UNIVERSITY OF EDUCATION, WINNEBA

AN ASSESSMENT OF SPORTS FACILITIES IN SENIOR HIGH SCHOOLS AND THE EFFECT ON SPORTS DEVELOPMENT IN THE TANO NORTH AND SOUTH DISTRICTS OF GHANA

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DECLARATION

Candidate's Declaration

I, THOMAS OKYERE declare that this Dissertation, with the exception of quotation and references contained in published works, which have all been identified and duly acknowledged, is entirely my own original work, and has not been submitted, either in part or whole for another degree elsewhere.

Candidate's Signature……..

Date……

Supervisors' Declaration

We hereby declare that the preparation and presentation of the dissertation was supervised in accordance with the guide lines on supervision of dissertation laid down by the University of Education, Winneba.

Name of Supervisor: DR W.W. AGBEKO

Signature…….....

Date……..

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DEDICATION

This dissertation is dedicated to my wife, Ernestina Obeng and family, Mr and Mrs Akyeampong family and All friends

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ABSTRACT

This study was conducted to assess and evaluate the state (current) of sports facilities and effects on sports development at the Senior High School (SHS) in the Tano North and South districts in Brong Ahafo region, Ghana. A quantitative research approach was used for the study. The research technique used was descriptive survey method. The significance of the study was to create awareness that availability of sports facilities in the Senior High School improve sports performance. The study again would help SHS students to develop good attitude towards sports participation. The study would also provide data upon which further research into areas of physical education could be done. Three research questions were raised. The instruments used were interviews, observations and questionnaire. Data was analysed using chi-square(x^2) to test the hypotheses and find the relationship between availability of sports facility and sports performance. The findings revealed that the study fails to accept the hypotheses that there is no significant relationship between sports performance and provision of sports facilities. Both teachers and students accepted in the study that there is a significant effect of availability of sports facilities on sports performance and also agree that existing facilities are not properly maintained. The descriptive analyses revealed that sports facilities in the various schools were not adequate for their PE subject requirement. Other findings are that most of the facilities have paths and passages across them since people use them as routes to their destinations, for celebrations and other activities. This indicates that there are no proper management systems put in place. Generally, the study has revealed that sports facilities in the Tano North and South were inadequate and have significant effect on sports performance. Some recommendations were that administrators and other stake holders should invest in sports facilities to beef up performance.

CHAPTER ONE

INTRODUCTION

1.1.Background of the Study

It has been a general concern for educational set-ups to include physical education and sports in their curricular. In most educational systems, physical education (PE), also called physical training (PT) or gymnastics in less progressive settings, is a course in the curriculum which utilizes learning in the cognitive, affective and psychomotor domains in a play or movement exploration setting. The primary aim of physical education is to equip students with the knowledge, skills, capacities, and values along with the enthusiasm to maintain a healthy lifestyle into adulthood (UNCW, 2013). Activities included in the programme that are designed to promote physical fitness, to develop motor skills, to instil knowledge and understanding of rules, concepts, and strategies, and to teach students to work as part of a team, or as individuals, in a wide variety of competitive activities (UNCW, 2013).

The Standards for Physical Education(NASPE) aims at helping students to demonstrate competency in motor skills and movement patterns needed to perform a variety of physical activities, demonstrate understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities, participate regularly in physical activity, achieve and maintain a health-enhancing level of physical fitness, exhibit responsible personal and social behaviour that respects self and others in physical activity settings and values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

Exercise, sport, play, games, dance, and many other terms have been used to describe the wide variety of pursuits considered to be physical activity. "Physical activity" is a

universal term defined as "bodily movement that is produced by the contraction of skeletal muscles and that substantially increases the amount of energy expended" (USDHHS, 1996). "Exercise" is narrower in focus and is defined as "one type of physical activity conducted with the intent of developing physical fitness" (Corbin and Pangrazi, 1999). The term is typically used for calisthenics, resistance exercises, stretching exercises designed for flexibility, and aerobic exercises specifically designed to improve cardiovascular fitness. Sport, play, games, dance, and recreational activities are all different forms of physical activity although, some are more organized than others.

Sport (or sports) is all forms of usually competitive physical activity which, through casual or organized participation, aim to use, maintain or improve physical ability and skills while providing entertainment to participants, and in some cases, spectators. Hundreds of sports exist, from those requiring only two participants, through to those with hundreds of simultaneous participants, either in teams or competing as individuals (Wikipedia, the free encyclopedia.).

Emphasis on the general concern to include physical education and sports in school curricular places learners in a better position to live healthy and active lifestyles, which invariably has an impact in their learning. According to the UNESCO general conference at its twentieth session, Paris, 21st November, 1978, the UNESCO charter on physical education opines that every human being has a fundamental right of access to physical education and sports, which are essential for the full development of his personality. The freedom to develop physical, intellectual and moral powers through physical education and sports must be guaranteed both within the educational system and other aspects of social life.

Based on what UNESCO has enshrined in their charter as far as the learning and participation in physical education is concern, it is very vital to undergo physical education in every educational institution so as to benefit from the immense opportunities stated above in the charter. Physical education can serve as a vehicle for helping students develop the knowledge, attitudes, motor skills, behavioural skills and confidence needed to adopt, maintain and make informed decisions about leading physically active lifestyles. Regular physical activity improves functional status and limits disability during the middle and later adult years. Physical activity contributes to quality of life, psychological health and the ability to meet physical work demands. Physical education is a key component of a coordinated school health programme that results in healthier children more ready to learn, healthier adults and healthier communities.

Tano north and south districts are two out of twenty seven districts in the Brong Ahafo Region of Ghana. The region is located in south Ghana. Brong Ahafo is bordered to the north by the Black Volta River and to the east by the lake Volta and to the south by the Ashanti region, Eastern and Western regions, and to the west by the Ivory Coast south eastern border. The capital of Brong Ahafo is Sunyani. Brong Ahafo was created in 1958 from Bono state and named after the dominant and native inhabitant Akans; Brong and Ahafo. Brong Ahafo is renowned for its large cocoa production agriculture and agribusiness industries. Brong Ahafo contains many Akan cultural and wildlife attractions, but it is less known to tourist than the Ashanti and Central regions of which Kintampo waterfalls and Fiema monkey sanctuary are few examples. The north and south Tano districts in the Brong Ahafo region are blessed with six senior high schools of which one is a single sex (female) school. All these schools take part in sporting activities as part of the academic calendar. Also, physical

education is part of the curriculum at this level of educational system. However, their performance is nothing to write home about. Several factors may have contributed to this level of performance, and this has been a source of worry to stakeholders. Some of the causes of poor performance in sports have been attributed to poor management, lack of facilities and so on in some places. The issue of lack of facilities may have contributed to this trend.

The lack of facilities is a major detrimental factor in the development of sports culture in the schools. In the Tano North district for instance, the researcher realized that there is a difficulty of access to sports facilities such as football field, handball court, volleyball court, and athletic oval.

To ascertain this, the researcher finds it necessary to delve into the matter to find out the state of sports facilities in senior high schools in these districts.

Facilities cannot be ignored when physical education is being made mention of. Recreational facilities provide a vital escape from academic pressures (Khaler, 2007). According to Marriot (2010), recreational plans are a key part of the process of improving the leisure opportunities available in the community and through this, the health and well-being of the community.

The school as a typical example of the community also needs sports facilities, which the students will use during leisure and sporting activities.

1.2. Statement of the Problem

Physical education programmes in schools are to be designed to promote physical fitness, to develop motor skills, to instil knowledge and understanding of rules, concepts, and strategies, and to teach students to work as part of a team, or as individuals who holds it as fundamental human right to be self-reliant to meet challenges in life. The experiences gained are to be practised yet attempts in doing

that normally becomes difficult which denies students some qualities to be developed. The inactive lifestyles of students coupled with the inadequate facilities at Senior High Schools lead to poor sports performance. This is a source of worry to most physical education teachers and other stakeholders. As a result there is the need for action to be taken to reverse the trend. This situation aroused the researcher's interest to assess and evaluate the current state of sports facilities and its effects on sports development at the Senior High Schools in Tano North and South districts.

1.3. Purpose of the study

The purpose of this study is to assess the state of sports facilities and effects on sports development at the Senior High Schools in Tano North and South districts of Ghana.

1.4. Research Questions

The following research questions were answered:

1. What is the current state of sports facilities in the Senior High Schools in Tano North and South districts?
2. How are sports facilities managed in Senior High Schools in the Tano North and South districts?
3. What effects do sports facilities have on sports performance?

1.5. Hypotheses

The following hypotheses were tested:

1. There is no significant relationship between sports performance and provision of sports facilities and sports performance.
2. There is no significant effect of availability of sports facilities on sports performance.

3. Physical education teachers and students have the same perception regarding the sports facilities in good maintenance condition.

1.6. Significance of the Study

The study is significant for the following reasons:

To improve sports performance in Senior High Schools in the Tano North and South districts. The results of the study would help the researcher to suggest ways of promoting the life span of sports facilities in Senior High Schools in the Tano North and South districts. To help students both in the Tano North and South districts to develop good attitude towards sports participation. The study would also highlight the need to institute the culture of maintenance. It will also prompt the stakeholders to do all things possible to invest in the provision of sports facilities to better the standards and the development of sports in the schools and the country at large.

1.7. Delimitation of the Study

The study is delimited to only Tano North and South districts Senior High Schools in Brong Ahafo region.

1.8. Limitations of the study

The study was based on selected SHS from Tano North and South districts, therefore the findings better depicts the situation in the area and may not be generalised to other settings. Again some of the students picked randomly could not respond to the questions which may influence the findings.

1.9. Operational Definition of terms

Assessment: assessment is an evaluation of sports facilities.

Facilities: facilities are designed structures for specific activities.

Sports: sports are usually organised or casual physical competitive activities done for healthiness, acquisition of knowledge and entertainment.

Sports facilities: sports facilities are playing grounds or structures used in doing sporting activities.

Sports development: sports development is the process or structures put in place in developing sports.

Stakeholders: stakeholders are financiers to education.

CHAPTER TWO

LITERATURE REVIEW

The purpose of this chapter is to provide a review of the literature related to sports facilities and their impact on senior high schools. The chapter will explore areas such as the meaning and concept of sports facilities, sports structures and facilities, standardized descriptions and dimensions of handball court, volleyball court, football field, athletic oval, basketball court and hockey field, effects of sports facilities on sports, managing sports facilities, planning the facility (management functions), the role of management in facility planning and development, facility maintenance.

2.1. Meaning and Concept of Sports Facilities

From Wikipedia (2014), sport (or sports) is all forms of usually competitive physical activity which, through casual or organized participation, aim to use, maintain or improve physical ability and skills while providing entertainment to participants, and in some cases, spectators. Hundreds of sports exist, from those requiring only two participants, through to those with hundreds of simultaneous participants, either in teams or competing as individuals. Sport is generally recognized as activities which are based in physical athleticism or physical dexterity, with the largest major competitions such as the Olympic Games admitting only sports meeting this definition, and other organizations such as the Council of Europe using definitions precluding activities without a physical element from classification as sports. However, a number of competitive, but non-physical, activities claim recognition as mind sports. The International Olympic Committee (through ARISF) recognizes both chess and bridge as bona fide sports, and sport accord, the international sports federation association, recognizes five non-physical sports, although limits the

amount of mind games which can be admitted as sports. Sports are usually governed by a set of rules or customs, which serve to ensure fair competition, and allow consistent adjudication of the winner. Winning can be determined by physical events such as scoring goals or crossing a line first, or by the determination of judges who are scoring elements of the sporting performance, including objective or subjective measures such as technical performance or artistic impression.

In organized sport, records of performance are often kept, and for popular sports, this information may be widely announced or reported in sport news. In addition, sport is a major source of entertainment for non-participants, with spectator sports drawing large crowds to venues, and reaching wider audiences through sports broadcasting.

From oxford dictionary sports is an activity involving physical exertion and skill in which an individual or a team competes against another or others for entertainment. Examples of sports could be soccer, rugby, table tennis, tennis, baseball, handball, volleyball, golf, bowling, boxing, racing, swimming etc.

According to Harper(2010),facilities are defined as something designed, built, installed, etc. to serve a specific function affording a convenience, or service or something that permits easier performances of an action, course of conduct, etc.Marriot (2010) sees facilities as simply the physical resources used for recreational activities and many activities need little by way of facilities. Jones and Bartlett (2005) says, for some recreational means the network of public agencies that provide facilities as parks, playgrounds, aquatic centers, sports fields and community centres in thousands of cities, towns, countries and park districts today. They may view these facilities as an outlet for the young or a meaning of achieving togetherness or pursuing interesting hobbies, sports or social activities or as a place for growth and development for all ages. The researcher considers recreational facilities as both

physical and natural things such as parks, swimming pools, rocks, musical instruments, trees, bicycles, buildings and others which promote physical activities which yield to enjoyment, learning, reducing stress and recreating minds of individuals.

2.2. Sports Structures and Facilities

Krotee and Bucher (2007). Remarks that individual buildings or groups of structures designed for exercising, sports training and practice, and competition in various sports. The prototypes of modern sports structures were the classical palaestrae, gymnasiums, stadiums, hippodromes, and circuses. The majestic amphitheatres of ancient Rome, such as the Coliseum, demonstrated the concept of combining a stadium and a circus. Bathhouses with heated water have existed at least as long as the ancient Greek palaestrae; the ancient Roman thermae are more elaborate examples. Christianity rejected the cult of the harmoniously developed human body, and consequently its spread halted the construction of sports structures and facilities, although hippodromes and special fields for tournaments of knights did exist in the middle ages. The accelerated construction of sports structures and facilities began in the 19th century. The first swimming pools were built between 1828 and 1830 and the first modern gymnasiums in the middle of the century. Most of these were built in the style of the ancient structures. The revival of the Olympic Games in 1896 provided an important stimulus to the construction of sports structures and facilities. Twentieth-century sports structures are often important public buildings and brilliant examples of progressive trends in modern architecture.

Modern sports structures and facilities serve more than 50 types of sports. A structure or facility is usually divided into the principal area, where training is done and competitions are held (fields, courts, halls), auxiliary areas (cloakrooms, dressing

rooms, shower rooms, rooms for officials, equipment rooms), areas for the maintenance systems (water, heat, and electric power supplies), and the spectator area (stands and seats, lobbies, refreshment counters, and restrooms). Sports structures and facilities can be outdoor or indoor.

Individual buildings may be designed for one or several types of sports, for example, auditoriums or halls for both gymnastics and games; sports complexes consist of several specialized structures designed for different sports. Fields and courts for games and track and field, ice rinks, swimming pools, rowing channels, ski trails, sledding runs, ski jumps, cycle tracks, and firing ranges are examples of individual outdoor structures and facilities. Stadiums with sports arenas and courts for different sports and equestrian sports centres are outdoor complexes. Individual indoor sports structures and facilities include halls or auditoriums for various sports, indoor arenas for track and field events and games, indoor ice rinks, tennis courts, and swimming pools. Indoor complexes include buildings with multiple arenas, general-purpose halls for entertainment and sports, and indoor stadiums. During the 1960's and 1970's, efforts to operate sports structures and facilities throughout the year resulted in the construction of buildings that could be open in the summer and enclosed in the winter, as well as complexes containing both outdoor and indoor facilities (Krotee, Bucher, 2007).

