Information technology and its' modernization, the Internet, and sport psychology

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Abstract

This research aims to describe information technology and its' modernization, the Internet, and sports psychology. A research study based on primary data collected used open-ended and closed-ended questions related to the variable and defined Internet modernization and sports psychology. This research study determines by smart PLS software. It generates a different result, including indicator correlations, discriminant validity, model fitness analysis, composite reliability, and an intelligent PLS Algorithm model related to the variables. Information technology is the leading independent variable. The Internet and sports psychology are both dependent variables. The result found that information technology presents significant and positive relation to the modernization of the Internet. Information technology also shows the direct impact and significance of sport psychology It plays a vital role in the modernization internet also sports psychology performance.

Keywords: Information Technology (IT), Modernization of Internet (MOI), Modernization of sport psychology (MSP)

Introduction

The digitalization of the world due to science and technological advancement has modernized several fields. The field of education is among the areas that have been modernized by digitalization. The modernization of information technology means upgrading the field of technology by updating it with the latest trends of the world. Educating the youth about modern technology is essential for developing a new technology-based system (Cojocaru et al., 2022). The youth of today that knows about advanced technology will be able to exile in the future. Revolution is the need of the present era, and the revolution of information technology by upgrading it with new and productive methods helps fulfill today's world needs. The modernization of information technology has influenced many fields. The use of the modernized form of IT system in various industries and factories has resulted in the growth and development of these industries (Saif et al., 2022). Information technology modernization brings with it significant social changes. These changes then maintain the sustainable economy of any country in the world.

The field of information technology has modernized with the help of internet-based applications. With the Internet, all the valuable information regarding any technology-based system can be easily assessed. The Internet provides students with all the field-related details on their subject. Sports and physical education students can get thorough information about the techniques and tricks of various sports through internet portals (Bousquet, 2022). The Internet is the primary source of all information-based technology systems. The Internet provides all the information about the virtual imaging systems used in sports. The process of coaching and biomechanical function in sports can be managed using internet-based information technology systems. In the present world of the Internet, many wearable and sensor technology systems are available to sports players (Deng et al., 2022). This system provides all the information about the movement and posture of a sports athlete. If any problem in the direction of a sports athlete occurs, it is detected by wearable sensors. After the problem is detected, the coaches then train the sports athlete about the correct posture and movement in particular sports.in this way, information technology helps improve the performance of various sports athletes (Talha et al., 2022).

The modernization of information technology has positively influenced the field of sports and physical education. Sports athletes can now learn various sports through the help of a technology-based sports system. In the modern world, sports teaching is carried on by establishing technology-based physical education and sports system. The PES (physical education and sport) system helps train the sports player in various sports techniques using information technology (Khabouze, 2022). The ability of sports athletes to comprehend transversal sports skills becomes manageable using the PES system application. As the PES system is an information technology-based system, it attracts players' attention, and players tend to seek more knowledge through this technology-based application (Dashti et al., 2022). As the PES system is a technology-based system, it is also available online so that sports students can benefit from the PES applications. The modernization of information technology has also resulted in the development of e-games that can increase athletes' interest in sports. The games are technology-based video games that attract people's attention. The main aim of developing these games is to create an interest in technology-based sports among the youth. Many types of research have shown that

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during the covid-19 pandemic, the number of people playing e-games increased drastically (Xu, 2022). This is because the e-games are built on information technology-based systems that attract the interest of a lot of people.

