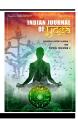**Indian Journal of Yoga Exercise & Sport Science and Physical Education**

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Discussion

ENHANCEMENT TEACHING AND LEARNING PROCESS THROUGH THE APPLICATION OF ICT IN PHYSICAL EDUCATION

[1]Dr. Nasim Ahmed & [2]Dr. Amlan Sarkar

[1]*Assistant Professor and Head, Department of Physical Education, Raja Narendra Lal Khan Women's College (Autonomous), Gope Palace, Vidyasagar University Rd, Paschim Medinipur-721102, West Bengal, India.*
[2]*Assistant Professor and Head, Department of Physical Education, Udaynarayanpur Madhabilata Mahavidyalaya (University of Calcutta), Udaynarayanpur (Jangalpara), Howrah-711226, West Bengal, India.*

A R T I C L E   I N F O

A B S T R A C T

In the modern world, ICT (information and communication technology) application in education has expanded quickly. Classes are becoming more engaging because to the use of computers in education, projectors, smart boards, and the internet. Research projects, assessments, statistical analysis, the collection of course materials, and communication with teachers and students all make use of computer and Internet technology. An essential component of the educational system is the teacher. Without a better instructor, it is impossible to conceive a better learning environment. Our time is referred to as the "knowledge explosion age." The field of knowledge is growing quickly. A teacher needs to keep up with changes in order to educate more effectively. ICT is really helpful in this. Systems of education have had a significant impact on the growth of contemporary economics. Tools and services that manage and communicate information are referred to as ICT, or information and communications technology. ICT makes it possible for students to learn at their own pace using a variety of instruments, including computers and assignments, and as a result, the teaching and learning process has improved. There are many young people with a keen interest in technology in today's classrooms. Institutions can improve learning chances for students by combining audio-visual learning with the conventional blackboard. Other than the fact that physical education is already entwined with the allure of contemporary scientific technology, physical education is still taught using an antiquated and conventional technique. In order to investigate the topic for the benefit of the students in the area of globalization of education, a transitional change is definitely needed. The purpose of this essay was to explore the drawbacks, value, and advantages of information and communication technology in the classroom. From the overall results, it can be inferred that using a computer for teaching and learning involves the use of technology. We also make sure that ICT has a beneficial impact on students' learning. This essay analyses the state of physical education in colleges today, demonstrates its shortcomings, and then elaborates on the benefits of information technology in the delivery of physical education in universities.

Email : nasimvb@gmail.com / amlan.sarkar80@gmail.com

Introduction

In order to investigate the topic for the benefit of the students in the area of globalization of education, a transitional change is definitely needed. The purpose of this essay was to explore the drawbacks, value, and advantages of information and communication technology in the classroom. From the overall results, it can be inferred that using a computer for teaching and learning involves the use of technology. We also make sure that ICT has a beneficial impact on students' learning. This essay analyzes the state of physical education in colleges today, demonstrates its shortcomings, and then elaborates on the benefits of information technology in the delivery of physical education in universities. Modern technology has changed how learning is taught and learned since it provides many tools that may be employed in the classroom to greatly improve learning. By measuring students' learning in terms of their performance in the classroom, technology can assist teachers. ICT is increasingly frequently used in assessments where digital tools are used to help create assessment activities for pupils. It facilitates the execution of evaluation tasks. The ICT has the capacity to provide pupils with grades or feedback. In order to support teachers, students, and other stakeholders, it is critical for schools to improve their commitment to improving assessment practices (Marina, 2015). Teachers can serve as catalysts for the ICT-based integration of technology, according to Watts-Taffe's 2003 research. Creating an ICT class will be simpler for instructors if institutes provide them with the support, resources, and technological assistance they need. Learning can take place anytime, anywhere, and through ICT. For instance, online course materials may be accessed every day of the week, 24 hours a day. Students and teachers can communicate simultaneously and easily in teleconferencing courses. (2011) Castro Sanchez and Aleman. ICT can be used wherever and wherever it is required. The effectiveness of information and communication technology in bringing low-cost services to students' doors. Only with the aid of ICT will higher education be made more affordable for all student classes across the nation. As a result, students will have the right to higher education and the ability to use their talents and knowledge to further human welfare and growth. Additionally, it fosters the development of mature learners who are better able to focus on both theoretical and practical tasks. It not only enables users to get knowledge, but it also facilitates interaction and communication with others. Information and communication technology that enables teachers to conduct lessons in a clear, engaging manner that students can readily comprehend through images and animations. Technology is primarily used to give teachers and students more alternatives for communicating, learning, teaching, researching, and sharing information. In this essay, we'll discuss how ICT can be used in the classroom to enhance students' learning in physical education.

