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Role of technology in sports

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Abstract

Sports in every aspect is a celebration of hard work, persistence, perseverance, and skill. It has been an integral part of human life entertainment since time immemorial. Technology in sports plays a pivotal role in advancing all domains in sports. Technology is constantly innovating and changing the world around us, thereby proliferation of technology can be felt in the sports arena too. Physical education and sports fields can make a great contribution to the role that technologies play in our lives by carefully considering the benefits and liabilities of new information technologies on the whole person, body as well as mind. Athletic performance and participation in sports has become safer with use of technology. Information Technology in Sports has established scientific discipline, Research activities, improve Learning and coaching, Bio-mechanical analysis and field research have evolved. There is something so captivating about all kinds of sports that keep its beholders glued to their seats. Ever-growing sports engineering has been helping all kinds of sports to overcome the limitations of human performance. Given the pace and results of technological development, more and more sportspersons are compelled to gain a competitive advantage in their respective sports.

Keywords: Technology, sports, training, performance

Introduction

Technology plays vital role in the human being in particularly in field of sports and games. It helps to avoid mistake in organization and administration of various sports and games at all levels. Ever-evolving technology has become smaller, more resilient, and less burdensome over recent years, paving the way for new opportunities, especially in athletics. Information age in Sports technology was in 1970's. The change was brought to the society with the creation of web. Channels of communication and message content changed. The computer technology established protocols which become as the internet and later development of Hypertext Mark-up Language (HTML) in 1989 and that became the basic for the development of web in 1993. The web was introduced to the public at large. Technology in sports is constantly changing in today's era which is boosted by the vast use of computers. Then video camera became common and helped analysing sport performance like never before. Electronic timing controlled by computers is employed to measure performance times of athletes in a great many sports including Athletics, Cycling, Skiing, Bobsled, Triathlon and many more. In the case of Athletics, the electronic timing also measures the athlete's reaction time to the start gun in case the athlete moves too early in the blocks. Hawkeye, a computer system first used in 2001 for showing the trajectory of a cricket ball has made an immeasurable difference to the sport of Cricket. Hawkeye produces all manner of statistical analysis such as ball speed, ball pitch on the wicket and trajectory of the ball after bounce. Hawkeye is now used in Tennis to assist in determining whether a shot is "in" or "out". The analysis of sport performance provided by Hawkeye has greatly enhanced the spectator's knowledge and involvement. Here are various impacts of information technology in sports:

Tracking Performance

Sports trainers can measure and track performance in real time by using sensors placed on body. Real-time individual performance measurements for athletes can set a more precise and accurate baseline. Trainers can read live metrics during practice and decide when it's time to rest, stretch or train harder. Almost anything about the athlete can be measured, from breathing and heart rate, to hydration and temperature. Lasers and GPS have been incorporated into various aspects of the sports training world.

Prevention of injuries

Technology in sports training has greatly helped in the fact that injuries have been severely reduced and now can be identified much earlier. Tracking performance, perfecting movements and enhancing communication are not only benefits but they actually help create less injury-prone environments. When coaches and trainers can define individual practice for optimum results, they are preventing fatigue and self-created injuries. Advances in software has allowed athletes and trainers to determine optimal workouts and nutrition to improve performance, sleep habits to the type of shoes they wear so that athletes can push their bodies to the limit and better avoid injury. The invention of smart helmets and equipment is certainly game-changing when it comes to efforts to prevent brain injuries. These helmets are designed with sensors that can measure the force of impact and determine if it was enough to cause a concussion.

Better Communication

Many applications such as YouTube and Twitter have enhanced the process of communication during training. Workouts and game plays can be shared just as quickly through YouTube. Communication has been further enhanced by other applications such as My Fitness Pal, a personal digital health, diet and exercise journal that can be accessed on a smartphone or computer.

Good Field Conditions

Grounds crews have lobbied their owners for new, better fields like AstroTurf that are maintained meticulously. It looks like a carpet out there. These conditions make sports better for everyone involved, most specifically the athletes.

Fair Games

Technology has helped to the extent that drug testing has become more sophisticated, thereby eliminating much of the cheating that was hard to eradicate. Humidors, were created to counterbalance the thin air in several stadiums which is important in making sure that both teams have a fair chance.

Enhanced Athletic Accuracy

Technology helps athletes, both amateur and professional, find out what is wrong with a particular part of their game, and helps them fix it. It is a revolutionary part of the game that has become a key ingredient for success.

Better Equipment

The equipment used is just as important as the person using it. Tennis rackets and golf clubs have seen the biggest jump in technological developments, while there has been a significant influence in all areas of the games. Everything from shoes to dry fit shirts has changed. There has been a natural evolution that has been great for sports.

Eases decision making for Umpires / Referees

Instant replay and other high-tech aids to help referees make the right call. Basketball referees use replay systems to make sure players are shooting within the time allotted by the shot clock. In international cricket, the third umpire has been used, one sitting off the ground with access to TV replays of certain situations (such as disputed catches and boundaries) to advise the central umpires. The umpires out on the field are in communication via wireless technology with the other umpire. Replays could be used to decide off-side decisions, whether a ball passes over the goal line, and clarify penalty

decisions in football.

Detailed Information

Smart phone can help download applications that make following sports as easy as receiving text messages. ESPN mobile and other websites have made it simple to follow scores and read analysis anywhere. This has made even the most casual sports fan into a technology junkie.

Watching more and viewing better

MLBTV, NFL Sunday Ticket and NBA League Pass are all ways for the biggest sports fans, no matter where they live, to catch every game. This connects sports fans and makes us all much more educated. There are many simple things that we take for granted in our daily sports viewing world. One of these is the first down line in football, and the other being the score prominently displayed at the bottom of the television screen. Visually stunning video games have made it desirable to play often and always buy the newest version.

Better Coaching, Training and Scouting

The use of video camera has helped coaches a lot in improving the feed-back to players. Scouting talent has been based on guts, feelings and instincts. Now with technology scouts have an entire sheet of information on how fast an athlete can run, how high they can jump and how accurate their passing is.

Fantasy Sports

Fantasy sports are dorky, but it is a billion dollar a year industry. Fantasy sports brings people that do not have a lot of knowledge of the game into the system and teaches them the sport from the inside out. It has helped make the leagues bigger and more important.

Ticket Purchasing

Earlier people used to go to the game and not have tickets. They would walk up to the window or scalp a pair in the parking lot. Those days are over. Now tickets can be purchased online sitting at home. This revolutionized our ability to go to games and find the exact seat we want to sit in.

Hi-fi Stadiums

Hi-fi stadiums are made with technology with enormous booming sound systems make you feel like you are on another planet. It enhanced the game experience like never before. Highlights can be seen perfectly and nothing gets lost and every fan leaves happy whether the team wins or loses. It's a truly incredible experience that takes the phrase state of the art to a whole new level.

Better Understand of Game

Technology has done a great job at making it easier to understand what is going on in a game by highlighting the most important things going on. One way this has been done is through ESPN Axis, a revolutionary way of showing the intricacies of the game. It shows which players scored, why and who could have prevented it.

Conclusion

Technology is revolutionizing sports training by live-tracking performances, perfecting athletic movements, enhancing communication and virtually eliminating injuries. Technology in Sports has established scientific discipline, Research

activities, improve Learning and coaching, Bio-mechanical analysis and field research have evolved. As long as athletes continue to push themselves to the limits of human potential, there will be technology racing alongside them to ensure their safety and aide their performance. In future very soon the way computer with be applicable in sports with good quality and best results.

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