The Use of Information technology offers several benefits to the sports industry. These advantages include; improving and maintaining the athlete's performance by tracking their movement, enhancing athletes' skills by providing new strategical skills to sports athletes, improving the athlete's abilities to cope with the pressure during the game, and helping the athletes build confidence and strength (Li, 2021). All these advantages provided by the information technology system to the sports athletes improve the overall sports performance of a sports team. Many technology-based wearable systems use sports systems to help them know their activity and posture while playing (Wang, 2022). Various sports athletes also use mobile-based technology apps that track their calorie intake and calorie burn count, providing complete information about their calorie intake and burned calories and helping them to maintain their weight. The maintenance of physical health for a sports athlete is essential. If an athlete is physically unfit, he cannot perform his best. So to focus on athletes' physical health, these calorie count apps are best. Physical education training sessions are also given to sports athletes so that they can maintain their physical as well as mental health.in these sessions, information about the technology-based system in sports and the effect of this technology-based system on athletes' physical health is provided (Yang et al., 2022). These informative sessions help the athlete to groom and progress.

Physical education holds great importance in today's world. In the present era, physically fit and active youth are allowed to participate in various sports. All the sports tests are mostly fitness-based. Only the athletes that are physically active and fit are selected to be part of a sports team. Improving health gives many other benefits, like keeping a person busy and relaxed (Li et al., 2021). Digital apps are the best physical education sources in the modern world, as people of the 21st century can relate to these apps more than anyone. Many studies have shown that these digital apps are so helpful in providing physical education. Almost eighty percent of the youth is educated about the importance of physical education through these digital apps (Gammelsaeter & Anagnostopoulos, 2022). Many countries worldwide focus on making the use of information technology in sports more and more common so that the youth can easily understand the tactics of playing various sports. The modernization of science and technology has encouraged the world to grow and progress using advanced technological methods.

Research objectives

The research paper's objectives include the Use of the Internet and information technology in sports and the modernization of information technology, which has also been discussed in the research article.

This research study is divided into five portions: the first part describes the introduction related to Information technology and its modernization, the Internet, and sports psychology. This section describes the research objective, research questions, and purpose of research. The second portion represents the literature review on information technology and sports psychology. This portion describes the hypothesis development between variables. The third section defines the research methodology related to the independent and dependent variables. This section describes the variables and also presents the theoretical framework. The fourth section describes the result and its descriptions, and the last area offers the conclusion of the comprehensive research study.

Review of research

Today, with the fast emergence of science and technology, information technology and the Internet has gained popularity in every sector, including sports, industries, banking education, etc., which also directly influence sport psychology (Turaeva et al., 2022). In this article, the researcher highlights the significance of information technology, its modernization with the emergence of technology and internet applications, and sports psychology (Hai, 2021). Furthermore, it was underlined that modernizing the proper development of professionals in sports and physical culture in universities of higher education so that students can understand a combination of cutting-edge knowledge, abilities, and skills in the sector of sports and physical education has become essential with time (Sun, 2021). Consider includes organizing education as a deliberate process of learning (Linqi et al., 2020). Furthermore, it was studied that a young practitioner in sport and physical culture can only behave accordingly in the world, explore challenging situations, find logical solutions to manage professional challenges, and be competitive in the employment market with an adequate degree of specialized training, digital literacy, and information competence (Cojocaru et al., 2022). Apart from this, the researcher investigated the development of sport psychology, physical education, and movement due to the Internet's and information technology's evolution (Zhou, 2020). Finally, the researcher highlights the significance of finding appropriate ways to develop and enhance the future training process of specialists in sports and physical culture (Nasiri et al., 2018).

Moreover, the researcher highlighted the Internet's and information technology's significance in developing sports psychology (Okhrimenko et al., 2021). It was claimed that information technology has vast applications in almost every developing field (Deng et al., 2022). In the development of sport psychology, the Internet and information technology have had a remarkable positive influence (AlAzzawi,

2022). In addition, many scholars highlighted that information technology has significant advantages in educational sectors, including higher-level physical education (Zhou et al., 2020).

