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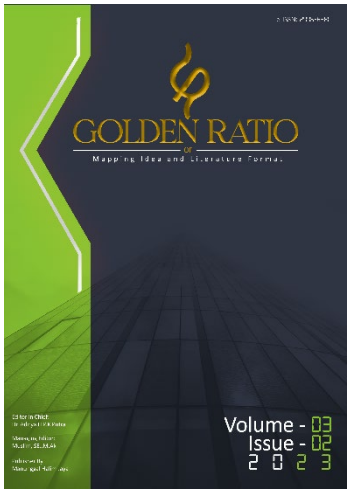

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MAPPING IDEA & LITERATURE FORMAT

The Digital Revolution in Sports: Analyzing the Impact of Information Technology on Athlete Training and Management

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Abstract: The digital era has brought about significant transformations across various aspects of life, including the world of sports. This study aims to delve deeply into how information technology (IT)—encompassing big data, IoT, wearable technologies, AR, and VR—has shifted the paradigms of athlete training and management. Employing both quantitative and qualitative approaches, this research explores the impact of IT on training efficiency, injury risk reduction, and athlete performance enhancement. By collecting data from coaches, sports managers, and athletes across different sports disciplines, this study tests the proposition that IT integration in sports not only elevates athlete performance but also redefines training practices and sports management strategies. This research is expected to provide new insights that can be utilized by coaches, sports managers, and policymakers to effectively harness information technology in enhancing athlete performance and optimizing sports management. Furthermore, these findings are anticipated to spur further discussion on the future of technology in sports and how it can continue to be used to push the boundaries of human performance.

Keywords: Information Technology, Athlete Training, Sports Management, Big Data, IoT, Wearable Technology, Augmented Reality, Virtual Reality.

JEL Classification Code: L83, O32, I12

1. INTRODUCTION

The impact of information technology on sport management, particularly in athlete training and evaluation, is significant and multifaceted. Integrated technology, including accelerometers, GPS, and heart rate monitors, has been used to assess training and performance demands in field-based team sports (Dellaserra, 2014). Big data and information technology have been applied to the evaluation system of athletic training in colleges and universities, aiming to improve the quality of use (Yin, 2021). The use of technological applications in elite sports has shaped data collection, information relay, and athlete monitoring (Giblin, 2016). The application of technology in sports training has been found to improve the diagnosis and planning of training, leading to better results (Vera-Rivera, 2019). Wearable technologies and scouting tech-based techniques have been highlighted as key areas of progress in sports performance (Mataruna-dos-Santos, 2020). The application of information technology to provide athletes with relevant feedback has been critically evaluated (Liebermann, 2002). The use of IoT, augmented and virtual reality applications in sports science has been discussed as a significant contribution to the field (Ioannidou, 2020).

In the constantly evolving digital era, information technology has revolutionized many aspects of our lives, including the realm of sports. This transformation has not only permeated the way we enjoy and follow sports activities but has also deeply influenced the core of sports management, particularly in athlete training and evaluation. The advancements in information technology have opened the doors to new innovations, enabling coaches, managers, and sports scientists to enhance athlete performance in ways previously unimaginable. From leveraging big data and analytics for more personalized training strategies to employing wearable technology for real-time physical condition

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monitoring of athletes, we are witnessing a revolution in sports management. This narrative aims to explore the impact of information technology on sports management, focusing on innovations in athlete training and evaluation. We will delve into how information technology not only optimizes athlete performance but also shifts traditional paradigms in sports management and talent development, pushing the boundaries of athletic achievement, and paving the way for a new era in sports that is more informed, efficient, and competitive.

