiorespiratory endurance. Adapted physical education teachers and coaches can use

this information to include the selected five sports in their curriculum, or similar sports to produce health-enhancing levels of PA.

A similar study by Scarpa (2011) examined the role of sport and PA, comparing the results between individuals with and without physical disabilities, ages 13 to 28 years. Among the 1,149 participants, 742 participated in sport and didn't have a disability (Group A), 264 did not participate in sport and did have a disability (Group B), 109 participated in sport and did have a physical disability (Group C), and 34 did not participate in sport but had a physical disability (Group D). Eligibility of those who participated in sport was regular practice of a sport for one or more years, 2 to 3 times per week, practicing 1 to 1.5 hours per session. Eligibility criterion for participation of IWPD was the presence of peripheral (spinal cord injuries) or central (cerebral palsy) paraplegia.

The cross-sectional design for this study involved completion of the Physical Self-Description Questionnaire (PSDQ, 1994) along with personal information such as gender, age, weight (kg), height (m), type of sport participation, and type of disability (peripheral or cerebral paraplegia). The research took place throughout the entire Italian territory, and data were collected through an online questionnaire containing approved consent forms and an explanation of the study.

Results from the study indicated Group D (no sport – has disability) had the lowest scores in regards to coordination, sport, and global esteem in the PSDQ. The researchers' hypothesis was supported in that adolescents and young adults who regularly practice sport present higher levels of physical self-concept than their peers who were not involved in sport. The above findings held true for Groups A and C, implying that sport participation increases self-concept in IWPD and those without a disability. Among

Groups A and C were also findings that both groups showed significant differences in the dimensions of endurance, flexibility, global physical self-concept, and self-esteem.

These findings led to many implications, inferring that there is a need to increase opportunities for adolescents and youth with PD to participate in "fully integrated" contexts (Groff & Kleiber, 2001). Further research was suggested in the form of a longitudinal study of sport participation among IWPD. It is important to note that all sport participants experienced increased levels of self-concept when compared to their nonparticipating peers. It is still unknown which environment elicits the greatest increase in self-concept, although this study does suggest full integration.

In summary, the benefits of PA and sport participation among children and youth with disabilities are multifaceted. Current research recognizes regular sport participation as beneficial to physical self-concept, cardiorespiratory endurance, along with other preventative health measures for SWD. Physical benefits are one of the many benefits SWD can receive from consistent sport participation.

**Social and Emotional Benefits of Sport Participation and Physical Activity**

The social and emotional benefits of sport participation are just as important for a SWD to lead and maintain a healthful and active life. The vulnerability of individuals with intellectual disabilities (IWID) for mental, physical, and health problems is significantly higher compared to their same age typically developing peers. Sport participation, therefore, is especially important for SWD in preventing associated mental and physical health ailments. Many research studies have been conducted that address the need for and importance of sport participation for this population.

One study by Horwitz, Kerker, Owens, and Zigler (2000) found that between 29-50% of IWID worldwide are considered overweight (Grandisson, Tetreault & Freeman, 2012; Horwitz, et al., 2000). With the importance of PA participation among IWID to maintain a healthy weight and healthful lifestyle, Grandisson et al. (2012) studied the barriers and facilitators to the integration of IWID with their nondisabled peers in sport. Grandisson et al. (2012) also studied adolescence' and parents' perception about the outcome of sport participation.

The Horwitz et al. (2000) study included 20 IWID, ages 12 to 19 years, 20 parents of IWID, and 39 staff who worked with this population. The participants in this study were a part of *Centre de readaptation en dificience intellectuelle* of Quebec City or from Special Olympics. The principal investigator, an occupational therapist, conducted interviews with the adolescents and parents to determine activity participation, perceptions of the outcomes, and barriers and facilitators to integration of IWID involved with integrated sport participation. The staff completed a questionnaire and 1-hour audiotaped interview. A reoccurring theme in the study was that sport participation led to physical and mental health improvement. Other themes among IWID included self-esteem development and development of motor, social, and cognitive abilities. Parents felt a sense of pride that their child was able to participate in sport, along with the feeling that their parent-child relationship improved.

Barriers expressed in this study included sociocultural factors, environmental obstacles, availability of staffing, a lack of information about local adapted sport opportunities, and a lack of funding for parents of IWID. Facilitators of successful participation of IWID in sport included parent's views that their child was like their

nondisabled peers, coaches' knowledge of intellectual disability, participants' interest in various sports, and a positive attitude of other parents of disabled and nondisabled peers.

Integrated sport participation elicits many benefits for IWID and their nondisabled peers, while also improving parent attitudes towards their children. However, the barriers to sport participation for SWD suggest the need for an alliance between public health authorities, rehabilitation professionals, integrated sports organizations, such as Special Olympics, schools, communities, as well as the media. Further research could be conducted on the perspectives of coaches and nondisabled athletes in integrated sport.

While there are no current comparisons of self-concept between inclusive and segregated sport among IWPD, Shapiro and Martin (2010) provide an in-depth investigation to predict reported PA and its benefits to athletes. Researchers aimed to identify the correlation between PA and self-esteem, using a physical self-concept model, which included items such as strength, endurance, and sport competence. The study included 36 youth, ages 12-21 years, with cerebral palsy, spina bifida, traumatic brain injury, muscular dystrophy, heart condition, hip condition, as well as two participants with an unidentified physical disability. All participants were members of the American Association of Adapted Sports Programs (AAASP), and per eligibility standards of AAASP, did not have associated cognitive disabilities.

Participants from the wheelchair basketball and wheelchair football teams volunteered to complete a 20-minute questionnaire. The questionnaire included 70 items measuring 9 elements of the psychomotor domain of self-perceptions along with demographic information such as their age, gender, ethnic background, as well as an open-ended question soliciting disability type. The questionnaire was administered

individually, and included assistance of the primary investigator to read the questions out loud.

Results from this study revealed a moderate to strong perception of physical self-concept, which was correlated with four physical self-concepts: global self-concept (32%), strength, endurance, and flexibility. Researchers used these data to determine that participants' perceptions of their physical self-concept accounted for almost half of their overall sense of self-esteem. Future research included examination of various settings (i.e., sport type, physical education class, and neighborhood) and their affect on the recommended levels of frequency and intensity to improve cardiovascular endurance. Similar to other researchers' interests, this study noted the need for research with objective measures such as accelerometers, heart rate monitors, or cyclometers.

Conclusions and implications from this study encourage participation in sport programs for IWPD. The data supporting benefits of using sport as a means to increase cardiorespiratory endurance and self-concept, provides parents, adapted physical education teachers, and adapted sport coaches with rationale to incorporate sport into the lives of IWD. General and adapted physical education teachers, along with other members of a child's IEP team, should be encouraged to consider the practicality of implementing an adapted sport program.