The researcher studied that compared to traditional training, information technology-based training helps to promote athletes' abilities, increase athletes' motivations, as well as it also helps to manage, access, and control a vast amount of information (Yuan, 2019). Whereas the author explores that with sufficient technical training, digital literacy, and information competence, sport psychology can be improved (Chen & Wang, 2022; Xiao et al., 2021). With the modernization of the Internet and information technology, the applications of information technology have also increased in physical education training programs and sports psychology (Wang & Park, 2021). Furthermore, many scholars studied that the development of collaborative educational methods, the modeling of educational information, its collapse, compression, and deployment based on learning and academic goals, divergence, and personalization of learning all help to create better-working management for the physical education and sports process. While author claimed that information technologies in sport psychology and material culture, as well as technical experience of future specialists in sport and physical education, seems to have applications in organizing and training intellectual leisure, creating models of competitive situations and training, biomechanical analysis of the movement's techniques of athletes, and automating research and competition (Jin & Zou, 2021).

Apart from this, many researchers investigate the research on the applications of information technology, computer technology, its modernization, and the Internet and sports psychology (S. a. Yu, 2021). It was highlighted that the application of computer technology and information technology training potential in physical education and sports games as an essential factor in the development of healthy training of athletes had been considered an emerging challenge in modern sports science (Saif et al., 2022). Furthermore, using instructional methodologies, today's information and technological communication advances help the management to manage independent educational programs (Aleksić, 2020). Moreover, the researcher discussed that multimedia technology based on the Internet and IT had become an essential source of teaching techniques for sports and physical education. Furthermore, information and communication technology has changed the entire spectrum of sports psychology due to its widespread use in physical and sports education. Therefore, academic institutions have started concentrating on applying information and communication technologies in physical and sports education and have introduced research policy changes in sports teaching (Li et al., 2021). Whereas in the investigation of the importance of IT as well as ICT, the researcher suggested that although information technology, the Internet, and ICT have various applications in sports psychology and physical and sports education, appropriate measures should be taken to investigate innovative methods to utilizing multimedia as well as internet and information technology in physical and sports education (Sun, 2020). Apart from this, the researcher also emphasized the applications of information technology, multimedia technology, and internet technology for improving sport psychology and physical education (Sattaburuth & Wannapiroon, 2021). It was suggested that multimedia technology, information and communication technology, and internet technology could increase the interests of students in sports learning while also being more beneficial to the understanding of sports students and deep understanding of physical development, professional knowledge, and cumulative classroom teaching performance (H. Yu, 2021). Apart from this, many other scholars have also investigated how ICT, network-based distance education, and the Internet can improve sports psychology and physical education training programs.

For this purpose, the researcher conducted both quantitative and qualitative research and collected the study's results through documentation, comparative experiments, in-depth research interviews, and control and experimental groups. It was highlighted that these technologies have vast applications in developing sport psychology, physical and educational programs, and athletes' motivations. Still, some of the limitations of these technologies have also been investigated in the paper. It was suggested that multimedia, information, and internet technology should be used appropriately and by teaching information. Sports and Physical education teachers must constantly update their skills and professional knowledge in cutting-edge sports technology. It was also suggested that only by combining information technology, multimedia technology, internet technology, and conventional physical training can students be educated on sports skills and knowledge while also increasing their interest, initiatives, and efficiency in their learning and claimed that all these technologies have positive influences in the development of sport psychology and along with the limitations it also has vast applications in sports sector.

Hypothesis Development:

H1= There are positive and significant effect of Information technology and its' modernization, the Internet.

H2= There are direct and significant impact of information technology and its moderation on sport psychology.

H3= There are negatively associated Information technology and its' modernization, the Internet, and sports psychology.

Research methodology

This research study describes Information technology and its' modernization, the Internet, and sports psychology. This research study is based on primary research for determining the overall analysis of information technology, the Internet, and sports psychology these are all considered variables for measuring the research.