2. Literature Review Procedure

Diving into the ocean of technological advancement, the realm of sports stands at the cusp of a revolution, heralded by the integration of information technology (IT) in enhancing athletic performance, training methodologies, and the holistic management of sports. This transformative journey, marked by studies spanning from the early 2000s to the dawn of the 2020s, illuminates a path of relentless innovation, challenges surmounted, and a future replete with untapped potential. At the heart of this evolution lies the seamless amalgamation of IT with traditional sports training and management, promising a future where the physical and digital converge to elevate the human spirit of athleticism to unprecedented heights. Carla L Dellaserra, Yong Gao, and L. Ransdell's 2014 exploration into integrated technology within team sports unveils a paradigm where the quantification of movement, the discernment between training and competitive demands, and the meticulous assessment of physiological responses are not mere aspirations but tangible realities. This study not only charts the terrain of current practices but boldly points towards a horizon where female athletes and indoor sports stand to benefit immensely from IT's embrace. Fast forward to 2021, and Yanan Yin's critique of big data's role in physical education underscores the growing pains of integrating sophisticated technologies into traditional frameworks. Yin's insights serve as a clarion call for a balanced approach, where the promise of big data is harmonized with the pedagogical and developmental needs of athletes within the collegiate arena.

The narrative arc then bends towards the broader implications of technology on elite sports performance, with Georgia Giblin, E. Tor, and L. Parrington's 2016 study acting as a testament to the profound impact of technological applications. Here, the digital domain is not just an ally but a cornerstone in crafting competitive edges, where every byte of data and every second of performance are meticulously analyzed to forge champions. J. L. Vera-Rivera, A. Ortega-Parra, and Y. A. Ramírez-Ortiz in 2019, and L. Mataruna-dos-Santos et al. in 2020, further expand the canvas, exploring the quasi-experimental methods and the symbiosis of big data with sports management. These studies illuminate a path where technology is not just a tool but a transformative agent, enabling a leap in efficiency, precision, and, ultimately, excellence in sports. Amidst this digital renaissance, Luisa Varriale and Domenico Tafuri's 2015 insights into the technological trends within the sport field underscore the critical role of IT in knowledge transfer and the empowerment of disabled athletes. This holistic view highlights the multifaceted impact of technology, from enhancing performance to fostering social integration. As the journey through the landscape of sports and technology unfolds, it becomes evident that the integration of IT into sports is not merely a trend but a revolution. Each study, from D. Liebermann et al.'s 2002 evaluation of technology-based feedback to I. Ioannidou's 2020 examination of IoT and VR/AR applications, serves as a beacon, guiding the way towards a future where the potential of athletes is not just maximized but redefined. In this digital odyssey, the fusion of information technology with sports training and management emerges as a powerful narrative of progress, challenge, and aspiration. It is a journey marked by the relentless pursuit of excellence, where the digital and physical realms merge to redefine the boundaries of human athletic potential. As we stand on the precipice of this new era, the promise of information technology in sculpting the future of sports is not just imminent; it is inevitable.

3. Conclusion and Proposition

Given the comprehensive exploration into the impact of information technology in sports, specifically in athlete training and management, the following propositions for future research are proposed:

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Proposition 1: The use of integrated information technology in athletic training significantly improves training efficiency and effectiveness, reduces recovery times, and maximizes athlete performance.

Proposition 2: The implementation of advanced big data and analytics in sports management significantly enhances the ability of coaches and managers to make data-driven strategic decisions for athlete development and competition strategy.

Proposition 3: The adoption of wearable technology and the Internet of Things (IoT) in monitoring athlete health and performance allows for early detection of potential injuries and performance enhancements through real-time feedback.

Proposition 4: The use of Augmented Reality (AR) and Virtual Reality (VR) technologies in athlete training provides more immersive and effective training methods, improving athletes' understanding of techniques and strategies.