2.3. Standardized Descriptions and Dimensions of Handball Court, Volleyball court, Football field and Athletic oval Basketball court, Hockey field:

2.3.1. *Handball Court*

According to International Handball Federation, the main dimensions and markings for the Team Handball Court consist of the following major elements.

2.3.2. *Court and Lines:*

The court has a hard surface. All lines are 5 centimetres (2 inches) thick; the only exception is the goal line, which is 8 centimetres (3 inches) thick. All lines must be prominent and of the same colour.

2.3.3. *Side-lines and Goal Lines:*

The overall size of the court is 40 meters (44 yards) long by 20 meters (22 yards) wide. This is much bigger than a standard basketball court. The longer outer boundaries of the court are called side-lines or touchlines. The shorter boundaries are referred to as Goal Lines or End Lines. A distance of 1 meter (1 yard) outside the court in all four directions should be free of obstacles to allow for free throwing of the ball and safety to the players. The characteristics of the playing court must not be altered during the game in such a way that one team gains an advantage.

2.3.4. *Halfway or Centre Line:*

This is a line parallel to the goal lines and equidistant from both. There is a point marked at the center of the halfway line; the game is started from there at the beginning and re-started from the same point after halftime and after any goal is scored (www.ihf.info).

2.3.5. *Free-throw Line (9 Meters):*

The Free-throw line is a dashed arc outside the D-zone. Its furthest point is 9 meters (9.8 yards) from the outer goal line. After an attacking team is fouled inside the Free-throw line, players resume the game from this line.

2.3.6. *Penalty Mark (7 Meter Mark):*

The Penalty Mark is 7 meters (7.6 yards) in front of the goal line and is 1 meter (1 yard) wide. The Penalty mark is where a player of the opponents' team takes a penalty throw.

2.3.7 ***Goal Area / Crease / D-Zone (6 Meters):***

The goal is surrounded by a D-shaped area formed of two quarter-circles, each with a radius of 6 meters (6.5 yards) and using the outer end of the goal post as the centre. A short straight line joins the open ends of the two quarter-circles. The only player allowed in the Crease is the goalkeeper defending that goal. This line separates him from all the other players.

2.3.8 ***Goalkeeper Line (4 Meter Line):***

The Goal Keeper line is drawn 4 meters (4.4 yards) away from the goal and centred along the width of the court. That line marks the outermost distance to which the goalkeeper is allowed to go from the goal being defended during a penalty throw.

2.3.9. ***Goal / Clearance Area:***

A goal is cantered along each goal line at each end of the court. It is 3 meters (3.2 yards) wide and 2 meters (2.2 yards) tall, bolted to the wall or to the floor. It is 2 meters (2.2 yards) deep from the goal line to the outside.

2.3.10. ***Goal posts:***

The goal posts and crossbar are made of aluminium or wood, 8 centimetres (3 inches) wide in cross-section. These three rods should be painted in alternate colours that contrast with each other and with the court background to make them visible from all areas of the large court. A common colour code should be used for both goals. The net should be fixed to the posts and crossbar such that a ball thrown into it should not pass or leave the goal.

2.3.11. *Substitution area:*

The substitution area is cantered along one side-line of the court, extending 4.5 meters (5 yards) each side from the halfway line. This endpoint of the substitution line is enhanced by a line which is parallel to the centre line, extending 15cm inside the side-line and 15cm outside the side-line. Any player leaving or entering the field must do so from there (sports knowhow.com).

2.3.12. ***Volleyball Court Dimensions***

According to www.volleyballces.com, the Volleyball court dimensions for indoor and outdoor volleyball courts are different. In competitive volleyball, the court measurements, net requirements and ball particulars are strictly followed and must be the same for all games and teams. The game of Volleyball is played on a rectangular court that is divided in half by a high net. The court measurements for regulation play are 18 meters (59 feet) long by 9 meters (29 feet 6 inches) wide.

2.3.13. ***The Lines and Zones***

The Centreline divides the volleyball court into two equal halves that measure a perfect square, 9 meters by 9 meters. The volleyball net is hung at the Centreline. The Attack Line, or Centre Line, is 3 meters (9 feet 10 inches) from the net on each side of the court. The Attack Line runs parallel to the net and divides the playing area into the back row (or back court) and front row (or front court).The rows are further divided into zones, with three zones and positions per row. From left to right, the back row has Zone 5 - Left Back Position, Zone 6 - Middle Back Position, and Zone 1 - Right Back Position, where the server is stationed during service. The front row has Zone 4 - Left Front Position, Zone 3 - Middle Front Position, and Zone 2 - Right Front Position, also in order from left to right. The Free Zone is the area surrounding the

volleyball court. It measures 3 meters wide, and players are allowed to enter the Free Zone during game play. The court boundary lines are generally 2 inches wide, and they are part of the actual court measurements. So the ball remains in play if it lands directly on the line.

2.3.14. ***The Net***

The volleyball net is hung at the exact centre of the volleyball court between the two side-lines. It is 1 meter wide and the height is different for men and women. For men-s games, the volleyball net is 2.43 meters from the floor (7 feet, 11 5/8 inches). For women-s games, the volleyball net hangs 2.24 meters off of the floor (7 feet, 4 inches).An antenna is placed on each side of the net, lining up with the side-lines or court boundaries. The two antennae are a guideline for when the ball is in or out of play. The ball must pass completely over the net and inside both of these antennae in order to remain in play. If the ball hits the antenna, it is out of play. If the ball wanders outside the antenna or crosses the net directly above the antenna, it is out of play. The ball is also out of play if it hits the cables, netting or poles.

Keeping volleyball court dimensions consistent helps to keep game play fair. Uniform volleyball court dimensions also make it easier for players to comply with the rules of the game, since they are already familiar with the court, the net and the zones.

2.3.15. ***Track & Field Dimensions***

Some of the world's most extravagant architectural masterpieces have been outdoor athletics stadiums. From the first stadium constructed thousands of years ago in Greece, to the Olympic tracks of today, countries have used these venues to show off the society's wealth, power, and intelligence. Regardless of whether it is a billion

dollar project or the local school stadium, the dimensions of the track, runways, and throwing rings remain similar (though rarely identical).

The International Association of Athletics Federations (IAAF) sets standards for tracks used in international and elite competitions, as well as minimum standards for a track to meet the requirements for world record performances. Many tracks you are likely to encounter will never have to worry about hosting international competition, so consider what type of competition a given track is likely to host before assuming it is constructed under IAAF standards. While some high schools do use the IAAF standards, more often than not, your local track won't. Still, IAAF standards are useful and do manage to provide a layout similar to most tracks you'll come across.

An outdoor track measures 400 meters (m) around, with standard IAAF measurements of 84.39m for the straights and 115.611m for the curves. These distances are typically measured either 20 centimetres (cm) from the inside of the track (if no rail or curb exists on the inside), or 30cm from the inside (if there is a rail or curb in place). One straightaway is extended for the start and finish of sprint races. Two start lines exist on this extension: One for the 110m hurdle race, and one for the 100m races. Tracks should extend a minimum of 3m behind the starting line and 17m after the finish line, leaving room for sprinters to decelerate. Typically, a track will have eight lanes. Six and nine lane tracks are also common, while two and four lane tracks are occasionally made. A tenth lane becomes too wide and gives too much advantage to the outside athlete in the 200m, since running a turn is less efficient than running a straight. Tracks used for international competition will always be either eight or nine lanes. Each lane is 1.22m wide. A common finish line exists for all running events. Consequently, there are many starting lines on a track.

2.3.16. ***The Horizontal Jumps***

The triple jump and the long jump, at many facilities, are competed on the same runway, utilizing the same sand pit. The only difference is the take-off board position. The take-off board typically is placed in the same position for both men and women in the long jump, but in different positions in the triple jump. The run up track must be at least 40m long. The runway is the same width as a track lane: 1.22m. The take-off board is 20cm long, including a soft strip at the back that will show impressions on foul jumps The landing pit is filled with sand and must be at least 9m long and 2.75m wide. The sand in the pit should be washed river sand or pure quartz sand so that it does not harden when wet. In the long jump, the take-off board must be at least 1m back from the front of the sand. In the men's triple jump, the take-off board is 13m back from the pit. For women, the distance is 11m.

2.3.17. ***High Jump***

The bar is raised as competition progresses. Opening heights vary from meet to meet, but the bar always spans 4.02m. This is also the width between the standards, or uprights, which are used to measure the bar's height. The foam rubber landing, or pit, for the high jump is at least 4.00m deep, 6.00m wide, and 0.70m high. The runway is a semicircle with a radius of at least 20m.

2.3.18 The Throws

2.3.19. ***Discus***

The throwing circle is 2.50m in diameter. In international competition, the landing sector is marked by two radii separated by 34.92 degrees. They extend 80m from the centre of the throwing circle. The landing sector is marked by white lines measuring 5cm wide, the inside of which is the boundary for fair throws. A protective cage must

surround the throwing circle. The discus is symmetrical in all the planes. It is circular with edges that must also be circular. The discus for men must be between 219mm and 221mm in diameter. For women, this diameter is 180mm to 182mm. From top to bottom, the discus must be between 44mm and 46mm for men, and 37mm and 39mm for women. The discus weight is 1 kilogram (kg) for women and 2kg for men.

2.3.2.0 ***Shot Put***

The throwing circle is 2.135m in diameter. A stop board of 1.21m by 0.112m by 0.10m is used at the edge of the throwing circle. The landing sector is marked by two radii separated by 34.92 degrees. They extend 25m from the centre of the throwing circle. The landing sector is marked by white lines measuring 5cm wide, the inside of which is the boundary for fair throws. The shot itself must be made of a metal no softer than brass and must have an extremely smooth surface. For open international competition, the men's shot weighs 7.260kg and must have a diameter between 110mm and 130mm. For women, the weight is 4.000kg with a diameter between 95mm and 110mm.

2.3.2.1 ***Javelin***

The javelin runway is 30m minimum in length, and 4m wide. The landing sector is marked by two radii separated by 29 degrees, extending outward from a point on the runway 8m before the curved throwing arc. In international competition, the radii extend 100m from the inside of this throwing arc. The landing sector is marked by white lines measuring 5cm wide, the inside of which is the boundary for fair throws. The men's javelin weights 800 grams (g) and is between 2.60m and 2.70m long. For women, it weighs 600g and is between 2.20m and 2.30m long. The grip of the javelin

must cover the centre of gravity, which must be between 0.90m and 1.06m behind the tip for men and between 0.80m and 0.92m behind the tip for women.

2.3.2.2 ***Football Field***

From Wikipedia, the free encyclopaedia not all pitches are of the same size, though the preferred size for many professional teams' stadiums is 105 by 68 metres (115 yd × 74 yd) with an area of 7,140 square metres (1.76 acres). Old Trafford is this size, with other pitches' size a slight variation (Stamford Bridge, Santiago Bernabeu, LaBombonera). A football pitch (also known as a football field or soccer field) is the playing surface for the game of football made of turf. Its dimensions and markings are defined by Law 1 of the Laws of the Game, "The Field of Play".

All line markings on the pitch form part of the area which they define. For example, a ball on or above the touchline is still on the field of play; a ball on the line of the goal area is in the goal area; and a foul committed over the 16.5-metre (18-yard) line has occurred in the penalty area. Therefore a ball must completely cross the touchline to be out of play, and a ball must wholly cross the goal line (between the goal posts) before a goal is scored; if any part of the ball is still on or above the line, the ball is still in play.

The field descriptions that apply to adult matches are described below. Note that due to the original formulation of the Laws in England and the early supremacy of the four British football associations within IFAB, the standard dimensions of a football pitch were originally expressed in imperial units. The Laws now express dimensions with approximate metric equivalents (followed by traditional units in brackets), but use of the imperial units remains common in some countries, especially in the United Kingdom.

2.3.2.3 ***Pitch boundary***

The pitch is rectangular in shape. The longer sides are called touchlines. The other opposing sides are called the goal lines. The two goal lines must be between 45 and 90 m (50 and 100 yd) and be the same length. The two touch lines must also be of the same length, and be between 90 and 120 m (100 and 130 yd) in length. However, in international matches, the goal lines must be between 64 and 75 m (70 and 80 yd) long and the touchlines must be between 100 and 110 m (110 and 120yd). All lines must be equally wide, not to exceed 12 centimetres (5 in). The corners of the pitch are demarcated by corner flags.

In March 2008 the IFAB attempted to standardize the size of the football pitch for international matches and set the official dimensions of a pitch to 105 m long by 68 m wide. However, at a special meeting of the IFAB on 8 May 2008, it was ruled that this change would be put on hold pending a review and the proposed change has never been implemented.

Although the term goal line is often taken to mean only that part of the line between the goalposts, in fact it refers to the complete line at either end of the pitch, from one corner flag to the other. In contrast, the term bi-line (or by-line) is often used to refer to that portion of the goal line outside the goalposts. This term is commonly used in football commentaries and match descriptions, such as this example from a BBC match report; "Udeze gets to the left by-line and his looping cross is cleared...".

2.3.2.4. **Goals**

2.3.2.5. A ***football goal***

Goals are placed at the centre of each goal-line. These consist of two upright posts placed equidistant from the corner flag posts, joined at the top by a horizontal

crossbar. The inner edges of the posts must be 7.32 meters (8 yd.) apart, and the lower edge of the crossbar must be 2.44 meters (8 ft.) above the ground. Nets are usually placed behind the goal, though are not required by the Laws. Goalposts and crossbars must be white, and made of wood, metal or other approved material. Rules regarding the shape of goalposts and crossbars are somewhat more lenient, but they must conform to a shape that does not pose a threat to players.

A goal is scored when the ball crosses the goal line between the goal-posts, even if a defending player last touched the ball before it crossed the goal line (see own goal). A goal may, however, be ruled illegal (and void by the referee) if the player who scored or a member of his team commits an offence under any of the laws between the time the ball was previously out of play and the goal being scored. It is also deemed void if a player on the opposing team commits an offence before the ball has passed the line, as in the case of fouls being committed, a penalty awarded but the ball continued on a path that caused it to cross the goal line.