Data collecting and processing

Used open-ended and close-ended questions for the dataset and analysis for collecting the data from different IT organizations related to information technology, the Internet, and sports psychology. In the practice process, a sample of input data is configured to be represented by parameter X, and the data are encoded and decoded consecutively during the forward transmission process. Finally, comparisons between the output findings and student responses are made. After the automated encoder is finished processing, the input student data are accurately presented by modifying the weight of each layer. The algorithm can forecast the results of a sports psychology test given to college students after some practice related to information technology.

Data source and analysis

This research study describes the modernization of information technology internet and sports psychology. For measuring, the research study used smart PLS software and ran different results related to information technology, the Internet, and sports psychology. The indicator correlation coefficient, composite reliability, discriminant validity, total effect, significant analysis, and the smart PLS Algorithm model related to the independent and dependent variables.

Moderation of Information Technology

Information technology (IT) is a vast professional discipline encompassing jobs like establishing communication networks, preserving data, and repairing computer problems. Applications are used on conventional computers that store data and have programs to enter, process, and output data Software and support for computers that run office automation programs like spreadsheets and word processing—PCs and software used by users. Information technology enables quick data storage and retrieval by utilizing hardware and software networks, workstations, and storage devices at reduced prices. Data may be combined and modified using information technology to provide distinctly new information that speeds up decision-making. Business models and procedures may now recognize that they may operate as subsets of information technology to the development of computer-based information technologies (Baydjanov, 2021). Many people have already started building computer

applications that may aid company procedures, even for small organizations. An industry's operational business demands can be supported by information technology, which studies the design, implementation, development, administration, and support of computer-based information systems.

According to this research study the field of information technology covers a wide variety of subjects, including hardware and software tools for data collection, management, and analysis. In the end, analyzing this data aids businesses in achieving their objectives. Additionally included are workflow processes that might improve an organization's potential for revenue growth. In today's fast-paced world, sales growth and profit margins are significant aspects that affect efficiency and effectiveness for many business owners. The four primary aspects of information technology are commercial software development, database, and network management, computer technical support, and information security.

- Computer Network Architect – For network administrators, this is a step up the professional ladder that often calls for a bachelor's degree and prior experience in the IT industry. This role involves designing and constructing networks, including intranets, LANs, and wide area networks (WANs). According to the BLS, the median income for this line of work was $120,520 in 2021, and employment was expected to expand by 5% through 2030. Network architects must frequently comprehend various software systems, including operating system applications, administration tools, and development environment software. In addition, network architects may need to collaborate with sales and marketing personnel to satisfy client requests and ensure accounts are set up correctly. This typically involves a human touch.

- Computer Systems Analyst – Business expertise and IT systems are necessary for this position, sometimes known as a system architect. The standard educational requirement for the job, as with many information technology occupations, is a bachelor's degree in computer science or related discipline, while some people enter this field of employment after completing business or even liberal arts coursework. Strong computer abilities are required, frequently incorporating knowledge of programming languages, database management systems, and development environment software. Additionally, those who perform in this profession need to be able to use computer systems to handle workflow, inventory control, and manufacturing process concerns. Work in this field will increase as more companies use cloud computing. According to the BLS, the job's median salary in 2021 was $99,270.

Moderation of the Internet

The Internet is a vast worldwide network that connects computers all over the world. People may communicate and exchange information online from any place with an Internet connection. The Internet, a network of networks, comes in various ways. It connects regional to the global public, commercial, academic, corporate, and government networks using a wide range of electromechanical, electronic, and optical networking technologies. The primary objective of the Internet is to make data and communications accessible to everyone worldwide. For the advancement of engineering, technology, science, and health research, as well as for maintaining global defense and surveillance, networking and the Internet are essential. Globally, billions of computers and other electronic devices are linked to the Internet. With the aid of the Internet, you may communicate with anybody worldwide, get access to almost any information, and perform numerous other tasks. You may complete all these things online or by connecting a computer to the Internet. Primary Internet is the most affordable tier of cable internet service that offers wired connections and direct high-speed internet access.