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Table 1: Mapping Literature

Title	Authors	Year	Abstract Summary	Main Findings	State of the Art	Novelty
Use of Integrated Technology in Team Sports: A Review of Opportunities, Challenges, and Future Directions for Athletes	Carla L Dellaserra, Yong Gao, L. Ransdell	2014	Integrated technology can contribute to significant improvements in the preparation, training, and recovery aspects of field-based team sports.	Integrated technology has been used in sports settings to assess training and performance demands. The uses of IT in sports settings can be categorized into quantifying movement patterns, assessing differences between training and competition demands, measuring physiological and metabolic responses, and determining a valid definition for velocity and a sprint effort. IT can contribute to significant improvements in the preparation, training, and recovery aspects of field-based team sports, and future research should focus on using IT with female athlete populations and developing resources to use IT indoors to further enhance individual and team performances.	The state of the art in Carla L Dellaserra, Yong Gao, L. Ransdell (2014) is the use of integrated technology (IT) in sports settings, particularly in field-based team sports, to assess training and performance demands. The paper categorizes the uses of IT and discusses its limitations and potential for significant improvements in sports performance. It also calls for future research focusing on female athlete populations and indoor use of IT.	The novelty in the paper lies in the emerging use of integrated technology (IT) in sports settings, particularly in field-based team sports, and the potential for future research to focus on using IT with female athlete populations.
The Application of Information Technology in the Information Evaluation System of the Athletic Training in Colleges and Universities	Yanan Yin	2021	Big data is used in physical education the improvement in the quality of use has an adverse effect.	The paper discusses the challenges in meeting the development needs of various sports within the current physical education framework and highlights the lack of implementation of physical education under big data, as well as the adverse effects of using big data in physical education.	The "state of the art" in Yanan Yin (2021) is that physical education is currently focused on demonstration teaching and repeated practice teaching, which may not fully meet the needs of various sports. Additionally, big data has not been effectively implemented in physical education and its use has had an adverse effect on the quality of education. The article aims to address this by	The novelty in Yanan Yin (2021) lies in the proposal to integrate information technology into the physical education evaluation system on a big data background to address the challenges and adverse effects of using big data in physical education.

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					discussing the construction of information technology in the physical education evaluation system on a big data background to achieve efficient use of big data information technology in physical education.	
The impact of technology on elite sports performance	Georgia Giblin, E. Tor, L. Parrington	2016	The use of technological applications is now widespread across many major sports science disciplines.	The main findings of the paper are the widespread adoption of technological applications in elite sports to gain a competitive advantage, which has significantly impacted data collection, processing, and communication within sports teams, as well as the monitoring of athletes in training and competition environments.	The "state of the art" in the paper involves the widespread use of technological applications in sports science, particularly for gaining a competitive advantage in elite sports. These technologies have significantly impacted data collection, processing, information relay, athlete monitoring, and training methods. The paper also provides examples of the latest technologies and discusses considerations for implementation.	The novelty in the paper lies in the widespread adoption of technological applications to gain a competitive advantage in elite sports, shaping the way data is collected and processed, how information is relayed, and the impact on athlete monitoring. It also highlights the latest technologies for data collection and processing, feedback methods, and training tools.
Impact of technology on the evolution of sports training	J. L. Vera-Rivera, A. Ortega-Parra, Y. A. Ramírez-Ortiz	2019	The use of technology applied to sports training represents a significant advance in reducing costs, time and processes in the training of athletes with a view to professional sports.	The main findings of the study are: - Winning in national and international competitions is the result of well-planned interdisciplinary work. - The use of technology in sports training leads to a significant advance in reducing costs, time, and processes in the training of athletes for professional sports.	The state of the art in J. L. Vera-Rivera, A. Ortega-Parra, Y. A. Ramírez-Ortiz (2019) is the use of quasi-experimental methods with technological implementations for data processing, evaluations, and treatment of injuries in athletes, management of evaluative information in different sports disciplines, and the reduction of costs and time	The novelty in this paper lies in the application of technology, including quasi-experimental methods and various technological tools, to improve data processing, evaluations, and injury treatment in sports training. It also emphasizes the generation of reliable data for predicting results in sports competitions and highlights the significant advance in reducing