2.3.2.6 History of football goals and nets

Football goals were first described in England in the late 16th and early 17th centuries. In 1584 and 1602 respectively, John Norden and Richard Carew referred to "goals" in Cornish hurling. Carew described how goals were made: "they pitch two bushes in the ground, some eight or ten foot asunder; and directly against them, ten or twelve score off, other Dwayne in like distance, which they term their Goals". The first reference to scoring a goal is in John Day's play The Blind Beggar of Bethnal Green (performed circa 1600; published 1659). Similarly in a poem in 1613, Michael Drayton refers to "when the Ball to throw, and drive it to the Gole, in squadrons forth they go". Solid crossbars were first introduced by the Sheffield Rules. Football nets were invented by Liverpool engineer John Brodie in 1891.

2.3.2.7 **Penalty and goal areas**

2.3.2.8. ***Penalty area***

The penalty area is the large marked rectangular area. The smaller rectangle within it is the goal area (here the yellow-shirted goalkeeper is the only player in the goal area). The penalty arc is the curved line adjoining the "top" of the penalty area (here the red-shirted referee is standing near the arc).Two rectangular boxes are marked out on the pitch in front of each goal. The goal area (colloquially the "six-yard box"), consists of the area formed by the goal-line, two lines starting on the goal-line 6 yards (5 m) from the goalposts and extending 6 yards (5 m) into the pitch from the goal-line, and a line joining these. Goal kicks and any free kick by the defending team may be taken from anywhere in this area. Indirect free kicks awarded to the attacking team within the goal area must be taken from the point on the line parallel to the goal line nearest where an incident occurred; they cannot be taken further within the goal-area. Similarly drop-balls that would otherwise occur in the goal area are taken on this line.

The penalty area (colloquially "The 18-yard box" or just "The box") is similarly formed by the goal-line and lines extending from it, however its lines commence 18 yards (16 m) from the goalposts and extend 18 yards (16 m) into the field. This area has a number of functions, the most prominent being to denote where the goalkeeper may handle the ball and where a foul by a defender, usually punished by a direct free kick, becomes punishable by a penalty kick.

The penalty mark (or "penalty spot") is 11 meters (12 yd.) in front of the very centre of the goal; this is the point from where penalty kicks are taken. The penalty arc (colloquially "the D") is marked from the outside edge of the penalty area, 9.15 meters (10 yd.) from the penalty mark; this, along with the penalty area, marks an

exclusion zone for all players other than the attacking kicker and defending goalkeeper during a penalty kick.

2.3.2.9. ***Other markings***

The centre circle is marked at 9.15 meters (10 yd.) from the centre spot. Similar to the penalty arc, this indicates the minimum distance that opposing players must keep at kick-off; the ball itself is placed on the centre spot. During penalty shootouts all players other than the two goalkeepers and the current kicker are required to remain within this circle.

The half-way line divides the pitch in two. The half which a team defends is commonly referred to as being their half. Players must be within their own half at a kick-off and may not be penalized as being offside in their own half. The intersections between the half-way line and the touchline can be indicated with flags like those marking the corners – the laws consider this as an optional feature.

The arcs in the corners denote the area (within 1-yard of the corner) in which the ball has to be placed for corner kicks; opposition players have to be 9.15 m (10 yd) away during a corner, and there may be optional lines off-pitch 10 yards away from the corner on the goal- and touch-lines to help gauge these distances.

2.3.2.10. ***Turf***

Grass is the normal surface of play, although artificial turf may sometimes be used especially in locations where maintenance of grass may be difficult due to inclement weather. This may include areas where it is very wet, causing the grass to deteriorate rapidly; where it is very dry, causing the grass to die; and where the turf is under heavy use. Artificial turf pitches are also increasingly common on the Scandinavian Peninsula, due to the amount of snow during the winter months. The strain put on

grass pitches by the cold climate and subsequent snow clearing has necessitated the installation of artificial turf in the stadia of many top-tier clubs in Norway, Sweden and Finland. The latest artificial surfaces use rubber crumbs, as opposed to the previous system of sand infill. Some leagues and football associations have specifically prohibited artificial surfaces due to injury concerns and require teams' home stadia to have grass pitches. All artificial turf must be green and also meet the requirements specified in the FIFA Quality Concept for Football Turf.

Coleman and Lori (1995) briefly said that, Soccer is a game played by two opposing teams on a field 90 to 120 meters long and 45 to 90 meters wide. In international matches, the measurements are stricter. The minimum length is 100 meters and it cannot exceed 110 meters. The width has to be between 64 and 75 meters. The goal of the game is to kick or head the ball into the opponent's goal without the use of hands. There is a penalty area at the goal line where the goal is. It is 16.5 by 11 meters wide. Goalkeepers may use their hands in this area but not once they venture beyond its boundaries. This is the only time hands can be used in a game. The ball, usually made of leather, is 68 to 70 centimetres in circumference and weighs between 410 and 450 grams. It is constructed of 32 black and white panels, 12 pentagons and 20 hexagons. The duration of one match is 90 minutes and it is played in two 45 minute halves. Each team consists of 11 players. The Fédération Internationale de Football Association (FIFA) is the official governing body of soccer worldwide. They are responsible for both the Olympics and the World Cup. According to the FIFA, the official name of soccer is association football. The name soccer is said to be derived from its official name, association football.

2.3.2.11 Basketball Court Dimensions

From isport.com, the standard basketball court consists of a rectangular floor with baskets at both ends. Because basketball was originally conceived as an indoor sport, the traditional court surface is a hardwood floor (most often highly polished maple wood). However, as the popularity of the game expanded, so too did the variety of court surfaces. Other popular basketball court surfaces include plastic (court composed of interlocking tiles), asphalt (outdoor), and blacktop (outdoor).

The actual dimensions of the court can vary depending on the age of the players and/or the level of competition. Each governing body has unique court dimension specifications. Here is a breakdown of the dimensions among the sport's major organizations:

NBA Court Dimensions: 94 feet x 50 feet

WBNA Court Dimensions: 94 ft x 50 ft

FIBA Court Dimensions: 91.86 ft x 49.21 ft

NCAA Court Dimensions: 94 ft x 50 ft

U.S. High School Court Dimensions: 84 ft x 50 ft

U.S. Junior High School Court Dimensions: 74 ft x 42 ft

2.3.2.12. A Court Divided

The standard indoor basketball court is divided into various sections by markings drawn on the court. These lines are 2 inches thick and should be drawn in a contrasting colour from the floor. A general description of the lines and their purpose can be found below:

2.3.2.13. Baseline/End-line

The baselines mark the end of the court's boundaries. If a player steps on the end-line while in possession of the ball it is a violation and the ball is awarded to the opposing team.

2.3.2.14. Side-line

These lines mark the side boundaries of the court. If a player steps on the side-line while in possession of the ball it is a violation and the ball is awarded to the opposing team.

2.3.2.15. Mid/Half Court Line

This line divides the court into two equal halves.

2.3.2.16. Foul Shot/Free Throw Line

When a player is fouled while attempting a try on goal (shot), he/she is rewarded with either one, two, or three unguarded opportunities to score (depending on where the shot was taken and if it was successful). The penalty shots are taken from the free-throw line, which is always marked 15 feet from the end-line.

2.3.2.17. Three-Point Line

The three-point line – the arc-shaped line that separates the two-point scoring area from the three point area – was introduced in 1942. Any successful shots from behind the three-point line count as three points instead of two. Additionally, if a player is fouled while attempting a three-point shot and that shot is unsuccessful, he/she is awarded three free throw attempts.

The distance of the three-point line varies depending on the level of competition. Listed below are the current three-point distances and their corresponding leagues/levels:

Junior High School Three-Point Line: 19 feet, 9 inches

High School Three-Point Line: 19 feet, 9 inches

NCAA Women's Three-Point Line: 19 feet, 9 inches

FIBA Three-Point Line: 20 feet, 6 inches

WNBA Three-Point Line: 20 feet, 6 inches

NCAA Men's Three-Point Line: 20 feet, 9 inches

NBA Three-Point Line: 22 feet

2.3.2.18. The Key

The key refers to an area under the basket that can be anywhere from 16 (NBA) to 12 (college and high school) feet wide and 15 feet long. The key is used to prevent players from standing under the basket for long periods of time. The shape of the key is one of the most noticeable differences between an American court and an international court (American courts have a rectangular-shaped key while international/Olympic courts have a trapezoid-shaped key). However, on April 26, 2008, FIBA (the international governing body for basketball) announced that after October 1, 2010, international competition will adopt the rectangular key.

2.3.2.19. Jump Circle

A formal basketball game begins with a tip-off, and this is where that action takes place. A tip-off is when two opposing players meet in the jump circle – also called the center circle – and wait for the referee to toss the ball into the air. Once the ball is tossed, both players jump into the air in an attempt to tip the ball to one of their teammates.

2.3.3.1. Restricted Area Arc

The restricted area arc is found only on NBA courts. According to NBA rules, if any part of a defender's body is touching the arc, that player is not eligible to draw an offensive foul.

2.3.3.2. Equipment

The equipment requirements for basketball are simple: Basic play requires only a ball and an elevated goal/hoop. Formal competition, however, is much more demanding. The regulations concerning legal ball size and composition, hoop height and construction, along with other basketball equipment, can be found below.

2.3.3.3. The Ball

Basketballs currently come in four distinct sizes; the size of the ball depends largely on the level of competition. Here is a breakdown of the different sizes:

Circumference 22 to 22.5 inches, weight 10 to 11 ounces: Recommended for small children (age 5-8).

Circumference 27.25 to 27.75 inches, weight 16.6 to 18 ounces: Recommended for boys and girls under 12 years old (junior league).

Circumference 28.5 to 29 inches, weight 20 ounces: Recommended for boys ages 12 through 14, and girls age 12 and up. This is the official ball at the girls' high school, women's college, and women's professional ranks.

Circumference 29.5 to 30 inches, weight 22 ounces: Recommended for boys age 15 and up. This is the official ball at the boys' high school, men's college, and men's professional ranks.

Though the size and weight of the ball may vary according the level of competition, the rules regarding the colour and composition of the ball are uniformed.

The basketball must be spherical and shall be an approved shade of orange. In addition, the ball shall have a deeply pebbled leather or composite cover.

2.3.3.4. The Basket/Ring

The basket is comprised of an orange metal ring (18 inches in diameter); a mesh net (15 to 18 inches in length); and a backboard. The ring must be elevated 10 ft. above the playing surface and should be securely fastened to the backboard.

2.3.3.5. The Backboard

The backboard must be composed of a transparent material and can measure either 6 feet horizontally and 3.5 feet vertically, or 6 feet horizontally and 4 feet vertically. The backboard is always positioned 4 feet from each end line and in the center of the court.

2.3.3.6. Clock/Score Board

A game clock that shows the amount of time left in each period is required for all formal competitions. The highest levels demand a timing device that displays tenths of seconds, but most lower-level competitions don't have such stringent requirements.

2.3.3.7. Possession Indicator

The possession indicator keeps track of alternating possessions.

2.3.3.8. Field Hockey Field Diagram and Positions

2.3.3.9. Field of Play

A field hockey field, often called the "pitch," has some important markings;

2.3.3.10. Side-line

Boundary along the length of the field. Balls that cross the side-line result in a side-in.

2.3.3.11. End line

Boundary along the width of the field. Balls that cross the end line result in a long hit, penalty corner, or 16-yard hit. The goal-line is the part of the end line between the goal posts.

2.3.3.12. Center line

Divides the field in half.

2.3.3.13. 25-yard line

Intentional fouls between this line and the end line result in a penalty corner.

2.3.3.14. Striking circle

For a goal to count, shots must be taken from within the striking circle or deflect off an offensive player within the circle. Also called the "D." Fouls within the circle result in penalty corner. The 5-yard mark is five yards outside of the circle and penalty corners end when the ball crosses this line.

2.3.3.15. Penalty stroke line

Penalty strokes are taken from this mark.

2.3.3.16. Substitution area

Substitutions may take place during the game through this area only. The player must exit the field before her replacement enters the field.

2.3.3.17. Positions

There are 11 players on the field per team, including the goalie and 10 field players. Formations often consist of four forwards, three halfbacks, three fullbacks, and one goalkeeper, known as a 4-3-3 formation. Variations, such as the 5-3-2, are also used, depending on the coach's strategy.

2.3.3.18. Forwards

Primary scorers who spend most of their time between the midfield and the opponent's goal.

2.3.3.19. Midfielders

Must be able to play both defence and offense and have the stamina to run the field in the transition between offense and defense. Also called "links."

2.3.4.1. Fullbacks

Primarily defend the opposing forwards and attempt to clear the ball when it gets close to the goal. Some coaches assign a single defender, called a "sweeper," who plays closest to her own goal behind the fullbacks.

2.4. Effects of Sports Facilities on Sports Development

According to Marriot (2010), recreational activities are often done for amusement, enjoyment or pleasure and are considered to be "fun". Recreation is difficult to separate from the general concept of play, which is usually the term for children's recreational activities that reflect the realities of adult life. It has been proposed that play or recreational activities are outlets of expression of excess energy, channelling it into socially acceptable activities that fulfil individual as well as societal needs, without need for compulsion, and providing satisfaction and pleasure for the participation.

A traditional view holds that work is supported by recreation, recreation being useful to recharge the battery so that work performance is improved. Work and activity generally performed out of economic necessity and useful for society and organized within the economic framework, however can also be pleasurable and may be self-imposed thus blurring the distinction to recreation. Many activities may be work for

one person and recreation for another or at an individual, over time recreational activities may become work and vice-versa. Thus for a musician, playing an instrument may be at one time a profession and at another time a recreation. Similarly, it may be difficult to separate education from recreation as in the case of recreational mathematics or activities. The researcher sees recreational facilities as a tool for transformation, thus developing individuals' total personality through physical activities.

From Ezinemark.com, people enjoy watching sports in college as pure entertainment. Also we want our children to be good sportsmen along with, and very good academically. In India, slowly the culture is coming where parents are giving the importance to sports, which was lacking in the past. There was a mind-set to have the child owning academic excellence, even if he is zero in sports. But going by the opportunities, fitness factors etc., parents have realized that sport is a part of academics.

School spirit in providing the sport: There are more and more schools that are giving many sports facilities to the students. There are some who merely go for the fitness factor but many top schools take it very professionally and create sportsmen who can play at the district level and state level so that if somebody has interest and is good in some sports, he can join a sport institute as his career. Many schools have the lottery system for students to access the games-popular sports like football and cricket. Students can opt for a sport, whereas some sports are compulsory.

The vast gaming facilities require a huge infrastructure, thus fees for these schools is generally very high. Many schools still manage by the vast funds they receive from the alumni, giving fewer burdens to the students.

Revenue: College Sports bring in money to the school in a number of ways. Time to time there are school and college competitions at every level. The demand of schools providing good sports facilities is very high, and if one school is proving his superiority in the sports, of-course demand will increase as well. This is very important advertising factor for the school. The revenue to the students is, they can go the extra mile to discover and prove themselves in the sports.

College Sports for Girls: It is illegal to discriminate against women in any program of education. This includes athletics and sports also. Schools must comply with it, providing athletic opportunities by enrolling the girl students and having a continued expansion of athletic opportunities to girls. The participation of girls now is increasing rapidly, where girls are taking active part in most of the sports. It allows them to feel the benefits like the boys, and it literally helps to level the playing field.