Objective of the study

The object of this study is to find out use of ICT, the most important technological of today.

Methodology

Descriptive method was used to investigate the effects through literature searching.

Benefits of using ICT in Teaching and Learning Uses of ICT in Teaching

With the use of information and communication technologies, teachers can develop a variety of skills. He is able to complete a number of certification programs offered by renowned worldwide educational institutions. These programs aid in improving his ability to instruct and in making his subject matter simple, affordable, and easier to comprehend. Additionally, Serhan (2009) and Chai, Koh, and Tsai (2010) looked into pre-service teachers' perceptions of the use of technology and the efficacy of ICT programs. The findings of the two studies show that pre-service teachers understood the value of incorporating technology into their curricula and thought that using ICT would improve student learning after taking the courses. According to Lowther et al. (2008), developing high-quality teaching and learning with ICT requires three key criteria. The use of ICT can enhance the quality of teaching and learning by combining student autonomy, aptitude, and creativity. We are aware that conducting research is challenging, with data gathering being the most challenging step. Online data collecting and surveys have gotten much easier because to the usage of information and communication technologies. A instructor can quickly obtain responses. ICT is also useful for data analysis, researching relevant literature, and publishing one's results. A teacher can learn contemporary teaching approaches with the aid of ICT. He can collaborate with the kids on a range of projects and tasks. In order to increase engagement with teachers and pupils, he also benefits from information and communication technologies. When and where ever the pupils wish, he can readily reach them.

Uses of ICT in Learning:

According to Chai, Koh, and Tsai (2010), ICT helps students gain new insights in their subject areas of study.

ICT also aids in his problem-solving counseling for students. He is better able to inform pupils about online resources such as e-books, e-journals, e-magazines, and social media sites like LinkedIn thanks to ICT. According to McMahon's study from 2009, there are statistically significant associations between using ICT while learning and developing critical thinking abilities. The internet is incredibly important for schooling. Without a doubt, everyone chooses Google for their questions, issues, or doubts in the present era. People frequently use well-known search engines like Google, Yahoo, and others because they provide quick and easy access to a great amount of information. Internet access is necessary for students to look out information on exams, curriculum, results, etc. For students, the importance of the internet in education is that it makes it simpler for them to conduct research. In a research done in 2010, Muniandy discovered that students primarily utilized the Internet to download notes, communicate with friends, and look for books in the library. According to the study's findings, 94% of pupils downloaded material effectivelyAccording to Salend (2009), the Internet serves a variety of purposes, thus it's necessary to think about how much higher education students utilize it for academic work. It is clear that the Internet is a wealth of knowledge and that everything can be found there fast and effortlessly. Students may access any kind of material whenever and wherever they want thanks to the asynchronous education that the internet offers. Students' horizons are expanded by this. According to Glazewski and Hew (2008), students use ICT as a tool to learn about new subjects, work out problems, and offer solutions to those problems. ICT facilitates the acquisition of knowledge and aids in the comprehension of academic topics while involving students in ICT applications.