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					in athlete training for professional sports.	costs, time, and processes in training athletes for professional sports through the use of technology.
Big Data Analyses and New Technology Applications in Sport Management, an Overview	L. Mataruna-dos-Santos, A. Faccia, Hussein Muñoz Helú, Mohammed Sayeed Khan	2020	Innovations both in the field of materials, but above all in terms of tools for verifying correct training through the collection of a large number of data turned into carefully analysed useful information.	The main findings of the paper include the profound impact of technology on sporting activities, advancements in technology for improved sports performance and impartiality of competitions, and the identification of video assistant data collectors, wearable technologies, and scouting tech-based techniques as key areas of interest.	The "state of the art" in the paper highlights the impact of technology on sports performance and the impartiality of competitions, with a specific focus on video assistant data collectors, wearable technologies, and scouting tech-based techniques.	The novelty in the paper lies in its systematic analysis of the most important technologies that are currently allowing great progress in sports performance and in the impartiality of competitions through the analysis of collected data, with a focus on video assistant data collectors, wearable technologies, and scouting tech-based techniques.
Technological Trends in the Sport Field: Which Application Areas and Challenges?	Luisa Varriale, Domenico Tafuri	2015	New technologies facilitate the knowledge transfer in the sporting event management process, such as the Olympic Games.	The main findings of the paper are that technology, particularly IT and internet, is significantly impacting the sport sector, facilitating knowledge transfer in event management and affecting athletes' performance and the social integration of disabled persons. Additionally, the application of technology in the sport field is rapidly expanding across various sub-organizational areas, but this trend is not well-represented in the existing literature.	The "state of the art" in Luisa Varriale, Domenico Tafuri (2015) is the deep impact of information technology and the internet on the sport sector, including their facilitation of knowledge transfer in sporting event management and their significant effects on athletes' performance and the social integration of disabled persons. The paper also acknowledges an explosion of technology applications in the sport field across different sub-organizational areas. It aims to identify and evidence the main application areas and challenges faced by technology in the sport setting,	The novelty in Luisa Varriale, Domenico Tafuri (2015) lies in the exploration of the significant impact of new technologies, particularly information technology and the internet, on the sport sector, including knowledge transfer in event management and its effects on athletes' performance and the social integration of disabled persons. Additionally, the underrepresentation of technology applications in the sport field in the literature is highlighted.

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					representing a research starting point to systematize and clarify the main contributions on this topic and to identify new research perspectives.	
Advances in the application of information technology to sport performance	D. Liebermann, L. Katz, M. Hughes, R. Bartlett, J. McClements, I. Franks	2002	The usefulness of technology-based feedback to athletes and coaches in training is evaluated.	The paper provides examples from various sports to illustrate the applications of technology-based feedback and critically evaluates their usefulness in enhancing skill acquisition and sport performance.	The "state of the art" in this paper is an overview of diverse information technologies used to provide athletes with relevant feedback, including vision, audition, and proprioception. The paper critically evaluates the usefulness of these technologies in enhancing skill acquisition and sport performance.	The novelty in the paper lies in the critical evaluation of diverse information technologies for providing athletes with feedback and their potential to enhance skill acquisition and sport performance.
Revolutionizing Sports Science through Information Technology: IoT, Augmented and Virtual Reality Applications	I. Ioannidou	2020	The Internet of Things and Big Data paradigms have enabled access to important analytics and risk monitoring to diagnose and protect athletes from injuries.	Information technology has significantly contributed to Sports Science by enhancing various aspects of the modern sports field, including broadcasting, monitoring, training, coaching, motion tracking, and physical education. The adoption of IoT and Big Data paradigms has enabled access to important analytics and risk monitoring for diagnosing and protecting athletes from injuries, as well as real-time 3D trajectory tracking for performance evaluation. Augmented Reality and Virtual Reality applications have the potential to provide fast visual enhancements and immersive	The state of the art in I. Ioannidou (2020) includes the significant role of Information Technology in various aspects of the sports sector, such as broadcasting, monitoring, training, coaching, motion tracking, and physical education. It also encompasses the use of IoT and Big Data for analytics and risk monitoring, as well as the development of Augmented Reality and Virtual Reality applications for presenting information and immersive sport experiences.	The novelty in I. Ioannidou (2020) lies in the comprehensive integration of Information Technology, including IoT, Big Data, Augmented Reality, and Virtual Reality, into various aspects of the sports field, aiming to enhance training, coaching, monitoring, and viewer experience.