The importance for athletes in schools: Irrespective of females or males, if athletes play to a very successful internal team, there are multi fold facilities for them. Many colleges recognize sports as part of their core values, and help student athletes balancing between sports and academic career thus maintaining the highest level of integrity and sportsmanship.

Many children join junior teams or community-based sports teams during their years in elementary school because their parents want them to learn the same fundamental values. Early age is best to learn integrity, collaboration, communication and good sportsmanship. Skills continue to be refined during years of college and it is the skill that eventually will make a success of student-athlete at work.

No doubt it's fun to watch your kid participating in the sports events. Moreover college Sports create productive and responsible citizens, strengthening community feeling and create strong schools. As early years have the most impact on the child,

it's important for the parents to research for the schools who provide good quality sports. Many medium size schools just have a playground, and sell it like they've all kinds of sports facilities. It may not be your school, if you want your child to rule some sports.

From essayforum.com, in most countries, public health is an important topic and takes deep consideration of society. Some people argue that the best way to improve public health is to increase the number of sports facilities, however, I personally believe that it depends mainly on the consciousness of every citizen.

Advocates of the first view claim that many areas are lacking sports facilities. In some areas, it is difficult to access these facilities because registration list is full all the time or it is so expensive that people cannot afford. For example, in Vietnam, people with modest salary hardly play tennis as service fee is very high and they have to invest sizable amount of money for accompanied equipment's including racquets and balls. Therefore, increasing the facilities quantity will help reduce the service fee, encouraging people to play sports. As a result, the public health will be improved.

However, people with opposition view argue that the most important factor is the consciousness of citizens. It is clear that some people like swimming, playing football or doing gym but some others do not like playing any sports. Increasing the number of facilities therefore only takes effect on self-conscious people. To help inactive people, local governments should have training sessions or education programs to propagate about the benefits of being healthy. Furthermore, sports competitions should be organized annually to encourage playing sport or working out to keep fit. Another factor that is necessary to take into account is the quality of sports facilities. Increasing number of facilities but not assuring the quality will not help the player.

For this reason, quality assurance process should be clear when building new sports facilities.

2.5. Managing Sports Facilities for Development

Traditionally, at the K-12, college, and public sector levels (e.g., YMCA/YWCA, local health and fitness club, community centres, etc.), the responsibility of facility management falls to those persons who are in charge of physical education, recreation and sports programs. The facilities for which they are responsible include outdoor facilities-such as playgrounds, beaches, pools, skate parks, courts; and fields-and indoor facilities – such as locker and shower rooms, racket sport courts, weight and exercise rooms, arenas, climbing walls, multipurpose rooms, gymnasiums, and sometimes a golf course. Facility management includes not only the effective operation, scheduling, and maintenance of such facilities but also, at times, planning new and reengineered structures to keep pace with the growing demand for participation in physical education, recreation, and sports programs. Contemporary sport facilities management at the university and community level, in some instances, has taken on a whole new meaning. (Pate, Moffit, and Fugett, 1997). Facility management at many large universities for example, has become a full-time profession. Facility management groups ranging from Spectator and Signature Sports to Ogden and International Management Group (IMG) have created profitable multimillion-dollar businesses that professionally manage large sports complexes like the Hubert H. Humphrey metro dome, the Xcel Energy Centre, the RBC Centre, or the RCA Dome. In addition to their operations and traditional responsibilities, facilities managers are now involved in the Total Facility Management Package, which includes conceiving, planning and design, administering, operating, marketing,

financing, and attending to the legal implications of facility management. Contemporary facility managers need to be well schooled in all dimensions of their profession. (Appenzeller 2004; Kraus and Kurtis 2000). Additional developments have critical implications for facility l. The cost of materials and labour is rising as a result of inflation, making it very difficult for new capital building projects to go forward. High interest rates make it difficult to get bond issues passed for facility construction. Facilities must be accessible for persons with disabilities (per ADA) and must be brought up to code concerning myriad safety and environmental standards. Energy, environmental and land conservation and sustained maintenance and repair costs must also be taken into consideration, not to mention security. Because little or no money is available in some situations or because capital expenditure for building is so high, alternative methods are being used to see that physical education, recreation, and sports programs have the facilities necessary to conduct equality programs. Methods such as renovating, retrofitting, and converting existing structures and instituting multiple use of present facilities are emerging. When funds are limited, fiscal responsibility involves following design and construction plans that are most economical not only in cost but in construction time, maintenance and the use of energy. Joint ventures and partnering between school, community and public and private sector interest groups (e.g., Ys, health and fitness clubs) are becoming commonplace. Even though the partnering groups may not share the same goals, each entity desires quality facilities for its consumer or user groups. So from Geneva, Illinois, to Springfield, Massachusetts, and from Wayzata, Minnesota, to Cary, North Carolina, Ys and medical centres are partnering and sharing with communities and private health and fitness clubs are sharing with school districts to form common ground facilities projects. On a larger scale, enterprises such as Disney and

corporations such as Toro and Cyber have also combined resources, for example, at Disney's 200-acre Wide World of Sports complex. Physical plants whether in schools, municipalities, or private settings require careful planning and consultation and specialists in architectural planning and design. Managers, physical educators, coaches' fitness and recreation specialists, consultants, and other personnel should participate in the planning and design phase of new facilities (Tharrett and Peterson1997). Other participants, depending on the type of facility, should include representatives from the school board, institutional policy board, municipal sports facilities commissions, building and grounds, maintenance, public safety, and numerous building task force groups including disabilities, risk management, and security. The facility manager must be knowledgeable not only about the facility's specific structure but also its function and maintenance in the context of the organization's mission and vision. Trends and innovative structural design concepts should be thoroughly examined to provide a healthful, safe environmentally friendly and efficient physical plant. The physical plant is a major consideration in most physical education, recreation, and sport programs. New architectural design ideas are constantly being introduced and new concepts developed that have a more economical, accessible, and functional management scheme. Some building concepts include convertibility, in which interiors are rearranged by employing movable walls, curtains, and partitions. Such as concept facilitates using the gymnasium, cafeteria, and amphitheatre as multipurpose activity stations that can accommodate small or large activity-specific groups. This concept provides instruction and independent study and spaces for a number of varied activities and is becoming a trend as plant space and fiscal restraint become crucial to the survival of programs. Some suggested resources that are aimed exclusively at planning facilities for physical education and

sport are listed at the end of the chapter and should be consulted by those who desire a more thorough treatment of this subject. Once a facility comes online, however, there are certain facility management fundamentals embedded in the Total Facility Management Package (TFMP) that must be placed into practice to ensure a high level of service for all user groups.

2.6. Planning the facility (Management Functions)

At the outset, two principles relating to facility management should be uppermost in the minds of professionals: (1) facilities are built as a result of community and program needs, and (2) cooperative planning is essential to design and construct quality facilities. After determining the needs via a needs assessment study, a feasibility study is usually conducted. The purpose of the feasibility study is to identify the costs, both short and long term, associated with the project (e.g., operations and maintenance, equipment, financing, etc.); the potential site; primary target and user group population; environment, economic, and community impact; the legal feasibility (e.g., deed, ownership, easements, restrictive zoning, etc.); as well as the design and management feasibility and capability. This information is then fed into the design plan or building scheme that identifies the organization's needs and priorities. Program objectives; user group needs; priority activities; instructional strategies, delivery, and materials; management philosophy; policies; equipment; technology; and supplies and maintenance all represent considerations regarding facilities. The educational and recreational needs of both the school and community; the vision and thinking of the engineers; and input from other groups mentioned earlier are other inputs requisite if facilities are to be planned wisely. Management

guidelines and principles for facility planning that apply to all educational levels and organizations include the following:

Facilities should be planned primarily for the participants and user groups.Facilities should be planned for multiple and shared usage as well as potential growth patterns and trends. All planning should be based on goals that recognize that the total physical and nonphysical environments must be safe, secure, attractive, comfortable, clean, healthful, practical, and accessible to the needs of the individual. Facilities must be economical and easy to operate, control, and maintain. The planning should include a consideration of the total physical education, recreation and sport facilities community. The programs and facilities of these common areas are closely allied, and planning should be coordinated and cooperative, based on the needs and character of the total community. Sound, lighting, civil services –fire, police, transport, medical emergency). The facility must be accessible to user groups, yet isolated enough so that the activity is not a distraction to other programs. Facilities should be geared to health, safety, and legal codes and standards, which are important in protecting the health, welfare, and safety of user groups, as well as the environment. Facilities should be planned so that they are easily accessible (ADA) and secure for all individuals, including those with disabilities.

Facility planning must be long-term in nature to include adaptability, convertibility, and expandability to meet the needs of a changing society. This includes adequate acreage for expansion. Facilities play a part in a healthful environment. The extent to which organizations provide ample and safe play area space, sanitary considerations (e.g., drainage, lighting), and proper ventilation, heating, and cleanliness will to some extent determine how effectively health and wellness are promoted.

Managers must make plans for facilities long before an architect is consulted. Technical information can be obtained in the form of standards, codes, and guides from various sources, such as state departments of health and education, sports organizations and federations, professional journals and literature (e.g., athletic business, facility manager, facility management journal, fitness business pro, The Academy of Management Review, Special Events, Aquatics), as well as from appropriate groups such as the American Association of School Administrators , AAHPERD, NASPE, NASSM, CFE (council on facilities and equipment's), NCAA, and the American Institute of Architects.

Standards may be used as guides and as a starting point; however, it is important to keep in mind that standards cannot always be implemented entirely as envisaged. They usually have to be modified in light of community needs, environmental conditions, and scarce inputs, including fiscal and space constraints.

Building safety and environmental and sanitation codes managed by the local and state departments of public health and the technical advice and consultation services available through these sources should be identified and implemented by managers during the planning phases as well as the construction phase of the facilities. Information about quality building materials, safety specifications, minimal standards of sanitation, power, sound and light, and other details may be secured from these sources.

Physical education, recreation, and sport human resources should play important roles in planning, providing needs and feasibility studies, administering, operating, marketing, and promoting new and renovated facilities. The specialized knowledge and experience that such individuals have is important. Provisions should be made so

that their expert opinion will be used to promote healthful, safe, optimal learning environments.

Facilities should be planned only after thorough needs and demand assessments and market and economic impact studies and forecasts are performed. Too often, facilities are constructed, out-dated, and outgrown within a very short time. Building units should be large enough to accommodate peak-load participation for various activities at all user group levels. The peak-load estimates should be made with future growth of the target user group, community, and activity in mind.

Planning should provide adequate allotment of space to each activity and program area. Space allotment should fit into an overall plan of program priorities (e.g., cardio and strength training, dance, open fitness, group exercise, lifetime sports, spectator sports). Office space and service and storage units, although important, should not be planned and developed in a spacious and luxurious manner that goes beyond efficiency and necessity.

Geographical, ecological, and climatic conditions should be considered when planning facilities. By doing this, the full potential for conducting activities outdoors as well as indoors can be realized.

Architects are not always fully aware of special educational and health features when planning physical education, recreation, and sport buildings and facilities. Therefore it is important that they be briefed on certain requirements and specifications that physical educators and other professionals believe are essential so that the health, safety, and welfare of children, youth, and adults may be better served. Such a procedure is usually welcomed by the architect and facility planning committee and will aid them in rendering a greater service to the community. Facilities should include all the safety, security, and risk management features essential in physical

education, recreation, and sports programs. Health and sports medicine services and office locations near the gymnasium, pool, arena, and other activity and play areas, proper surfacing of activity areas, adequate space, temperature and humidity control, communication, and proper lighting are a few of these considerations.

The construction of school physical education, recreation, and sports facilities often tends to set a pattern and elicit a positive reaction that will influence community, civic leaders, parents, and others. This in turn promotes a healthful and safe environment for the entire community to take pride in.

2.7. The role of management in facility planning and development

1. Management should familiarize itself with background information (needs, feasibility and impact studies) pertinent to the facility plan and should be actively involved in all planning sessions.
2. Management should visit sites of other like facilities and talk to appropriate personnel.
3. Management should meet and discuss the facility project with all people (e.g., user groups, community) who have a stake in the project. Management should be familiar with the views of such people and consider their input carefully.
4. Management should insist on being involved in selecting the architect or engineer who is going to do the master plan. Management should press strongly for selecting competent and qualified people to do the job rather than the lowest bidder or the firm with political connections. This is also the case with materials and equipment.
5. Management should attend planning conferences to present the departments' point of view on facility design, construction and detailing.

6. Management should conduct regular site audits after construction begins. All problems should be noted, recorded, and reported to the appropriate facility planning team or "change" committee.
7. Management should insist that all details and standards incorporated in the project be carried out exactly as specified. Management should not approve any facility or authorize payment unless this has been done.
8. Management should initiate a "time frame" for each phase of the plan, so appropriate "construction tracking" can be continuously monitored and updated.
9. Management should see that appropriate standards and codes recommended by such organizations as the American National Standard Institute (ANSI), ASTM International, Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the American College of Sports Medicine (ACSM), and National Spa and Pool Institute (NSPI), are closely followed.

2.8. Health considerations in facility planning

According to Krotee and Bucher (2007), the participant must be provided a safe, healthful, pleasant, and emotionally secure environment in which to participate. This environment also includes the outdoors, where everything possible should be done to protect and enhance land, water, air, and other delicate ecosystems. The total learning, playing, and working environment should be integrated, healthful, and pleasant for all, whether staff member, employee, or participant.

Another set of principles basic to facility planning concerns the optimal promotion of a healthful environment for not only the participants but also the community. Included in this set of principles is the provision for facilities that consider the physiological

needs of the participant (i.e., intergenerational activities), including proper climate control, lighting, water supply, and acoustic (noise) level.

A second principle is to provide safe and secure facilities. The facilities should be planned that the possibility of mechanical accidents, the danger of fire, and the hazards involved in traffic, and crowd safety and control would be eliminated or kept to a minimum. Risk management, emergency, and disaster plans are vital.

A third principle is to protect against disease. This means attention to items such as proper sewage disposal, sanitation procedures and policies, and quality water, air, and materials supply.

A fourth principle is the need to provide a healthful psychosocial environment. This has implications for space, capacity control, location of activities, colour schemes, and elimination of distractions through such means as sound-proof and light sensitive construction materials and design.

2.8.1. ***Site***

There are many aspects to consider in selecting a suitable facility location. These considerations will differ, depending on the community. Whether it is a rural or an urban community will have a bearing on the site selection. In an urban community, it is desirable to have a school situated near transportation facilities but at the same time located away from industrial concerns, railroads, noise, heavy traffic, toxic fumes, and smoke. A rural facility site might bring more attention to readily accessible initiatives including cable and fibre optics, transportation, and parking as well as access to medical, emergency, and fire services. Real estate, surrounding neighbours, zoning, toxification, sewage, environment, security, topography, and legal constraints also are crucial site variables. Consideration should also be given to demographic trends, population forecasts, and future development of the area in which the buildings and

space for activity are planned. Adequate space for play, recreation, and community involvement should be provided. The play area should consist of a minimum of 100 square feet for each young child and 125 square feet for each high school student. Some school standards recommend five acres of land for elementary schools, ten to twelve acres for junior or middle schools, and twenty acres for senior high schools.