Uses of ICT in Evaluation
Education systems place a lot of importance on evaluation. ICT aids a teacher's evaluation process as well. He might be conversant with the new tools and procedures for evaluation with the aid of ICT. With the aid of the tools and procedures, he may quickly assess each and every area of the development of the children. In order to measure learning effectively and efficiently, technology is essential. There are many new tools available to educators thanks to modern technology that can be employed in the classroom. Technology can assist teachers in evaluating both the learning and classroom performance of their pupils. Utilizing ICT for assessment entails using electronic tools to facilitate the creation, distribution, archiving, or reporting of student assessment assignments, responses, grades, or feedback. According

to Geoffrey Crisp (2011) in the Teacher's Handbook on e-Assessment, the ICT-based assessment can be conducted using a variety of devices, including conventional desktop computers or laptops, mobile communication devices like smart phones, digital devices like iPads, or electronic gaming consoles. Computers can be used by teachers to create their assessment assignments, distribute them to the appropriate students, record the results, and give comments and grades to those students. Computers can also be used to analyze student responses and give feedback on the task's ability to differentiate between students of different abilities as well as to give feedback to the student on the quality and relevancy of their response. In the realm of education, the significant role that computer and internet technology plays as a medium of communication is extremely crucial. A student can readily communicate with teachers, other students, or the most technologically advanced library in the world with the aid of a computer. As a result, he is receiving the anticipated news and information while at home. Not all students are bright academically. Some people have more courage than others, and vice versa. Many pupils in the class have inferiority complexes and feel embarrassed to ask questions of the teacher. Sending a message rather than calling the teacher is considerably more convenient. Teachers can utilize these wireless clickers for assessments and quizzes, according to Salend (2009). Results are immediately available to the teacher when each student has finished answering the questions. Last but not least, these clickers enable professors to covertly answer queries that children discreetly pose. Both teachers and students gain from this, particularly the timid and fearful ones. so that instructors can help students access a range of knowledge sources. Through online study, students can ask the necessary questions with ease. something they are reluctant to accomplish in classroom settings.

Current Situation of Physical Education in General

Degree Colleges

Low teaching level: Although information technology is already used in a wide variety of fields, it is not widely used in education, particularly in physical education. The lack of instructors' information literacy is the cause. Information technology has not yet totally permeated the educational system.
Lack of teaching resources: The primary goal of conventional education is to transfer knowledge to pupils through textbooks. The teaching process must come to an end without the textbook carrier. The information in

the textbooks is typically of a very high caliber. Without the assistance of teachers, learning is challenging for both students and teachers. There are many students and few teachers in the department of physical education of general degree colleges today.

Limitations of informatization: Some physical education instructors are not very technologically savvy and will simply use basic teaching tools. Due to their ineffectiveness, physical education teachers in situations with restricted information technology do not effectively utilize the information-based educational system, which causes education to degrade.

The boring teaching process: Many kids say they dislike participating in physical education lessons. They are uninterested in physical education classes because they are too unpleasant and exhausting. The assignments made by physical education teachers are excessively demanding and challenging to finish. In class, there isn't much free time.

Traditional teaching methods: The teaching of varied sports information, particularly the teaching of action fundamentals and skills, makes up the teaching material of the physical education curriculum. The teacher typically gives a demonstration before letting the students copy his or her motions in traditional physical education lessons. It is undoubtedly hard for a physical education instructor to attend to every kid in the class when they are teaching a big number of students at once.

Conclusion

The most practical and consistent piece of equipment in a well-balanced educational institution is the teacher. Without integrating experienced teachers with this sector, it is impossible to conceive a distinctively developed educational environment. A combination of chalk, duster, and black board does not adequately illuminate instructional features in the current scientific context. A smart classroom is outfitted with fast internet, computer super-technology, a smart board, and virtual etiquette in the era of modern digitalized educational procedures. Teachers must be skilled with current formulations of relevant subjective cognition in the track of a digitally superstructural educational system, and they must also be well-versed in digital educational technology at the highest level of globalization of learner demand. It must be acknowledged that the educational system has undergone a necessary reform. Current advancements in computer science have a significant impact on research activity in this area. the enhancement of teaching efficacy through the use of computers and the internet. Other than the fact that physical education is already entwined with the allure of contemporary scientific technology, physical education is still taught using an antiquated and conventional technique. In order to investigate the topic for the benefit of the students in the area of globalization of education, a transitional change is definitely needed. Each department of physical education at general degree colleges should have the necessary hardware, including computers, LED/Smart Boards, internet access, and other classroom amenities.

