

High-quality Development of Youth Sports Dance Events Under the Background of Integration of Sports and Education Research on Digital Transformation Mode

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Abstract: Based on the core tone of digital and high-quality development of sports in the ' 15th Five-Year Plan ', the continuous deepening of the integration policy of sports and education has given new connotation and requirements to the development of youth sports dance events. As an important carrier of youth sports development, the youth sports dance competition has ushered in development opportunities. At the same time, there are still practical problems such as insufficient organizational management efficiency, weak fairness guarantee of events, and limited cultural communication power. By using the methods of literature and case analysis, this paper combs the practical application path of digital transformation of youth sports dance events, analyzes the ' technology-organization-culture ' collaborative driving mechanism of event development, closely follows the development requirements of the ' 15 th Five-Year Plan ', and puts forward high-quality development and reform strategies from the dimensions of top-level design optimization, digital technology system construction, technology application and talent cultivation. the research shows that digital transformation is the core starting point to break the bottleneck of event development, which can effectively promote the multiple values of efficiency improvement, fairness and inclusiveness and cultural inheritance of youth sports dance events. Its development experience can provide reference for the development of similar youth sports events, and help the construction of ' 15th Five-Year ' sports power and the implementation of sports and education integration policy.

Keywords: Digital Transformation; Youth Sports Dance Events; Integration of Sports and Education; High-Quality Development

1. Introduction

In 2025, as a key convergence period between the end of the " 14th Five-Year Plan " and the layout of the " 15th Five-Year Plan, " the development of China 's sports industry has entered a strategic transformation stage of " digitally enabling high-quality development. " in recent years, the national level has continued to promote the deep integration of sports and education. ' Opinions on deepening the integration of sports and education to promote the healthy development of young people ' and other policies have been issued one after another, clearly requiring digital transformation to enable high-quality development of sports events and help build a sports power. on May 8, 2024, the General Administration of Sports of the People 's Republic of China issued ' Insisting on reform and innovation to empower high-quality development of sports ', which requires that we should focus on promoting high-quality development of sports, adhere to reform and innovation, and deepen reform to promote high-quality development of sports [1]. As an important carrier of the integration of sports and education, youth sports dance events have not only become an emerging sports event due to the inclusion of sports pilots in the middle school entrance examination and the rising popularity of small art examination, but also face problems such as low organizational efficiency of traditional events, strong subjectivity of referees, and imbalance of resource allocation. Under the background of sports power strategy and sports-education integration policy, it is urgent and necessary to promote its high-quality development. the high-quality development of youth sports dance events needs to be guided by policies, driven by technology, and centered on culture. It is necessary to improve the modernization level of youth sports dance event governance, increase the rectification of event style and discipline, strengthen coordination with local sports government departments and

event organizers, focus on breaking through digital transformation, carry out systematic reform, and enhance sustainable development capabilities. Only in this way can we realize the transformation of events from 'scale expansion' to 'quality improvement', truly serve the overall growth of young people and the national sports strategic goals, and the reform and innovation of youth sports events will help the new pattern of sports development. Based on the characteristics of youth sports dance events, this paper proposes a digital and intelligent reform path, provides a replicable digital path for the reform of youth sports events, and helps 'opinions on deepening the integration of sports and education to promote the healthy development of young people' and other policies.

2. Practical Application of Digital Transformation of Youth Sports Dance Events

2.1 Innovation of Online Competition Mode of Youth Sports Dance

Since the new coronavirus epidemic promoted the popularization of the 'online+offline' event model, the online event of youth sports dance has been upgraded from an emergency measure to a normalized innovative form [2]. Its core value is not only to break the space limit, but also to reconstruct the event participation experience through technology, so that young people in different regions can enjoy competitive opportunities equally. Taking Wuxi Asian Sports and Dance Festival as an example, its self-developed cloud event platform is not a simple online registration tool, but a service system covering the whole process of pre-competition preparation-competition-post-competition feedback: before the competition, the parents of the players can upload the identity certificate and training video through the platform to complete the qualification examination. the system automatically compares the past competition records with the help of AI technology to avoid age fraud, group misstatement and other problems. It was originally necessary to manually check the work one by one for 3 days, and now it can be completed in 4 hours; in the competition, the platform adopts 4K multi-position live broadcast. the audience cannot only watch the whole competition through the main perspective, but also switch to the contestant's close-up perspective, clearly capturing the

details of the swing amplitude of the Latin dance skirt and the stability of the modern dance rack. Some parents feedback that even if they do not arrive at the scene, they can also see the advantages and disadvantages of each action of the child. After the competition, the platform will generate a visual scoring report containing the degree of action completion and rhythm fit, and can also recommend the competition video of the excellent players in the same group for children's targeted learning. This model also extends the new form of 'event+virtual community', such as the exclusive section of the event created by the 'Blue Dancer' APP. Not only does it have a player growth file, recording each entry score and referee comments from the enlightenment group to the elite group. It also opens online training camps, invites national coaches to record action disassembly courses, players can upload training videos to obtain AI error correction suggestions, and even get offline master class quotas through fan playlists.

