International Journal of Physiology, Nutrition and Physical Education

Dr. Sanjay Choudhary
Assistant Professor, Department of Physical Education, Satyawati College, University of Delhi, Phase III, Ashok Vihar, Delhi, India

Effects of information and communication technology on physical education and sports

Dr. Sanjay Choudhary

Abstract
Science has made man civilized in every sphere of life. The great achievement and advancements made of science have shrunk the world and have provided great comforts and conveniences to mankind and increased the life expectancy.

In present world, media influences every activities and sport is no exception. In order to make use of media for popularizing various sports activities and motivating young masses and children to participate more and more in various games and sports, a systematic and well planned strategy is required.

Keywords: Information, communication, technology, physical education, sports

Introduction
Science has made man civilized in every sphere of life. The great achievement and advancements made of science have shrunk the world and have provided great comforts and conveniences to mankind and increased the life expectancy. It is because of science that many dangerous diseases have been cured and saving thousands of innocent life from the jaw of mouth. The invention of electricity and telephone helps to connect the people from far-off places. The transport and communication system give men comfortable journey and saves the precious time. Mass media give the people information, recreation and satisfaction. The man had conquered the earth with the help of science and wanted to conquer the space also. Scientific progress has played a crucial role in enhancing human civilization across all aspects of life. The remarkable achievements and advancements in science have effectively minimized the world, offering tremendous comfort and convenience to humanity while extending life expectancy. Science has been instrumental in the eradication of numerous perilous diseases, thereby safeguarding countless innocent lives. Innovations such as electricity and the telephone have facilitated connections between individuals residing in distant locations. Transportation and communication systems have not only made travel more comfortable but have also saved valuable time. Mass media channels provide people with information, entertainment, and fulfillment. With the aid of science, humanity has conquered the earth and aspires to explore outer space.

Contribution of Science
With the introduction of digital technology, all aspects of human life [1] appear to have been influenced and field of physical education also has undergone rapid changes. UNESCO defines IT as "Scientific, technological and engineering disciplines and the management techniques used in information handling and processing, their application, computers and their interaction with men and machines, and associated social, economical and cultural matter. The revolution in science and technology increased the standard of sports. Sportsmen become professionals and get recreation, mental satisfaction and achieve high quality of fitness because of advancements of science and technology in this field. The Sportsperson achieve world-class performance due to scientific training. The use of fiber glass in jumping events, protective measures in games like Cricket, hockey, boxing, softball and football etc, synthetic track, scientific and biomechanical principles application in the construction of various field and track events and manufacturing sports goods are all role of science in the field of sports.

Corresponding Author:
Dr. Sanjay Choudhary
Assistant Professor, Department of Physical Education, Satyawati College, University of Delhi, Phase III, Ashok Vihar, Delhi, India

cience in the field of sports [2].

Information technology and media in sports

In present world, media influences every activities and sport is no exception. In order to make use of media for popularizing various sports activities and motivating young masses and children to participate more and more in various games and sports, a systematic and well planned strategy is required. With this strategy, we may increase number of viewers of various sports and games being telecast, live or recorded, and number of persons having upto- date information of the different aspects of games and sports. Such strategy provides information about various games and sports institutes, coaching camps, clubs and association of individual games devoted to prepare good player, rules of games, coaching and such activities which encourage participation of young people and children in various games. Media should also highlight success stories of a good player by not glamorizing them but by introducing the hard task they put in for achieving their targets. As far as sports and games are concerned, the media, specially the electronic media, should act as a teacher and a fellow partner [3].

Athletic Meet Management Software

Organization and management of tournament is an integral part of games and sports. Success of any tournament depends upon how effectively and efficiently it has been organized. Athletic competitions, in particular require huge organizational structure. To make the task easy, prompt and error free, use of information technology and computer is indispensable. Computers can play remarkable role in managing an athletics meet. During a track meet, time is critical. Effort spent handwriting entry forms, waiting on event results and determining points totals wastes time and results in slower track meets. Manually recording and summarizing results requires the efforts of several people [4].

Coaching

- One can find out leading sports clubs, organizations and institutions of any part of globe.
- One can have latest techniques and take a printout or download videos of soft ware itself.
- One can identify coaches/ experts in their respective fields and he can contact for more information on a particular problems.
- For changes in any rules, one can directly go to respective federation and clarify it.

World Wide Class Room

Now onwards we do not have to sit in a class room which is sometimes most boring and monotonous. Through this latest technology, we can sit at home and we choose the subject and the resource person from any part of the Globe. You can ask, listen, and interact as you do in your class room.

On Line Jobs

One can search different web sites, which provide job information and can identify your choice of jobs according to your area of specialization. The Internet will definitely play a very important role in physical education and sports.
One can apply thorough online and one can fix interview by video conferencing. Its make the things and life very comfortable useful and easiest way [5].

Role of computer in research with reference to physical education and sports

Application of computer in research in physical education can be done by using some programs as illustration and explore the potential for computing in research in this field. This includes action research as well as experimental research, literature search data analysis, report writing and interfacing with a mainframe computer in order to use more powerful statistics packages. In teaching, doing research, analyzing results, writing reports, writing editing and reviewing articles for journals and books, creating various tests, they may contribute a lot to the profession. A personal computer has its excellent provision of instant feedback. Computers play a crucial role in research within the field of physical education, offering a multitude of tools and capabilities to enhance various aspects of scholarly inquiry. Specialized programs are employed to demonstrate and harness the potential of computing, facilitating tasks such as action research, experimental studies, literature searches, data analysis, and report writing. Additionally, interfacing with mainframe computers enables researchers to utilize more sophisticated statistical packages, thereby enhancing the depth and accuracy of their analyses. In the realm of teaching, computers contribute significantly to conducting research, analyzing results, crafting reports, as well as editing and reviewing scholarly articles for publication in journals and books. Furthermore, computers aid in the creation of various tests, providing educators with valuable tools for assessing student learning and progress. The instant feedback offered by personal computers further boosts efficiency and effectiveness in both research and educational endeavors within the domain of physical education. Computers have become indispensable in modern research, profoundly influencing various fields, including physical education and sports. The integration of computer technology in these domains has revolutionized the way research is conducted, data is analyzed, and information is disseminated. This essay explores the multifaceted role of computers in research, focusing on their impact on physical education and sports [6].