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				experiences for coaches and viewers of sport events.		
Using Innovative Technologies During Sports Training in the Additional Education	A. M. Danilova, A. D. Voronin	2020	Mobile applications and other multimedia support tools are effective to make the success of athletes in the educational process.	The main findings are the importance of using innovative technologies in the training process, the effectiveness of mobile applications and multimedia support tools in developing athletes' abilities, and the evidence of their effectiveness in enhancing athletes' success in the educational process.	The "state of the art" in A. M. Danilova, A. D. Voronin (2020) involves the use of innovative technologies such as mobile applications and multimedia support for the development and improvement of athletes' physiological, cognitive, and technical qualities, as well as the effectiveness of these tools in the educational process for athletes.	The novelty in A. M. Danilova, A. D. Voronin (2020) lies in the emphasis on using innovative technologies, such as mobile applications and multimedia support, to enhance the training and educational process for athletes. This includes the development of a methodology for improving athletes' technical and tactical abilities using these innovative tools.
Application and prospects of information technology in sports training	Zhong Ya-ping	2008	The current research of information technology adopted in the sports training in China.	-	The state of the art is the current research of information technology adopted in sports training in China, including data collection and management, analysis and simulation of movement technique, and assistant training system for sports.	-
Wearables and Internet of Things (IoT) Technologies for Fitness Assessment: A Systematic Review	J. Passos, S. I. Lopes, F. Clemente, P. M. Moreira, Markel Rico-González, P. Bezerra, L. P. Rodrigues	2021	Wearable and IoT technologies have been used in sports not only for fitness assessment but also for monitoring the athlete's internal and external workloads.	Wearable and IoT technologies have been used in sports for fitness assessment, monitoring internal and external workloads, physiological status monitoring, and activity recognition/tracking. The maturity level of these technologies is still low, particularly in terms of acquiring more effective biomarkers for athletes' internal workload. The	-	The novelty in the paper lies in the application of wearable and IoT technologies in sports for athlete training, performance monitoring, and fitness assessment, as well as the recognition of the low maturity level of these technologies and the need for more effective biomarkers for athlete's internal workload. Additionally, the paper

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				recent advances in machine learning in sports are enabling predictive fitness analytics, which can determine appropriate training and in-game strategies.		discusses the evolution of the concept of Internet of Things (IoT) from its initial focus on internet connectivity to a broader ecosystem encompassing multiple technologies and application domains, including sports.
Research on the Application of Information Technology in School Sports	Yunyun Du	2013	The application of information technology in school sports is analyzed theoretical and practical basis for the application of information technology in the school sports.	The main findings include the widening application of information technology in school sports, its role in optimizing sports class teaching, enhancing students' autonomy and initiative in learning and training, and the importance of scientific selection of athletes.	-	The novelty in Yunyun Du (2013) lies in the comprehensive integration and application of information technology in various aspects of school sports, including teaching, athlete selection, training monitoring, and management. This approach represents a holistic utilization of information technology to enhance different facets of school sports, which may not have been extensively explored in previous literature.
Research on the Applications of Information Technology in Sport Management	Chuang Li, Zhen Wang	2011	Information technology can improve the work and management efficiency significantly in modern society.	The main findings of the paper are the utilization of information technology for improving the efficiency of sport management and an overview of how information technology is changing the nature of management practices in modern society.	The "state of the art" in Chuang Li, Zhen Wang (2011) is the utilization of information technology for improving the efficiency of sport management and how it is changing the nature of management practices in modern society.	The novelty in Chuang Li, Zhen Wang (2011) lies in its focus on the utilization of information technology to improve the efficiency of sport management and its attempt to provide an overview of how information technology is changing the nature of management practices in modern society.
THE USE OF TECHNOLOGICAL INNOVATIONS IN SPORT	I. Turcu, G. B. Burcea, D. Diaconescu	2021	The data gathered through technology is used to dissect the athlete's performance.	- The advancement of modern technology has significantly impacted the world of sports, from dissecting athlete performance to	The "state of the art" in I. Turcu, G. B. Burcea, D. Diaconescu (2021) includes the use of technology in sports, emphasizing data analysis,	The novelty in the paper lies in the rapid evolution and continuous innovations in sports technology and equipment, as well as the increasing awareness of general