2.8.2. ***Building***

The trend in school and community- based building projects is toward one- story construction, with stress on planning from a functional rather than an ornamental point of view. The building should be constructed for optimal use and, when possible, be multipurpose in design. The materials selected should be high quality, up to code, and make the building attractive and safe. Every precaution should be taken to protect against accidents, fire, slippery floors, and other dangers and risks. The walls should be painted with light colours, a matte or new glossy finish, and treated with acoustic materials. Doors should open out-ward. Space for clothing or storage should be provided. Provisions for persons with disabilities and for older citizen community user groups, including nonslip ramps, walkways, split entrance accessibility, toilet facilities with grab bars, and others should be major considerations when building, renovating, or retrofitting, an existing facility.

2.8.3. ***Lighting***

Proper lighting is important to protect and conserve vision, prevent fatigue, provide a safe environment, and improve morale. It is recommended when possible to have a combination of natural (windows, skylights) and artificial (direct and indirect) lighting. Artificial light (e.g., mercury-vapour, fluorescent, metal halide, high pressure sodium, quartz, incandescent), moreover, should come from many sources rather than

a few to prevent too much concentration of light in one place (glare). Lighting intensity (especially high- intensity outdoor lighting) should be uniform in accordance with recommended standards and colour rendering indices. Switches and other power sources for artificial light should be located in secure parts of the facility and of course should be recessed and enclosed for protection. In gymnasiums, arenas, field houses, and swimming pools, light intensity should range from 50 to 100 foot-candles, depending on the type of activity being conducted. Outdoor recreational areas and high school stadiums also should have at least 50 foot- candles of light while professional stadiums and parks range from 150 to 300 (pro baseball infield) foot- candles. Group exercise, dance, cardio and strength training areas, and most sport courts should range from 50 to 70 foot- candles, whereas classroom and laboratory settings require 100 to 150 foot- candles of illumination. Glare, reflection, and shadows are undesirable hazards that should be eliminated, especially in aquatic facilities to ensure the safety of the participant and protect sight lines for lifeguards. Overhead or other multistage lights should be properly installed (twenty- four feet above the playing surface), recessed, protected (transparent polycarbonate), and adjusted for best results. Some new facilities are employing occupancy or motion sensors or pre-programmed computers to control their lighting systems. Strong contrasts of colour such as light walls and dark floors should also be avoided if possible.

2.8.4. ***Environmental climate control***

Efficiency in the classroom, gymnasium, fitness centre, arena, special activities rooms, and other places is determined to some extent by thermal comfort, which is mainly determined by heating, ventilation, and air conditioning (HVAC).

The purposes of heating, ventilation, and air conditioning are to remove excess heat and humidity, unpleasant odours, and in some cases, gases, vapours, fumes, and dust from the room to promote balanced radiant temperature and uniformity, to diffuse the heat within a room, and to supply heat to counteract loss from the human body through radiation and otherwise.

Heating and air conditioning standards vary according to the activities engaged in, and the geographical location of the facility. Usually the air temperature is maintained between 64 and 72 degrees, whereas the humidity ranges between 40 and 60 percent.

For ventilation, the range of recommendations is from eight to twenty-one cubic feet of fresh air per minute per occupant. Adequate ventilating and condensing systems are especially needed in dressing, shower, and locker rooms, steam and storage rooms, toilets, gymnasiums, and swimming pools, in fact, all rooms require adequate ventilation. The type and amount of ventilation including air conditioning will vary with the specific needs and location of the particular activity or special area. Computer-controlled HVAC "smart systems" that control not only the environment, but also fire alarms and security and communications systems are coming online. Preventive HVAC maintenance and corrective services and repair are requisite for health and risk management purposes. The American Society of Heating and Ventilation Engineers is a good resource for specifications.

2.8.5. ***Plant sanitation***

Plant sanitation should not be overlooked. Sanitation facilities should be well planned and maintained. The water supply should be safe and adequate. If any question exists, the health individual per day is needed for all purposes.

Drinking fountains of various heights should be recessed in corridor walls and should consist of material that is easily cleaned. A stream of water should flow from the

fountain so that it is not necessary for the mouth of the drinker to get too near the water outlet or drain bowl.

Water closets, urinals, lavatories, shower rooms, and washroom equipment such as soap dispensers, toilet paper holder, waste containers, safety mirrors, bookshelves, and grooming facilities should be provided keeping in mind reasonable accommodations for persons with disabilities.

Waste disposal should be regularly collected and monitored. There should be provision for clean-up, removal, and recycling of paper and other materials that make the grounds and buildings a health and safety hazard as well as unsightly. Proper sewage disposal and prompt garbage, trash, and recycling services should also be provided. Frequent plant and facility sanitation audits are strongly encouraged.

2.8.6. *Acoustics*

Noise disturbs, causes nervous strain, and detracts from the many benefits of participating in physical activity. Therefore the sonic environment or noise (e.g., background, echoing, etc.) should be eliminated, absorbed, and reflected as effectively as possible. Walls, including double wall construction, dividers, fences, beams, trees, and water all provide a means of sound control. Sound control can also be achieved by acoustical treatment of such important places as corridors, gymnasiums, arenas, and swimming pools.

Acoustical materials include glazes, plasters, fibres, boards, acoustic tiles, matting, turf, and various fabrics. Floor covering that reduces noise should be used in corridors, and acoustical material should be used in walls and ceilings. Gymnasiums, arenas, swimming and diving pools, and racket courts need special treatment to control the various noises associated with enthusiastic play and participation. Of

course, sound and sound systems (i.e., group exercise and dance rooms, public address systems), when appropriate, must also be taken into full consideration.

2.9. Facility Maintenance and Sports Development

Planning for the construction or remodelling of facilities is an important management function. An equally important responsibility of facility management is maintenance. With proper maintenance, a facility will last longer, provide a healthier and safer environment, be less costly, and provide a more satisfying experience for user groups. Planning and constructing facilities in physical education, recreation, and sport are team efforts. If proper plans, construction, and materials are selected, then maintenance including energy conservation should be made easier. Nothing is more embarrassing than a new facility that is a maintenance nightmare because of poor management decisions in the design and planning phases of the construction process, not to mention the purchase of equipment, scheduling, and hiring of staff. Giving an adequate facility, it is up to the physical education, recreational sports, and athletic departments management and all user groups as well as the maintenance staffs to work together in taking pride in their facility and putting forth a special effort to see that it is maintained in as near perfect condition as possible. (Krotee and Bucher,(2007).

2.10. Sports Development

According to www.ask.com, sports Development seeks to promote opportunities available for people to take part in sports and activities for: Fun and Enjoyment, health and well- being benefits, playing to their potential and progressing to their chosen level, reducing anti-social behaviour and incidence of crime, competitions and leagues. It also helps to establish and improve the facilities' infrastructure, volunteers,

coaches, officials, clubs, events and leagues that are needed for the Development of sports.

According to Collins, R. (2010), modern sports development program is usually based on a four part model called the sports development continuum. The foundation level of the continuum focuses on teaching young people basic and perceptive skills and this generally happens at school level. The aim of the foundation level is to ready pupils for the higher stages in the continuum and encourage them to take sport seriously and consider taking part in sport throughout their life. It teaches the basic skills needed to partake in a specific sporting activity; these include activities such as body literacy, hand-eye coordination and spatial awareness. Due to that fact, it is unlikely that when young people join primary and secondary schools they have any real knowledge of sporting games, the schools will start with teaching basic skills such as dribbling, catching, passing etc. To encourage kids to stay playing sport, there are many things parents, teachers and sports development authorities can do to help. They need to be willing to provide transport, opportunities, equipment and also motivation. Sports at any level rely on members attending week in week out in order to keep the clubs going. Therefore the sports rely on methods such as advertising, marketing and sponsorship.

The second level in the continuum is participation. This level is possibly the most important in the continuum and is the main focus for sports bodies, local, regional and national authorities. The aim is for more people to take part in sport to stay healthy and therefore aid the NHS. This is because a healthier individual means less people on waiting lists for treatment and less money having to be spent by the government. Therefore this level involves people who want to take part in sport to stay healthy and have fun. Also this level is where some younger people will start to realize they can

succeed in a specific sport and progress higher up the continuum. The British sports council, now sport England, in its annual reports always has categories of participants it wishes to encourage, such as young people, the elderly, ethnic minorities and women. Therefore this involves targeting beginning performers and bringing them up to performance level and maybe trying to prolong the playing of sport by older people, encouraging lifelong participation. There are many providers who can aid this, some include parents helping their children through voluntary work and coaching, PE teachers and lecturers in schools and universities, local authority sports development officers, local clubs, local sector facilities such as gyms and pools, regional sports councils and federations and active community program leaders.

The third level in the sports development continuum is the performance level. This is the stage where sportspersons reach county level and start to earn money while playing sports whether it is part or full time. This level signifies a sufficient gap from just playing sport for fitness; it is a form of more competitive sport. Therefore people are competing for higher achievements or personal reasons. An example of performance level is someone who plays semi-professional football for a team in order to win trophies and earn extra money doing what they are good at.

The highest level in the sports development continuum is the level of excellence. This is where people have reached the higher performance levels in sport and are participating at national or international level. Promoting excellence is extremely difficult for the governing bodies. Most sports development agencies focus on grants aiding talented individuals, such as financial support for coaching or scientific support. Also they must work on promotion work to attract sponsorship, state of the art facilities and setting up junior networks or grass-roots schemes. Although the formation of the United Kingdom Sports Institute has brought another dimension to

development at the top level, providing further networks of facilities and support for elite players and athletes.

Comparatively, the Foundation Level of Football Development in Wales earmarks all children to take part in football in school time; even girls participate at younger ages in physical education lessons. The schools qualified teachers teach the children the basic rules of the game and they do not necessarily have an in-depth knowledge of the game. Therefore the children don't have expert advice available, although at a young age this is not necessarily needed. The facilities used will only be basic such as a field or maybe football pitch. Some schools prefer Astroturf because it is easier to maintain and provides safer conditions.

Football is very popular at foundation level because it is a popular sport and relatively cheap for the schools to run. This is because football equipment is relatively cheap i.e. footballs sell for near to nothing and goal posts last for long periods of time. Also there are many famous football role models who greatly help participation in the sport because young people aspire to being rich and famous like them. The target aim group for the sport at foundation level is boys aged 11-16 years old.

The Football Association of Wales (FAW) is very keen on increasing the development of football in the country. At foundation level the FAW have realized that schools football is the foundations of player's participation and development for countless years. The Technical Department of the FAW has recognized the importance of this by forming a strong partnership with the governing body for schools football, the Welsh Schools Football Association; this is to offer financial and professional support for the activities it undertakes, including most importantly, the National teams and Development squads.

They also offer schools throughout Wales a program of support to attract the interest of young players to the game and assist teachers in establishing football in the curriculum, as well as after school clubs and festivals for pupils to play competitive games. The FAW hope this will lead them to further their interest and play on a more regular basis by joining a local junior club. In an attempt to try and co-ordinate this support to schools in a structured way, the Technical Department have devised a new National Program, the McDonald's Primary Schools Accreditation Scheme. This scheme aims to increase participation and improve the standard of provision in schools through the setting of quality standards that schools try and achieve. In return, those schools that become accredited receive outstanding benefits, through the support of McDonald's, including the use of the scheme's branded logo, professional and voluntary support, free equipment, special festivals, resource cards, a regular newsletter and international match tickets. Special schools are involved in this scheme too and it is anticipated that it will be expanded to include Secondary schools at some point in the future.

2.10.1 *Participation Level*

This is the level where younger people may start to realize they can succeed in the sport and progress higher up the sports development continuum. In football, this is where adults play for fun in their spare time and maybe train during the week. These older participants are likely to have jobs and haven't pursued a career in football. They are therefore participating to maintain their mental, social and physical well-being. This level is also where teens that are looking to progress in the sport play on weekends for their local team and may be scouted or drafted into youth academies. The younger generation playing football tends to be more competitive as they are

fighting to impress their coaches and teachers in order to be noticed. It is believed that it is extremely important for work to be done on the participation level.

Football as a sport has many advantages when encouraging kids to participate as it is extremely popular, has many famous role models, has many well-known sponsors and is extremely easy to set up and play. There also needs to be local clubs and local authority sports development officers, otherwise talent will seep through and be wasted where there aren't any. Imagine if Wane Rooney wasn't encouraged by his parents to play the game.

The Welsh Local Government Association has also put much effort into increasing participation in football. They believe particular emphasis should be put on community involvement, particularly local clubs which play an important part in increasing participation in football, especially by young people which in turn will aid developing safer communities. Considerable progress has been seen at junior level football in recent years, and with continued improvements in coaching levels and this trend could easily continue. However, lack of adequate funding hampers development and there continues to be a need for greater consistency across countries. In particular, there needs to be better support for junior and grass roots football for both males and females. They need to ensure that local authority football development officers are able to spend their time more constructively in developing the sport to ensure that participation levels increase by delivering coach education; funding workshops and advising on increasing volunteer numbers. Unfortunately, these development officers continue to be called upon to deal with technical work and player development is hampered by this.

They have also made it an aim to help increase women's participation in the game. Although women's participation in the game has increased by 300% in recent years,

the participation rate still remains low. The WLGA believe that for the growth rate to continue, additional resources are needed to create opportunities for women to play quality football games on a more regular basis. Also amateur football in Wales plays a significant role in football development. Hundreds of clubs are signed up to the Club Accreditation Scheme, and there has been a significant increase in qualified, registered coaches over the last few years. Amateur football is vital to the sports' development and more input is needed to further increase standards.

2.10.2 *Performance Level*

At this level players are performing at a high level and looking to improve all the time. Players playing at this stage are not quite up to international standard but are not just playing the game for fun. They are either playing the sport as a career or participating for more personal reasons. An example of someone at performance level is a player playing at a semi-professional level, who is playing for their own personal reasons while earning money.

