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A survey study on the importance of information technology and its contribution in the field of sports and games

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Abstract
The field of physical education and sports can make a significant 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. Information technology play key role in the human being in particularly in field of sports and games, the use of technology in sports and games is growing rapidly. For instance, new devices are used for different reasons such as to help referees in decision-making and to quantify the athlete's performance during a game, thus helping the Coach to set the training program and the game strategy. It helps to avoid mistake in organization and administration of various sports and games at world level. Information technology in sports has established scientific discipline, Research activities, improve Learning and Coaching, BioMechanical analysis, and field research have evolved. The contribution of technology in sports and games are Cricket, Athletics, and Basketball. Here are five exciting technologies being used in the sports industry, Instant Replay, Sensor Tools, Timing System, RFID Chips, and Equipment Development.

Keywords: Athletics, basketball, cricket, information technology, physical education, sports and games

Introduction

Technology can be most broadly defines as the entities, both material and immaterial, created by the application of mental and physical effort to achieve some value. In the usage, technology refers to tools and machines that may be used to solve real world problems in sports and games. Technology has intrinsic in the development and advancement of sports; much like it has in other aspects of life. With significant advances in technology, players now receive competitive advantages from the use of certain sporting equipment, and many view this as anathema to the spirit of sport. Using latest trends of technology is making sports safer in a number of ways. For example, the evolution of smart helmets and other wearable tech allows for better monitoring of potentially traumatic injuries, which paves the way for more immediate and effective medical care.

Instant replay is an example of the remarkable technology being used in sports today. With this technology, officials are able to see exactly what happened, providing a second perspective on sports events. Instant replay is used in games such as cricket, American Football, Rugby, Soccer, and even in combat sports. Sensor tools are often used to analyze whether a goal is valid or not. It is often used in cases where the naked eye cannot truly tell if a ball went past the goal line. Different sports use varying sensor tools. For example, cricket's Hawk-Eye is also used to determine where the ball would have landed if it had not hit a player's foot. This establishes whether the ball was unfairly blocked from striking the wicket. On the other hand, tennis sensor tools use laser beams to determine whether the tennis ball went out of bounds or not. Sensor technologies help to accurately determine the position of the ball at a given time. Timing systems, nobody uses a stopwatch when timing a race anymore. This means that differences in reaction time no longer affect the precision and consistency of a racing even. In many races today, the starter pistol is linked to a clock. Once the pistol goes off, the clock immediately starts timing the race. On the other hand, swimming uses a touch pad placed at the finish lanes as well as wearable inertial sensors to determine performance. Many racing events also use laser beams and photographs to determine winners.

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The results of timing systems are often provided to the nearest thousand of a second. However, world and olympic records are only recorded to the nearest hundredth of a second. This technique was established to eliminate insignificant errors. RFID chips are often used to time individual contestants in an event. The devices use antennas that relay wireless signals. RFID chips are often used in long distance races to help broadcasters and viewers track the exact locations of contestants during a race. There are two types of chips used in races: Active and passive chips. Active chips have an in-built battery or power source and can determine the exact time a participant crosses a specific line. Passive chips can only be used with sensors placed in a mat because they do not have an in-built power source.

Equipment development in sports and games safety is a key factor; equipment manufacturers have developed devices to reduce injuries on athletes. In the 2010 season, special helmets were used in the National Football League after several players experienced concussion injuries. The helmets were designed to absorb shock caused by collisions and protect athletes from suffering head and neck injuries. Similar technology is being used for games such as auto racing and hockey to enhance the safety of participants. Technology has taken over today's modern world. Many professional and amateur sports bodies have embraced new technologies featuring certain gears and gadgets to protect athletes and make it easier to officiate the games.

Information and Communication Technology is a field that has a wide coverage. It extensively deals with communication technology and how it impacts on other fields of human endeavor. It is the fastest growing academic field of study and a viable source of livelihood. It is the convergence of telephone and computer networking through a single cabling system with ease of data storage, manipulation, management, and retrieval. It is concerned with database management, computer programming, and software development. Web designing, mobile application development, project management, security, networking analysis, media equipment, computer engineering, computer studies, the internet, intranet, internet protocol (IP), system software, application software, signal technology, base station management etc.