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				improving the spectator experience. - The use of data and technology in sports has become crucial for identifying areas of improvement and maintaining competitiveness. - The sports equipment industry is rapidly evolving due to the adoption of emerging sports technologies and increasing awareness of general health among people.	video editing, and access to information. It also highlights the importance of investing in CRM solutions for sports clubs and federations, the central task of management for successful operations, rapid development and continuous innovations in sports technology and equipment, and the increasing awareness of general health driving the growth of the sports equipment market. Sensor technology is also mentioned as being advanced enough to be incorporated into various sports equipment.	health leading to a growth in sports activities. The paper also emphasizes the use of technology in dissecting athlete performance and improving training methods, along with the centralization of information about fans and the use of CRM solutions by clubs and federations.
Rapid Feedback Systems for Elite Sports Training	A. Baca, Philipp Kornfeind	2006	Advances in information technology have let computer scientists and engineers develop sports-specific feedback systems in cooperation with biomechanists, physiologists, sport psychologists, and strength and conditioning specialists.	The main findings of the paper are the development of sports-specific feedback systems incorporating sensors to acquire various parameters of exercises, which could be productive for athletes and sports broadcasts.	The "state of the art" in A. Baca, Philipp Kornfeind (2006) involves the development of sports-specific feedback systems using information technology, in collaboration with experts from various fields, to acquire biomechanical, physiological, cognitive, and behavioral parameter values for athletes' performance improvement and potential use in sports broadcasts.	The novelty in A. Baca, Philipp Kornfeind (2006) lies in the development of sports-specific feedback systems incorporating sensors and devices to acquire various parameter values, allowing athletes to compare performance and sports broadcasts to illustrate informative segments.
Design of the Physical Fitness Evaluation Information Management System of Sports	Haobo Liu, Xiaoyun Zhu	2022	The continuous improvement of the physical training evaluation system is directly related to the	The main findings of the paper include the development of an artificial intelligence-based physical fitness evaluation system for sports	The "state of the art" in Haobo Liu, Xiaoyun Zhu (2022) is the development and application of an advanced physical fitness	The novelty in Haobo Liu, Xiaoyun Zhu (2022) lies in the development of a physical fitness evaluation information

