Research on Network Information Security and Strategy in Vocational Colleges

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\textbf{Keywords:} Higher Vocational Colleges, Digital, Network Security.

\textbf{Abstract.} With the advent of the era of big data, intelligent and Internet +, personnel training and education of the school, the teaching pattern reform needs network information technology to support, so the education organization attaches great importance to the development of network information technology, as one type of higher education in higher vocational colleges, no matter from the education administrative department or local government attaches great importance to the development of higher vocational education, especially for digital campus construction in higher vocational colleges put forward very high requirements. From higher vocational colleges to strengthen the construction of digital campus, strengthen the campus network information security, this paper explores the deficiency existing in digital campus construction, research the connotation of higher vocational digital campus network security prevention and control system clear priorities, further summarizes the work method

\textbf{Introduction}

\textit{The law on cyber security of the People's Republic of China} has been officially implemented since June 1, 2017. The state has paid more and more attention to the network environment self-care and cyber security protection. Currently running their own campus network in higher vocational colleges, and with the advent of the era of big data, intelligent and Internet +, schools are actively carrying out the digital campus construction. Various website platform and application system is constantly increasing, and the scale of the network service is also in constant increase. At the same time, as the development has revealed more and more problems, especially the problem of network security protection, it has become the primary problem to solve the campus informatization construction.

\textbf{The Necessity of Digital Campus Construction}

As a type of higher education in higher vocational colleges, mainly cultivate high-quality technical skilled personnel, pay attention to during the process of running university-enterprise cooperation, integration, production and education as the big data, intelligent, and the advent of the era of Internet +, the school of management, social services, and services a variety of student life are more dependent upon the digital campus information network management. Undergraduate course colleges and universities of our country in digital network construction work started early, invest more, has made certain experience and achievements, but doesn't directly applied in higher vocational colleges. Higher vocational colleges need according to their own actual situation analysis, construction of digital campus construction meets the school's actual condition.
Deficiencies in the Construction of Digital Campus

Understanding of Digital Campus Construction is not in Place

According to the actual situation of higher vocational colleges, we must realize the teaching reform's form, information infrastructure, the construction of network course, and virtual practice base construction. These aspects are the main content of the digital campus construction. Working content of the digital campus network, the departments at all levels is not enough attention, a lot of people just to digital network construction as the hardware and the idea of combining the campus network. Have not fundamentally recognize the digital network construction will bring the future development of higher vocational colleges how to the positive role, because there is not enough, so the development of digital campus network construction in higher vocational colleges work just didn't get the some attention, for the overall development of teaching also to have certain effect.

There is no Adequate Plan for Network Security Construction

With the continuous development of informatization level, the concept of digital campus in expanding, has been to the deep wisdom campus, and some higher vocational colleges have begun to have the work arrangement of construction of digital campus construction and network security. But it just the starting point of school work would stay on solve the problem of the current management work and education, teaching, can meet the needs of some of the basic work, for the construction of the overall planning and no detailed plan and schedule.

The Operating System of Network Security Construction is not Perfect

At present a lot of work in higher vocational colleges put forward the thought of some of the construction of digital campus, but in the concrete work is still not enough perfect operation system to support the work of job authority has not been clear elaboration and implementation of the corresponding management rules and regulations also does not have clear specification and requirement. This is the digital network security construction in higher vocational colleges development affected one of the important reasons.

Insufficient Funds for Network Security Construction of Digital Campus

All aspects of the construction of higher vocational college money into colleges and universities themselves are needed to solve, but higher vocational colleges itself funding will not be able to fully support the construction of digital campus network system, or could not quite in place to support the development of the work. Higher vocational colleges to get the government funding is limited, this kind of situation in higher vocational colleges of the construction of the digital network running funds will be lacking, this to its long-term development and construction will have certain influence.

Network Information Security Prevention and Control System

Management System Security Prevention and Control

Network room is not ordinary room. Computer room construction must be strictly in accordance with national standards, and connect the transformer room, air conditioning rooms, computer rooms and other important sectors of the computer system of strict management, and establish a regular maintenance log management, system maintenance, maintenance, and repair, maintenance log records. For breaking safety accident treatment make contingency plans, the main servers and network devices, the designation of personnel for taking, fails to ensure timely repair, to ensure all equipment is in the best running state.

Prevention and Control of Network Security

Router is the first layer of network architecture and the primary target of hacker attack. Therefore, the router must set some filtering rules to filter out the blocked IP addresses and services. Firewall is
according to the connection of network packets to monitor and control system of each port, identity verification, to limit the external users into the Intranet, at the same time filter network security services, threatening to refuse the illegal user to enter. The intrusion detection system is a key part of the computer network that monitors all the packets on the network for real-time monitoring of the abnormal behavior of network and information system access. The purpose is to catch dangerous or malicious action. Including routers, firewalls and intrusion monitoring system, is used to capture information and network system of abnormal behavior and prevent its invasion, these aspects are effective is an important strategy to implement network security isolation.

Safety Prevention and Control of Network Hosts

The security of the operating system, if necessary, must ensure that the operating system is genuine and updated in real time. After that, ensure that the operating system is clipping, not installing or removing unnecessary system components. Followed by the database security, database and restore to ensure data security and integrity, backup strategies include only backup the database and transaction log, incremental backup, backup database. Once again, the security of cryptographic technology is the core technology of information security, which provides reliable guarantee for information security. Finally, the virtual machine is secure, and the virtual machine is a system that supports multiple operating systems on a single physical server and can provide more efficient use of underlying hardware.

Measures to Strengthen Network Security Construction

Enhance Teachers and Students' Awareness of Network Security

With the advent of the era of big data, intelligent and Internet +, in addition to the teachers and students as the main body of education teaching exists, the construction of digital campus network security technical personnel is of important to ensure the safety of the campus network running smoothly, all technical personnel to meet in strengthening their own development at the same time, actively promoting the significance of the work for the teachers and students, to guide teachers and students cooperate to use digital teaching form, ensure the safety of digital network construction in the practical application in the education teaching work smoothly.

Planning Network Security Construction

Only scientific and effective plan to ensure the development of digital campus network construction, so the planning and construction in higher vocational colleges to build a specialized institutions, to improve the work of the planning is scientific, improve the effectiveness of the work.

Improve the Network Security Management System

Every school in the digital campus construction and network security, at all levels should strictly abide by the ministry of education and all kinds of documents issued by the government, and perform the superior leadership arrangement, perfect internal management system, make evaluation and management mechanism, assurance system safe running smoothly.

Realization of Network Security Funds and Personnel Protection

In order to do the digital campus construction and network security work, there must be sufficient financial security. On the one hand, we should pay more attention to the school, and have a larger investment every year. Through diversification of university-enterprise cooperation on the other hand, for enterprises to provide effective financial support, digital network security construction at the same time, enterprises can also in the process of cooperation with schools to strengthen its own technical team, realize the upgrading of technology and talent.
Conclusion

Higher vocational colleges in the construction of campus informatization development, because there are some limitations in terms of funding and technology, development speed is slower, network security protection scheme is not perfect, but it is a priority of development of higher vocational colleges. So we need to make continuous efforts, the job will work into effect, thoroughly implement the long-term development of the work.

References