The FAW have also made it one of their aims to increase the standard of the performance level in Wales. They have made it one of their technical department's key aims to identify and develop talented players to support the success of future National teams. To try and achieve this they are working with all key partners in the game to try to create a clear and well-structured pathway for players with talent to emerge and develop. This process begins by working with local junior clubs and leagues to provide additional quality training opportunities through the establishment of local development centres. Junior team managers and league representatives nominate players to attend. Players are also identified through the schools program and representative matches. The Development Centres operate for 24 - 32 weeks of the season and are coordinated by the County Football Development Officers. Games

against other centres are organized on a regular basis to improve the level of competition that the players experience. Players may be identified by League of Wales clubs to attend their academies or are recruited by football league clubs, including Cardiff, Gresham and Swansea to attend their centres of excellence. In some cases, outstanding players can join professionals clubs straight from local league football. Here players are identified to play for the Welsh Schools FA (WSFA) Regional Squads (North and South), with ultimately the best players progressing to the National Development squad at under 15 level and the WSFA under 16 national team. The FAW Trust has established a National Player Development Forum to try to coordinate this process in a structured way, aiming to minimize any conflict that may emerge between the key partners involved. This ensures that their most talented players are not overplayed or torn between school, club or WSFA loyalties. To this end a National Player Development Calendar is produced to create a structure to the season and provide information regarding the timing of representative games to avoid any potential conflict.

2.10.3 *Excellence Level*

This level is for the highest performing athletes in the country. Players at this level are playing for the more successful football league clubs and the Welsh National team. One example of a player at this level is Gareth Bale, who plays for a premier league team and regularly for the Welsh national squad. Historically the development of excellence has been dogged by a number of deficiencies, and this was shown in the 1980s and 1990s by the UK' failure to succeed at the highest levels of international sport. The problems encountered include lack of coordination among sports bodies, lack of facilities of international standard for training or playing, lack of coaches and

educational staff and also lack of sports science support, e.g. injury clinics, assessment and evaluation centres.

Recent developments have begun to address some of the problems identified, such as establishment of the National Coaching Foundation and a network of university sports science centres in Manchester, South borough, Leeds, Newcastle, Sheffield and London. Centres of excellence have also been established around the UK under the new organization UK Sport, to foster development of elite performers. These centres offer increased knowledge of how to develop the football game and help learn more about.

2.11. Summary of Literature Reviewed

To sum it all, this chapter highlighted the various topics related to assessment of sports facilities in senior high schools and the effect on sports development in the Tano North and South Districts of Ghana. Literature was reviewed on the meaning and concept of sports facilities. Also, literature was reviewed on sports structures and facilities, standardized descriptions and dimensions of some sports facilities were also covered. Again, effects of sports facilities on sports development, managing sports facilities for development, planning the facility (Management Functions), the role of management in facility planning and development, health considerations in facility planning as well as facility maintenance and sports development were also reviewed.

CHAPTER THREE

METHODOLOGY

This section presents an overview of the methods used in the study. Areas covered include the research design, population, sample and sampling techniques, instrumentation, validity and reliability of the instrument, data collection procedure and data analysis procedure.

3.1. Research Design

Research design constitutes the blueprint for the collection, measurement and analysis of data. In this research work the researcher used descriptive survey method which allows the researcher to summarize the characteristics of different groups or to measure their attitudes and their opinions towards some issues. According to Nelson, Thompson and Silverman, (2005), the survey is a technique of descriptive research that seeks to determine present practices or opinions of a specific population. Survey can come in the form of questionnaire, a personal interview or normative survey. There is no manipulation of variables. The researcher therefore collected data on the variables and evaluated them.

3.2. Population

The researcher used the physical education teachers and students from six schools in Tano North and South Districts in Brong Ahafo. The schools comprise Yamfo Senior High School, Bomaa Senior High School, Boakye Tromo Senior High School, Bechem Presbyterian Senior High School, Techimantia Presbyterian Senior High School and Serwaa Kesse Senior High School. The students come from predominantly farming communities. Their ages range between 14 - 16 years. All but one of the schools is a mixed sexed. Five of the schools have two (2) physical

education teachers and one having three, making up a total of thirteen teachers in the two districts. The final year students in all the targeted schools make up a population of one thousand (1000). Three hundred (300) students representing thirty per cent (30%) of the target population were sampled for the study. All thirteen teachers were taken due to their relatively small number in all the schools.

3.3. Sample and Sampling Technique

A sample is a small portion of the population selected for the study. Through purposive sampling, a total of thirteen physical education teachers in the targeted schools were used for the study. Based on the number of the final year classes in all the selected schools, random sampling technique was used in each school, to select five classes for the study. Here, the researcher made the class captains to pick folded papers which bore five yes and the rest, no. Class captains who selected yes had their classes considered. Again random sampling was used in each school to select ten students from each of the five classes making a total of fifty students each from each school to make up the sample for the study. In each class, students were made to pick folded papers made up of only ten 'yes' and the rest being blank so that only ten students will be selected from each of the sampled classes.

3.4. Instrument for Data Collection

Every researcher gathers information in order to explain his or her findings. The researcher relied on observations, interviews and questionnaires in collecting the data from both students and physical education teachers in the targeted schools. All instruments have the capacity to gather information in survey. With interview, the researcher through personal interactions interviewed both teachers and students on series of questions concerning the availability of sports facilities and how it affects

sports development in the various schools. In a methodical manner, the researcher through an interview made up of open and close-ended questions solicited the views of each of the respondents which freely requires of them to give their opinions.

Observation as an instrument for data collection also paved way for the researcher to go to all the school settings for personal observations on the availability of sports facilities. An observation check list in appendix A was used. Also open and close ended questions were given to respondents to collect data.

3.5. Validity and reliability of the instruments

Validity of research instrument refers to the extent to which the instrument measures what it is supposed to measure (Amin, 2005). The researcher asked the experienced colleagues to read through the test items to prove whether they measure what they are supposed to measure. The researcher's supervisor also scrutinised each item properly to make sure that they are properly constructed to measure what they are intended to. Reliability of the instrument also refers to the degree to which the said instrument consistently measures whatever it is measuring (Amin, 2005). For reliability purposes, the instrument was pilot-tested in Winneba on a similar group of students as those in sampled schools to ensure that the instrument is well understood to the respondents.

3.6. Data Collection Procedure

Data collection procedure refers to the method, steps or processes used by the researcher to do an actual field work of data gathering. Before the study, the researcher took introductory letters from his university to be given to the targeted schools to seek their consent to carry on the study. The headmasters in their acceptance introduced the researcher to the entire school. The researcher first

established good contacts in the schools environment especially with the selected individuals who were to be interviewed. He explained the rationale behind the study before embarking on the interview, and then proceeded on to the observation of the facilities. Different dates were scheduled to conduct the studies in each of the schools.

3.7. Data Analysis Procedure

Data analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. According to Shamoo and Resnik (2003), various analytic procedures "provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon on interest) from the noise (statistical fluctuations) present in the data". The responses were categorized based on the views the data carried with the aid of tables. Then the responses were compared and described in percentages with the aid of computer software known as statistical package for social sciences (SPSS).

CHAPTER FOUR

RESULTS, FINDINGS AND DISCUSSIONS

The study was to assess and evaluate the state of sports facilities and associated effects on sports development in the Senior High Schools in the Tano North and South Districts of the Brong Ahafo Region. The specific objectives addressed in the study include an analysis of the current state of sports facilities, the management of sports facilities and; the effects of available sports facilities on sports performance at the Senior High School level.

4.1 The Current State of Sports Facilities in the Senior High Schools (SHS)

In analysing the state of sports facilities in the various Senior High Schools, four questions were addressed. This included sports facilities available in the schools, access to these facilities, surfaces of the facilities and the extent to which students and PE teachers agree that their school lack some sports facilities.

Table 4.1 presents summary of result for sports facilities available in the various Senior High Schools sampled for the study. A total of 300 (95.8%) of the respondents were students whereas 13 (4.2%) were teachers. More students were selected because their population was high compared to the teachers. However, it was found that the number of teachers for the physical education subject in the six SHS were few. This indicated that the subject is accorded relatively low attention. How, it must be realized that the subject has the potential to contribute to positive academic performance, improved health among others for students and society as a whole (GES, 2010).

Table 4.1 Sports facilities available in the Senior High Schools

Types of sports facilities available in schools	Status of respondent		Total number of respondents, N (%) 313 (100.0)	
	Student n (%) 300 (95.8)	Teacher n (%) 13 (4.2)		*p value/* X^2 Value
Football field				
Yes	285 (91.1)	13 (4.2)	298 (95.2)	0.409*/
No	15 (4.8)	0(0.0)	15 (4.8)	0.683
Handball court				
Yes	268 (85.6)	8 (2.6)	276 (88.2)	0.002*/
No	32 (10.2)	5 (1.6)	37 (11.8)	9235
Volleyball court				
Yes	284 (90.7)	13 (4.2)	297 (94.9)	0.393*/
No	16 (5.1)	0 (0.0)	16 (5.1)	0.588
Athletic oval				
Yes	104 (33.2)	13 (4.2)	117 (37.4)	0.000*/
No	196 (62.6)	0 (0.0)	196 (62.6)	22.721
Basketball court				
Yes	29 (9.3)	7 (2.2)	36 (11.5)	0.000*/
No	271 (86.6)	6 (1.9)	277 (88.5)	23.893
Hockey pitch				
Yes	11 (3.5)	2 (0.6)	13 (4.2)	0.038*/
No	289 (92.3)	11 (3.5)	300 (95.8)	4.298

Source: Field survey, 2014. *Chi- square statistics is significant at the 0.05 level

Table 4.1 presents a summary of the results for the availability of football field, handball court, volleyball court, athletic oval, and basketball court as well as hockey pitch in schools based on evaluation by PE teachers and students. The study found that majority (95.2% representing 91.1% of students and 4.2% of PE teachers) of the respondents considered football field to be available in their schools. This implies that football field is a common sports facility in the various SHS in the study district. However, it is worthwhile noting that 4.8% (all of whom were students) pointed that they had no football fields in their school. This is an indication that teachers knew about the availability of football fields in the schools than students. The implication is

that some students do not show interest in football as part the physical education subject. The Pearson's Chi- square test showed a significant difference(X^2=0.683, df= 1, p= 0.409) in responds by teachers and students.

When respondents were asked of the availability of handball fields in their school, 88.2% of them pointed yes indicating that they had handball fields in their schools. This includes 85.6% of students and 2.6% teachers. It can therefore be inferred that both PE teachers and students were equally aware of the availability of handball fields in their schools. Also the percentage of respondents that pointed that there were no hand ball fields in their schools were low (11.8%). This included a large number of the PE teachers (5 out of the 13). However, the difference in the responds of teachers and students was not statistically significant (X^2=9.235, df= 1, p= 0.002).

Regarding volley ball field, the result indicates that all the PE teachers(13 representing 4.2% of the total respondents) agreed they have one in their school. Also, the majority (90.7%) of the students pointed yes to this question. This implies that volley ball field was another major sport facility acknowledged by both PE teachers and students. The relationship in the responds for PE teachers and students was statistically significant(X^2= 0.588, df= 1, p= 0.443). This provides evidence to justify that volleyball court is a common sports facility in the various schools surveyed. None of the PE teachers indicated no for the availability of volleyball field though a smaller proportion (5.1%) of the students pointed that volleyball court was not available in their schools.

Interestingly, all the PE teachers (4.2%) pointed that they had athletic oval in their schools but majority (62.6%) of the students pointed they were not aware of such a facility. This was significant at a p-value of 0.000.The result implies that most students did not know what the athletic oval is. Thus efforts should be made to

introduce students to the names of various facilities they use as part of the subject curriculum.

Hockey pitch appeared the least available sports facility in the schools. A disproportionate number, 300 (representing 95.8%), of the respondents pointed that they had no hockey pitch in their schools. Only 0.6% of the PE teachers and 3.5%of the students (making a total of 4.2%) pointed that they had hockey pitches. This implies that adequate provisions are not made for hockey at the SHS level in the Tano North and South Districts.

Using the likert type scale (from strongly agree to strongly disagree), respondents were required to indicate whether or not they agree to the statement that sports facilities in their schools were adequate for them. The result, as presented in figure 4.1, shows that majority (50%) of the respondents disagreed to the statement whereas 26% strongly disagreed the statement. Only 6% and 18% strongly agreed and agreed respectively. These findings reinforce the idea that PE in the various schools is among the lowest prioritize. In the 2010 academic syllabus for the subject, the GES explains that sports facilities in schools are not adequate and that teachers should make do with the few they may have at their disposal (GES, 2010). However, this gives a poor image to the discipline and makes it difficult to catch the attention of many. Therefore if the course is to fully achieve its inherent goal, policy attention should be directed to addressing the bottlenecks in sports facilities availability.

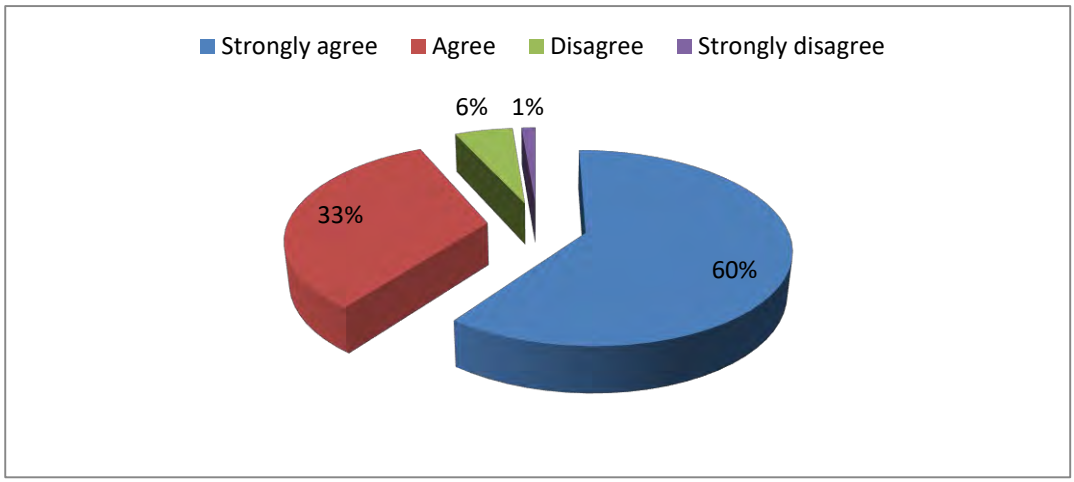

Figure 4.1The level of adequacy of sports facilities

Source: Field survey, 2014.

Surfaces for various sports facilities have effect on performance as well as on the type and frequency with which players (PE students) get injury (Nigg, 2003). Also, Sport England (2012) demonstrated that the type of surface used determines the various sports activities can be conducted on the facility. Table summarize result for the surfaces used for the various sports facilities in the sampled schools. The result indicates that, with the exception of football field which had majority (66.1%) of the respondents indicating that they are covered by grass, most of the surfaces of sports facilities in the various schools had bare grounds. The study indicates that, 75% and 76% of respondents had handball and volleyball courts respectively in their schools which are on bare grounds without grass. Bare surfaces have higher chance for causing injuries and therefore require efforts to be made to introduce grass for these facilities. With regards to surfaces for basketball court and hockey pitch, a little above 82% and 90%respectively pointed that N/A (Not Applicable) to indicate they do not have such facilities in their schools. This is consistent with the earlier finding in the study that basketball and hockey are not regular sports undertakings in the various schools. Attention must also be directed to introducing these games into the schools.