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Athletes Based on Artificial Intelligence			reforming in the evaluation and monitoring methods of physical training.	athletes, with a focus on improving data collection and analysis accuracy, as well as enabling coaches to tailor training plans based on athletes' physical consumption. The paper also highlights the importance of various algorithms in artificial intelligence and the model calculus module in system development.	evaluation information management system for sports athletes based on artificial intelligence. The paper emphasizes the use of artificial intelligence to address the limitations of traditional methods in accurately assessing athletes' physical fitness, thereby improving their sports performance and training plans.	management system for sports athletes using artificial intelligence technology to address the issue of outdated equipment for physical fitness evaluation in China. The comparison with other systems and the use of network and intelligent data analysis software for correct movement analysis also contribute to the novelty of the paper.
Research on sports fitness management based on blockchain and Internet of Things	Yuqiu Shan, Yu-Chia Mai	2020	The functions and technical performance indicators of the dynamic fitness management technology can meet the needs of users in indoor and outdoor fitness management.	The main findings include the potential of blockchain and Internet of Things technology for fitness management, the successful demonstration of dynamic fitness management technology, and the real-time collection and processing of user movement and physical health information.	The state of the art in Yuqiu Shan, Yu-Chia Mai (2020) involves the use of blockchain and Internet of Things technology for fitness management, the importance of regular aerobic exercise for human health, the collection and analysis of health and exercise information for effective guidance and intervention in sports and health, the evolution of sports fitness information parameters collection, the integration of three layers in the system: data collection, data transmission, and data processing and display, the use of blockchain technology for high concurrency problems, continuous monitoring of user's movement status for effective monitoring, integration of three-axis	The novelty in Yuqiu Shan, Yu-Chia Mai (2020) lies in the development and implementation of a dynamic management technology for sports fitness based on the integration of Internet of Things and blockchain, as well as the emphasis on using blockchain to address data processing challenges and the novel hardware design for data collection. The experimental verification of the system's ability to obtain high-quality sports fitness data also represents a novel contribution.

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					acceleration detection module for user movement status detection, continuous recording of 24 hours of dynamic ECG and other data for different activity situations, and building a sports fitness IoT platform and adopting blockchain technology for verification.	
Digital Coaching and Athlete's Self-efficacy - A Quantitative Study on Sport and Wellness Technology	Eeva Kettunen, Tuomas Kari, Markus Makkonen, W. Critchley	2018	Digital coaching can increase the athletes' knowledge regarding their technique as well as provide improvement on perceived level of skiing technique.	Digital coaching provides valuable training data and guidance, improves athletes' knowledge and technique, and offers insights into the effects and possibilities of digital coaching among athletes.	The paper discusses the increasing use and demand for sport and wellness technology devices among athletes, emphasizing the role of digital coaching in providing valuable training data and guidance. It specifically investigates the effects of digital coaching on cross-country skiers' self-efficacy and technique improvement during a one-month preparation period for a ski marathon race. The results indicate positive effects on athletes' knowledge and perceived level of skiing technique.	The novelty in the paper lies in its focus on the subjective perceived effects of digital coaching among cross-country skiers, particularly in relation to changes in the athletes' self-efficacy during a specific period of preparation for a ski marathon race. This focus on the subjective impact of digital coaching on athletes' self-efficacy in a specific sport context appears to be the novel aspect of the study.
The importance of information technology in the development of the school sports	W. Jia	2012	Information technology in physical education help to improve the quality of physical education.	The main findings include the exploration of the functions and effects of information technology in the development of school sports, proposal of specific measures for its full use, and the improvement of the quality of	The "state of the art" in W. Jia (2012) is the exploration of the functions and effects of information technology in the development of school sports, along with the proposal of specific measures for its full use. The paper also highlights	The novelty in W. Jia (2012) lies in its exploration of the functions and effects of information technology in the development of school sports, as well as its proposal of specific measures for full-used information technology in school sports. It also emphasizes

