

DEVELOPING ACADEMIC ADMINISTRATION GUIDELINE
TO ENHANCE EDUCATIONAL TECHNOLOGY IN MODERN EDUCATION
OF ZHANGJIAKOU VOCATIONAL AND TECHNICAL COLLEGE,
ZHANGJIAKOU, HE BEI PROVINCE CHINA

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ABSTRACT

The objectives of this research were 1) to investigate problems of academic administration in modern education, 2) to develop academic administration guidelines to enhance educational technology in modern education. The respondents in this research consisted of 392 students, 67 teachers and 44 administrators obtained through stratified random sampling at Zhangjiakou Vocational and Technical College. The research instruments employed questionnaire and 2) the questions of focus group discussions. The statistics were frequency, percentage, mean, and standard deviation. The study results indicated that 1) the problems of academic administration in modern education were at high level, 2) academic administration guidelines to enhance educational technology in modern education consisted of introduction, organizational structure and roles, policy implementation and support, recruitment, retention, and professional development, student services and technology integration, financial management, resource allocation, and strategic planning. All academic administration guidelines were evaluated by experts with Index of Congruence (IOC) values ranging from 0.67 to 1.00, indicating that the guidelines are appropriate for enhancing educational technology in modern education.

Keywords: Academic Administration Guideline, Educational Technology, Modern Education

INTRODUCTION

Among various types of education at all levels, higher education is constantly and increasingly drawing the public attention. (Edward, 1999). Meanwhile, universities in China have also gone through series of changes ever since the twentieth century and a remarkable achievement on internal management system. (Zhou, 2001). First-rate universities in China was declared, which has undoubtedly strengthened the importance of higher education system reform (Zhou, 2016).

The Action Plan of China aims to accelerate the modernization of Chinese education and build China into a powerful country in education by leveraging technology to transform its education system in the new era. Surrounding this goal, it proposes the following actions: popularizing digital educational resource services, expanding the online learning space, narrowing the digital divide, emphasizing the demonstration of exemplary models, standardizing the construction of smart campuses, innovating instructional paradigms using educational technology, boosting digital competence of the educational community. (Ma, 2025)

The development of the corresponding academic administration guideline requires

an in-depth analysis of the current situation at Zhangjiakou Vocational and Technical College to understand the college's needs for technological resources, hardware, software, and network infrastructure. Additionally, attention must be given to the current situation of faculty training, curriculum design, and teaching methods.

China's educational administration system is closely related to the history of the centralized culture, the establishment of the Imperial College opened the prelude of modern education in China. Driven by both internal and external factors, Chinese society had gradually reinforced its cognition and acceptance of the modern educational system, brewing the birth of educational administration system at the beginning of the next century. Educational administration system has evolved with the development of society, politics and economy, and the educational administration system with significant Chinese characteristics has been formed. (An & Du, 2019)

To develop a feasible academic administration guideline, the school needs to learn from successful cases of promoting educational technology both domestically and internationally to discover experiences relevant and guiding to the institution. This will help the college

achieve success in digital education, improve education quality, and equip students with a broader range of skills for workplace application. In conclusion, developing an academic administration guideline to enhance educational technology in modern education at Zhangjiakou Vocational and Technical College is an essential task. Through in-depth analysis of the current situation, learning from both domestic and international successful experiences, and adopting strategies suitable for the institution, the college will be able to realize the widespread application of educational technology, providing high-quality education for its students.

RESEARCH OBJECTIVES

1. To investigate problems of academic administration in modern education of Zhangjiakou Vocational and Technical College.
2. To develop academic administration guidelines to enhance educational technology in modern education of Zhangjiakou Vocational and Technical College.

RELATED CONCEPTS AND THEORIES

Concept of Educational Technology

Educational technology is undergoing significant changes due to computers' increasing pervasiveness (Collins, 2010). Technology is an essential part of communication, storing and transferring information, audio-visual media use and production, and sharing. (Ohler, 2011). Technology is invaded and made life better in many ways; however, it can constitute a severe threat to the physical and mental well-being (Mitroff, 2019).