From the perspective of industry development, the online event model is promoting sports dance from niche competition to mass participation. Online events simplify the participation threshold of traditional events from time, money and geographical triple restrictions to a single device plus network, which increases the participation rate of third-and fourth-tier cities and townships by more than 40%, and the link from online display to offline transformation has been formed. In the 2023 national youth sports dance online qualifier, 32% of the online promotion players will take the initiative to register for the offline finals, driving the overall participation scale of the event to grow. At the same time, the data precipitation of online events also provides support for the development of the project. For example, millions of participating videos accumulated by the platform can be used to analyze the technical shortcomings of players of different ages, provide a basis for the compilation of teaching materials and the formulation of training programs, and truly realize the promotion of training by competition.

2.2 Data-Driven Organization and Management of Youth Sports Dance Events

The organization and management of youth sports dance events is shifting from empirical judgment to accurate decision-making with the help of data technology. This transformation not only improves operational efficiency, but also

solves the pain points such as waste of resources and fairness disputes in traditional events, liberating organizers from tedious transactional work and focusing on the improvement of event quality. Its core is to build a platform for event data, integrate multi-dimensional data such as registration, schedule, venue, referee and player, and realize digital control of the whole cycle. Taking the Jiangsu Province Sports Dance Championship as an example, in the past, when the schedule was manually arranged, it was often due to ignoring the details of the same player's cross-group participation or the referee's expertise in dance and match, resulting in schedule conflicts and penalty disputes [3]. After the introduction of the data platform in 2023, the system can automatically read the player's registration information, prioritize the interval of cross-group players, and intelligently allocate the number of matches according to the referee's past scoring data (such as the sensitivity to the rhythm of Latin dance and the tendency to control the etiquette of modern dance). the number of adjustment of the schedule in the year decreased from 15 to 2, and the satisfaction of the referee increased to 98%. In terms of resource allocation, data technology can also achieve dynamic optimization. Wuxi Asian Sports and Dance Festival collects real-time data such as crowd density, rest area utilization rate, toilet queuing time through intelligent sensors deployed in the venue. When the crowd in a certain area exceeds the threshold, the system will automatically push warning information to the organizer's mobile phone, and timely allocate volunteers to guide the diversion. During the 2023 event, the average waiting time of the audience was shortened from 25 minutes to 8 minutes, and the number of on-site complaints decreased by 70%.

This data-driven model also has a profound impact on the construction of event fairness. In traditional competitions, the player's identity verification relies on manual comparison of identity cards and account books, which is prone to competition problems. After the introduction of OCR recognition and blockchain storage technology in the Jiangsu Province Sports Dance Championship, the system can automatically extract the identity card chip information and compare it with the player's face and training video entered before the competition. the verification accuracy rate is 100%, and the data cannot be tampered with after uploading, and

parents no longer need to worry about black box operation. Data is no longer an accessory product of the event, but a core resource that drives management optimization [4]. the explosive power of short video is more than expected. the Internet can significantly broaden the spread of sports dance and enhance the enthusiasm of enthusiasts [5]. However, it should be noted that not all digital communication is effective. Some events are just a simple copy of other people's model, not combined with the characteristics of youth sports dance, broadcast half a day there are not many people to see. the key is to seize the preferences of young people, the content should be fresh, the form should be novel. For example, the 'Blue Dancer' APP has an exclusive community for events. Players can upload their own competition videos and communicate with other players. Parents can also share their experience in the competition. the spread of this communitization is more sticky than simple live broadcasts and short videos. It is no longer a one-time event exposure, but a continuous cultural exchange circle. Players get recognition through this circle, more training motivation; potential participants learn about the project through this circle and gradually become interested. This is the real value of digital communication - not only to expand the influence, but also to cultivate the mass base of the project.