The findings here confirms that most schools conduct PE in sports for which competitions are organised (GES, 2010)

Table 4.2 Surfaces to the available sports facilities in schools

Facility	Grass n (%)	Concrete, n (%)	Bare n (%)	Not available in the school n (%)
Handball court	39 (12.5)	21 (6.7)	237 (75.7)	16 (5.1)
Volleyball court	24 (7.7)	47 (15.0)	238 (76.0)	4 (1.3)
Basketball court	3 (1.0)	46 (14.7)	6 (1.9)	258 (82.4)
Hockey pitch	9 (2.9)	15 (4.8)	7 (2.2)	282 (90.1)
Football field	207 (66.1)	0 (0.0)	38 (12.1)	68 (21.7)
Athletic oval	96 (30.7)	8 (2.6)	22 (7.0)	187 (57.7)

Source: Field survey, 2014.

Further, the study investigated the level of agreement of respondents to a proposition that their school lack some sports facilities. To this question, the summary result in figure 4.2 reveals that a huge contrast in strongly agree and strongly disagree. The number of respondents that strongly agreed (184 representing 60% of the respondents) to the question was disproportionately larger than those that strongly disagree (4 representing only 1% of the total respondents). This evidently indicates that, in the SHS in the Tano North and South District, sports facilities are lacking for the teaching and learning of the PE subject. It can further be seen from the chart in figure 4.2 that the second largest (33%) proportion of the respondents also agree to the assertion that the schools lack some sports facilities.

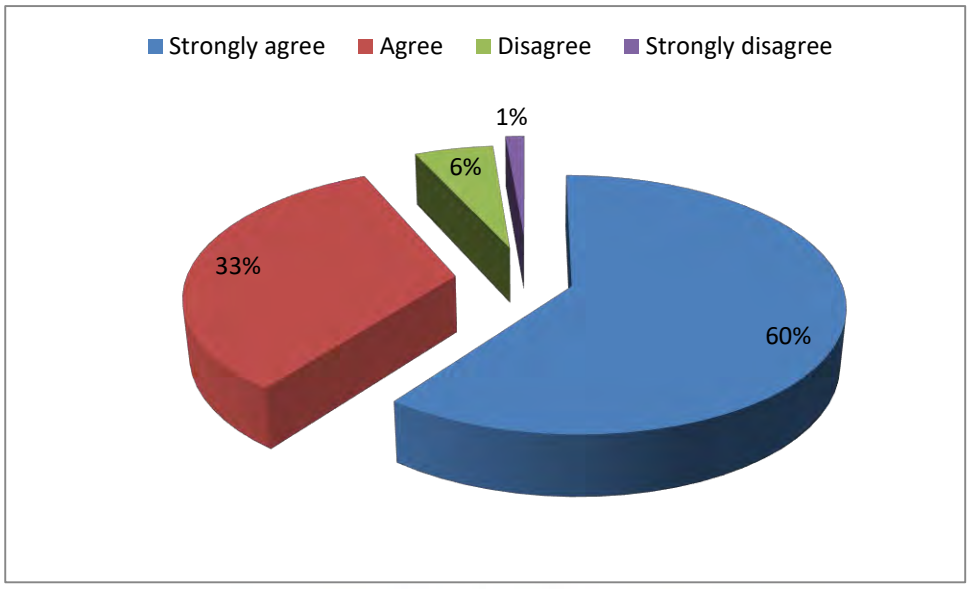

Fig. 4.2: Sports facilities and their availability.

Source: Field survey, 2014

4.2 How Sports Facilities are managed in SHS in the Tano North and South Districts

This section analyses the management procedure for the sports facilities in the SHS in the two Districts. Data for this analysis were based on modified likert-type scales. In this analysis, the various facilities were collapsed into one and referred to as sports facilities (instead of analysing them separately). This was because, using the observation checklist, it was revealed that most of the schools did not have separate facilities for the various sporting activities.

Three questions were addressed here, viz. what activities are carried out on the sports facilities in the school? Are sports facilities in your school in good repair? How sports facilities should be maintained. The analysis are organised in the order of the questions herein and presented in the subsections 4.2.1, 4.2.2, and 4.2.3.

4.2.1. Activities Organised on Sports Facilities in the SHS of Tano North and South Districts

Sports facilities in schools are sometimes not used solely for the purposes of Physical Education lessons. According to the UN Inter-Agency Task Force on Sport for Development and Peace (2003) can be used for multiple purposes. This has implications on the quality of the facility. Two activities were identified to include celebrations and games (that is sports activities). Respondents were required to indicate which of the activities were frequently carried out. It was revealed that a little above 68% indicated that games were carried out on their sports facilities whilst about 32% were of the view that celebrations was carried out on their sports facilities. This confirms the assertion above. The implication is that the facilities are used for activities beyond sports. This affects the quality of the fields and requires that maintenance works should commensurate its uses.

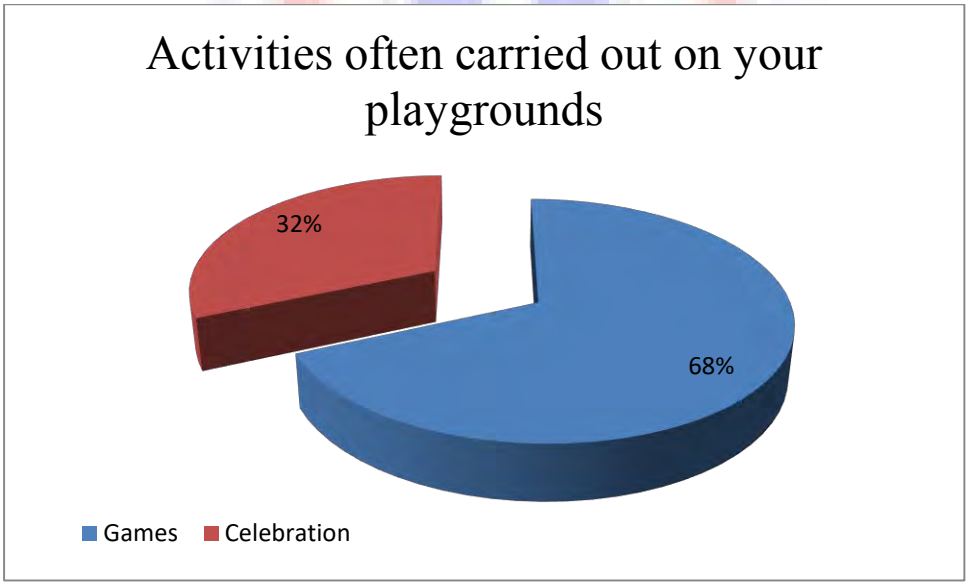

Figure 4.5 Activities often carried out on your playgrounds?
Source: Field survey, 2014.

4.2.2. Maintenance of Sports Facilities.

In this sub-section, respondents were asked to indicate how they agree to the statement that sports facilities are in good repair. These were ranked from strongly agree to strongly disagree. Table 4.3 summarize the results. Majority (31.3%) of the respondents agreed that their school sports facilities were in good repair. However, this was not very different from those that indicated they disagree (30.4%). Further, a significant percentage (25.9)pointed that they strongly disagree and 8.6% indicated they did not know. This portrays that sports facilities in most of the schools were under poor repairs. Based on the observation checklist, the study identified a trend consistent with this result. In a school like, Bechem Presbyterian SHS, it was noted that sports facility were properly maintained. However, the researcher noted in Yamfo and Bomaa SHS those facilities were in poor state, an indication that they are under poor repair. This signals a need for education officials to pay special attention for the maintenance of these facilities.

Table 4.3 Maintenance of sports facilities in SHS of Tano North and South Districts

Responds	Frequency	Percentages
Strongly agree	12	3.80%
Agree	98	31.30%
Disagree	95	30.40%
Strongly disagree	81	25.90%

Source: Field survey, 2014.

This sub section analyses PE teachers and students perceptions regarding how sports facilities should be maintained. Qualitative data was gathered and summarize to allow for frequencies and percentages to be generated. Three major themes emerged and were coded into the SPSS software for the analysis. This has been supplement with quotations that were related to the themes identified.

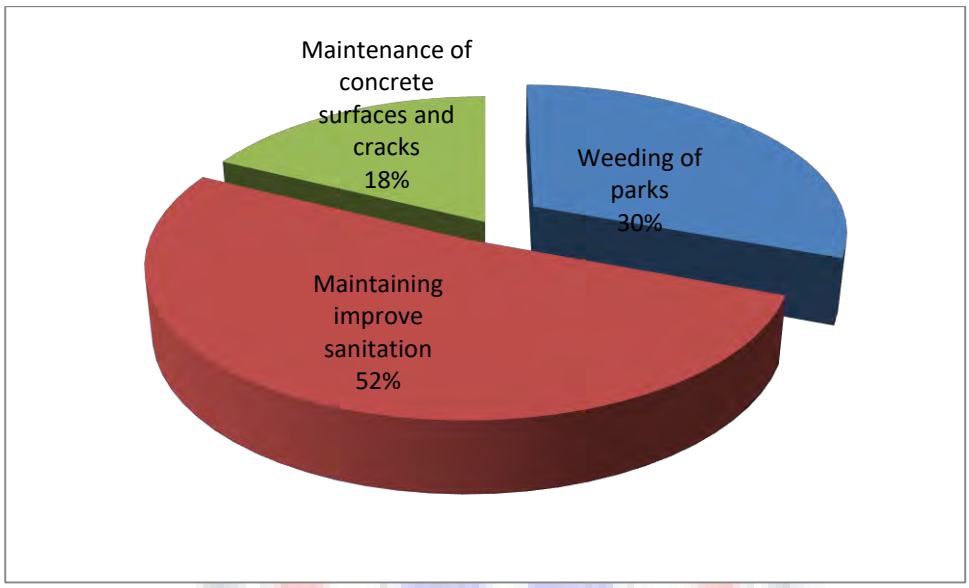

Figure 4:4 Sports Facilities and their maintenance.

Source: Field survey, 2014

Table 4.4 presents the result for respondent's perceptions on how sports facilities should be maintained. This is explained to be as a result of the apathy which was demonstrated earlier. The most frequently cited suggestions were in regards to maintaining improved sanitation (52%). In this category, most of the respondents generated were about ensuring that litters are not left on the fields. The quotation below from a student of Techimantia Presbyterian SHS clearly depicts the appropriate measure to be put in place.

"*For me I think people should not be allowed to drive or walk through the parks because those people will leave rubbish and banana peels on them. Always this will make the park dirty and not attractive for us*" (Student- Techimantia Presbyterian SHS, 2014).

The second theme that emerged from the data was constant wedding of parks. Almost 30% of the respondents expressed concern related to wedding of the parks. This included both students and teachers. It was explained that this will not only help promote the quality of the subject but will also protect the students and staff from snakes and other organisms that are harboured by busy fields. In the qualitative study, following quotation has been generated to add depth to the quality of the data.

"All the grounds used in this school are grassed. Thus frequent mowing will help to maintain the facilities especially in the rainy season. If they are not maintained in this way, dangerous animals will find their way in and harm the students." (Teacher- Techimantia Presbyterian SHS, 2014).

The third theme generated was in regard to maintaining concrete surfaces that have developed cracks. Only a little above 18% of the total respondents shared views related to maintaining concrete surfaces. This indicates that such surface is not common across the study prefecture. It was explained that leaving the facility bare will subject it to the mercy of the weather and will result in development of channels across. From Boakye Tromo, a student averred and in quote;

"*Some of the fields require concrete surfaces because erosion will continue to wash the topsoil away and make them undulating*"(Student- Boakye Tromo SHS, 2014).

Other respondents also explained that they have concrete surfaces on some of the sports facilities but cracks that develop on them are not attended to. This could aggravate injury and calls for urgent attention to address such situations.

4.3. Effects of Sports Facilities on Sports Performance.

Annor (2011, unpublished Master's Thesis), established that the Brong Ahafo Region lacks basic sports facilities. It was explained that the situation is partly responsible for low sports performance in the Region. The last research question of this study was to investigate how the available sports facilities affect the teaching of the PE subject and as well assports performance at the SHS level.

Two questions were addressed here. Foremost, the study sought to find out students and teachers reactions to the statement that sports facilities have effect on the lessons in PE. The other question was required students to indicate how sports facilities in their schools help the school to perform well in sporting competitions.

Table 4.4 presents the result for the first question. When the question of whether or not the availability of sports facilities have effect on the lessons in the Physical Education subject, a disproportionate number of them (117 and 103 representing corresponding percentages of 37.4 and 32.9) indicated that they strongly agree and agree respectively. From this analysis, it is shown that availability of sports facilities is as equally important as teaching the discipline itself. The result further reveals that the proportion of respondent that strongly agree and agree to the question represents all the PE teachers, 1.9% and 2.2% respectively. Thus teachers were more likely to attribute the effectiveness of sports lessons to availability of sports facilities than students. However, this was not statistically significant as the *p* value was greater than 5% (X^2= 6.116,df=4, *p*= 0.191). The implication is, there is a general believe among

both teachers and students that facilities availability affect the teaching and learning of PE in schools.

Further, the result reveals that a little above 13% and 14% disagree and strongly disagree that the available sports facilities has effects on the lessons in PE. It can be seen from table 4.4 that none of the respondents in this category was a teacher. Only a few proportion of the student do not agree that sports facilities have effect on the PE lessons. This is attributed to one on two reasons. One reason is some of the students have no regards for sports and only think of it as a waste of time on their academic calendar. This was disclosed by some of the teachers in an informal conversation. Urgent action should be taken to clear this notion and enable participation in sporting activities in order to be able to reap the number of far- reaching benefits associated with the discipline.

Table 4.4 Effects of sports facilities on the subject of Physical Education

	Status of respondent		Total number of respondents,
	Student n(%)	Teacher n (%)	N (%)
Responds	300 (95.8)	13 (4.2)	313 (100.0)
Strongly agree	111 (35.5)	6 (1.9)	117 (37.4)
Agree	96 (30.7)	7 (2.2)	103 (32.9)
Disagree	41 (13.1)	0 (0.0)	0 (0.0)
Strongly disagree	45 (14.4)	0 (0.0)	0 (0.0)

X^2= 6.116, df=4, p= 0.191

Source: Field survey, 2014.

The last question generated from the third objective was to find out whether or not the available sports facilities enable the various schools to perform well sports activities. The question was based on the likert scale and respondents were required to indicate how they agree or otherwise to proposition that available sports facilities help their

school to perform well in sports competitions. The responds are summarized in figure 4.5. Mixed responses were generated. Whereas the largest majority (a little above 28%)indicated they agree to the proposition, the second largest majority (almost 27%) pointed that they did not agree to the proposition. The sharp contrast in the responses is an indication of a vast dichotomy among schools is the study prefecture. Whereas schools like Bechem Presbyterian SHS are endowed in sports facilities, others like Boakye Tromo SHS have very limited facilities such that they sometimes share facilities with other schools.