It is important to examine individuals who acquired a physical disability and those who were born with one (congenital). Sit, Laue, and Vertinsky (2009) studied the population of individuals with an acquired physical disability (APD), looking at factors such as body image, self-concept, and self-esteem. This study was unique in that the 66 participants were from Hong Kong, a country where IWD are often isolated, and

considered unproductive and not part of a harmonious society. To gain an adequate number of participants, researchers randomized the study to involve individual's ages 18 to 47 years with an APD who were active (26%), and those who were inactive (74%).

The study aimed to answer two questions, one of which was whether there were significant differences in body image, physical self-concept, and self-esteem between physically active persons with an APD compared with inactive individuals with an APD. The other question was to determine if body image, physical self-concept, and self-esteem of individuals with an APD differed as a function of gender and onset of disability. Four measures were chosen to answer the two questions: The International Physical Activity Questionnaire (IPAQ, 2004), the Multidimensional Body Self-Relations Questionnaire (MBSRQ; Cash, 2000), the physical concept subscale of the Tennessee Self-Concept Scale (TSCS:2; Fitts & Warren, 1996), and the Rosenburg Self-Esteem Scale (RSE; Rosenburg, 1965). The four measures were compiled into one questionnaire for ease of completion, and sent to 150 individuals.

Out of the 150 questionnaires sent, 76 were returned, and 10 were excluded due to a congenital disability. Results showed more than 70% of those with an APD were not physically active enough to achieve health benefits. Researchers found that self-esteem and self-concept were highly correlated, and that higher levels of these two factors were linked with positive body image and body satisfaction. Overall, participants who perceived themselves to be overweight tended to believe they were physically unfit, athletically incompetent, and were less satisfied with particular aspects of their body. Perhaps the most interesting findings were those found among individuals with fewer years since acquiring the disability. These individuals, in comparison to the other

participants, were more involved in activities to maintain their fitness, and felt their bodies were healthier. This led to higher levels of self-esteem and self-concept.

Those individuals studied with fewer years since acquiring their disability had more active lifestyles, and subsequently higher levels of self-concept and self-esteem. One implication that can be made from this study is that more effort is needed to promote lifelong PA among those individuals with more time since acquiring their disability. Establishing community-based programs for IWPD who have an outlet for activity participation, after the individual exceeds the age/time limit of special education services may be one option to increase the self-concept levels of SWPD.

In summary, the affects of sport participation and PA among all IWD is not limited to physical benefits. The social and emotional benefits of PA have a positive impact on individuals with many disabilities, and current research finds these benefits to be consistent with a wide age range of IWD. The importance of PA and sport participation among IWD is important to teach during early development, and continue to promote throughout their life to create a healthful lifestyle as well as lifelong PA.

**Existing Models and Frameworks for Disability Sport**

Promoting PA and sport participation opportunities for SWD is different than promoting these activities for students without disabilities. There are many barriers that can prevent SWD participating in extracurricular sport in a school setting. The importance of including SWD in extracurricular sport for physical, social, and emotional benefits is well known, and these students should not be denied their right to participate based on disability. Not only is it beneficial for SWD to be active in and out of school,

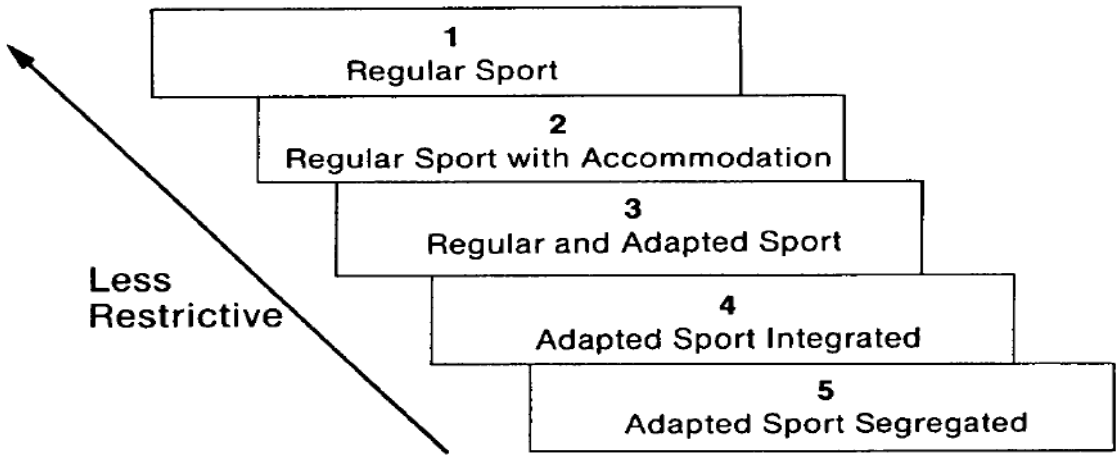
extracurricular activities are mandated in the Individuals with Disabilities Education Act (IDEA) of 2004.

Educating students through extracurricular sport is an important component of American education. Through federal legislation, such as the Individuals with Disabilities Education Act (IDEA) and Section 504 of the Rehabilitation Act, SWD are required to have equal participation in extracurricular sport similar to their nondisabled peers. Winnick (2007) states that not providing these opportunities may be discriminatory toward IWD, and therefore, infringe on the First, Fifth, and Fourteenth Constitutional Amendments. These amendments include freedom of association, life, liberty, property, and equal protection under the law. Winnick (2007) also identifies the lack of interscholastic sport programs for SWD. Founded on his own five-level sport integration continuum (1987), Winnick (2007) describes an updated framework for the development of interscholastic programs for IWD. The new framework called Adapted Interscholastic Model for Sport (AIMS), encourages participation in the least restrictive environment, and takes advantage of modern technology for adapted sport participation (See Figure 1).

Typically, only students without disabilities participate in level 1 of the continuum, which is regular sport. However, level 1 may be appropriate for students with mild disabilities. Level 2-sport participation would allow a blind runner placement in regular sport by utilizing an aid to guide her through the course. These modifications do not alter the fundamental nature of the sport. Level 3 allows SWD to participate in adapted sport alongside their competitors. Examples of this level are found in the Special Olympics Unified Sports Program, where both participants with and without disabilities are simultaneously playing. Level 4 can be described as the participation of students with

and without disabilities in adapted sport. One example would be a collegiate wheelchair basketball team including athletes with and without disabilities. The rules and equipment of the adapted sport, in this case, wheelchairs, must be used by all participants. Finally, level 5, the most restrictive model on the continuum, is segregated sport participation. Level 5 participation is the model that is referenced frequently in the video that accompanies this project. In this level, athletes must have a diagnosed cognitive, sensory, and or physical disability in order to compete.

**Figure 1. Sport Integration Continuum (Winnick, 1987)**




Parallel sport is another option for schools that have limited facilities and wish to align adapted sport seasons with those of regular sport. In this model, SWD compete in, for example, the 100yd sprint after their nondisabled peers compete. This type of participation is similar to an additional heat, and can follow the same rules of regular sport or use modifications. One modification during a track meet may include an IWPD performing a 100yd wheelchair push. When appropriate, SWD can be interspersed or participate alongside their peers in the same event or heat. This would allow a slightly less restrictive environment for extracurricular sport participation.