Concept of Modern Education

The modern education should be an empowering process that allows and guides students to develop their passions, critical thinking, compassion, and orientation towards wisdom for timely action. The education in any society objectively does have a goal and basically have to answer to the question: what is the conception of the education right now. (Ahlam and Deepika, 2014) Education changes the perceptions of society, enhances scientific knowledge and creates new

perspectives on research, its foundation, goals and opportunities (Goodyear, 2002). While setting goals in education we should to take into account: first, the social order, and secondly, theoretical concepts, and thirdly, the tradition of training and education, and, fourthly, international experience (Goodyear, 2002). Thus, based on the functionality and substantive content of the pedagogical concept, should act as theoretical, methodical and technological support depending on aspects of the educational process (Storks, Aleksandrov and Mavlyutov, 1983)

RESEARCH HYPOTHESES

1. The problems of academic administration in modern education of Zhangjiakou Vocational and Technical College are at the high or highest level.

2. The academic administration guidelines to enhance educational technology in modern education of Zhangjiakou Vocational and Technical College are complete and suitable.

CONCEPTUAL FRAMEWORK

Conceptual framework was shown in figure 1.

1. Academic administration of educational technology in modern education: organizational structure and roles, policy implementation and support, recruitment, retention and professional development, student services and technology integration, financial management, resource allocation and strategic planning (An & Du, 2019; Gao, 2021; Zhou, 2016)
2. The problems of educational technology in modern education: organizational structure and roles, Policy implementation and support, recruitment and retention, professional development and training, student services, technology integration and usage, financial management and resource allocation, strategic planning and implementation (Gao, 2021; Zhou, 2016)



Academic administration guidelines to enhance educational technology in modern education of Zhangjiakou Vocational and Technical College

Figure 1 Conceptual Framework

RESEARCH METHODOLOGY

Population The population consisted of 20,000 students, 80 teachers and 50 administrators in Zhangjiakou Vocational and Technical College

Samples The samples were consisted of 392 students, 67 teachers and 44 administrators. The samples were derived from Taro Yamane formula (Yamane, 1973) through the stratified random sampling technique.

Research Instruments

Questionnaires: The questionnaires were divided into 3 sets; namely, 1) students set 24 questions, and 2) teachers set 24 questions, 3) Administrators set 24 questions. The questionnaire was divided into 2 parts, 1) general information, 2) problems of academic Administration in Modern Education. The questionnaire was evaluated for the Index of item-objective Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire evaluated with the range of IOC 0.67 to 1.00.

A set of questions for this discussion meeting. For developing academic administration guideline to enhance educational technology in modern education, the 3 specialists were invited to check correctness and suitability of the guidelines. The results were presented

in terms of IOC (Index of Item-objectives congruence) 0.67 – 1.00.

Data Collection Data were collected using an online questionnaire with permission from Zhangjiakou Vocational and Technical College.

Data analysis The Data was analyzed with frequency, percentage, mean (\bar{X}), standard deviation (SD). The criteria and define at the range of the mean scores. Rating reference were: (Srisa-ard, 2002) mean range 4.51 – 5.00 were highest level, 3.51 – 4.50 were high level, 2.51 – 3.50 were middle level, 1.51 – 2.50 were low level.

RESEARCH RESULTS

1. General information of students

There are 262 female (66.80%) and 130 male (33.20%). Most of the sample group are in the age between 18-20 (85.96%) and rest are in between 21-24 (14.04%).

2. General information of teachers

There are 30 female (44.78%) and 37 male (55.2%). About the age, the number of the teacher at the age of 26-30 is 12, accounting for 17.9%, the number of the teacher at the age of 31-35 is 17, accounting for 25.4%, the age of 35-40 is 15, accounting for 22.4%, the age of 41-45 is 11, accounting for 16.4%, the age of 45-50

is 7, accounting for 10.4%, and the number of the people at the age of 51 and above is 5, accounting for 7.5%.

3. General information of administrators There are 18 female (40.9%) and 26 male (59.1%). About the age, the number of the teacher at the age of 26-30 is 10, accounting for 22.7%, the number of the teacher at the age of 31-35 is 7, accounting for 15.9%, the age of 36-40 is 11, accounting for 25%, the age of 41-45 is 13, accounting for 29.5%, the age of 45-50 is 2, accounting for 4.5%, and the number of the people at the age of 51 and above is 1, accounting for 2.3%.

4. Problems of academic administration in modern education of Zhangjiakou Vocational and Technical College for students

The data indicates that employees have a very clear understanding of the organizational structure at their college, with a mean score of 4.69 and a low standard deviation of 0.20, reflecting the highest level of satisfaction in this area. Similarly, the roles and responsibilities of staff and faculty are perceived as well-defined, with a high mean score of 4.50 and a standard deviation of 0.41, indicating general satisfaction with role clarity. However, despite the overall clarity, there are perceived issues related

to the hierarchy and chain of command, as indicated by a high mean score of 4.51 and a standard deviation of 0.32.

