The Present Situation and the Prospect of the Campus Informationization Construction of the Physical Education Colleges and Universities under the Internet + ERA

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Abstract. By using the methods of literature, induction and deduction, investigation and interview, this paper studies the theory and practice of campus information construction in sports colleges and universities. According to the dimension of digital campus construction and evaluation in colleges and universities, the current situation of campus informatization construction in sports colleges and universities in the era of Internet + is analyzed and prospected, and specific opinions and suggestions are put forward. It has a certain reference role for the construction of campus informatization in sports colleges and universities in the era of Internet +.

Informatization of higher education is an effective way to promote the reform and innovation of higher education and improve its quality, and it is also an innovative frontier of the development of educational informatization. The outline of The National Medium And Long-Term Education Reform And Development Plan (2010-2020) points out that information technology has a revolutionary impact on the development of education and must be highly valued.

The Orientation and Guiding Ideology of the State for Educational Informatization

The outline of The National Medium And Long-Term Educational Reform And Development Plan (2010-2020) points out that information technology has a revolutionary impact on the development of education. Itis an indispensable driving force and support for the realization of educational modernization.It is a major strategic choice to solve the problems of educational development and become a powerful country in education. It plays a unique and important role in promoting innovation and change, educational equity, quality, learning society, concept change and innovative personnel training. It alsoplays an important role in the national quality and national innovation ability. Informatization of higher education is an effective way to promote reform, innovation and qutality improvements of higher education, and it is also an innovative frontier of the development of educational informatization. Educational informatization should be based on educating people, and guided by innovation of ideas, and based on high-quality educational resources and information-based learning environment, and centered on innovation of learning methods and educational modes, and guaranteed by the construction of system and mechanism team, giving full play to the important role of educational informatization in supporting development and leading innovation in the process of building a learning society and a strong human resources country.

The first International Conference on Education Informatization, co-sponsored by UNESCO and the Chinese Government, was held in Qingdao, China, from May 23 to 25, 2015. During the conference, delegates focused on the theme of Information Technology and Future Educational Change, through the Education and Information Technology Leadership Forum, Ministerial Round Table and a series of Plenary sessions and chapters, on Effective Use of Information Technology to Ensure the Quality of Learning, Inclusive and Appropriate Lifelong Learning, Universal Quality Learning Content and Monitoring, Evaluation and Financing, moocs Course and other innovative methods of online learning and other topics, conducted extensive and in-depth exchanges and discussions, reached broad consensus, adopted the landmark outcome document Qingdao Declaration, and successfully completed the expected objectives of the meeting. This conference is an important milestone in the field of educational informatization. Chairman Xi Jinping pointed out

thatIn today's world, with the rapid progress of science and technology, modern information technologies such as the Internet, cloud computing and big data have profoundly changed human thinking, production, life, and learning.It profoundly demonstrates the prospects for world development. In response to the development of information technology, promoting educational reform and innovation, building a network, digital, personalized and lifelong education system, building a learning society in which everyone can learn, everywhere can learn, always can learn and ecultivate a large number of innovative talents are major issues facing mankind. Sports colleges and universities should follow the trend, andactively promote the integration and innovative development of information technology and physical education, in order to jointly explore the sustainable development of physical education and comprehensively improve the quality of education in higher sports colleges and universities.With the development direction of building a networked, digital, personalized and lifelong education system, building a learning society in which everyone can learn, learn everywhere and learn from time to time to train a large number of innovative talents, we should implement the overall plan of the 13th Five-Year Plan for educational informatization, and follow the principle of serving the overall situation, integrating innovation, deepening application and improving mechanism, giving full play to the supporting and leading role of educational informatization in educational modernization, and basing on the basic school conditions, focusing on future development, and striv ting to promote educational informatization to achieve leapfrog development.

Current Situation and Prospects of Campus Informatization Construction in Sports Colleges and Universities in the Era of Internet +

General Situation of Campus Informatization Construction in Sports Colleges and Universities

Beijing Sports University's Wireless Network Basically Covers, with a Total Export Bandwidth of 3300M (Including Student Dormitories). There are 141 servers in the computer room, which has been virtualized since 13 years ago, and 20 systems are currently using virtualized servers. The school has 59 systems, using the digital platform of Jinzhi (the original system was Zhengfang of Zhejiang University, upgraded to Jinzhi last year), of which 25 systems realizeddata sharing, and unified identity authentication is realized in 18 systems.The school has built a wired examination system, and Marxist-Leninist, foreign language, computer, and technical theory have all adopted the online examination system to achieve the separation of teaching and examination. It is also preparing to set up a data center to provide sports data management and services (scientific research) for the whole country, establish an online energy system based on the Internet of things, and rebuild a wireless network covering the whole school.