Segregated sport is commonly practiced today, and is more restrictive than parallel sport with regards to participation with nondisabled peers. This type of sport participation includes SWD participating in adapted sport alongside other peers with disabilities. Restrictions on disabilities can be used, but is not necessary. One example of a team with restricted disability participation would be the University of Wisconsin-Whitewater men's wheelchair basketball team. The sport is sanctioned by the NCAA and requires participants to have a physical disability. An example of a less restrictive segregated or adapted sport would be the Minnesota State High School League, or the Mississippi Valley Conference-Adapted Sport League (MVC-ASL) in Western Wisconsin.

Electronic sport, the most restrictive on Winnick's model, has been around since the early 1900's. The first telegraphic track meet for IWD took place in 1907. This type of sport participation is geared toward allowing IWD to compete against opponents who are collective members of a central coordinating organization. Individual sports are most common with this independent electronic means of competing, and advancements in technology have made communication faster and more enticing for athletes with disabilities who do not wish or do not have the funds to travel for competition. Scores are calculated and transmitted online, with outcomes of track times or powerlifting weight being available instantaneously. An example might be athletes with paraplegia performing the shot put in one city and competing against similar athletes in another city. These organizations are not as popular as they once were due to other adapted sport programs gaining the interest of SWD.

Adapted sport programs exist at the local, state, and international levels. From Special Olympics and Paralympics, to Minnesota's Association for Adapted Athletics, each program is designed to meet specific needs of athletes with disabilities of all skill levels. It is important to be aware of some of the organizations that were pioneers in adapted sport to get a perspective on the components that lead to an effective program. As more local programs are introduced, it will become clear how the MVC adapted sport league in Western Wisconsin utilized the Minnesota model to create a program to meet the needs of three school districts (La Crosse, Holmen & Onalaska).

One of the most well-known adapted sport programs is Special Olympics. Special Olympics is unique in that it offers an extensive program for individuals with disabilities at the state and local level for sport and other activities. For example, Special Olympics Wisconsin offers 17 Olympic-type sports for training and competition for individuals with intellectual disabilities, ages 8 and older. For a school or district with a high population of students with intellectual disabilities or cognitive delays, this program may be a viable option to offer those students the opportunity for sport participation. However, most public schools nationwide educate students with varying types of disabilities.

Paralympics is another well-known sport program, which has evolved into an international organization. Paralympics is unique in that it provides top tier athletes with physical disabilities high levels of competition. Athletes in this program can participate in high level sport competitions around world. While competition is an important aspect of adapted sport, all schools may not benefit from a program that focuses on high-level competition as opposed to recreational adapted sport for all. Successful programs such as

Special Olympics and Paralympics don't always cater to the needs of a broad range of disabilities and severity levels represented in most public high schools.

Blaze Sports America, the American Association of Adapted Sports Program (commonly known as AAASP), and the Great Lakes Adaptive Sports Association (or GLASA) are examples of national and regional organizations that approach adapted sport in unique ways. These programs not only provide guidance to adopt their unique model of adapted sport but also offer valuable information to those who want to start an adapted sport program.

Schools with a high population of students with physical disabilities can benefit from Blaze Sports America, who offers community-based sport programs for children and adults with physical disabilities. Their services include professional development workshops to gain certifications in adapted sport coaching along with online materials and resources to acquire knowledge to work with local general and adapted physical education teachers to plan and implement local sport programs. Taking the philosophy that sport is an avenue to lifetime PA and health is something all programs should encourage.

Similar to Blaze Sports is the American Association of Adapted Sports Program (AAASP), which aims to develop and support a standardized structure for school-based athletic competition to improve the well-being of students with physical disabilities (AAASP, 2012). Their website offers information on how to establish an infrastructure for extracurricular interscholastic adapted athletics which collaborate with state athletic associations. AAASP is an example of a national program which was developed in Georgia and expanded operations to offer its expertise to schools nationwide. This

program is appropriate for schools that have a desire to structure their league with sports for students with physical disabilities.

For schools looking to develop an adapted sport league for students with varying types of disabilities, the Minnesota Adapted Athletics Association (MAAA) has proven to be a successful model. The MAA has been successfully established for over 30 years to meet the needs of all SWD. This model was originally designed for IWPD, but in 1990 students with cognitive disabilities were included. By 1992, MAAA was successful in gaining the league acceptance into the Minnesota State High School League. This program provides extensive resources, including an online rulebook, easy to follow coaching videos, and valuable information about adapted athletics. Several sports are offered throughout the academic school year including indoor soccer in the fall, indoor floor hockey in the winter, and the choice of indoor softball or bowling for the spring.

Adapted sport programs have been created to meet the unique needs of SWD in the communities and schools across the nation. Schools may be able to provide adapted athletic opportunities for SWD through organizations such as Special Olympics and Paralympics, however this may not be the case for every school or every student. The MAAA is one example of a state that saw the need to provide more than just an organized sport, but felt they could use organizations like these to choose some qualities from each to best fit the needs of their SWD. The MVC-ASL developed its own version of an adapted sport program based on the MAAA model, and other schools now have an even greater chance of developing an adapted sport program that meets the unique needs of the SWD in their district.

## Implementation Strategies

With a growing number of interscholastic adapted sport opportunities available to SWD, a school should consider their options before beginning a program of their own. Implementing the program is one part to the overall process of developing an adapted sport program, while sustaining it is another. To help ensure the sustainability and effectiveness of an adapted sport program, school staff and volunteers who will be coaching the athletes must understand the learning styles and process of introducing sport to SWD. In addition to implementation strategies for coaches is the understanding of how legislation has affected school's obligation to provide extracurricular athletic opportunities to SWD.

For SWD who may not have the access or funds to participate in community sport, school-sponsored extracurricular sport may be their only option. The implementation of Section 504 of the Rehabilitation Act of 1973 requiring public schools to provide a free and appropriate public education (FAPE) was the first step to including SWD in athletics. This legislation prohibits school districts from denying a qualified SWD to participate or benefit from opportunities afforded to nondisabled students. Although the intent of this legislation was to prevent discrimination against SWD, "…implementation at the local level has been delayed in a similar manner as the implementation for African American boys and girls following the Civil Rights Movement (Dieringer & Judge, 2015)." Dieringer and Judge suggested that the 2013 Office of Civil Rights "Dear Colleague Letter" was critical in its support of ensuring inclusion and equal rights of SWD in regards to extracurricular athletic opportunities.

The “Dear Colleague Letter” is unique in that it provided specific guidelines for equal opportunity to participate for SWD in school-sanctioned athletics.