People may advance in nearly all aspects of life by using the Internet. It can connect people worldwide and create communities since it is a worldwide computer network organization. It's a great way to spread and acquire knowledge and is available everywhere (Fu, 2020). Moreover, the Internet provides a variety of significant services and materials that are necessary for day-to-day existence. Today, people use the Internet for various things, including Communication, individuals worldwide can now communicate in real-time and for a relatively low cost. Some of the best examples of live communications that are free of charge are emails, video conferencing, social networking, and chatting. May do even job searches online in this manner.

However, the Internet also gives access to education, with online distance learning courses growing more and more popular these days. This allows access to online books, tutorials, and reference resources on practically any subject globally. Education is surprisingly, the Internet also gives access to education, with online distance learning courses more popular in recent years (Fu, 2020). This allows access to reference resources, online books, and lessons on virtually any subject.

Modernization in sport psychology

The most significant benefit of technology in sports training may be the efficient reduction in injuries and the improvement in injury detection time. Monitoring performance, honing motions, and improving communication are not just advantages; they also contribute to developing surroundings that are less prone to damage. Performance coaching, sometimes referred to as sports psychology, assists in disseminating and using psychological strategies to treat an athlete's psychological health issues (Zhang et al., 2022). These specialists in psychological health and human behavior help patients find their strengths and discover and eliminate any mental obstacles that are getting in the way of their physical or athletic success. Sports performance and personality are influenced by various psychological characteristics, including motivation, concentration (or attention), confidence, and anxiety. Sportspeople need to understand psychology—the elements of the sport, their significance, and how they support preserving health and wellbeing. The correct technology may significantly impact the capacity of an athlete to perform and advance over time. It enables athletes to practice data-driven decisions, learn more about their recovery, and simulate various scenarios they could encounter during competition. It's incredible how technology has changed sports. In today's connected world, sports are performed, analyzed, and improved due to the Use of wearable technology, big data analytics, social media, and sensor technologies. Over the past 20 years, players, coaches, parents, and sports organizations have become increasingly interested in sports psychology (Atamanyuk et al., 2021). Both professional and recreational athletes openly admit to seeking mental health care. Players are not the only ones who can see a sports psychologist. Anyone who works in high-stress, results-driven environments, such as the performing arts or business, may benefit from the assistance of a sports psychologist.

Result and Descriptions
Composite reliability

Table-1

variables	Cronbach's Alpha	Rho-A	Composite Reliability	Average Variance Extracted (AVE)
Information Technology	1.000	1.000	0.655	0.5433
Internet	0.4222	1.000	0.4591	0.4322
Sport psychology	0.3412	1.000	0.5671	0.5762

The above table represents the composite reliability analysis of each variable, including independent and dependent variables. The result shows that Cronbach's Alpha values, rho-A, composite reliability, and average variance extracted values of each variable. For example,

information technology is independent. Its Cronbach alpha value is 1.000, and the composite reliability is 0.655, which means that 65% of the research is reliable for analysis. The average variance extracted value is 0.5433 means a 54% variance extracted value of information technology. The Internet is another variable its shows that the

composite reliability value is 0.4591, showing that 45% reliability the sport psychology is a dependent variable. Its Cronbach alpha value is 0.3412 its combined reliability value is 56%, respectively, which shows that research is reliable for analysis. According to the result, its average variance extracted value is 57%.

Discriminant Validity

Table-2

Variables	Information Technology	Internet	Sport psychology
Information technology	1.000		
Internet	0.050	1.000	
Sport psychology	0.087	0.086	1.000

The above table describes that the Internet discriminant validity analysis of each variable shows a 5% validity rate with information technology. Sport psychology shows 8% discriminant validity with **Model fitness analysis**

information technology. Sport psychology offers a 0.086 value with the Internet and significant discriminant validity with each other.