Suggestions

- Computer/networking/other technology training should be required for all physical education teachers.
- For this purpose, every physical education department and/or institution should have a computer, an LED/Smart Board classroom, and other necessary infrastructure.
- Offering a higher-level course to interested students so they can increase their ICT-based pedagogical abilities.
- The teacher education program's curriculum needs to be flexible in order to give student instructors the chance to create different ICT-infused teaching materials.

References

1. Brush T, Glazewski KD, Hew KF. 2008. Development of an instrument to measure preservice teachers' technology skills, technology beliefs, and technology barriers. Computers in the Schools 25;112-125.
2. Casey A, Goodyear V. 2015. Can cooperative learning achieve the four learning outcomes of physical education? a review of literature. Quest 67; 56–72.
3. Castro SJJ, Alemán EC. 2011. Teachers' opinion survey on the use of ICT tools to support attendance-based teaching. Journal Computers and Education 56;911-915.
4. Chai CS, Koh JHL, Tsai, CC, 2010. Facilitating preservice teachers' development of technological, pedagogical, and content knowledge. Educational Technology and Society 13; 63-73.
5. Chen J, Liu X. 2017. Application of computer multimedia technology in auxiliary Physical Education. Automation and instrumentation 2; 129–136.
6. Chen X., Pan Y. Application of computer simulation technology in Physical Education. 2015;11: 152
7. Crook CK. 1999. Internet assisted learning. Journal of Computer Assisted Learning 15(1);91-94.
8. Darshan K. 2017. Application of computer in physical education and sports 4(3); 335-336.

9. Fateme SL. 2014. The Impact of Using PowerPoint Presentations on Students' Learning and Motivation in Secondary Schools. Procedia - Social and Behavioral Sciences 98; 1672 – 1677.

10. Gavin N, Kenny, Carol S. 1979. Computer-assisted learning in the teaching of anaesthesia. Anaesthesia 34; 159-162.

11. Ismail ME, Irwan M, I, Othman H, Amiruddin MH, Ariffin A. 2017. The use of animation video in teaching to enhance the imagination and visualization of student in engineering drawing. IOP conference series 203.

12. Jago R., Mcmurray RG.2009. Modifying middle school physical education: piloting strategies to increase physical activity. 21(2);171–185.

13. Jebakirubai K.2017. Computer Assisted Teaching and Learning in Classrooms. Journal of Technology for ELT; 7.

14. Junmin L, Mengjuan L. 2020. Application of Information Technology in College Physical Education. Journal of Physics: Conference Series 1574 012094.

15. Kuiper E, Volman M, Terwel J. 2008. Integrating critical Web skills and content knowledge: Development and evaluation of a 5th grade educational program. Computers in Human Behavior 24; 666–692.

16. Lowther, DL, Inan FA, Strahl JD, Ross SM. 2008. Does technology integration work whenkey barriers are removed? Educational Media International 45; 195-213.

17. Mcmahon, Graham. 2009. Critical thinking and ICT integration in a Western Australian secondary school. Educational Technology and Society 12; 269–281.

18. Pal A. 2017. Importance of Computer Education In The Field Of Physical Education. IJRSSIS 5; 49-50.

19. Ruiz JG, Cook DA, Levinson AJ. 2009. Computer animations in medical education: a critical literature review. Medical education 43; 838-846.

20. Salend SJ. 2021. Technology-Based Classroom Assessments: Alternatives to Testing. *Teaching Exceptional Children 41*(6); 49-58.

21. Serhan D, 2009. Preparing preservice teachers for computer technology integration. International Journal of Instructional Media 36; 439-447.

22. Sylvia C. 2000. Internet usage in education. T.H.E. Journal 27(10); 12.

23. Watts-Taffe S, Gwinn CB, Horn ML. 2003. Preparing preservice teachers to integrate technology with the elementary literacy program. The Reading Teacher 57; 130- 138.