Although legislation supports the inclusion of SWD in extracurricular athletic opportunities, there still are potential barriers to implementation, as well as a lack of scholarly information about inclusion practices for SWD (Rimmer, et al., 2010). One of the major underlying factors contributing to the lack of extracurricular sport opportunities for SWD is the recent decline of federal and state financial allocations to public schools. The inability to access sufficient resources such as appropriate facilities, equipment, coaches, programs, and syllabi limits opportunities for SWD to fully participate in interscholastic sport (Rimmer, & Rowland, 2008).

Another limitation that Dieringer and Judge (2015) note is the lack of information administrators have in creating more athletic opportunities for their SWD. The article recommended training and instruction for educators and advocacy for equal opportunities through the use of how-to tips for advocating and implementing opportunities for SWD in K-12 and postsecondary extracurricular athletics. The article suggests practical strategies for educators when advocating for SWD, including learning the interests of SWD in school, initiating socialization between students with and without disabilities, familiarizing oneself with the special education teacher, and introducing adapted sport organizations such as BlazeSports and the American Association for Adapted Athletics into K-12 school districts.

Dieringer and Judge (2015) also address a stereotype in their article that SWD are unable to participate in “regular” sports. The 2001 *Martin v. PGA Tour Inc*. case helps illustrate that as long as an accommodation for an individual with a disability does not

alter the fundamental nature of competition, the Americans with Disabilities Act (ADA) prohibits discrimination on the basis of disability. Making SWD aware of extracurricular sport opportunities is one step recommended by the authors. Students may not be aware that they enjoy or could benefit from a sport, which suggests that creating open gyms and practices could be an option to advocate for the inclusion of SWD in sport. When a student's disability is too severe or the game/sport is not conducive to facilitate successful inclusion, adapted sport may be the best option. Inclusion of sports such as goalball, beep baseball, or other alternative sports in the physical education curricula was suggested as one option to introduce students to the accessibility of sport for all. With support from the U.S. Government Accountability Office Report (U.S. Government Accountability Office, 2010) and the OCR through the Dear Colleague Letter, school districts can reduce common barriers to PA participation among SWD and provide extracurricular athletic opportunities to those who would greatly benefit from participation.

Community sport participation should be encouraged as the least restrictive environment for SWD who would benefit and be successful with this placement. The majority of SWD who may be able to successfully participate in regular sport with accommodations under Section 504 of the Rehabilitation Act, are excluded from participation. Shangraw (2013) looked at children in this category who have 'hidden disabilities', which include conditions that affect an athlete's physical and cognitive abilities. Some examples of this may be asthma, diabetes, mild autism, learning disabilities, and attention deficit hyperactivity disorder. These individuals might not readily be identified as having a disability by a coach, and can often be perceived as an

athlete who doesn't try hard, has a short attention span, or becomes agitated or confused easily when, in fact, these can be learning barriers developed as a result of their disability.

Shangraw (2013) describes coaching as the transmission of knowledge from coach to athlete, which can prove to be difficult for children with learning barriers. Shangraw connected universal design for learning (UDL) to coaching due to its success in the educational setting. UDL provides guidelines for educators including goals, methods, materials, and assessments, which can be modified to fit the sport environment. Through multiple means of representation, multiple means of action and expression, and multiple means of engagement, coaches can create activities and drills that, from the start, meet the needs of all athletes on the team without singling out any players.

Multiple means of representation of content could mean that the coach is providing a whole-part-whole approach to teaching a skill, such as throwing. Breaking down each step through demonstration, practicing each step separately, and then combining all the steps together, would help a young athlete with difficulty combining complex skills replicate proper throwing technique. Other techniques, such as scaffolding and auditory cue words, can help trigger a learner's memory when implementing new skills during game play. These methods can be useful for capturing learner's attention from the start, and maintaining the attention or engagement of athletes with ADHD or moderate autism.

UDL helps engage students throughout their learning process by providing guidelines for multiple means of engagement. An example of this is using goal setting to increase focus during practices and games. One study on goal setting recommended the use of visual cues to represent current goals, as well as having other individuals help in

the goal setting process for IWD (Copeland, & Hughes, 2002). An example of using visual representation for goal setting could include a printed list of the previous season's daily batting averages for players to reference throughout practice. Individuals could check to see how they compare each day and recognize improvement more readily. Daily progress could also take the form of peer assessment. Having one player look for and record a teammate's performance criteria of a skill during a bunting drill in baseball could help hold the attention of individuals who are waiting their turn, while providing assessment data.

Demonstrations may be easy to replicate when practicing closed skills, like batting and throwing, but often the best type of practice for introducing strategies during gameplay is running scrimmages. Some athletes may need immediate and specific feedback during scrimmages to help them apply skills and strategies to game play situations. One suggestion Shangraw (2013) pointed out was to run 'Start and Stop Scrimmages' in which a coach pauses gameplay to highlight a technical skill, tactical decision, or to re-run a play. In context, a soccer scrimmage can be paused during a defensive press for a coach to show the offense what options they have when the defense closes out left field.

In summary, because of the many community-based youth programs delivered throughout the country, it is inevitable that coaches will be responsible for coaching SWD. Through multiple means of representation, multiple means of engagement, and multiple means for action and expression (UDL), a coach can create programs that cater to children with various learning barriers, preventing isolation from their nondisabled peers. Coaching and teaching strategies are similar in that they both include a transfer of

knowledge. Keeping a practice engaging through reciprocal learning, whole part whole demonstrations, and providing differentiated feedback can enhance comprehension for both students with and without disabilities.

# CHAPTER III

# CRITICAL ANALYSIS

## Introduction

Many students with disabilities (SWD) do not possess the necessary skills or athletic abilities to participate successfully in extracurricular sport with their nondisabled peers. Therefore, most SWD do not benefit from the physical, social, and emotional aspects sport has to offer. The resources for schools to develop an adapted sport program for SWD exist, but are often overlooked by schools that are already burdened with tight budgets and limited facility space for practices and games. The Office for Civil Rights "Dear Colleague Letter" has provided guidelines for schools to implement extracurricular athletic opportunities, including adapted sport programs for SWD (See Appendix B). This chapter describes important components necessary to develop a school-sponsored extracurricular adapted sport program, along with examples of programs which help provide implementation strategies to help establish an effective program that meets the unique needs of the SWD. This chapter also provides valuable resources such as legal policy documents supporting the implementation of extracurricular adapted sport programs, relevant adapted sport journals, magazines and books, as well as future research and project recommendations.

## Recommendations for Developing and Implementing School-Sponsored Adapted Sport Programs

### Administrative Support

Designing an adapted sport program starts with gaining support at the district administrative level and at school sites. Once an individual or team of teachers has a fundamental idea of how the adapted sport program fills a gap in extracurricular activity

for SWD, the athletic director, or activities director, is one of the first persons to approach. Using a successful model of adapted sport, such as the Minnesota Adapted Athletics Association (MAAA), will help administrators know what their roles might be in a new sport program for SWD. Approaching administrators with a specific plan of steps and procedures leading to implementation will help them see the possibility the school has of creating a successful extracurricular adapted sport program for SWD.

