

A brief analysis of the influence of teaching management informatization on universities in Yunnan Province

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Abstract: The extensive application of educational management information technology and the in-depth development and application of information resources can improve the quality and efficiency of teaching management, so that teaching management can better serve the goal of training talents in colleges and universities. However, due to the limitations of interference factors such as poor infrastructure, low capital investment and late start of information management of teaching and educational affairs in colleges and universities, traditional education in colleges and universities has been severely challenged. This paper takes the education management information management system currently used by 5 colleges and universities in Yunnan Province as the research object. This paper investigates the education management information platform of 5 universities in Yunnan Province from three aspects of information technology, education management and background knowledge reserve, the factors restricting its development and the difficulties and challenges it faces by questionnaire survey and expert interview. The purpose is to briefly explain the influence of teaching management informatization on universities in Yunnan Province, and provide guidance and reference for the future development direction.

Keywords: Yunnan Province, Universities, Teaching Management Informatization, Influence

1. Background

The information construction of colleges and universities is a systematic project, which means that information technology is widely used in various fields of higher education, prompting fundamental changes in educational concepts, educational systems, educational management, educational means and educational methods, thus profoundly affecting all levels of higher education and promoting the modernization of higher education and sustainable development of colleges and universities^[1]

According to the system theory, the university information system is an organic whole composed of several system elements. Colleges and universities must think comprehensively, put forward construction planning and implementation plans systematically, and strive to build a complete information construction system. Only in this way can it be possible to solve many difficulties and problems at present, mobilize the enthusiasm of all aspects, and push the information construction of colleges and universities continuously forward in a planned and step by step. There are various opinions on the system structure, connotation, construction principles, influencing factors and realization ways of college informatization, and there is no complete systematic theoretical system, which leads to confusion in cognition and deviation in practice, making the huge investment in the process of college informatization fail to achieve the expected benefits^[2].

Based on the above reasons, this paper selects five universities in Yunnan Province to study the construction of informatization system. Starting from the characteristics and current situation of informatization in universities, this paper compares the gap in the influence of informatization in universities, draws on the achievements in the development process of informatization in foreign universities, and discusses the influence of informatization management in universities by using multidisciplinary theoretical basis and research methods

Finally, from the perspective of combining theory and practice, this paper explores the countermeasures for the construction of university information management system in order to promote

the sustainable development of university information in Yunnan Province.

2. Term Description

2.1 Education Management

Educational management is one of the important links of school management, and it is also a more complicated link in school management. Educational management not only needs to manage all kinds of education-related facilities and equipment, but also needs to manage all educational activities and educational plans, that is, educational management departments should use scientific methods and methods under the guidance of leaders. Education management system is an important measure to plan, organize, guide, supervise and coordinate educational institutions and organizations at all levels, rationally allocate limited educational resources, achieve the goals of improving education quality, improving school efficiency, stabilizing teaching order and improving school conditions, and promote the development of education^[3]

2.2 Connotation of educational management informatization

The so-called education management informatization refers to the extensive application of modern information technology such as computer, network communication and multimedia in education management under the guidance of modern education management ideas to manage all kinds of education affairs at all levels, so as to achieve the purpose of improving the quality of teaching and improving the level of education governance, and promote the modernization process of education management^[4].

University education management information is the derivation of management information thought in the field of higher education, not only refers to the integration of various information technology and education, but also the deep penetration of modern scientific management thought in the field of education^[5].

2.3 Informatization of teaching management

It is a teaching management system based on network computer, which is a scientific, objective, comprehensive and timely qualitative analysis of all kinds of teaching information data.

2.4 Information Technology

It is a general term for various technologies primarily used to manage and process information. It mainly applies computer science and communication technology to design, develop, install and implement information systems and application software. It is also often referred to as information and communication Technology (ICT).

It mainly includes sensing technology, computer and intelligent technology, communication technology and control technology^[6].

3. Research Methods

3.1 Research design and methods

Through quantitative research, the effectiveness of teaching management informatization measures in Yunnan Province is understood. This makes the findings easier to quantify, count, process, analyze and interpret. The qualitative research method of interviews was used to understand the initiative and challenges of teaching management informatization in Yunnan Province.

3.2 Study population and location

As these five universities represent the comprehensive level of higher education in Yunnan Province, in order to understand the measures and existing problems in running schools, front-line teachers who have worked in Baoshan University, Dali University, Yuxi Normal University, Zhaotong University and

Honghe University for more than five years will be selected as the key information for interviews and as the basis for selection.

In order to do a good job in all aspects of the use of education information management system, some teachers with more than 5 years of teaching experience in 5 universities will be selected for questionnaire survey and interview. There are more than 3840 full-time teachers from 5 universities in Yunnan Province. Among them, 3,320 are teachers with five or more positions. In these faculty groups, 5% of faculty were drawn from each university according to the description of the systematic sampling method, with a total sample survey scale of 168. Please refer to Table 1: Table of weighted average of questionnaire survey for a detailed distribution plan.