The wired network of Shanghai Institute of Physical Education is gigabit backbone desktop, wireless network covers office area and library, and the bandwidth of campus exit is 450M + 100M of education network; The server management of the computer room has been upgraded to virtualization, the network security equipment is complete (including all kinds of auditing and protective equipment), and the disaster preparedness center has been built in different places; In addition to logistics service support business, other departments have business system support to achieve management informatization; The school adopts the digital platform of Jinzhi (the same as our school), which basically opens up the data sharing of 35 business systems in the whole school. Standardize data standards, stipulate the only source of data, unify identity authentication, seamlessly link business systems through the portal website, and provide school-level data statistical analysis for schools. At the same time, it plans to carry out wired network upgrading and wireless network full coverage projects; The establishment of digital media resource centres and personal data centres; Establish a mobile campus platform project to integrate the PC information portal function into the mobile office hall; Using the platform of public courses outside the school to realize network teaching;

Establish a general wisdom classroom; Building smart venues (Table Tennis, martial arts) to achieve automatic data acquisition and analysis.

Establish double network, data network related to teaching and management, equipment network of one-card, energy management, and security management in Tianjin Institute of Physical Education; Full coverage of wireless network (under construction), campus export bandwidth is Unicom 200M + education network 200M, the new campus will be upgraded after relocation; The school realizes the intelligent function of the campus according to the mode of three centers and one platform. The teaching network information center (realizing the management of multimedia classroom starting by swiping cards, delaying shutdown mode, etc., and managing the whole school classroom and venues and other equipment through the intelligent system). Security management center (to achieve monitoring, patrol system to achieve security intelligence), energy management center (to achieve campus card, energy monitoring, building equipment monitoring and lamp control system and other energy management intelligence), by three centers composed of school intelligent campus unified management platform.

Shenyang Institute of Physical Education will build a stable 10 trillion campus network, with a wireless network covering the whole school. CERNET2 IPv6 access, building virtualization-based data centers, solving the problem of insufficient server and storage resources. Multimedia classroom transformation and upgrading, building smart classroom; Complete the transformation and upgrading of computer classrooms and foreign language voice classrooms, and build cloud desktop computer rooms; Build virtual cloud office system to improve the operation efficiency and security of office computers. We should build a disaster recovery center to ensure the safety of campus network information and data, and the continuity of campus network application services.

Outlook for Campus Informatization Construction in Sports Colleges and Universities in the Era of Internet +

2012, because Yang put forward Internet +, he believes that Internet + is the penetration and change of the Internet to traditional industries. In the 2015 Report on the Work of the Government, Premier Li Keqiang put forward the Internet + plan, which means that Internet + has risen to the national will. On the basis of the technological advantages of big data, cloud computing and mobile interconnection, In addition to the free use of Internet thinking, the Internet is like a tsunami, sweeping through all traditional fields, setting off a wave of reform, Internet + plan applied to the field of education, that is, Internet + education. Internet + education not only refers to Internet + learning, Internet + teaching but also a new type of intelligent teaching mode produced by teachers and students with the support of Internet information technology. Its essence is to promote the modernization of education in an all-round way, to transmit high-quality teaching resources through the Internet, to promote personalized learning for every student, to promote the all-round and free development of every student, so as to cultivate intelligent talents with good value orientation, high thinking quality and strong innovative ability. The advent of the era of Internet + education has provided a new opportunity for the change of teaching mode, and the relationship between teachers and students has also changed greatly. Especially the development of the new education and teaching mode under the background of Internet + education, such as Wechat public number, MOOC, micro class, electronic schoolbag, flipped classroom, learning space and cloud classroom, has greatly expanded the use value of high quality education resources, accelerated the ability of self reform of education, and thus better promoted educational equity and improved the quality of education to a certain extent. The following measures are therefore recommended:

Strengthen the Construction of School Information Organization and Determine the Specific Objectives of Information Construction. School informatization and network security are very important. Strengthening the school information organization construction, determing the specific objectives of information construction, the principal should comprehensively guide the school information work. As the executive body of the leading group of information work, the information center or the educational technology center is responsible for implementing the school information

planning and coordinating the integration of cross-departmental business processes. Responsible for the formation of an information technology project implementation team. The information project implementation team is composed of business departments, information centers, and implementers to determine the implementation plan of information project construction, hold regular project meetings and organize the construction of specific projects. Efforts should be made to give full play to the role of support, integration, and guidance of information technology in all aspects of school work. The fundamental goal of school information construction is to effectively serve students, teachers'growth, efficient management, and convenient life. We will build an international and modern digital campus environment with physical education characteristics, and serve the development goals of personnel training, cultural construction, social services, and international exchanges. Establish business system construction, on-line and centralized management mechanism, formulate information system access security standards, data standards, and clarify the only source of data.