**Advocating for Adapted Sport Programs**

Deiringer and Judge (2015) address the lack of opportunities for SWD to participate in sport in an article that discusses strategies for implementing inclusion in extracurricular sport. This article stresses the importance of helping SWD and their parents to become more aware of extracurricular sport activities that are available to them. One example is to increase awareness by creating open gyms and practices for students with mild to moderate disabilities. This is one strategy that helps SWD become aware of what adapted sport has to offer. Another example is to include adapted sports in the general physical education curriculum. Sports, such as beep baseball or goal ball for students with visual impairments, can be played by SWD and their typically developing peers. Promoting extracurricular sport participation in the school setting is especially important for SWD to prepare them for successful lifelong sport participation in the community or with organizations such as Special Olympics.

Promoting awareness of adapted sport is one of the first steps to successfully involving SWD in an adapted sport program. Once a student is involved in an interscholastic or local sport program, it is important for the coach to use a variety of strategies to address the specific learning needs of each child.

## Securing a Budget

An important step in the development of an adapted sport program in a school district is establishing a budget. Starting a program doesn't cost much compared to the other sports in a school district, and the annual operating costs may even be lower. The primary reason for the lower cost is the availability of equipment already at the school, and the possibility of having volunteer coaches or assistants as opposed to paid coaches. In addition to volunteers and assistants, special education directors may be useful allies in the budget development process. It is important to note that funding should be requested through the districts extracurricular athletic budget.

Creating a realistic budget does not take much time or be much of an obstacle if basic sports equipment is available. Startup costs for Onalaska High School in Western Wisconsin accounted for just over 1% of the total extracurricular budget at around $4,800, which included coach's pay, uniforms, and equipment (Cappuccio, 2013). Obtaining supplemental funding through grants is another option to help lower the cost. Parent involvement through fundraising, like other sports, can help alleviate the strain on district budgets. In schools where there is no room in the budget to provide funding, alternative options have to be taken to implement the program. Fundraising at Holmen High School in Holmen, Wisconsin started as soon as an adapted sport program was approved. This high school raised over $4,000 to cover the startup costs for equipment and uniforms for the athletes. Through booster clubs, PTA's, and local business donations, coaches can implement a program even if there is a lack of funding available.

## Coaches and Volunteers

Staffing for the ASL in the MVC schools in Holmen, Onalaska, and La Crosse, Wisconsin, consists primarily of adapted physical education and special education teachers, with some help from high school students and preservice adapted physical education teachers from a local university. Using instructional aides, parents, local college students, or other school staff members to assist in the program ensures each athlete has an opportunity to participate safely and successfully, especially the students who are lower functioning and may need more assistance to stay engaged. One example of how college students have benefited an adapted sport program is found in the Mississippi Valley Conference (MVC-ASL). Graduate and undergraduate students from the University of Wisconsin-La Crosse assist with coaching practices and officiating games. Each school will vary in their need for staff and not all athletes will require one-on-one physical assistance.

## Sport Selection

Sport selection can vary based on the needs and interests of the population served. An appropriate sport should enable the highest level of participation for a broad range of disabilities. The goal is to limit sports that might exclude SWD who could benefit from that sport. The MVC-ASL uses the same three sports each year, and has had successful participation for students with physical, behavioral, sensory, and cognitive disabilities. The sports that the MVC-ASL has selected are based on those used in the MAAA, and have all been adapted for indoor play. The fall sport is indoor soccer, winter is indoor floor hockey, and spring is indoor whiffle ball. An indoor gymnasium would allow wheelchair users to navigate safely, limit environmental distractions, and allow

participants to easily transfer skills they have used in physical education with a consistent environment.

**Eligibility**

Creating a program that is offered to a broad range of SWD is always a challenge. The target population should be students who do not possess the physical and/or cognitive abilities to allow for safe and successful participation on extracurricular athletic teams alongside their nondisabled peers. The MVC-ASL was created knowing that the majority of SWD in the public schools would benefit from a sport program with very few eligibility restrictions. Since the MVC teams are coached primarily by adapted physical education and special education teachers, athletes are recruited by the teachers who know the students very well. With parent consultation, a decision can be made on whether or not the ASL is appropriate for that child.

Depending on the number of SWD, schools or districts can choose to offer multiple divisions within each sport. For example, a school with 20 students with physical disabilities and 20 students with cognitive disabilities may be able to offer more playing time for their athletes by creating two separate divisions. This decision may be affected by the availability of facilities, equipment, and staff.

**Liability**

As with any scholastic sport program, liability considerations must be addressed before the start of participation. A medical clearance form must be filled out by the participants' primary care physician, viewed by the coaches, and filed with the school nurse. Supplementing this document, most districts require an interscholastic sport and

activities form (See Appendix C). Both of these forms should exist in the school or districts athletic department, and may require some modification to be reviewed by the adapted physical educators, special education director, athletic directors, and principal. Coaches must be aware of all conditions that could impact the safety of student-athletes.

**Facilities**

Space in schools is often limited, and coaches must be flexible and open to suggestions from school staff members and other coaches when determining where practices and games will be held. The goal when acquiring space would be somewhere that can consistently be available a minimum of 2 days per week, with 3 to 4 days being the best. An indoor gymnasium or multipurpose room is important for wheelchair users, because of the smooth floors, consistent environment, and elimination of distraction factors. Once facilities have been established, the space should be booked at least one season in advance. As any coach would do for their team, be persistent, and advocate for having a designated space for practice and games. All of these aspects need to be coordinated with all other sports and athletic staff. Keeping communication open with other adapted sport teams in the area is crucial when considering the use of facilities for tournaments or competition throughout the season.

**Scheduling**

Aligning the seasons of an ASL with other adapted sport teams may or may not coincide with other interscholastic sports a school district. One resource for sport season structure is found on the MAAA website (http://goo.gl/EfNBve).

Seasons can be created much like in other interscholastic sports. The MVC-ASL model uses an annual 3-season/3-sport model, with each season lasting 8 to 9 weeks. Game days are scheduled throughout the season by the coaches. The MVC-ASL chose to align their sport selection and seasons with the existing high school athletics teams, but this isn't always necessary. It is important to establish a schedule well in advance of the start of a season, especially for parents who have to plan for after-school transportation and medical or related service appointments. Parents should be provided a copy of the practice and game schedule and notified with any information or concerns via phone or email. An email distribution system would be beneficial to contact parents throughout the season for games, practices, cancellations, fundraisers, and changes in location or times. Each school is different in their approach to contacting parents or guardians. Therefore, talking with the special education director or principal before collecting phone numbers or email addresses should be considered.