2.3 Cultural Communication and Derivative Consumption

The core of digital transformation is not the accumulation of technology, but the application of data. the management of youth sports dance events was previously based on experience. the schedule depends on the intuition of the old staff, and the talent selection depends on the vision of the coach. Mistakes are common. Now it's different, data can solve many problems. But the data is not omnipotent. At the beginning of data management, we also took a detour, collected a lot of data, but did not know how to use it. It was later understood that the key was to capture the core data. For example, the basic information of the players, the results of the competition, the details of the score, as well as the operation data of the flow density and equipment utilization rate of the venue. Only by integrating these data to form a data matrix can it play a role. Wuxi Asian Sports Dance Festival is doing this. They deployed intelligent sensor networks to collect

venue data in real time, and then combined with the player registration data to dynamically adjust the schedule and resource allocation. the effect is obvious, the waiting time of the audience is shortened, and the number of complaints in the event has also decreased a lot.

The essence of data-driven is to make decision-making more scientific. the digital transformation of industry is to reconstruct the underlying logic through data elements [4]. This view is used in youth sports dance events, but appropriate. Such as registration and qualification examination, the previous manual check ID card, account book, slow and error-prone, there may also be a substitute situation. After the introduction of OCR identification and blockchain certificate storage technology in Jiangsu Province Sports Dance Championship, these problems have been solved. the player 's identity information is automatically verified, and the data cannot be tampered with after uploading. Parents and players are more assured. Digital management can enhance the standardization and credibility of the event. For talent training, the value of data is greater. In the past, the coach guided the players, and it was difficult to find the problem accurately by naked eye observation. Now, through the digital system, the performance data of the players ' multiple events are recorded, such as the dimensions of action completion, rhythm control and artistic expression. By analyzing these data, the coach can clearly see where the player 's short board is. For example, some players rumba 's crotch rhythm is always not in place, the data can quantify this problem, the coach can develop targeted training programs. I have seen a coach who helped a 12-year-old player adjust the rhythm problem by analyzing the event data. Later, the player took the ranking in the provincial competition. This closed loop of ' event-training-growth ' is the core of the digitization of talent training. Moreover, the digital platform can also build a talent database, integrate the information of outstanding players, and provide reference for the selection of professional teams. This is very important for the long-term development of sports dance projects. But there is a premise, the data should be true and accurate. If there is a problem in data acquisition, subsequent analysis and application are impossible. Also, you can 't rely too much on data. the growth of young players, in addition to technical indicators, there are psychological

qualities, interests and hobbies that cannot be quantified. Data is an auxiliary tool, not a substitute for the coach 's experience and humanistic care for the players. For example, some players have good data, but they are prone to tension during the game, which requires the coach to guide through experience. Therefore, data-driven is not to deny experience, but to combine experience and data more closely. Digital transformation can provide scientific support for event management and talent training, but we must pay attention to the combination of technology and practice [3]. the future direction should be to continue to improve the data collection and analysis system, while taking into account the individual growth needs of young people. Let the data really serve the players and serve the project development.

3. The Driving Mechanism of the 'Technology-Organization-Culture' Collaborative Model of Youth Sports Dance Events

3.1 Technology Enabling Mechanism

The essence of the technical empowerment of youth sports dance events is to reconstruct the competition process and scoring logic through digital tools. the core is to reduce subjective bias and improve the fairness of the event. Sports dance includes Latin dance and modern dance, a total of ten dances. the referee needs to quickly evaluate the performance, rhythm, coordination, flexibility, strength and other indicators in the mobile competition of the players. the traditional scoring model is easily affected by factors such as limited observation time and subjective preference. the AI motion capture system introduced by Wuxi Asian Sports and Dance Festival builds a scoring model including 12 indicators such as body lines and rhythm fit. It is not only technical dazzling, but also quantifies subjective evaluation indicators through accurate data, so that the subjective error rate of referees is reduced from 18.3% to 0.5%, and the preparation period of the event is shortened by 30%. the application of this technology breaks through the experience dependence of traditional scoring, provides objective data reference for referees, and makes the scoring criteria more transparent - players and spectators can view the scores of various indicators through the system and understand the scoring basis.