**Table-3**

Factors	Saturated Model	Estimated Model
SOME	0.000	0.034
d-ULS	0.000	0.007
D-G	0.000	0.001
Chi-square	0.6987	0.686
NFI	1.000	0.589

This result represents that the model fitness analysis presents the saturated and estimated models. The result shows that SRMR, d-ULS, d-G, Chi-square values, and NFI rate of each model included saturated and estimated models. The saturated model is 0.000 and

0.000, and its chi-square value is 0.6987, which means that 69% model fit for analysis. The estimated model shows that 0.034, 0.007, 0.001, and its chi-square value is 0.686, which shows that 68% model fit for research and its NFI rate is 58%, respectively.

Smart PLS Algorithm
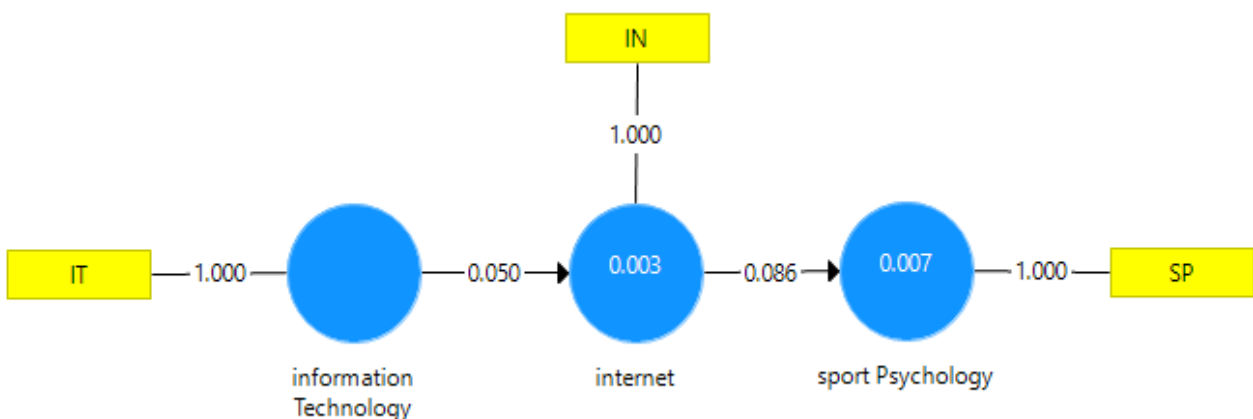
The above model describes the brilliant PLS Algorithm relation with independent and dependent variables. Information technology shows a 5% positive and significant relationship with the Internet. Sport psychology presents an 8% positive

and meaningful relationship with the Internet, according to the algorithm model. They offer a positive relationship with each other. according to the result the value of internet is 0.03 shows that 3% significant relation with information technology and

sport psychology.

Significant analysis

Table-4

MATRIX	Original Sample	Sample Mean	Standard Deviation	T Statistic	P value
Information Technology<-sport psychology	0.050	0.055	0.104	0.486	0.0627
Information Technology<-internet	0.004	0.007	0.016	0.276	0.0783
Internet <- sport psychology	0.086	0.091	0.110	0.783	0.0434

The above result represents the significant analysis between one variable and another. The result shows the original sample values of each matrix, the mean, the standard deviation rate, and the T statistic value also present the significant value of each matrix. For example, the first matrix is information technology<-sport psychology. Its original sample value is 0.050; its sample means the value is 0.055 the standard deviation rate is 0.104. the T statistic value is 0.486, and its probability value is 0.06, which shows a positive and **Indicator correlation**

significant relationship. The second matrix creates in between information technology and the Internet. Its original sample value is 0.004, the mean value is 0.007, the T statistic value is 0.276, and its P value is 7% result shows that positive and significant relationship between information technology and the Internet. The third matrix is Internet and sports psychology. Its P value is 4%, and its T statistic value is 78% showing all of them are positive and significant.