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				physical education through information technology.	the improvement in the quality of physical education through the use of information technology.	the improvement of the quality of physical education through information technology as a means of scientific management.
The Application of Information Technologyin Sports Training	Shang Ying, Wang Gang, Wang Yaojun	2011	The sports training system developed by information technology combined with automatics apply in the tradition sports training will be promote the efficient of the training.	The paper does not explicitly state main findings or a summary of results or conclusions. It mainly discusses the potential benefits of combining information technology and automatics in traditional sports training, aiming to promote the efficiency of the training and provide useful information to researchers and consultants in the field.	The paper discusses the potential benefits of combining information technology and automatics in traditional sports training to improve efficiency. It aims to explore the connection between information technology and sports training and provide useful information for researchers in computer applied training systems and the development of sports training.	The novelty in Shang Ying, Wang Gang, Wang Yaojun (2011) lies in the exploration of the potential benefits of integrating information technology and automatics into traditional sports training to enhance training efficiency. It also aims to provide guidance for researchers and developers in this field.
Application of Information and Communication Technology (ICT) in Administration of Physical Education and Sports	B. Ohuruogu, U. Ikechukwu, Eneka Mong, Alor Roseline Chinyere	2019	ICT represents one of the most useful tools for enhancing the decoding of physical education and sports curriculum if used correctly.	ICT is a highly useful tool for enhancing physical education and sports curriculum when used correctly, and practical ICT training is recommended for teachers and students. ICT tools provide students with immediate feedback to improve their observational and analysis skills.	-	The novelty in the paper lies in its specific focus on the application of information and communication technology (ICT) in the administration of physical education and sports, as well as the recommendation for practical ICT training for physical education teachers and students. The paper also emphasizes the potential of ICT tools in improving efficiency and performance in Nigeria sports at an international level, highlighting the unique application of modern technology in this domain.
Investigating the Role of Management Information	Sajjad Pashaie, Mirdavood Hoseini,	2020	The higher the management information systems, the	The main findings of the paper are the positive and significant effects	The paper investigates the role of management information	The novelty in this paper lies in its investigation of the specific role of

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Systems Technology on the Performance of Sports Organizations	Fatemeh Abdavi, M. Moharramzadeh, Geoff, Dickson		higher the organizations performance.	of ISQ, ISS, and organizational size on organizational performance, indicating that higher management information systems lead to better organizational performance. Proper implementation of management information systems can also lead to user satisfaction, reduce administrative errors, and assist in organizational decision-making.	systems (MIS) technology on the performance of sports organizations using a quantitative method with a questionnaire-survey. It finds positive and significant effects of information system quality (ISQ), information system strategy (ISS), and organizational size on organizational performance, suggesting that higher management information systems lead to better organizational performance. Proper implementation of management information systems is suggested to lead to user satisfaction, reduce administrative errors, and assist in organizational decision-making.	management information systems (MIS) technology on the performance of sports organizations, supported by empirical data. It also highlights the positive and significant effects of ISQ, ISS, and organizational size on organizational performance.
The Prospect and Application of Sports Computer of Information Technology	Z. Li	2008	Sport information technology applied in large-scale sports game at home and abroad is developing very fast.	The main findings are related to the components of sport information technology, its rapid development in certain areas, and its increasing reliance in various aspects of sports and related activities.	The "state of the art" in Z. Li (2008) is the development and application of sport information technology in large-scale sports games, particularly in China. It also addresses the existing problems and future prospects of sport information technology in various aspects of sports.	The novelty in Z. Li (2008) lies in the review and analysis of the developing course and application of sport information technology in various aspects of sports business, including its increasing dependence and the developing prospects in China.
The Research on Application of Information Technology in sports Stadiums	Han Can, Ma Lu, Luying Gan	2011	The use of computer technology, image analysis, computer-aided training athletes, sports training	The main finding of the paper is the research on the application of information technology in sports stadiums and the exploration of its	The state of the art in Han Can, Ma Lu, Luying Gan (2011) is the wide range of information technology	The novelty in the paper lies in its exploration of the wide range of information technology applications in modern sports

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			system and related data entry systems, decision support systems are applications in the sports venues in the increasingly wide range of modern venues and facilities.	future trends, with the aim to promote the growth of China's national economy, improve students' quality, and promote the cause of Chinese sports.	applications in modern sports venues and facilities, as well as the focus on modernizing sports infrastructure and exploring future trends in the application of information technology in sports stadiums.	stadiums and facilities, as well as its focus on the future trends in this area.

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