The conclusion on Policy Implementation and Support, the data shows a high level of satisfaction with the policy implementation process at the college, with a mean score of 4.40 and a low standard deviation of 0.23, indicating that employees generally find the process effective. However, there is recognition that some policies are particularly challenging to implement, as reflected by a mean score of 4.32 and a standard deviation of 0.30. Despite these challenges, there is strong agreement that adequate support is provided for policy changes, with the highest mean score of 4.64 and a standard deviation of 0.47.

The conclusion on Professional Development and Training, The data reveals a strong consensus that professional development opportunities are readily available for faculty and staff, with a mean score of 4.65 and a very low standard deviation of 0.21, indicating the highest level of satisfaction in this area.

The conclusion on Student Services, The data indicates that student support services, including counseling and career services, are perceived as highly

effective, with a mean score of 4.50 and a low standard deviation of 0.21, reflecting strong satisfaction in this area. Additionally, there is a high level of agreement that students have adequate access to academic advising and mentoring, as evidenced by the highest mean score of 4.66 and a standard deviation of 0.51. However, there is also recognition of specific challenges in providing these services, with a mean score of 4.49 and a higher standard deviation of 0.48, indicating some variability in experiences.

The conclusion on Technology Integration and Usage, The data indicates that the integration of technology in administrative processes is regarded positively, with a mean score of 4.34 and a standard deviation of 0.39, suggesting a high level of satisfaction with how technology is being utilized. Additionally, there is a strong belief that technology has improved administrative efficiency, as reflected by the highest mean score of 4.59 and a standard deviation of 0.41. However, some challenges are associated with the use of certain technological tools or systems, indicated by a mean score of 4.29 and a standard deviation of 0.37.

5. Problems of academic administration in modern education of Zhang Jia Kou Vocational and Technical College for teachers

It is indicated that the teachers rated the problems of academic administration in modern education of Zhangjiakou Vocational and Technical College at the high level. Firstly, most teachers indicate that they believe the effectiveness of financial management and budgeting at college is very effective (Item 16) have the highest impact on academic administration in modern education with $\bar{X} = 4.69$, $SD = 0.20$. Secondly, most of teachers indicate that the organizational structure at your college is very clear (Item 1) has the highest impact on academic administration in modern education with $\bar{X} = 4.67$, $SD = 0.40$.

The conclusion on Policy Implementation and Support. The data shows that policy implementation at the college is generally effective, with strong support for policy changes (mean score of 4.58). However, some policies are challenging to implement (mean score of 4.50), indicating areas that may need additional attention. Overall, the process is well-regarded, but addressing

these challenges could further improve effectiveness.

The conclusion on Recruitment, Retention, and Professional Development. The data indicates that the recruitment process for faculty and staff is highly regarded, with a mean score of 4.65, though there are notable challenges in retention (mean score of 4.55). This highlights a strong recruitment strategy but underscores the need for improved retention efforts.

In terms of professional development, opportunities are perceived as readily available, with a high mean score of 4.51, suggesting that the college is effective in supporting the growth and development of its faculty and staff. Overall, while recruitment and professional development are strong, addressing retention challenges will be key to sustaining a committed workforce.

The conclusion on Student Services and Technology Integration, The data reveals strong satisfaction with student services, particularly in their effectiveness (mean score of 4.61) and in providing adequate access to academic advising and mentoring (mean score of 4.51). However, there are recognized challenges in delivering these services, reflected in a mean score of 4.56.

In terms of technology integration, the use of technology in administrative processes is generally viewed positively (mean score of 4.40), and it is seen as having significantly improved administrative efficiency (mean score of 4.60). However, there are some challenges with specific technological tools or systems (mean score of 4.41), indicating areas where further support may be needed.

The conclusion on Financial Management, Resource Allocation, and Strategic Planning, The data indicates that financial management and budgeting at the college are highly effective, with a mean score of 4.69, though financial constraints are recognized as impacting administrative efficiency (mean score of 4.59). Resource allocation is viewed positively, with a mean score of 4.50, but communication between administrative departments, while effective, shows room for improvement (mean score of 4.18).

In strategic planning and implementation, there are perceived barriers (mean score of 4.31), but a systematic process for addressing feedback and making improvements is in place (mean score of 4.20). Regular feedback collection from faculty, staff, and students is noted (mean score of 4.19), and the strategic goals

are seen as realistic and achievable (mean score of 4.43).

