

**USE OF INFORMATION TECHNOLOGY IN PHYSICAL
EDUCATION AND SPORT**

Vats Kavita¹

Dr. J P Sharma²

Rakesh Kumar Tiwari³

ABSTRACT:

The emergence and use of technology in this century is a significant development affecting the teaching and learning of physical education and sport. Education is faced with a new dimension dominated by e-learning. For Physical educators, this trend is also reflected by the necessity to improve their teaching and methodology. The modern alternative is the use of technology meant to increase accessibility to information and teaching process effectiveness. This paper highlights the use of modern technology in physical education and sports. The use of technology for teaching and learning has been summarized, in the following aspects: the needs for technology, computer-motion analysis, internet, video analysis/conferencing, chatting and challenges. It is concluded that technology use enormously improve teaching and learning of physical education and sport.

Keywords:

Physical Education (P.E.), Teaching and learning.

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1. Ph.D Scholar, D.P.E.S.S.,University of Delhi
 2. Associate Professor,IGIPESS(D.U)
 3. Ph.D Scholar, D.P.E.S.S.,University of Delhi

Introduction

The rapid development of technology over the past two decades has provided many new and creative ways for educators to present instructional materials effectively. Until recently, those advancements have focused on desktop technology, which limited their use in physical education.

The National Association for Sport and Physical Education (NASPE) believes that technology can be an effective tool for supplementing instruction when used appropriately. Therefore, the primary purpose of this document, developed by a task force of NASPE's Physical Education Steering Committee, is to provide guidelines for using technology to help students achieve the Standards for Physical Education. Teachers now face a generation of students who have never known life without a computer, video game console, cellular phone or Internet access; and that is changing the scope of education dramatically. Technology tools can provide objective data on activity levels and creative methods for individuals to engage in physical activity. Studies have indicated that active gaming can promote higher levels of energy expenditure compared to seated video games, as well as increasing heart rate and oxygen consumption. National School Health Policies and Programs Study indicated that 42% of physical education teachers receive staff-development training on using physical activity monitoring devices; 37% on using technology overall.

Also, between 17% and 49% of the teachers studied received additional training for administering fitness tests, assessing student performance, and developing portfolios and individual physical activity plans: areas in which technology can supplement instruction and help in managing data. Those statistics in addition to the recent release of updated National Educational Technology Standards for Teachers underscore the importance of developing guidelines for proper technology use in physical education.

Technology such as projection systems, smart boards and wireless transmission (Wi-Fi and Bluetooth) allow for the display and transfer of information far beyond the traditional chalkboard. Teachers can enhance physical education instruction by using those tools, provided that set-up and/or implementation don't reduce student activity time.

Planning and preparing effectively in advance of lesson presentation is necessary to ensure that these valuable tools become an integrated part of the lesson with minimal transition time and manage Physical educators must consider which types of physical activity monitoring devices are suitable for students' developmental levels. Using technology to monitor children's heart rate and comparing the data to adult ratios, for example, or having children use pieces of equipment designed for adults can provide invalid information. Teachers should use these tools to enhance instruction only if the data provided are accurate for the grade level to which they are to Using technology for technology's sake might not provide relevant instruction experiences for students, since technology is not the curriculum but rather a tool or device to supplement When

implementing technology, teachers must continue to adhere to the best practice of maximizing participation and success.

All students, not only a few should benefit from technology. If not enough heart rate monitors, pedometers, exergames and/or computers are available for all students to use them simultaneously, teachers should implement station or circuit formats. Instruct Desktop programs such as Microsoft Excel, and Web and CD-ROM software can allow for the collection of data using hand-held computers, with the ability to transfer results to desktop systems quickly. Those technologies can help physical educators determine assessment performance quickly and easily through calculation formulas, and allows them to create and customize individualized fitness plans, as well as offering many other uses.

Motion-analysis software and digital video make student performance evaluation easier, thereby enhancing teacher, peer and individual assessment.

Many pieces of technology, such as heart rate monitors, pedometers and active games, have the ability to track performance, allowing students to document and monitor their progress. However, physical educators must consider the reliability and validity of such devices when selecting the technologies to use. Students also should be well-versed in using the devices, to prevent an increase in management time and a reduction in student activity levels.

Implementing technology appropriately into physical education can enhance teaching and learning and contribute to providing a quality physical education program. Technology can aid in content presentation and can help students becoming physically educated individuals who have the knowledge, skills and confidence to enjoy a lifetime of physical activity

Practical use of technology in the teaching and learning of physical education opines that the use of technology in the learning process of physical education may not be a goal of its own but it is a tool with which to reach objectives. The following are the uses of technology in learning physical education.