Table 1: Table of weighted average of questionnaire survey

Colleges and Universities	Total teacher population	Teachers who have worked for more than 5 years	Sample size
Baoshan University	780	671	34
Dali University	970	840	42
Yuxi Normal University	650	540	27
Zhaotong University	710	630	32
Honghe University,	730	640	32
Total	3840	3321	168

3.3 Data Collection Tools

In this study, Likert scale was used for data statistics and interview guidance.

This questionnaire was modified according to "Impact Table on the Use of Education Information Management Platform in Chinese Universities" to meet the purpose of this study. The questionnaire consists of 15 items, which are analyzed from three dimensions: information technology, teaching method and content knowledge.

The interview guide, produced by the researchers and verified by members of this research team, will be used to collect data on initiatives and issues affected by the use of the education information management platform in general higher education institutions in Yunnan Province.

4. Data Analysis

In this questionnaire survey, a total of 168 questionnaires were sent to senior teachers in 5 universities, and 168 questionnaires were recovered and 168 valid samples were collected. As can be seen from Table 2 the values of the reliability coefficient are all greater than 0.9, which indicates that the data has high reliability and can be used for further analysis. Table 3 shows the validation of validity tests using KMO and Bartlett: the KMO value is 0.955, and the KMO value is greater than 0.8. Research data is ideal for extracting information (showing good validity from side view).

Table 2: Reliability Analysis - Simplified Format

Cronbach Reliability Analysis - Simplified Format		
Number	sample capacity	Cronbach α
10	168	0.933

Table 3: Validity analysis results

KMO and Bartlett's test		
	KMO	0.945
Bartlett sphericity test	Approximate chi-square	4423.15
	df	103
	p-value	0.00

4.1 Information Technology

Table 4: The influence of information technology on the information platform of higher education management in Yunnan Province

Content of a project	average value	Description
It can meet the current teaching management data flow and realize the influence of information management of business.	3.241	Influential
It has established effective technical cooperation relations with relevant secondary colleges and research institutions, and has a high impact on information and technical support.	3.231	Influential
There are specialized technical maintenance, research and development management personnel often conduct professional evaluation of the use and influence.	3.244	Influential
The information exchange between the secondary colleges and departments is convenient and the data is effective to meet the normal teaching management.	3.241	Influential
Teachers, students, school administrators can use and facilitate the timely access to the required information data.	3.231	Influential

It can be seen from the summary of the questionnaire described in Table 4 that in terms of information technology, the data of the teaching management platform can meet the data needs of current teaching management. In order to realize the guidance of information management for business, and establish effective technical cooperation with relevant secondary colleges and research institutions, the school has arranged special technical maintenance, research and development management personnel to maintain frequently, so that the information exchange between secondary colleges and departments is convenient and the data is effective. It can meet the normal teaching management, so that teachers, students, school administrators can easily use and timely access to the required information from these five aspects, information technology is influential. But the impact was not the highest. Combined with the consultation of experts, the main performance is as follows.

Backward technology: the technology of education management information system in some colleges and universities is backward and can not meet the needs of the rapid development of education management. For example, the system's ability to process large amounts of data is limited, resulting in the data update is not timely, affecting the decision of education management.

Security problem: With the continuous development of information technology, the security problem of college education management information system is becoming increasingly prominent. For example, systems can be hacked, resulting in data leaks or tampering.

Compatibility problem: The information system used between various departments in the university may be incompatible, resulting in data sharing, affecting the coordination and efficiency of education management.

4.2 Pedagogy

Table 5: Statistical table of the influence of higher education management information platform on pedagogy in Yunnan Province

content of a project	average value	Description
Establish and informationize perfect teaching management rules and regulations and management organization structure.	3.211	Influential
Can ensure the teaching quality according to the corresponding requirements, improve the personnel training management mechanism.	3.241	Influential
Be able to implement standards and carry out standardized evaluation of educational work.	3.234	Influential
The education management department can understand the teaching process in time and implement the comprehensive evaluation.	3.221	Influential
It can continuously optimize the personnel training plan and improve the education system.	3.234	Influential

According to Table 5, in the whole aspect of pedagogy, the data of the teaching management platform can realize the establishment and informatization of teaching management rules and

regulations and management organization structure, ensure that the teaching quality is carried out according to the corresponding requirements, improve the talent training management mechanism and implementation standards, and conduct standardized evaluation of the education work.

The education management department can understand the teaching process in time, implement comprehensive evaluation, and constantly optimize the talent training plan. In the five aspects of improving the education system, the influence validity is 3.221. Influence is influential, but not the highest.

Through the research and analysis of the above table, the influence of pedagogy is mainly shown as. Insufficient attention: some colleges and universities have insufficient investment in the construction of education management information system, and have not formulated a comprehensive construction plan, resulting in the construction of the system is difficult to meet the actual needs.

Misunderstanding of management concept: some colleges and universities simply understand the information of education management as "information of education management", rather than the real sense of education information management. This leads to the system in the education process of information acquisition, storage and use and other links of the deficiencies, unable to carry out effective information analysis.

Data inconsistency: Due to the lack of unified data standards and norms, the data reported by various departments often differ, and information sharing and integration cannot be realized.