Data Collection and Analysis

One of the primary roles of computers in research is in data collection and analysis. In physical education and sports, researchers gather vast amounts of data from different sources, such as surveys, experiments, and observational studies. Computers facilitate the efficient collection of this data through various software applications and digital tools. For instance, wearable devices and sensors can track athletes' performance metrics like speed, heart rate, and movement patterns, feeding real-time data into computer systems for analysis.
Advanced statistical software, such as SPSS, R, and MATLAB, enables researchers to perform complex analyses on the collected data. These tools can handle large datasets, perform intricate calculations, and generate meaningful insights that would be time-consuming and error-prone if done manually. This capability is crucial in physical education and sports research, where precise data analysis can lead to improved training techniques, injury prevention strategies, and performance enhancement [7].

Simulation and Modeling

Computers also play a significant role in simulation and modeling in sports research. Through computational modeling, researchers can create virtual environments to study various scenarios and predict outcomes. For example,

biomechanical models can simulate the human body's movements, helping researchers understand the mechanics of injuries and develop better protective gear and training methods.

Simulation software can recreate sports environments to analyze strategies and tactics. Coaches and athletes use these simulations to test different approaches in a virtual setting before applying them in real-world situations. This method is cost-effective and reduces the risk associated with trial-and-error in actual practice.

Literature Review and Information Retrieval
The process of conducting a literature review has been greatly simplified by computers. Researchers in physical education and sports can access a vast array of academic journals, articles, and databases online. Digital libraries and search engines like PubMed, Google Scholar, and JSTOR provide quick and easy access to relevant literature, saving time and effort [8].

Computers enable researchers to organize and manage their references efficiently using citation management software like EndNote and Zotero. These tools help in storing, organizing, and citing sources accurately, ensuring that researchers maintain a comprehensive and well-organized bibliography.

Communication and Collaboration
Computers facilitate communication and collaboration among researchers, which is vital in advancing knowledge in physical education and sports. Email, video conferencing, and collaborative platforms like Slack and Microsoft Teams allow researchers to connect with colleagues worldwide, share ideas, and work on joint projects seamlessly.

Online platforms also enable researchers to participate in webinars, virtual conferences, and workshops, staying updated with the latest developments in their field. This global connectivity fosters the exchange of knowledge and promotes interdisciplinary research, leading to innovative solutions and advancements [9].

Publication and Dissemination
The role of computers extends to the publication and dissemination of research findings. Researchers use word processing software to write and format their papers, ensuring they meet the required standards for publication. Moreover, digital publishing platforms and open-access journals have made it easier for researchers to publish their work and reach a wider audience.

Social media and academic networking sites like Research Gate and Academia.edu provide additional channels for researchers to share their findings, engage with the academic community, and gain visibility. This increased accessibility ensures that valuable research in physical education and sports reaches practitioners, educators, and policymakers who can implement the findings to improve practices and outcomes [10].

Conclusion
The revolution in information technology and communication technology takes physical education and sports in to new direction. Physical education and sports has become popular & hold major place in society. Physical education and sports make the people aware about physical health education, games & sports. And the finally combination of both information technology & physical education and sports changes the social life, increase the economy of the country, establish the relation of country to country and increase the job chances also.

Reference
1. Ahsen ME, Ayvaci MUS, Raghunathan S. When algorithmic predictions use human-generated data: a bias-aware classification algorithm for breast cancer diagnosis. Information Systems Research. 2019;30(1):97-116.
2. Barba P. Machine Learning (ML) for Natural Language Processing (NLP), 2020. Retrieved from https://www.lexalytics.com/lexablog/machine-learning-natural-language-processing.
3. Dastin. Amazon scraps secret AI recruiting tool that showed bias against women, 2018. Retrieved from https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G.
4. Favaretto M, De Clercq E, Elger BS. Big data and discrimination: perils, promises and solutions. A systematic review. Journal of Big Data. 2019;6(1):12-27.
5. Kalberg S. Max Weber's types of rationality: Cornerstones for the analysis of rationalization processes in history. American journal of sociology. 1980;85(5):1145-1179.
6. Mikolov T, Chen K, Corrado G, *et al*. Efficient estimation of word representations in vector space, 2013. https://arxiv.org/abs/1301.3781.
7. Samuel J, Kashyap R, Samuel Y, et al. Adaptive cognitive fit: Artificial intelligence augmented management of information facets and representations. International journal of information management. 2022;65:102505.
8. Stahl BC. Responsible innovation ecosystems: ethical implications of the application of the ecosystem concept to artificial intelligence. International Journal of Information Management. 2022;62:102441.
9. Tafjord O, Mishra BD, Clark P. Proofwriter: generating implications, proofs, and abductive statements over natural language, 2020. https://arxiv.org/abs/2012.
10. Zhang P, Soergel D, Yang FJ, *et al*. Towards a comprehensive model of the cognitive process and mechanisms of individual sense-making. Journal of the Association for Information Science and Technology. 2014;65(9):1733-1756.