**Transportation**

A significant and often overlooked expense for implementing an adapted sport program is transportation. Busses need to be booked in advance for game days and practices that are regularly held off-campus. In addition, transportation services may be part of a student's IEP and be required per the Individuals with Disabilities Education Act (IDEA). Athletic Directors can assist in providing contact information to book transportation for the season. Another option that doesn't include busses or vans, but does require regular communication, is parent pick-up.

In summary, there are many important steps to starting an adapted sport program in a school district. After advocating for an adapted sport program through administrative

and parent support, a budget, reliable staff, appropriate sport and facilities selection must be established. After determining student eligibility and addressing the districts sport participation procedures, transportation and scheduling are some of the final steps in the process of implementing an adapted sport program in a school district.

## Description of Project Video

The purpose of the video included in this project is to provide adapted and general physical education teachers, special education teachers, and other school staff who work with SWD an overview of selected models of disability sport in high schools. The video also provides a step-by-step approach to implementing a high school level extracurricular adapted sport program for SWD. Below is an outline of the video sequence and content.

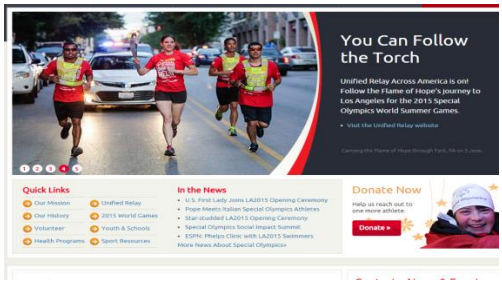
1. Introduction
    a. Sport Participation among Youth with Disabilities
    b. Benefits of Sport Participation
    c. The "Dear Colleague Letter" and other Legal Documents
    d. Continuum of Adapted Sport
2. Existing Models of Adapted Sport
    a. National and International Adapted Sport Programs
    b. Statewide and Regional Adapted Sport Programs
    c. Local High School Adapted Sport Programs
    d. The Mississippi Valley Conference Adapted Sport League
3. Administrative Support
    a. Gaining Support of Administrators
    b. Athletic Director Interviews
4. Securing a Budget
    a. Startup Costs
    b. Support and Fundraising

5. Coaches and Volunteers
    a. Examples of Volunteers
    b. Collaboration with University Students
6. Sport Selection
    a. Participation for a Broad Range of Student-Athletes with Disabilities
    b. Examples of Sport Choices
    c. Environmental Limitations
    d. Coaches Perspective on Sport Selection
7. Eligibility and Liability
    a. Who Should Participate
    b. Recruiting Students for the Team
    c. Medical Clearance Forms
    d. Interscholastic Activity Form
8. Facilities, Transportation, and Scheduling
    a. Scheduling Practice and Games
    b. Sport Seasons
    c. Transit to Practices and Games
    d. Alternative Transportation Examples
    e. Resources

## Resources

This section includes resources that would benefit athletes, coaches, and staff interested in adapted sport. The resources include a selection of popular local, regional, national and international adapted sport organizations, as well as books, journals, magazines and articles related to adapted sport.

## Adapted Sport Programs and Organizations




Special Olympics is a well-known organization offering extensive adapted sport programs and other specialized physical activities for individuals with disabilities (IWD) at the local and state level. For example, Special Olympics Wisconsin offers 17 Olympic-type sports for training and competition among individuals with intellectual disabilities, ages 8 and older. The national website includes links for Special Olympics official training and certification, overviews of their existing programs, and contact information for local Special Olympic organizations. More information can be found by visiting their website at: www.specialolympics.org.


Paralympics is another well-known program that has evolved into an international organization. Paralympics provides top-tier athletes with physical, sensory, and intellectual disabilities high levels of competition in 29 sports ranging from alpine skiing, to wheelchair basketball and table tennis. The Paralympics website contains links to every sport offered, outlining specific eligibility criteria and provides site visitors with

photos, videos, and the latest news on disability sport. More information can be at: www.paralympic.org.

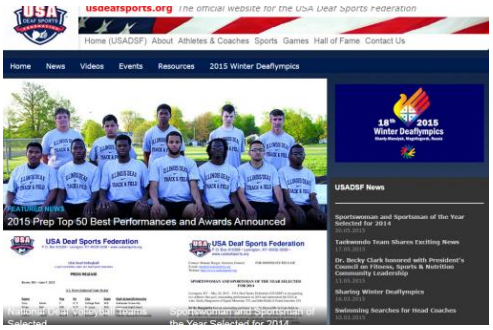

The American Association of Adapted Sport Programs (AAASP) is a national sport organization established in Atlanta, Georgia. AAASP uses a standardized structure for developing and supporting interscholastic adapted sport competition for students with physical disabilities (SWPD). The organization provides recommendations for new adapted sport programs such as rules, guidelines, federal mandates, and supplementary documentation for wheelchair sports. Additional features of the website include videos and information on the four sports offered through their organization. Their website can be accessed at: www.adaptedsports.org.


For schools with high populations of SWPD, Blaze Sports America offers community-based sport and recreation programs, which include both children and adults.

Their services include professional development workshops for certifications in adapted sport programming, along with online materials and resources to acquire knowledge to work with local general and adapted physical education teachers to plan and implement local sport programs. More information on ways to get involved and upcoming events can be found at: www.blazesports.org.


Disabled Sports USA is a national organization dedicated to providing sport and recreation opportunities to individuals with physical and intellectual disabilities. Their mission is to use community-based chapter networks to target specific disability needs in order to improve the lives of youth and adults with disabilities. Their website offers resources for coaches, athletes, volunteers, and donors looking to get involved in disability sport programs, local adapted sport chapters, and support or attend adapted sport programs across the U.S. More information can be found at: www.disabledsportsusa.org.

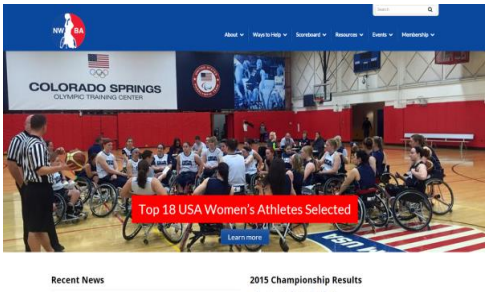

The United States Association of Blind Athletes (USABA) is an organization based in Colorado that provides sport opportunities for individuals of all ages and ability levels with visual impairments. This national organization is a member of the U.S. Olympic Committee and prepares elite athletes with visual impairments for a number of Paralympic sports. The USABA's website offers links to various sporting events, training camps, and video testimonials of how sport has affected the lives of individuals with visual impairments. More information can be found by visiting their website at: www.usaba.org.




The USA Deaf Sports Federation (USADSF) is an organization that regulates rules of competition, serves as a parent organization of national sport organizations, conducts annual athletic competitions, and assists the US Team international competition in the Deaflympics, PANAMDES Games, and World Championships. The USADSF's website provides athletes, coaches, and supporters with sport eligibility criteria,

international sport competition videos, disability sport news, and National Sport Organization (NSO) affiliation requirements. More information can be found at: www.usdeafsports.org.

