



Category: IT in Sports



HOW BENEFICIARY IS INFORMATION TECHNOLOGY TO THE SPORTS WORLD? - A CRITICAL STUDY

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ABSTRACT

Sporting events are as old as human mankind. People enjoy and love to participate in sporting events across the globe. It builds and promotes friendly, healthy and harmonious relations among social groups and among countries. Keeping this into consideration Olympic Games were started in Athens. But unfortunately due to two world wars and cold war Olympic Games were not conducted during the wartimes and during the cold war. Olympic Games are considered to be the biggest sporting extravagant event in the world and all countries will participate in this event. As years pass by competition, umpiring, equipments, health and fitness and technology changed. Professionalism cropped in. After the advancement of Information Technology sports world has changed drastically. This paper critically examines how Information Technology benefits in sports and how it has redefined the Sports in general and in specific about health and nutrition, equipments, umpiring and the sports persons in specific.

Keywords: Information Technology, athletes, sporting equipment's, health and nutrition, umpiring.

The world of sports has drastically changed across the globe during the last two decades. The modern Olympics event is the biggest International sporting event in which and around 200 countries will participate. Around 15,000 sports persons will participate in summer and Winter Olympics once in four years. Besides this World Athletic Championships will be held regularly once in four years and after 1991, and it has run biennially. In every event new world records are being set and there is a very tough competition. The training, fitness, health and nutrition, equipments, umpiring were redefined. This is possible only due to Information Technology revolution. In this Global Village, communication has taken new vistas. IT has become the engine that's driving all sectors of today's economy be trade, government, and education or indeed, sports.

Information Technology plays a major role in the world of sports. Sports were redefined to new heights around the world. The world of sport is continually changing over the years, and the use of technology is just one of those areas that have made an impact on many sports in the modern day. All sports reached to newer heights and sports also are no exception. This paper tries to study how Information Technology benefits the world of sports

Today athletes capitalize on the advances of Information Technology from engineering, material science, biomechanics, communication to maximize training and performance. And brainiacs develop technologies that are transforming every aspect of sport, including coaching, judging, even the design of sports arenas and spectator experience. Significance changes took place in sports technology in material science and design. Massachusetts Institute of Technology have contributed a lot in this field. These advances in Information Technology made everything possible in which everything will be tracked, monitored,

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optimized, refined and disseminated in ways that athletes and coaches can't possibly imagine. With the help of Information Technology it would essentially eliminate the guess work from officiating. Not only that, but the type of data we could receive before, during, and after every sports event and play would be nothing shy of amazing. ESPN launched the first ever 3 dimensional networks with the help of IT.

Many athletes are taking advantage of the latest and greatest trends in technology as well. With the onslaught of social media, there are also many technological advances taking place away from the field. We all know that athletes are using social sites like Twitter, Facebook to connect with fans and build their personal brand. iPhone applications like the Chad OchoCinco experience are earning athletes money from both point of sale and ad revenue; and, websites like fanwave.com allow athletes, coaches, and teams alike to capitalize on every tweet they send. There are numerous advantages of IT in sports discipline.

Benefits of IT in Umpiring:

Umpiring is becoming almost perfect with the development of Information Technology equipment which suits best for umpiring. Modern sporting technologies have also made competition judging easier and more accurate, and spectator interest and excitement is enhanced by broadcasting and in-stadium displays. If we take into consideration some sports IT with Sport Specific in Tennis, it is now standard at the major tennis tournaments for a line review system to be in place, with players given power to review contentious line calls. It is powered by the Hawk-Eye ball tracking system. The umpires out on the field are in communication via wireless technology with the other umpire. The third umpire is also asked to adjudicate on run out decisions, which he makes without consultation with the two central umpires. With the help of Hawk-eye technology with the help of computer and camera system which traces a ball's trajectory. Of late it is being used in international cricket and tennis, and in many other sports.