Personnel quality problem: the information quality of educational managers is low, and the use and operation of the system are not skilled enough, which affects the use efficiency of the system.

4.3 Content knowledge

Table 6: Statistical table of background knowledge influence of higher education management information platform in Yunnan Province

content of a project	average value	Description
Video information resources can fully improve the understanding and mastery of knowledge.	3.218	Influential
A variety of exercises and question banks can help you learn and improve.	3.221	Influential
The teaching management platform can promote students' independent learning and inquiry learning.	3.274	Influential
Links on the Education Information Management platform can make it easy for you to get more knowledge.	3.231	Influential
The resources on the Education Information management platform fully meet all your teaching needs.	3.254	Influential

According to Table 6, in terms of overall background knowledge, it is not difficult to see that the situation of the survey is also influential, but not the highest. Mainly manifested in.

Lagging knowledge update: The knowledge base of the education management information system is updated slowly and can not keep up with the rapid development of the education field. As a result, the information and advice provided by the system may be out of date, affecting the quality of decision making in education management.

Knowledge base content is not comprehensive: some universities education management information system knowledge base content is not comprehensive, lack of education policy, education philosophy, education methods and other aspects of in-depth analysis and interpretation. This makes the system unable to provide comprehensive information support for educational administrators.

Single way of knowledge reserve: some universities' education management information system knowledge reserve way is too single, only rely on the traditional text and data storage way, lack of multimedia, video, audio and other diversified information form integration and application.

5. Conclusions and Suggestions

5.1 Information technology

First, upgrade technology: Colleges and universities should regularly upgrade the technology of the education management information system to improve the processing capacity and data update speed of the system to meet the rapidly developing needs of education management. The second is to strengthen security protection: colleges and universities should strengthen the security protection of education management information system, establish a sound security management system and protection mechanism to ensure the security and integrity of the system data.

Promote compatibility of system data between secondary departments: Colleges and universities should promote the compatibility of information systems among various departments, formulate unified data standards and exchange methods, realize data sharing and integration, and improve the coordination and efficiency of education management. Third, regular maintenance and inspection: colleges and universities should regularly check and maintain the education management information system to ensure the normal operation of the system and the accuracy of the data.

To sum up, to solve the problems existing in the information technology of the university education management information system, universities need to start from various aspects, upgrade technology, strengthen security protection, promote inter-departmental system compatibility and regular maintenance. Only in this way can the education management information system play a better role and improve the efficiency and level of education management.

5.2 Pedagogy

One is to improve the degree of attention: colleges and universities should fully realize the importance of education management information system in education management, increase investment, and formulate a comprehensive construction plan. The second is to change the management concept: colleges and universities should change from "information management of education" to "information management of education", pay attention to the effective application of information technology, and conduct a comprehensive analysis of the information in the education process.

Third, unified data standards: Universities should develop unified data standards and norms to ensure that the data formats and exchange methods of various departments are consistent, so as to achieve information sharing and integration. The fourth is to strengthen personnel training: colleges and universities should strengthen the training of educational management personnel, improve their information quality and operational skills, and ensure the efficient use of the system. The fifth is to establish a late maintenance and update mechanism: colleges and universities should establish a late maintenance and update mechanism of the system, check and update the system regularly, and ensure that the performance and functions of the system always meet the actual needs.

To sum up, to solve the problems existing in the education management information system of colleges and universities in education management, universities need to start from many aspects, improve the degree of attention, change the management concept, unify the data standard, strengthen personnel training and establish a later maintenance mechanism. Only in this way can the education management information system play a better role and improve the efficiency and level of education management.

5.3 Content knowledge

First, update the knowledge base in time: Colleges and universities should regularly update the knowledge base of the education management information system to ensure that the information and suggestions provided by the system keep pace with The Times. At the same time, universities should strengthen cooperation with experts and institutions in the field of education, timely access to the latest educational policies and ideas, and improve the timeliness and accuracy of the system knowledge base. The second is to expand the knowledge base content: colleges and universities should constantly expand the knowledge base content of education management information system to cover a wider range of education fields, including education policies, education ideas, education methods and so on. At the same time, universities should encourage educational administrators to participate in the construction and updating of knowledge bases to provide more practical experience and professional insights. The third is to adopt diversified knowledge reserve methods: colleges and universities should

adopt diversified knowledge reserve methods, integrate multimedia, video, audio and other information forms, and improve the diversity and richness of knowledge base. At the same time, universities should pay attention to the classification and organization of knowledge, so as to facilitate users to quickly find and obtain the required information.

The fourth is to establish a feedback mechanism: colleges and universities should establish a feedback mechanism for users to the knowledge base and encourage users to put forward opinions and suggestions in order to timely discover and correct the problems in the knowledge reserve.

To sum up, to solve the problems of background knowledge reserve in the education management information system of colleges and universities, it is necessary for colleges and universities to start from various aspects, timely update the knowledge base, expand the content, adopt diversified knowledge reserve and establish a feedback mechanism. Only in this way can the education management information system play a better role and improve the quality and level of education management.

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