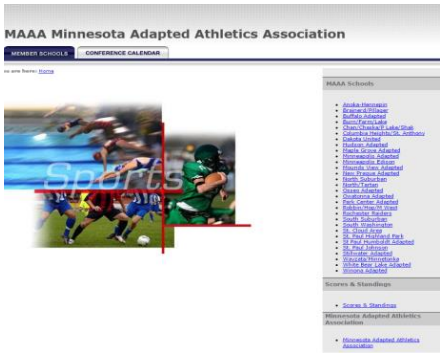

The National Alliance for Accessible Golf (NAAG) is an organization that promotes inclusion of individuals with physical disabilities in golf so that they may receive the same health benefits and active social engagement in the community as their nondisabled peers. One of the many roles of this organization includes promoting the benefits of accessible golf through social media marketing, publications, and public speaking. Additionally, the NAAG's online website offers resources for golfers with disabilities such as grant writing practice and funded training programs like GAIN (Golf: Accessible and Inclusive Networks). More information can be found at: www.accessgolf.org.




The National Wheelchair Basketball Association (NWBA) is the leading organization for wheelchair basketball, and oversees men's, women's, intercollegiate,

and youth teams throughout the U.S. and Canada. The organizations website lists scores and rankings for all teams and divisions in the NWBA. Additionally, the website offers an extensive resource section that includes disability classifications, rules, coaches and officials exams, sport transition programs, a list of local teams, and information on forming a new team. More information can be found at: www.nwba.org.


The Great Lakes Adapted Sports Association (GLASA) in Illinois supports youth and adults who primarily have physical or visual impairments through recreation, fitness, and sport activities. GLASA partners with community-based organizations to offer individualized instruction, adapted sport and recreational programming in schools and the community, peer mentoring, and a variety of other health and wellness opportunities. With more than 40 programs and sport choices, GLASA is able to meet the needs of many youth and adults with physical and visual impairments. More information can be found by visiting their website at: www.glasa.org.




The Minnesota Adapted Athletics Association (MAAA) is a successful program which has been in place for over 30 years, meeting the needs of SWD. This model was originally designed for individuals with physical disabilities, but in 1990, students with intellectual disabilities were included. By 1992, advocates were successful in gaining acceptance into the Minnesota State High School League. The extensive resources this association provides on their website include an online rulebook, easy to follow coaching videos, and valuable information about adapted athletics for high schools. More information can be found on their website at: http://goo.gl/im6Q1q.

**Books**

Barber, G. (2010). *Different speeds & different needs: How to teach sports to every kid.* Baltimore, MD: Brookes Publishing.

This book, written by a father of two sons with autism, explains the various inclusion settings of adapted sport, and highlights the physical, social, and emotional benefits of sport for IWD. Section two includes a description of various coaching strategies such as; using a universal design principle and multiple intelligence theory (Gardner, 2011) for coaching student athletes with a broad range of disabilities. In section two, Barber provides common characteristics of eight categories of disabilities,

concluding each chapter with strategies to use for each disability to help SWD participate successfully in adapted sport.

Davis, R. (2011). *Teaching disability sport: A guide for physical educators* (2nd ed.). Champaign, IL: Human Kinetics.

This book contains strategies for adapted sport program planning and implementation, as well as detailed information on a number of individual adapted sports. The program planning section in part one of the book is useful for physical educators looking to implement disability sport into the general physical education curriculum, or assessing which sport may be most appropriate for specific disabilities. Part two introduces seven disability sports covering the rules, inclusion strategies of SWD in disability sport, and drills for skill development.

Norlin, J. (2013). Athletics, extracurricular activities and students with disabilities: District obligations under the IDEA and Section 504. Palm Beach Gardens, FL: LRP Publications.

In 2013, LRP publications released an updated version of their 2006 publication titled, "Athletics, Extracurricular Activities, and Students with Disabilities". This book includes two chapters that pertain to extracurricular athletic opportunities for SWD in public schools. The IDEA and Section 504 of the Rehabilitation Act are referenced in chapter one to provide educators with an understanding of a school's obligation to take steps towards affording SWD's an equal opportunity to participate in extracurricular activities. Additionally, chapter one outlines Section 504 as it pertains to discrimination against SWD and providing extracurricular activities in the least restrictive environment.

Chapter two contains a number of case laws pertaining to the participation of SWD in athletics and interscholastic sports. The cases contain clarification for educators, administration, and parents, identifying athletic participation as a component of a free and appropriate education (FAPE). More specifically, individual, district and Supreme Court decisions in chapter two help distinguish how a SWD's IEP must reflect adaptations, accommodations and supports that are necessary for participation in athletics. Chapter two also includes relevant court cases concerning eligibility requirements in interscholastic athletics, health and safety risks of participation in sports for SWD, and disciplinary measures for SWD displaying extreme behaviors that put the student or school community's safety at risk.

Sherrill, C. (2004). Adapted physical activity, recreation, and sport (6th ed.). New York, NY: McGraw-Hill.

This book contains comprehensive descriptions and sport classifications for individuals with physical, mental, emotional, cognitive, and other types of disabilities. The various characteristics of sport competition and recreation among individuals with disabilities are outlined, along with several examples of sport organizations across the country. The book provides an extensive list of resources for educators and parents looking to pursue adapted physical activity and sport.

**Book Chapters**

Jones, J. & Paciorek, M. (2001). Adapted sport. *Disability sport and recreation resources* (pp.41-49). Rockville, MD: Cooper Publishing Group.

This chapter begins with the importance of providing SWD meaningful sport participation. Various levels of adapted sport are discussed using Winnick's (1987) integration continuum which includes unified sport models (Special Olympics), segregated sport, and electronic sport competition. Additional references are made to specific adapted sport organizations that exist locally, regionally, and notionally.

Paciorek, M. (2011). Adapted Sport. *Adapted physical education and sport* (6th ed.) (pp.41-57). Champaign, Il: Human Kinetics.

In chapter three, Paciorek outlines key roles and responsibilities of general physical educators to provide meaningful sport participation and training opportunities for SWD in conjunction with adapted physical education. Winnick's integration continuum is used to describe various scholastic, national, and international adapted sport models. Paciorek describes the importance of a physical educator's role in advocating and understanding appropriate sport selection for SWD in the school, community, and transition settings.

**Legal Documents Supporting Adapted Sport Programs**

Active Policy Solutions, a government relation's advocacy firm specializing in sport, health, wellness, youth development, and civil rights, released a Q and A publication on the OCR's "Dear Colleague Letter" (U.S. Department of Education, 2013). This publication offers guidance and answers common questions regarding a schools obligations under the Rehabilitation Act of 1973 to provide extracurricular athletic opportunities for SWD. The questions presented in this Q and A cover a broad range of topics. See Appendix B for more information, or visit the website at http://goo.gl/ptV0l4.