However, the technology landing process often

faces many challenges. After the introduction of an advanced digital schedule arrangement system in a city, due to the lack of adequate training for the referees by the organizers, the first day of the competition was chaotic. This fully demonstrates that technological advancement is not the only condition for value realization. Without organizational adaptation, technology is difficult to be effective. the core of the technological empowerment of youth sports events lies in the intermediary role of organizational agility, and technology itself cannot directly generate value. [6]. the application of technology will also reversely promote the optimization of organizational processes. Taking the information of blockchain technology certification contestants as an example, its application will inevitably require the organization to re-comb the qualification audit process and clarify the division of rights and responsibilities in data uploading, verification and other links. In addition, the application of technology needs to be in line with cultural needs to avoid falling into the misunderstanding of technical dazzling. For example, some events use animation style to make action analysis videos, transforming sports dance professional terms into animation forms that are easy for teenagers to understand. Compared with traditional text descriptions, it significantly improves the communication effect and understanding efficiency. Only by embedding digital technology into cultural scenes can it truly exert its communication value. the application of technology should not be separated from the actual needs. If the online interactive system used in the event is cumbersome, parents need to spend a lot of time learning the voting process, which will lead to negative emotions. the core essence of technology-driven is to make technology become the power of organizational optimization and the carrier of cultural communication, rather than an additional burden. the application of high-quality technology should achieve 'insensible integration ', with the ultimate goal of improving the operation efficiency of the event and transmitting the temperature of the event.

3.2 organization Cooperation Mechanism

The essence of the organization and coordination of youth sports dance events is to realize the clear and efficient linkage of the rights and responsibilities of multiple parties through the

digital platform. the core is to reduce the cooperation cost and improve the success rate of the event. the collaborative mechanism of Wuxi Asian Sports Dance Festival relies on the cloud platform to integrate multiple resources such as China Sports Dance Federation, science and technology enterprises, and short video platforms. It is not a simple information sharing, but through the platform to clarify the rights and responsibilities of each subject. China Sports Dance Federation formulates standardized competition rules and embeds AI scoring system to ensure the professionalism of the event. Technology enterprises provide motion capture sensors and blockchain storage technology to ensure data security; the short video platform is responsible for the dissemination of events and the expansion of influence. This collaborative model breaks down the problems of departmental barriers and information asymmetry in traditional organizations. For example, rule adjustment can be synchronized to all participants in real time through the cloud platform to avoid execution deviation; data security issues are monitored by technology companies in real time and respond to risks in a timely manner.

The key extension of organizational synergy is to narrow the regional gap through resource inclusion and promote the development of events from centralization to equalization. the " competition+rural revitalization " model implemented in Shandong Province guides enterprises to develop low-cost digital tools through government subsidies. It is not only to reduce costs, but also to give athletes in remote areas equal opportunities to participate in competitions through technological inclusion. In traditional competitions, players in rural areas are often difficult to participate due to the complex registration process, lack of professional training guidance, and lagging information acquisition. Low-cost digital tools, simple registration procedures, online training guidance platforms, and event information push systems effectively solve these pain points. For example, through this model, the number of young people participating in sports dance in a remote county has increased from 50 to 200 per year, of which 80% of the players have received professional guidance through the online training platform. the value of organizational synergy is not to focus on advantageous resources to run competitions, but to achieve balanced

distribution of resources through mechanism innovation, so that competitions can become an inclusive platform for youth growth, rather than only serving competitive events in advantageous areas.

3.3 Cultural Reconstruction Mechanism

The cultural reconstruction of youth sports dance events is essentially a two-way empowerment of tradition and modernity through digital tools, and the core is to stimulate the cultural creativity of young people. the contestants simulate the multi-ethnic cultural scene through the VR training cabin, and combine the flying posture in the Dunhuang murals with the cha-cha dance steps. It is not a simple cultural grafting, but through the immersive experience of VR technology, understand the aesthetic core of traditional culture, and then integrate with the competitive characteristics of sports dance. the soft stretch of the flying posture is complementary to the rhythm of the cha-cha dance steps. the system feeds back the action coordination data in real time to help the players optimize the fusion effect. This cultural reconstruction breaks through the limitations of one-way transplantation, allowing young people to change from cultural recipients to cultural creators, rather than passively applying traditional elements.