6. Problems of academic administration in modern education of Zhang Jia Kou Vocational and Technical College for administrators

it is obvious that the administrators rated the problems of academic administration in modern education of Zhangjiakou Vocational and Technical College for administrators at the high level. Firstly, most administrators indicate that the organizational structure at your college is very clear (Item 1) has the high impact on academic administration in modern education with $\bar{X} = 4.67$, $SD = 0.40$. Secondly, most of administrators indicate that the recruitment process for faculty and staff is excellent (Item 7) has the high impact on academic administration in modern education with $\bar{X} = 4.65$, $SD = 0.52$. Thirdly, only a few of administrators indicate that suggestions for improving academic administration in modern education is very important (Item 24) has the lowest impact on academic administration in modern education with $\bar{X} = 4.16$, $SD = 0.33$.

The conclusion on Organizational Structure, Roles, and Policy Implementation,

The data suggests that the organizational structure at the college is perceived as very clear, with a high satisfaction level (mean score of 4.67), and roles and responsibilities are well-defined (mean score of 4.50). However, there are some concerns related to the hierarchy and chain of command, as indicated by a mean score of 4.45.

Professional development opportunities are perceived as readily available, with a mean score of 4.17, suggesting that the college is generally effective in supporting the growth and development of its faculty and staff.

The conclusion on Student Services and Technology Integration, the data suggests that student support services, including counseling and career services, are highly effective, with a mean score of 4.61.

Regarding technology integration, it is viewed positively for improving administrative efficiency, with a mean score of 4.60. The integration of technology into administrative processes is well-regarded (mean score of 4.40), though there are some challenges associated with specific technological tools or systems (mean score of 4.41).

7. Academic Administration Guideline to Enhance Educational Technology in Modern Education of Zhangjiakou Vocational and Technical College

This guideline aims to address key areas such as organizational structure, policy implementation, recruitment and retention, professional development, student services, technology integration, financial management, resource allocation, and strategic planning. The guideline consisted of organizational structure and roles; recruitment, retention, and professional development; student services and technology integration.

DISCUSSIONS

The problems of academic administration in modern education of students, teachers and administrators, in Zhangjiakou Vocational and Technical College were at the “High” level.

The results of the research on the problems faced by Zhangjiakou in connection with academic Administration developing come up in the responsibility of Zhangjiakou Vocational and Technical College. Students' learning outcomes and motivation are impacted by the particularly noticeable challenges

they face in gaining access to learning resources, scheduling courses, and receiving academic support. The development of courses, the use of educational technology, and pressures from the workplace all present teachers with equally daunting obstacles that lower their effectiveness and job satisfaction. The implementation of policies, technology management, and communication coordination present significant challenges for administrators, which lowers management efficiency overall and has a detrimental effect on the operations and standard of instruction at the college. It is correspondent with Thippochana, & Chansirisira (2021).

An & Du (2019) concluded that China has a long history of education and its educational administration system can be traced back to more than 2,000 years ago. The development of the educational administration system in China through a series of laws, regulations and policies, arguing that China's current educational administration system-the State Council and local governments at various levels are responsible to guide and administer educational work under the principles of administration by different levels and of a division of responsibilities needs to be further extended and

reformed to address the new challenges and problems in the era of marketization and internationalization.

Academic administration guidelines to enhance educational technology in modern education of Zhangjiakou Vocational and Technical College.

Developing an Academic Administration Guideline to enhance educational technology at Zhangjiakou Vocational and Technical College is crucial, as this guideline aims to promote the effective application of educational technology through optimized academic management. The guideline should include strengthening teacher training to ensure proficiency in using modern educational technology; establishing a comprehensive technical support system to assist teachers and students in resolving issues related to technology use; allocating resources equitably to ensure all students have fair access to learning resources, and arranging courses in a way that reduces conflicts and pressures in academic management. Additionally, it should focus on enhancing communication and coordination among departments to ensure the effective implementation of policies and the smooth operation of feedback mechanisms.

According to the study Gao (2021) concluded that with the rapid development of the internet and modern technology, education is becoming more and more technological. In particular, during the COVID-19 epidemic prevention and control period, online education was fully adopted in China. This a specific analysis on impact of modern technology on Chinese pedagogy in four aspects: smart classroom, the transformation of the role of teachers, the responsibility and anxiety of parents under Internet teaching, and targeted poverty alleviation through Internet + education, and puts forward some useful suggestions.