Table-5

variables	No.	missing	mean	Median	min	max	Standard Deviation	Excess Kurtosis	Skewness
Information technology	1	0	2.000	2.000	1.000	5.000	0.816	1.068	0.791
Internet	2	0	2.232	2.000	1.000	4.000	0.983	-0.801	0.422
Sport Psychology	3	0	2.081	2.000	1.000	4.000	0.849	0.031	0.648

The above result describes that the indicator correlation result represents the mean value, median, minimum, maximum, standard deviation rate, excess kurtosis rate also skewness rate of each variable. For example, information technology shows that 81% deviate from the mean. Its mean value is 2.000. The excess kurtosis rate is 1.068, and the skewness rate is 0.791, respectively. The Internet shows that 98% deviate from the mean. Its skewness value is 42%, the standard deviation value of sport psychology is 0.849, its mean value is 2.081 the excess kurtosis rate is 3%, respectively. The overall median rate is 2.000 minimum rate is 1.000, and the maximum speed is 5.00. according to the result its overall missing value is 0 the median rate is 2.000 result represent that minimum values of each variables is 1.000 and maximum value is 5.000 respectively.

Conclusion

In conclusion, it is studied that with the fast development of the world, science and technology have also been improved and promoting various technologies for the development of the different emerging sectors, including agricultural industries,

sports sectors, educational institutions, and many other fields related to the physical education and training programs. In this research paper, we studied the influences of information technology, its' modernization, the Internet and multimedia technology on sports psychology, and the various applications of internet-based technologies have also been investigated in the paper. We examine that the internet-based utilization of technologies has helped to revolutionize the information technology field. All critical information about any innovation system based on information technology can be easily analyzed using Internet technology. Various applications of internet technology, as well as information technology, have been studied in the paper. This research is based on quantitative measures, and results have been revealed by implementing Smart PLS software as modeling and experimentation analysis have also been conducted to investigate the consequences. It is concluded that information technology, like many other sectors, has significant positive influences on the improvements of sports psychology. In this case, internet applications also greatly influence the sports sector. This research study accepted the hypothesis 1, and 2 H1, H2 there are positive and significant effect of Information technology and its'

modernization, the Internet, and sports psychology. It helps to promote sport psychology in a significant way, also enhances the interests of athletes in sports-related activities, as well as it also helps to promote physical education training programs. Apart from this, the Internet also helps them better understand the tips and tricks of sports activities, which enables them to perform effectively during sports. So, we can say that the Internet is an essential source to improve all the technologies, athletes' performance, and sports psychology.

The environment for sports media is drastically changing. Thanks to cutting-edge technology, the business has countless chances to engage fans in unique and immersive experiences. The market for sports technology is anticipated to develop at a CAGR of 20.63% from 2018 to 2024, reaching $31.1 billion. Increased live sporting events, enhancements to the fan experience, and the demand for data-driven decision-making are driving this market expansion. Sports broadcasters will need to rethink athletic experiences, considering factors like fan interaction, broadcasting innovations, and targeted merchandise, as the world of sports returns to normal with several safety requirements.

Furthermore, a positive relationship of PE is also examined with the modernization of IT or information and communication technology. It also concerns that an innovative sports system based on information technology and internet technology now allows athletes to learn a variety of sports. Sports education and physical education in the civilized era are carried out by constructing an innovation system based on modern technologies in sports and physical education and sports. Whereas these innovative technology-based systems also train sports students better to enhance athletes' performance and improve sports psychology, including athletes' attitudes, behaviors, motivation, and emotions. Furthermore, this research paper highlighted the significance and role of wearable devices in promoting sports systems. Along with the advantages of information technology, multimedia technology, the Internet, and ICT, some limitations have been studied in the paper. In addition, it describes that information technology has changed the entire structure of the sports industries, improved sports psychology, enhanced performance, increased interest and understanding of the students, and promoted physician education training programs. So, we concluded that PE and sports psychology are positively influenced by the modernization of IT, ICT, and internet technology.

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