Computer

Computer is an electronic devise that has the capacity to store, retrieve and process both qualitative and Quantitative information fast and accurately. Computers-we used to produce documents, lesson plans, to convert scores management. It also involves video units PC heart rate monitor, remedy heart rate monitor and educational software. Computer also aid learning experiences when they are used for motion analysis. This involves using computer to examine the way learner moves and then determine ways in which this movement can be improved in a practical physical education class. This devise stresses how human motor abilities can be perfected and controlled. For example if you ask a softball pitcher how he/she throws a fastball, they may not be able to tell you. Motion analysis visually shows the rudiments and sequence of actions involved in arm, leg movements to enhance performance of skills. Video tape images are also transferred into computers. Special application software analyzes the images. It measures the exact angle at which the player s holding his or

her arms and legs. The speed and efficiency of each movement is measured. When using images, the teachers, advantage consist in his possibility of making corrections as soon as pupils exercise is completed, which him to quickly progress and improves his learning. Other computer software such as the programmes Professional Evolution Soccer (PES) is used to play games. Learners play, identify appreciate the skills, rules and evaluate officiating of the game.

Internet

Internet is a global system of interconnected computer networks that promotes free flow of information by packet switching using the standardized internet protocol suit. It is a network that consist of millions of private and public academic business and government network of local global scope that are linked by copper wires, fiber-optic cables and wireless connections technologies. The internet provides various information resources and services which can be used by physical educators for teaching and learning. They include electronic mail, online chat, electronic transactions, and bulletin board, file transfer and file sharing, online newspapers, arid journals, online gaming and inter linked hype text documents and other resources of the worldwide web. Physical education teachers share experiences with other professionals via the internet which are integrated into teaching lessons. Students explore new knowledge as they surf the web for assignments, chat with fellow students and play games online. The internet can be used to maximize the effectiveness their learning process of physical education. Students have the possibility to email their questions or comments concerning their questions concerning issues in health and audition fitness, physical education programmes, courses to their physical education teachers and academic staff. Internet is used access a machining list of professionals in the same area of study. A user sends an email message to like mailing list which is broadcast to other users for accessing current information. Examples are the sports philosophy and Questia lists.

Chat through the Internet

Interactive chat improves communication with experts and colleagues and community members. Chat allows fellow physical educators to simultaneously communicate publicly on your website, internet, extranet. Team members, class and course mates from different locations can easily conduct on line meetings. Colleagues gather together to intimate groups and discuss issues related to physical educations. They could gather in large online events to interact with expert's celebrities, instructors, coaches and teachers can assess chat groups on particular academic issues in physical education and sports.

Video Conferencing

It allows two or more people at different locations to see and hear each other at the sometime. The communication technology offers new possibilities for sport colleges,

libraries including formal instruction to share strategies for coaching sport skills. A very attractive multimedia tool determining students' enthusiastic participation in physical education lessons is represented by the audio aids.

Direct or indirect aids such as drums, piano respectively. Radio cassette recorder equipped with CD/DVD can be used to reline the movement pace and get students familiarized, with some sonorous competitive conditions.

The digital camera use in the instructive educative process allows a quick verification of students' placement and posture, being at the same time a very good mean to stress body segment positions when performing sonic motor elements. These are the potentials used to enhance teaching and learning of physical education.

Challenges of technology using Physical Education

Although technology has attractive potentials for improving teaching of physical education, it also has challenges especially in developing nations of the world. Physical educations are not technology compliant. The reports indicate that many do not still appreciate the use of technology in teaching and learning and complaint. Nowadays, it is uncommon to see physical education computers in classroom and on sport playground. These could be either ignorance of technology use or affordability of technology devices.

Similarly most educational institution in Nigeria is not providing enough funds for equipping schools with technology devices. Technology devices are becoming more and more mobile and affordable and this could eventually turn into a reality making the study of human movement in physical education a reality. Other challenges include the availability of regular power supply, staff training and development on technology softwares; assessing softwares and packages for teachers. Other challenges include crashing of computers corruption of files.

CONCLUSION

Physical education essentially requires the performing physical activity. This is associated with the development of motor skill. Physical education within the school system requires time, facility space and interactive lesson plans. Technology provides access to information, compresses information, motivate learners, and connect learners to teachers and teacher to the colleagues. There are nowadays many available technological innovations that could be inserted into the physical education lesson. The visual physical education lesson is essentially based on the connected learning environment which uses technology that are networked in structure. Physical education should avail themselves of these technology opportunities to make their lesson more real and dynamic.

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