The Department of Education's publication in 2011 entitled, "Creating Equal Opportunities for Children and Youth with Disabilities to Participate in Physical Education and Extracurricular Athletics" is an important document for physical education and sport participation among youth and children with disabilities. Several federal laws related to extracurricular athletic opportunities for SWD are summarized including the Individuals with Disabilities Education Act (IDEA), the Office for Civil Rights involvement in IDEA, and the 2010 report from the Government Accountability Office (GAO). U.S. Department of Health and Human Services (2008) guidelines for physical activity are also discussed in this publication. A link to the publication can be found at https://goo.gl/BeVqGK.

The "Dear Colleague Letter", issued by the Office for Civil Rights, outlines a clear interpretation of what it means for schools to provide equal opportunity for participation for SWD in interscholastic, club, and intramural athletics (34 C.F.R. § 104.34(a)). The letter uses examples and explanations to clarify the definition of equal opportunity for SWD. With this letter, it is made clear that schools have an obligation to provide equal extracurricular athletic opportunities for SWD. The "Dear Colleague Letter" can be accessed at http://goo.gl/OamTiO.

The 2010 GAO report entitled, "Students with Disabilities: More Information and Guidance Could Improve Opportunities in Physical Education and Athletics" outlines the importance of providing SWD an equal opportunity to participate in extracurricular athletics and physical education programs. The report includes a study which identifies the lack of equal access and opportunities for SWD to participate in physical activity and sport. The study found many challenges for schools to serve SWD in general physical

education class and lacked support regarding athletics for SWD. The report addressed the barriers schools face and provides recommendations for awareness and collaboration among school districts. This document can be found at: http://goo.gl/9eeVuL.

Health risks of inactivity for SWD are addressed in the *2008 Physical Activity Guidelines for Americans* (U.S. Department of Health and Human Services, 2008). These guidelines mention the increased risk for children and adolescence with disabilities to be more inactive than those without disabilities. Recommendations for children and adolescents with disabilities include 60 minutes of moderate to vigorous PA, along with participating in aerobic, muscle-strengthening, and bone-strengthening. These recommendations are the same individuals without disabilities, however, the guidelines mention that youth with disabilities should work with their healthcare provider to understand the types and amounts of physical activity appropriate for them to be as active as possible, reducing the risk of inactivity and childhood obesity.

**Journals**

A special edition article in the Journal of Physical Education, Recreation, and Dance (2013) titled, "*Helping Physical Educators and Adapted Physical Educators Address the Office of Civil Rights Dear Colleague Guidance Letter,"* is a practical resource for individuals looking to develop an adapted sport program for SWD. Several articles outline the importance of legal documents and policies that affect SWD right to participate in extracurricular sport similar to their nondisabled peers. Various existing programs are introduced, along with how each organization or school meets the needs of SWD in their district and community. A link to the article can be found at: http://goo.gl/0uw538.

Sports ‘N Spokes is a magazine for wheelchair sports and recreation that has been in existence for over 40 years. Sports ‘N Spokes provides subscribers with monthly updates on adapted sport and recreation across the nation. Collegiate and Paralympic game and tournament updates are among the many highlights the magazine provides. In addition to the sport highlights, resources for coaches and athletes to get in contact with local and national sport associations is provided. The magazine’s website can be found at: http://goo.gl/2Wb2wL.

PALESTRA is a magazine dedicated to sport, physical education, and recreation for individuals with disabilities. This magazine is a valuable resource for parents, athletes, and professionals seeking information on all aspects of physical activity. PALESTRA utilizes current research in the field of physical activity, physical education, and adaptive sport to increase advocacy and encourage individuals with disabilities to take advantage of the benefits physical activity has to offer. The website for the magazine can be found at www.palaestra.com.

### *YouTube Videos*

BlazeSports America offers an online video resource available to the public which contains videos outlining the importance of sport, various programs they offer, and instructional presentations for adapted sport coaches. Various sport clips from local and national adapted sport tournaments can also be found on the website. This online resource is valuable for individuals exploring the disability sport programs available to schools. More information can be found on their website at http://goo.gl/uZxXch.

Disabled Sports USA has a YouTube channel which includes a variety of adapted sports available through their program. The channel also contains informational and instructional videos of how to reach youth with physical disabilities who present barriers to participation. Examples of these barriers might be low income and limited access to sport programming. Another valuable video on the Disabled Sports USA channel provides information on fundraising tools to support athletic events. More information can be found on their YouTube channel at https://www.youtube.com/DisabledSportsUS.

GLASA Sport's YouTube channel contains numerous videos that discuss their adapted sport programs and the success stories of youth and adult athletes with disabilities. The GLASA Sport's video channel provides a look into a variety of adapted sports, and the positive impact adapted sport has had on the lives of the athletes. The channel can be located at https://www.youtube.com/user/GLASASports.

## Recommendations for Future Research

There is a lack of research regarding extracurricular sport participation among high school students with disabilities (SWD). While the benefits of sport participation among IWD are well known, there is not much information on interscholastic sport programs available for SWD. Future research is necessary to explore the benefits and long-term effects of including SWD in extracurricular sport. Potential research questions would include:

1. Do short adapted sport league seasons, versus longer seasons, have an impact on skill regression for high school students with disabilities?
2. Do high school students with disabilities who were involved in an adapted sport league in their school go on to participate in sport after graduation?

3. What are the effects of high school adapted sport programs on peer socialization?
4. What are the most appropriate sport choices for high school students with intellectual disabilities and physical disability.
5. What are the best methods for assessing high school adapted sport coaches effectiveness on student learning and development of skills?
6. Does indoor or outdoor sport participation elicit a greater effect on physical activity levels of high school students with disabilities?

## Recommendations for Future Projects

Future critical analysis projects are needed to increase the quality of current and future adapted sport programs for SWD. Future projects could serve to help parents and school staff feel more empowered about implementing an adapted sport program in their school district. Listed below are recommendations for future projects developed in the process of creating this critical analysis project.

1. Practical steps for implementing an inclusive adapted sport program for high school SWD.
2. Effective training procedures for school staff looking to become adapted sport coaches.
3. Practice structure and curriculum content for high school adapted sport programs.
4. Parent involvement and advocating for an adapted sport program.
5. Integration strategies for transitioning high school SWD into regular sport participation.

6. Selection of sport choices that provide the most accessibility for a diverse population of SWD to successfully participate.
7. Benefits of adapted sport programs for SWD who are preparing to transition out of the public education system.

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# APPENDIX A

## Office of Civil Rights "Dear Colleague Letter"

# APPENDIX B

## Active Policy Solutions: "Dear Colleague Letter" Q and A

# APPENDIX C

## Sample Interscholastic Sports Activities Card and Medical Forms

# APPENDIX D

## Critical Analysis Project Video Script