Information and Communication Technology as a Field of Study
Information technology inclusion in most high schools curriculum is relatively new. However, it has gain prominence as some institutions have made it a compulsory subject. This is as a result of the understanding that it cut across every facet of human endeavour most especially the education sector. More so, it is the fastest growing industry in the 21st century.
It is commonplace to hear e-learning, e-commerce, e-banking etc. It is, therefore incumbent on education curriculum developers to place ICT as a hub around which other disciplines revolve at least for the fact that it is a platform on which modern learning takes place. Needless to say that there is a paradigm shift with respect to popular opinion on how knowledge is acquired and dispensed.
Those who were hitherto conservative in this regard in the past seem to be winning the race ahead of those who merely believe and talk about it but with no evidence of commitment especially in the education sector. It is expected that in no distance future, textbooks may to a high extent be faced out in schools to be replaced with a soft copy accessible globally. This is not a news to the developed World as they are already

far ahead. So been ICT compliant is a necessary tool for any meaningful learning in this dispensation.
Information and Communication Technology as a field of study is a challenging one in the light of the foregoing. Unlike the old perception, it is not all comers affair without proper training and retraining. Although the demand for professionals is growing in this regard, the need to build a career in it through proper training in a well-defined curriculum to be undertaken in institutions of learning cannot be overemphasized.

Teaching Learning Process
The main and aim and object of all education is all-round development of individual's personality. To achieve this aim it is very essential for an educational institution or school to provide different activities to its students. Over the years, the educationists have realised to a great extent that the centre of all education is the child or the individual. This implies that the teaching-learning process in education has taken a broader meaning and scope. It is now absurd, if not foolish, to think that teaching is only, passing on the experiences from one generation to the other or that it is merely instruction i.e., do's and do not's of behaviour.
Recent knowledge in the matters of human behaviour has considerably revealed that neither a teacher teaches in isolation nor does a pupil learn in isolation and that the teaching, a process of reciprocal education between the teacher and the taught, is not restricted to the four walls of the school, rather it is very comprehensive and vast. It encompasses the idea that a teacher who does not learn himself, cannot teach at all. A candle that does not burn never lights others. Those who think that they have learnt and there is nothing more for them to learn, have really learnt nothing; they are like blind men grouping in the dark. We talk so much about the balanced personality of the child, the harmonious development of the individual etc., and yet we are quite far from understanding and emphasizing the real meaning of this phase.
Unfortunately, the teaching in schools and colleges is so much bookish and theoretical and formal that it is very difficult if not impossible to come out of this cobweb of undesirable obsession. How can a teacher spare time to understand child when he is yoked like a beast of burden, to books and books only. So teaching the books and just passing on bits of the information is lop-sided education. In fact no teacher can teach unless the child, the beneficiary, is ready to learn or receive. This clearly speaks of the law of readiness in psychology. If teaching is causing to learn, we must admit that teacher is the great source of help to the child who is to understand the nature of things around him.
Education based on bookish knowledge might start after a child is at least three to four years old, the motor skill education starts right from the time of one's birth; whether crawling, toddling, sitting, standing or running with jumpy, unstable steps, it is essentially a part of child behaviour. Later on, these activities form the basis of motor skills, which are utilised as the foundation stones of the complex skills in games and sports. Reading and writing may not be natural activities. Running, jumping, hitting, throwing etc., are basic natural qualities and when used as medium of education need a lot of combination with one another. So the physical education teacher utilises the basic patters of behaviour for the achievement of the aim and objectives of education.
Without physical education teacher's and that of the pupil's

involvement in the activities, education cannot take place on the play field, in the gymnasium and in the swimming pool. Moreover, movement education requires the use of visual cues to perceive an activity as a whole and the sufficient practice to master that activity. Conditioning or training of certain reflexes is another requirement for mastering some of the fundamental skills. Meaningful practice is the basis of learning in physical education.

Learning process
Human child goes on adding something to his behaviour through experience right from after his birth. In simple term we might say that he is learning something. The native equipment of learning was already present with the child at birth but now that he has been acquiring such attitudes, skills, habits and mode of walking, talking, thinking etc., he is trying to become the real member of the human society.

This acquisition of modes of behaviour raises him from the state of animal hood to that of human hood. Because of the highly complex nervous system, the human child has been considered the most educable being on the Earth. In fact, learning is the most comprehensive term encompassing the unhindered process of modification of behaviour through experience which starts at birth and comes to end at death. Maturation and learning go hand in hand because various traits of behaviour appear at various age-levels and many complex skills requires a certain level of maturation. If an individual reacts to a stimulus or a group of stimuli in a different way than he reached last time, we might conclude that he has learnt something.