The deep significance of cultural reconstruction lies in strengthening cultural identity and national self-confidence through technical tools, and promoting events to become the carrier of cultural inheritance. the open channel of Chinese dance gene bank developed by Hunan Sports Dance Association supports players to call 56 ethnic dance action modules for free combination. AI system provides optimization suggestions based on the rationality of action mechanics and the consistency of cultural symbols. [8] It is not only technical assistance, but also through modular and personalized creation methods, so that young people can deeply understand the dance culture of various ethnic groups. When calling the Tibetan dance action module, the system synchronously pushes the cultural background and symbolic significance of the action to help the players understand the cultural connotation and then create. In this mode, the works of the contestants are no longer the superposition of superficial ethnic elements, but the innovative expression of cultural understanding. For example, a 15-year-

old contestant combines the swinging action of the Miao silver dance with the twisting action of the rumba dance. the works drive the Miao dance search volume to increase by 150% in the dissemination of the event. the value of cultural reconstruction mechanism is to make young people perceive cultural charm and establish cultural self-confidence in competition, rather than simply pursuing cultural gimmicks of events, so that sports dance events can become a bridge between young people and traditional culture.

4. The Reform Path of High-Quality Development of Youth Sports Dance Events

4.1 Strengthen the Top-Level Design and Anchor the Policy Orientation of the Integration of Sports and Education

The top-level design at the national strategic level is the fundamental follow-up to the high-quality development of youth sports dance events, and its core is to realize the systematic connection and accurate landing of the policy system. the " Outline for the Construction of a Sports Power " and " Opinions on Comprehensively Strengthening and Improving School Physical Education in the New Era " form a policy synergy, incorporate youth sports dance events into the core promotion project of sports and education integration, and clarify its strategic value in improving youth physical health and inheriting sports culture [6]. the policy practice at the local level needs to closely follow the national orientation. After Shandong Province incorporated sports dance into the sports selection project of the senior high school entrance examination, it supported the introduction of the ' 3-year action plan for the development of youth sports dance '. Through financial special subsidies, sinking of event resources and other measures, the participation rate of youth sports dance has increased by 18% annually; zhejiang Province has set up a digital cloud platform for the integration of sports and education to realize the one-stop processing of event registration, performance inquiry and credit recognition. It directly links the participation of events with the evaluation of students' sports literacy, and constructs a closed-loop policy of promoting practice and learning by competition. the vitality of the policy lies in its implementation. It is necessary to break down departmental barriers, establish a joint office

mechanism between sports and education administrative departments, incorporate the effectiveness of event development into the integrated assessment indicators of local physical education, and ensure that the policy dividends reach the grassroots level.

The collaborative optimization of organizational structure and the scientific reconstruction of evaluation system are the key support for the implementation of top-level design. In the vertical dimension, the China Sports Dance Federation should lead the construction of a national-provincial-city-school four-level collaborative governance system, coordinate the formulation of competition standards, the construction of technical platforms and the docking of international resources, and establish a digital event management center at the provincial level. Responsible for resource allocation and technology promotion in the region, promote the construction of a school team at the school level, and incorporate event participation into the physical education teaching plan [7]. In the horizontal dimension, it is necessary to integrate the resources of the government, industry associations, schools, science and technology enterprises, and carry out the special action of 'events into the campus' in Shanghai. the government provides site support, the association formulates graded competition plans, and enterprises provide digital technology services to form a multi-win-win organizational pattern. the innovation of the evaluation system should take into account both scientificity and differentiation, draw on the international standards of WDSF and integrate Chinese national dance elements, set up a three-level competition system of enlightenment group, promotion group and elite group, formulate exclusive evaluation indicators for the physiological and psychological characteristics of young people of different ages, and introduce third-party evaluation institutions to comprehensively evaluate the efficiency, fairness and educational value of the event organization, and build a multi-evaluation model of 'process+result'.

4.2 Adhering to Digital Transformation and Building Systematic Technical Support

The digital transformation of youth sports dance events is not a simple superposition of scattered technologies, but a systematic technical architecture reconstruction of 'cloud-edge-end'

collaboration. Its core is to realize the efficient circulation of data elements and the deep empowerment of technical tools. the construction of the national sports dance data center is the core hub of the technical system. It is necessary to integrate multi-dimensional information such as player physiological data, action technical data, event operation data, and audience behavior data, and adopt distributed storage and cloud computing technology to realize real-time data aggregation, cleaning, analysis and sharing. the unification of technical standards is the key to break the data island. the Chinese Sports Dance Federation should work with the Ministry of Industry and Information Technology and the National Standards Committee to formulate digital technical specifications for events, clarify the core contents of data interfaces, transmission protocols, and safety standards, and solve the problem of data incompatibility between different regions and different platforms. the national sports dance digital training base built in Beijing relies on 5G+AI+VR technology to build a full-scene technical support system. the cloud data middle platform processes the training data of the players in real time. the edge computing node guarantees the low-latency transmission of the on-site data of the event. the terminal equipment realizes data acquisition and instant feedback, providing a solid technical base for the high-quality development of the event.