Strengthen Infrastructure and Provide Service Support. Establish a campus wireless network covering the whole school, and strengthen the construction of network security and the investment of network security equipment and funds. Accelerate the construction of business systems in key departments, improve and fill the gaps in business system construction, realize data sharing through the construction and upgrading of data center platform, business system construction and information portal construction, break the barrier of information island, gradually realize management informatization and teaching informatization, and gradually realize management. Complete the goal of digital campus construction. Through the upgrading and transformation of wireless network campus coverage and multimedia classroom, the video acquisition and data analysis system of teaching courses is established to provide support for teaching feedback and online and offline teaching, and gradually realize the informatization of some teaching services and the intellectualization of teaching environment, so as to achieve the construction goal of smart campus. Integrate the whole school business system and build network application software. Network teaching software, smart classroom, recording and broadcasting classroom, smart campus mobile platform, etc. To improve the level of school information application and information teaching. Promote the construction of dormitory management system and venue classroom management system, and improve the level of informatization and intellectualization of school teaching and life security. Promote the construction of virtual cloud office system, improve the efficiency and security of office computers. The disaster recovery center should be built to fully guarantee the operation security of the campus network and the data security of the information system.

Serve Education and Teaching and Promote Professional Construction. Taking the construction of professional teaching resource database as the guide, we should improve the quality and level of information technology of teaching resources. Service education and teaching, build a good (1) professional resource bank: including professional introduction, professional personnel training program, post practice, teaching conditions allocation, and the overall professional resources. (2) Curriculum resource database: including curriculum standard, unit introduction, electronic teaching plan, electronic courseware, evaluation standard, exercises and so on. (3) Material database: including text files, pictures, animation, video, audio, courseware, virtual simulation software, question database, enterprise cases, etc. It contains national quality courses, foreign famous school open courses and 60 domestic quality video open courses; Link to well-known MOOCs institutions such as the United States; Micro-curriculum resources; Combining with the needs of school teaching and scientific research, we should purchase the corresponding periodical resources and build a mirror library in the school. It also builds a mirror database in the school to provide high-speed and stable search and download services. Using the recording and broadcasting system of classrooms and venues to build curriculum resources of excellent courses in schools and provide on-demand services to improve teaching effect, assist after-school learning, and retain teaching files for schools. The construction of cross-school curriculum resources, combined with the needs of schools, actively develops and utilizes excellent curriculum resources inside and outside schools, improves the comprehensive quality of students, and promotes the sharing of educational resources.

Informationization of practical training, professional competition, and skill appraisal.Combination of production and education, on-the-job practice, integration of information technology and curriculum, the innovation of teaching content, the innovation of simulation and training resources application mode.The number of virtual training software and application satisfaction and professional coverage; Virtual simulation training teaching software, training base, and national key industries and strategic emerging industries docking. Information technology promotes the deep integration of education and industry, schools and enterprises, specialties and posts, textbooks and technology, and the integration of information technology and subject knowledge and professional skills. Improve the fitness of physical education and industry, distance vocational education and training, for everyone, for the community.

Informatization Runs through Teaching Construction and Reform, Strengthens Exchanges between Colleges and Universities, and Improves Teachers'ability of Informatization Teaching. Encourage the school's superior disciplines to face the world, support the participation and establishment of international academic cooperation organizations and international scientific plans, and support the establishment of joint R & D bases with high-level educational and scientific research institutions at home and abroad. We will speed up the establishment of world-class universities and high-level universities, train a number of top-notch innovative talents, form a number of world-class disciplines, and produce a number of internationally leading original achievements. Strengthen the exchange and sharing between colleges and enterprises, enrich the form of curriculum presentation, realize the sustainable construction of curriculum, and reduce the marginal cost of teaching students in accordance with their aptitude. In the process of promoting Internet + education and online education, we should study and apply relevant educational ideas, teaching methods, educational tools, educational technology, teaching design, and curriculum design.

Take Relevant Measures to Strengthen the Construction of network Security. Deploy external firewall, internal firewall, intrusion prevention system (IPS), Web application firewall, network anti-virus system, strengthen the security protection ability of campus network and servers, computers, websites, information systems, and ensure the safe and stable operation of the campus network. Deployment of Fort Rovers, database audit system, log audit system, Real-time collection, real-time analysis, abnormal alarm, centralized storage and post-analysis of security events in campus network, server, information system and database can effectively reduce the losses caused by system failures, reduce the cost of operation and maintenance and the complexity of management, improve the overall security, reliability and operation efficiency of the system, and ensure the normal, continuous and stable operation of the information system. Reduce the overall security risk of information systems.

Internet + intelligent education and education informatization should aim at promoting educational equity, improving the quality of education, speeding up the narrowing of the educational gap between regions, urban and rural areas, and schools, promoting the sharing of high-quality educational resou-rces, and deepening the application of information technology in education and teaching. Information technologies such as the Internet of Things, Cloud Computing and Big Data are comprehensively and deeply applied and integrated into school teaching, scientific research, school management, student learning, campus life, and social services, so as to realize the integration and benign interaction of real campus and cyberspace environment. Internet + has profoundly changed the educational concept, teaching mode, learning mode and talent training process, which is changing the traditional education mode for thousands of years and causing the revolution of education and learning. It has become the foundation and platform for building a lifelong education system and a learningsociety.

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