In the field of physical education, greatest stress is laid on the acquisition and mastering of the motor skills, leading to the learning of very complex skills of games and sports. The end-products of movement education are the health, mental development, social soundness and the skills to utilize the leisure hours in worthwhile ways. In fact, motor skill education is the means through which the mental upliftment and social soundness are ensured. Proper motor skill learning and its practice lead to such behavioural patterns which assist an individual to have all round fitness, economical use of his energies and abilities for the optimal growth and development both physical and mental.

In physical education, the theories and laws of learning propounded by psychologists and physiologists have been quoted extensively and intensively to illustrate the nature of learning. Certain facts which may be interesting to the teacher of physical education are enumerated below:-
1. Learning is the result of the interaction between human organism and the environment physical and social.
2. All activity in physical education is a doing phenomenon and it is essential that emphasis should be put on practice. Repetition and drilling lead to auto matization. Only pure insight cannot bring out the desired effect.
3. Learning is the acquisition of new responses and it inevitably results in progressive changes in the behaviour of the individual.
4. Learning is an active process and without the involvement of the body and mind - the whole man - new responses cannot be acquired nor can the old and undesirable responses be weakened.
5. A child would feel immense difficulty in acquiring a particular response unless he has perceived the act fully and that the concept about the action has engrained itself on his mind.
6. Learning does not take place in vacuum. It takes place

under the circumstances which are favourable and hence surroundings, where there is possibility of the individual to learn some activity, must be reasonably good if not ideal.
7. Learning is faster where the situation are more life-like because such situations induce the child to learn those responses which are meaningful and useful to him in his life.
8. Learning is so vastly affected by the hereditary qualities and traits that it has been considered as essentially an individual process.

Benefits of information technology in physical education
Technology, in general, has positively reshaped physical education classes with apps, online videos, personal computer, laptop, Zoom app, Google Meets, and Google class room, using these online aides instructors create a more varied and dynamic classroom in modernization of world using technology to teach physical health allows educators to create more activities and show how important their goals are and how to achieve their goals in a stipulated time and with proper planning and better utilization of technology in physical education. Pedometers are probably one of the first examples that come to mind when discussing technology and physical activity. Heart rate monitors are used to measure a student's pulse while engaged in activities. The goal of physical education is to develop physically literate individuals who have the knowledge, skills, and confidence to enjoy a lifetime of healthful physical activity.

Benefits of information technology contribution in sports and games
Increase accuracy in time measurements of sport performance. Enabling referees, umpires, and sport officials to make better decisions on rule infringements. Improvements in the design of sport equipment and apparel. Providing spectators with better viewing of sport performance. The game changing benefits of technology in sports and games are weather control, improved field conditions, better viewing experience, better coaching and scouting, modernized training, and make the game fair.

The future technology of sport and games, technological innovation is a major driving force behind change in usage of latest trends in for better accuracy and fair play in sports and games. Technology is helping to build better sportsmen and women while keeping athletes safer in the field and enhancing the fan experience to improve decision-making and entertainment value technology has entirely revolutionized the manner in which we are able to design apparel and equipment. From shoes and uniforms to gloves, helmets, and sporting equipment is now more high-tech and high functioning.

Cricket
Is having the best of the technology on the field and off the field. By which we can take an accurate decision with the help of using different aides such as cameras different situations to take a decision about the game with a very fair decision by which fair game can be continued. Hawk Eye, a computer system first used in 2001 for showing the path of the cricket ball. Snick-o-Meter, a very sensitive micro phone located in one of the stumps, which pick up the sound when ball nicks the bat.

Athletics

The increasingly high-tech tools used computer simulations, advanced video cameras, wind tunnels, and sophisticated mathematical and physics models that enable athletes to break down their physics models that enable athletes to break down their physical motions into their component parts to look for flaws or ways to improve.

Basketball

The NBA uses replay vision to review "last touch" decisions players release the ball before the shot clock expires. Use of technology in basketball helps the referees to judge better helps the coaches to train better and finally helps the players to review and perform better in future matches.

Conclusion

The contribution of information technology plays an prominent role in for the development of physical education and it is also very essential to promote the friendly and fair play in sports and games by which we can see many changes and developments takes place to improve the standard of sports and games in today's millennium world teaching methodology and usage of proper technology to improve the standard of sportsmanship and quality of output of a good coach using scouting for the future development. Hence, my study says that The contribution of Information Technology is a rapidly growing and adopting new trends to change the future of world sports and games.

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