The numbers of respondents that strongly disagree to the proposition were low (39 representing about 14%) compared with those who strongly agree (76 representing a little above 26%). This can also be inferred to imply that all the schools are able to do well in one sporting discipline or the other depending on the availability of the particular sports facility required. A similar trend is found between those that agreed (31%) and those that disagreed (29%).

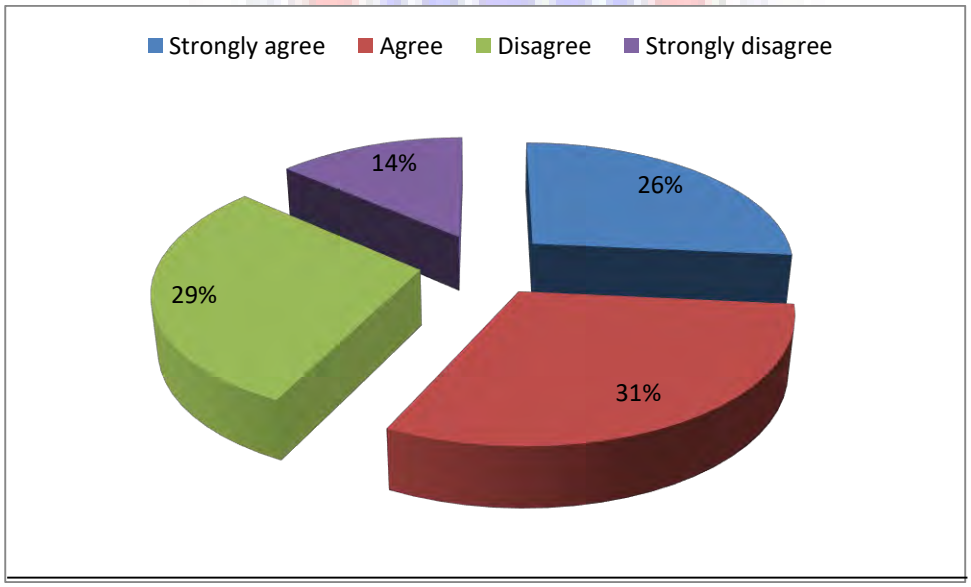

Figure: 4.5 Availability and the use of Sports Facilities in Sports in Tano Districts
Source: Field survey, 2014.

4.4 Testing of Hypothesis

4.4.1. H_o: There is no significant relationship between sports performance and provision of sports facilities.

The first hypothesis was tested using the Pearson's Chi- square. Variables tested were ranked variables of strongly agree through to strongly disagree (categorical likert scale variables) to the proposition that "the school lacked some sports facility" and dichotomous/ dummy variables of Yes or No to the question "Do facilities in your school have an effect on your school's performance in sports competitions?"

The result as summarized in table 4.5 reveals that there is a statistically significant (X^2=21.971, df= 4,*p*= 0.000) association between sports facilities provision and sports performance in the various schools. In this regard the study fails to accept the hypothesis that there is no significant relationship between sports performance and provision of sports facilities. This is because the available evidence does not support it.

Table 4.5 Relationship between sports facility provision and sports performance

	Do facilities in your school have an effect on your school's performance in sports competitions		Total
Your school lack some sports facilities	Yes	No	
Strongly agree	144	40	184
Agree	61	41	102
Disagree	17	0	17
Strongly disagree	4	0	4
Total	232	81	313

***X^2* Value= 21.971, df= 4, p= 0.000**

Source: Field survey, 2014.

4.4.2 H_o Both PE teachers and students have the same perception regarding the statement that sports facilities isin good repair

The second hypothesis wastestedas the perception for students and PE teachers about the repair of sports facilities is the same. This was based on respondent's status, which was dummy (student or teacher) and a categorical ranked likert- type scale (from strongly agree through to strongly disagree). The result obtained (see table 4.6) validated the hypothesis(X^2= 6.690, df= 4, p= 0.153). Only few (3.2% of students and 0.6% of PE teachers) strongly agreed that sports facilities in their school are in good repair.Responds for both PE teachers and students were nearly fairly distributed around the scale, thus second hypothesis is accepted.

Table 4.5 Good sports facilities for PE teachers and students and their use.

Sports facilities in your school are in good repair	Respondents status in school		Total
	Student n/%	Teacher n/%	
Strongly agree	10/3.2	2/0.6	12/3.8
Agree	93/29.7	5/1.6	98/31.3
Disagree	91/29.1	4/1.3	95/30.4
Strongly disagree	79/25.2	2/0.6	81/25.9
Total	**300/95.8**	**13/4.2**	**313/100**

***X^2* Value= 6.690, df= 4, p= 0.153**

Source: Field survey, 2014.

4.4.3H_oPE teachers and students equally agree to the effect of sports facility availability on the subject of PE

Sports facilities in SHS are intended, foremost, to promote physical education. The study therefore hypothesized that PE teachers and students will equally agree to the effect of sports facility availability on the subject of PE. The Pearson's Chi square

was used to determine this relationship. The result indicated no statistically significant difference in the responds of the PE teachers and students. This has vindicated the hypothesis. The cross tabulation further explains the relationship. Majority (37.4% including 111 of the students and 6 of the PE teachers) strongly agreed that sports facilities in schools have effect on PE lessons whereas 32.9% agreed. Only a few proportions disagreed (13.1%) and strongly disagreed (14.4%) respectively. This implies that there is a general notion among both PE teachers and students that sports facilities have effect on the subject of Physical Education.

Table 4.6 Both teachers and students perception on repairs of sports facilities in schools

Sports facilities in your school are in good repair	Respondents status in school		Total
	Student n/%	Teacher n/%	
Strongly agree	111/35.5	6/1.9	117/37.4
Agree	96/30.7	7/2.2	103/32.9
Disagree	41/13.1	0/0.0	41/13.1
Strongly disagree	45/14.4	0/0.0	0/0.0
Total	**300/95.8**	**13/4.2**	**313/100**

***X^2* Value= 6.116, df= 4, p= 0.191**

Source: Field survey, 2014.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter of the study presents a summary of the main research findings as well as lessons that could guide the provision of sports facilities for teaching of the subject of Physical Education. Further, the chapter presents conclusions with respect to the study findings and makes appropriate recommendations for consideration. The chapter begins with a brief explanation of the research approach, study instruments and sampling information.

5.2. Summary of key findings

The study was conducted to assess and evaluate the state of sports facilities and effects on sports development at the Senior High School (SHS) level in the Tano North and South Districts. Previous studies like that of Annor (2011) have concentrated on sports performance in the region with the aiming of finding out the performance of SHS in sporting competition. This study considered that sports facilities in the schools have indispensable role in this quest. Three research questions were therefore generated to guide the research in investigating the state of sports facilities and its effects on sports development at the SHS level.

To address the question of the study, the descriptive survey method was adopted. Six SHS were selected across the Tano North and South District. From these schools a sample of 313 (including PE teachers and students) was selected through a mixed sample approach. Random sampling approach was deployed to select 300 students whiles 13 PE teachers were selected through the purposive sampling approach. From each school, 20 students and at least 1 PE teachers were selected. Data was solicited

using a 15 item questionnaire with predominantly closed ended questions. The Statistical Package for Social Science (SPSS) version 17.0 for windows application was used for data coding and analysis. The results were summarized with graphs and table. Quotations were also used where appropriate.

5.2.1. The Current State of Sports Facilities in the Senior High Schools (SHS)

The study found that football and volleyball fields were the common sports facility available in the schools. This was indicated by 95% and almost 95% of the respondents. The statistical test based on the Pearson's Chi- square revealed that only knowledge regarding the availability of football field and volleyball court were not statistically significant. This indicates that both PE teachers and students were equally likely to tell whether or not their school have football field and volleyball court.

Amazingly, the study found that whereas teachers indicated that they have athletic oval in their schools a large proportion of the students (62.6) pointed that they did not have it. This tested significant at a *p* value of less than 0.05. This is an indication of knowledge gap suggesting that students did not understand the term. It is therefore necessary for teachers to stress on teaching students the names of the various facilities they use. The study found that sports facilities in the various schools were not adequate for their PE subject requirement and that they sometimes share facilities with other schools. It was also shown that most of the PE lessons in handball and volley ball were played on bare ground without the appropriate surfaces.

5.2.2. How Sports Facilities are managed in SHS in the Tano North and South Districts

From this objective, the study found that sports facilities were not used solely for sporting activities. It was indicated by about 32% of the respondents that celebrations

and other events are organised on the fields. This has implications on its management. When the respondents were asked whether sports facilities were in good repair, it was found that significant percentages of 30.4 and about 25.9 indicated that they disagree and strongly disagree respectively. This is an indication of poor maintenance of sports facilities in the schools.

It appeared that the major of maintenance required for the various sports facilities in the school were; improved sanitation (52%); regular weeding of sports field (30%) and maintenance of cracks on concrete fields (18%).

5.2.3. Effects of Sports Facilities on Sports Performance

It was found that majority of the respondents (37.4% and 32.9%) strongly agree and agree respectively to a proposition that sports facilities have effect of the teaching of the PE subject. A Chi-square statistical test was conducted to determine where or not there is a significant relationship between students and PE teachers regarding the question herein and the result indicated no statistical association since the *p* value was less than 0.05. Also only 13% and 14% of the respondents indicated that disagree and strongly disagree respectively. However, there was no PE teacher in this category.

When respondents were to indicate their responds to the statement that available sports facilitieshelp their school to perform well in sports competitions, mixed responds were generated. Those that agree (31%) were almost equal to those that disagree (29%). This was however not surprising since it gives a picture of the sharp dichotomy in sports infrastructure endowment among schools in the region.

5.2. Conclusion

The study investigated the state of sports facilities and their effects on sports development at the Senior High Schools in Tano North and South districts. The

hypothesis that sports facilities provision has no effect on sports performance was not justified in the analysis. The study has revealed that majority of the SHS in the Tano North and South Districts do not have adequate sports facilities for their PE lessons. It was indicated that only football field and volleyball court availability was almost equally acknowledged by both students and PE teachers. More teachers were aware of the availability of all other sporting facilities than student as was indicated in the statistical testing.

Regarding the maintenance of sports facilities, it was found that the facilities are also used for celebrations which often bring about littering on the facilities. Respondents suggested that the most important maintenance requirements were ensuring improved sanitation, regular wedding of fields and repair of cracks in concrete facilities.

The Chi-square statistical test conducted to determine whether or not there was a significant relationship between students and teachers on the proposition that sports facilities have effect of the teaching of the PE subject and PE teachers showed no statistical association. Facility availability was found to be an important requirement for the teaching of PE. Further, schools that had near adequate facilities agree they are able to perform well than those with relatively few facilities.

Generally, the study has found that sports facilities in SHS in the Tano North and South were inadequate and have significant effect on sports performance. Some schools were indicated to share sports facilities. There was need for improved sanitation, regular weeding and maintenance of cracks in concrete facilities as a way to improve the teaching and learning of the PE subject.

5.2.5. Recommendations

In considering sports facilities to make the most effective contribution to student's life experience, they must be recognised as important and valued by the administration of the institution. Sports facilities are expensive to build and expensive to maintain. They must be seen as an investment. It must also be recognised that a new sports facilities will not automatically change a campus culture. Physical education teachers and administrators will have to work to effect this change, involving student leaders and organisations. The findings of this study prompts the researcher to make the following recommendations for institutions that want their sports facilities to be a positive and socializing part of campus culture:

- Control potential tension on the usage of the limited sports facilities to promote its lifespan. For instance, restricting other activities not to be held there other than sporting activities alone.
- Institutions should be prepared to invest in putting up new sports facilities, renovating, updating and expanding to meet students' needs and required standards.
- GES should accord due attention to the subject, since it has the potential to contribute to positive academic performance, improved health among others for students and society as a whole.
- Teachers need to introduce the names of the facilities to students since it was revealed that though teachers are aware of the presence of the athletic oval in their school but students do not.

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APPENDIX A

UNIVERSITY OF EDUCATION, WINNEBA.

QUESTIONAIRE

This is an academic exercise to solicit information for a research work and you will be contributing to the success of the research if you answer the following questions below. The information you will provide will be treated as confidential.

Please indicate your response to the following questions by ticking the box with the appropriate answer and write other responses when and where it is due.

1. Tick from below the sports facilities you have in your school.

Football field [ ] Handball court [ ] Volleyball court [ ] Athletic oval [ ] Basketball court [ ] Hockey field [ ].

2. The facilities that you have access to in your school are adequate for your needs.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ].

3. Please rate your access to the following facilities (inadequate, adequate, good, excellent)

Handball court ……

Volleyball court ……

Basketball court ……

Hockey field ……

Football field ……

Athletic oval ……

4. Your school lack some sports facilities.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree

5. March the below surfaces to the sports facilities at your school.

SURFACES	FACILITIES
Grass	Football field
Concrete	Handball court
Bare	Athletic oval
	Volleyball court
	Basketball court
	Hockey field

6. How will you rate the following facilities?

Handball court:

Very good [ ] Good [ ] Poor [ ] Bad [ ] Very bad [ ].

Volleyball court:

Very good [ ] Good [ ] Poor [ ] Bad [ ] Very bad [ ].

Athletic oval:

Very good [ ] Good [ ] Poor [ ] Bad [ ] Very bad [ ].

Football field:

Very good [ ] Good [ ] Poor [ ] Bad [ ] Very bad [ ].

Basketball court:

Very good [ ] Good [ ] Poor [ ] Bad [ ] Very bad [ ].

Hockey field:

Very good [ ] Good [ ] Poor [ ] Bad [ ] Very bad [ ].

7. Paths and passages cut across your facilities.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ].

8. Which of the following are carried out on your play grounds? Tick as applicable:

Driving [ ] Celebrations [ ] Games [ ]

9. Facilities are kept clean.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

10. Are facilities in good repair?

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

11. Maintenance of facilities is frequent.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ].

12. How do you think facilities should be maintained? Write your answer

……

……

……

13. Availability of sports facilities helps your school to perform well.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

14. Facilities in your school have an effect on your physical education lessons.

Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ]

15. Do you think the facilities available in your school have an effect on your schools performance in sports competitions?

Yes [ ]. Give your reason:

……

……

……...

No [ ]. Give your reason:

……

……

……

APPENDIX B

AN OBSERVATION CHECH LIST OF SPORTS FACILITIES FOR TANO NORTH AND SOUTH DISTRICTS SENIOR HIGH SCHOOLS.

FACILITY	AVAILABILITY		SIZE		SURFACE			CONDITION	
	Present	Not present	Standard	Not standard	Grass	Bare	Concrete	Good	Bad
Handball court									
Volleyball court									
Basketball court									
Football field									
Hockey field									
Athletic oval									