This is also helpful in Football, for the goal line to determine if the ball passes over the line or not. In Basketball, the NBA uses replay vision to review 'last touch' decisions and also to determine whether players release the ball before the shot clock expires. In Cricket, technology has been driven by advances in the TV coverage and in the decision referral system (DRS), such as hawk-eye and hot spot. Through Digital Imaging and Video technology and television to play (and replay) stunning moments, it is not possible to show us legends in the making. IT has, in turn, shaped sports and redefined umpiring.

Benefits of IT in Sports Equipment's:

Technologies such as CAD (Computer Aided Design) can play a major role in the improved and advanced in sporting equipments. CAD allows virtual design and testing techniques to be applied to all aspects of sports. It helps for producing new products to improve safety, comfort and effectiveness. 'Smart' technologies include devices used for exercise stress testing and cardiovascular assessment, human reaction time and frequency of movement meters, and jump and run. Participants' safety at all times has also been made possible through the development of certain sporting equipment, such as helmets and body protection which are used in boxing and ice hockey to prevent injuries.

Computational Fluid Dynamics a subfield of physics focuses on the movement of air, water or gasses called computational fluid dynamics is indispensable to the design of anything that moves- including cars, bicycles, helmets and swimsuits-even human athletes. Using 3-D body scanners, computers, visualization and fluid dynamics software engineers can analyze skin friction. Aerodynamic technology has become very helpful in the development of equipment and clothing for speed-based sports.

CAD offers an efficient means of considering and assessing new products and ideas, and is primarily used to improve safety, comfort and effectiveness of specialised sports equipment. Sporting equipment such as the composite tennis racket has been created in order to provide enhanced ball speed, and reduce the potential vibration that can lead to a condition known as tennis elbow which will damage to the small blood capillaries in the muscles and ligaments that surround the elbow joint. In other sporting equipment such as

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the golf club, the overall mass of the club has decreased which is believed to result in a greater achievable distance and possibly a more precise shot. This also enhances sports person performance.

Benefits of IT for Sports persons' fitness, health and nutrition:

If we look into the advantages of IT and benefits by the technological advances it is hard to believe for the sports persons also. Development in sporting technologies have created a variety of products aimed at improving and increasing athletic performance. Athletic health can be maintained and observed with these technologies. With these modern sporting technologies such as heart rate monitors, pedometers and body-fat monitors are very beneficial for the sports persons. A deeper knowledge of the human body and its potential has been recognised. Technologies such as motion capture analysis are also used to analyse athletic performance.

There are numerous software packages that are designed for fitness and nutrition professionals to organize data and produce reports. Team Beep Test is the most versatile and useful software for conducting and recording results of the bleep / beep test, with results recorded directly onto your computer.

Ingestible Computers-Heat exhaustion is the second-leading cause of death in athletes. Until now, core body temperature has been monitored through observation, but athletes can ignore signs of heat exhaustion and trainers may be too far away to make accurate observations. A "thermometer pill" may save lives.

Wearable Computers -"Smart" clothing that uses embedded microscopic sensors and wireless networks to monitor athletes' heart rate, body temperature, hydration and more. Applications extend far beyond the sports arena.

Conclusion

Across industries, the trend is toward mobile, rich and instant data. Sports are no exception. Mix radio frequency identification tags, global positioning system devices, remote cameras and broadband networks, and then synchronizes and displays. Information technology is infusing sports at all levels and now giving a totally new dimension for sports and sports persons. "The sports world is on the cusp of changing into a whole new paradigm because of information technologies," says 94 Fifty's CEO and founder, Mike Crowley.

It's almost impossible to try and imagine where technology will take us next and in sporting arena too. Will there one day be tiny live cameras and microphones inserted into cricket balls, basketballs, footballs, and baseballs that allow fans to get an even closer view of the action? Will we all one day be playing video games with holographic players on a life size field? Let's see the wonders of Information Technology in the sporting field.

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