Ma (2025) indicated that the major achievements China has made in digital education since the introduction of the Education Informatization 2.0 Action Plan. Drawing on the existing research literature and relevant reports from the Ministry of Education of China, the study looks at the outcomes of digital education in China in six dimensions: digital infrastructure, digital educational resource platforms, teacher and student digital competence, innovative teaching modalities, digital educational administration, and educational equity. It finds that Chinese

education has undergone significant advances in the coverage of internet connection and digital equipment, construction of the national smart education platform.

KNOWLEDGE AND INNOVATION

Academic administration guideline to enhance educational technology in modern education of Zhangjiakou Vocational and Technical College were shown in Figure 2

1. Organizational Structure and Roles

1.1 Clarify Roles and Responsibilities: Ensure that roles related to educational technology are well-defined within the organizational structure. This includes designating specific roles for managing and supporting technology in teaching and learning.

1.2 Address Hierarchical Challenges: Review and adjust the hierarchy and chain of command to ensure that decisions related to technology integration are made efficiently and without unnecessary delays.

1.3 Policy Implementation and Support: Develop Clear Policies: Establish clear policies that guide the use of educational technology in teaching, learning, and administrative processes.

Provide Adequate Support: Ensure that there is sufficient support for the implementation of these policies, including training and resources for faculty and staff.

2. Recruitment, Retention, and Professional Development

2.1 Focus on Recruitment:

Prioritize the recruitment of faculty and staff with expertise in educational technology.

2.2 Address Retention Challenges:

Implement strategies to retain talented individuals by providing opportunities for growth and development in educational technology.

2.3 Enhance Professional Development:

Offer regular and relevant professional development opportunities focused on the integration and effective use of technology in education.

3. Student Services and Technology Integration

3.1 Improve Access to Services:

Use technology to provide students with better access to counseling, career services, academic advising, and mentoring.

3.2 Address Service Challenges:

Identify and address specific challenges in delivering student services through technology.

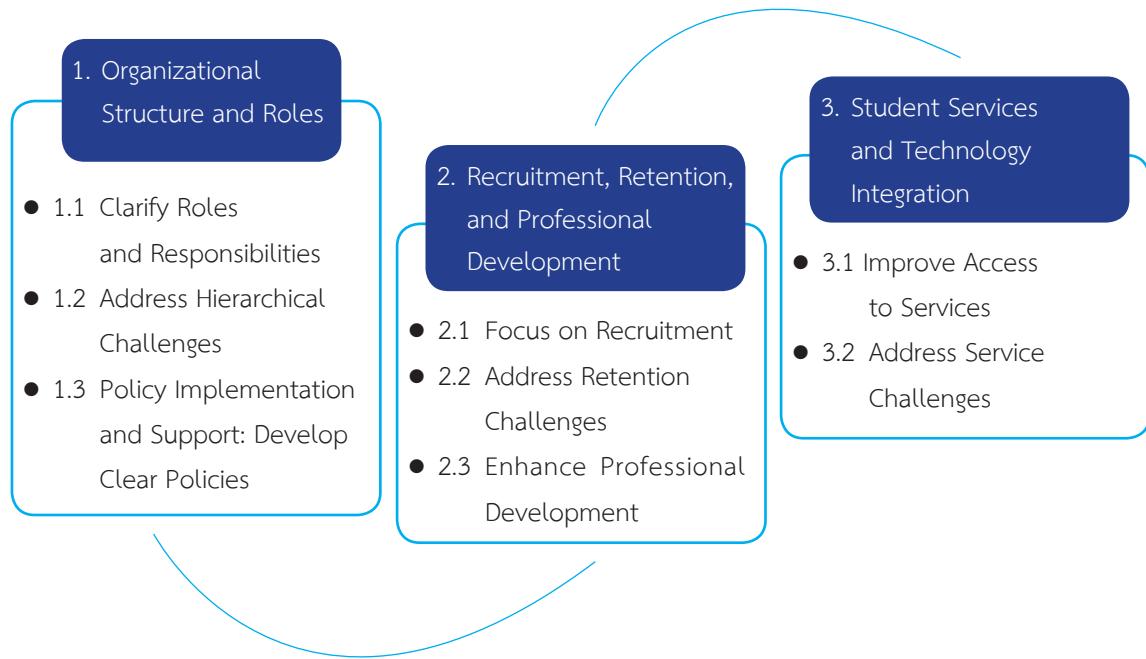


Figure 2 Academic administration guideline to enhance educational technology in modern education of Zhangjiakou Vocational and Technical College

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