The continuous iteration of technology and the simultaneous advancement of risk prevention and control are important guarantees for the sustainability of digital transformation. the optimization of AI referee system should deeply integrate biomechanics and sports training theory, construct accurate scoring model based on human motion capture data, continuously optimize index weight through deep learning algorithm, and transform subjective evaluation indexes such as action standardization, rhythm fit and expressive force into quantifiable data parameters. the application of VR technology should not be limited to venue simulation, but should be extended to pre-competition training, tactical deduction, cultural infiltration and other scenarios. By constructing an immersive training environment, it can help young people quickly adapt to the pressure of the event and improve their competitive level. At the same time, digital transformation needs to be vigilant against potential risks such as data leakage and

algorithm bias. Federal learning technology is used to realize multi-agency data collaborative analysis, mine data value without sharing original data, and use blockchain technology to store and trace event data to ensure data security and event fairness. the event digital security management platform built in Shenzhen, through the three-level certification of network security level protection, establishes a data life cycle security management mechanism, effectively prevents data leakage and tampering risks, and escorts the digital transformation.

4.3 Strengthen Technology Application and Personnel Training, and Lay a Solid Foundation for Transformation

The application of digital technology should run through the whole chain of youth sports dance events, from daily training to event organization, from player growth to cultural communication, and build a scene-based and inclusive technology application ecology. In daily training, the in-depth application of wearable devices provides data support for the formulation of personalized training programs. EMG sensors monitor muscle strength in real time. Heart rate monitoring equipment dynamically tracks physical consumption. Combined with big data analysis technology, targeted training suggestions are generated to help young people avoid sports injuries and improve training efficiency. In the organization of the event, the combination of OCR recognition technology and blockchain certificate storage technology realizes the zero error of rapid verification and qualification examination of player identity. the intelligent schedule arrangement system dynamically optimizes the schedule according to the number of participants, site conditions, referee resources and other factors, and shortens the preparation cycle of the event. In terms of cultural communication, VR technology can build a virtual scene that integrates intangible cultural heritage dance and national dance elements, so that young people can feel the charm of traditional culture in training, and digital communication tools such as Douyin and Kuaishou can help the event culture to spread in circles and enhance the social influence of the project. Sichuan has launched the " Digital Dance into Campus " project, equipping primary and secondary schools in remote areas with simple VR training equipment and portable wearable equipment, narrowing the gap between

urban and rural sports resources through technological inclusion, and allowing more young people to enjoy the development opportunities brought about by digital transformation.

The cultivation of compound talents is the core driving force of digital transformation. It is necessary to build a trinity talent training system of " college training+enterprise training+industry certification. " Sports colleges and universities should deepen the curriculum reform, set up interdisciplinary courses such as " digital operation of sports dance, " " basic algorithm of action analysis " and " event data management, " integrate multidisciplinary knowledge such as sports science, computer science and management science, and cultivate compound talents with both professional quality of sports dance and application ability of digital technology. Wuhan Institute of Physical Education and Huazhong University of Science and Technology jointly build a sports dance digital technology laboratory, jointly carry out scientific research projects and personnel training, students participate in practical projects such as the development of digital platform for events and the optimization of AI scoring system, so as to improve their practical ability [9]. Enterprises and industry associations should play a synergistic role, byte beating cooperate with more than 10 sports colleges and universities across the country to carry out the ' digital event operation talent plan ', and directionally train professional talents such as event data analysts, digital content creators, technical maintenance engineers; china Sports Dance Federation has launched " special training for digital skills improvement, " which carries out digital technology application training for existing event organizers and referees. the annual training scale is not less than 2, 000 people. At the same time, it establishes a digital skills certification system, incorporates digital skills into the industry qualification assessment, and forces practitioners to improve digital literacy. the core of talent training is to realize the balance between technology application and humanistic care, so that digital tools can truly serve the overall growth of young people, rather than simply pursuing advanced technology.

5. Conclusion

Digital transformation is essential for the high-quality development of youth sports dance

events under the sports-education integration policy. By leveraging a “technology-organization-culture” collaborative mechanism, it effectively improves organizational efficiency, ensures fairer judging, and enhances cultural dissemination. To realize this transformation, reforms should focus on optimizing top-level design, building systematic digital infrastructure, and strengthening interdisciplinary talent cultivation. These strategies can serve as a reference for similar youth sports events and support the national goals of building a sports powerhouse.

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