

GUIDELINES TO DEVELOP MODERN INFORMATION  
TECHNOLOGY TO PROMOTE EDUCATION QUALITY  
IN QINGDAO HENGXING UNIVERSITY

Li XUEQIAN


A thesis submitted in partial fulfillment of the requirements for the  
Degree of Doctor of Philosophy Program in Educational Administration  
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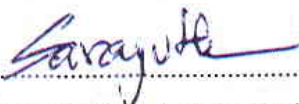
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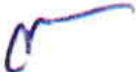
  
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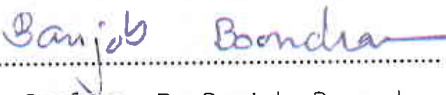
  
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### ABSTRACT

The purposes of this research are 1) to study promote the education management quality of application universities through the development of modern information technology, 2) to explore the different factors that affect the education management quality through the development of modern information technology, and 3) to study the guidelines improve the quality of education management through the development of modern information technology. The sample group of this research is 187 teachers of Qingdao HengXing University. Research instruments include questionnaire, data analysis forms and evaluation form. Data analysis by using percentage, mean and content analysis.

The results were found that the level of education information construction of application universities have improved to meet the needs of high-quality application talents training in education. And the application universities have made full use of modern information technology to enrich the content of practical teaching and improve the management quality of education. The application universities have got the guides to make full use of modern information technology to establish and promote the improvement of education management quality.

**Keywords:** Modern information Technology, Promote, Education Quality

ชื่อเรื่อง	แนวทางในการพัฒนาเทคโนโลยีสารสนเทศที่ทันสมัยเพื่อส่งเสริมคุณภาพการศึกษาในมหาวิทยาลัยชิงเต่าเหิงชิง
ชื่อผู้วิจัย	หลี่ เสวี่เซียน
สาขาวิชา	การบริหารการศึกษา
อาจารย์ที่ปรึกษาหลัก	ผู้ช่วยศาสตราจารย์ ดร.นนท์ณิธิ ดุลยทวีสิทธิ์
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ปีการศึกษา	2566

### บทคัดย่อ

วัตถุประสงค์ของการวิจัยนี้ คือ 1) เพื่อส่งเสริมการสร้างและแบ่งปันทรัพยากรการศึกษาที่มีคุณภาพสูงผ่านการพัฒนาเทคโนโลยีสารสนเทศที่ทันสมัย 2) เพื่อเพิ่มเนื้อหาของการจัดการการศึกษาและเพิ่มประสิทธิภาพของระบบการจัดการการศึกษาผ่านการพัฒนาเทคโนโลยีสารสนเทศที่ทันสมัย และ 3) เพื่อปรับปรุงการบริการการศึกษา และส่งเสริมคุณภาพของการจัดการศึกษาผ่านการพัฒนาเทคโนโลยีสารสนเทศที่ทันสมัย ประชากรกลุ่มตัวอย่าง คือ อาจารย์ประจำมหาวิทยาลัยเหิงชิงจำนวน 187 คน เครื่องมือที่ใช้ในการวิจัยคือ แบบสอบถาม แบบฟอร์มการประเมินผล การวิเคราะห์ข้อมูลโดยใช้วิธีการหาค่าเฉลี่ยค่าเบี่ยงเบนมาตรฐานและการวิเคราะห์เนื้อหา ผลการวิจัยพบว่าระดับของการสร้างข้อมูลทางการศึกษาของมหาวิทยาลัยที่มุ่งเน้น การปฏิบัติจำเป็นต้องได้รับการปรับปรุงเพื่อตอบสนองความต้องการทางการศึกษาของมหาวิทยาลัยที่มุ่งเน้นการปฏิบัติที่มีศักยภาพสูง มหาวิทยาลัยที่มุ่งเน้นการปฏิบัติควรใช้เทคโนโลยีสารสนเทศที่ทันสมัยเต็มรูปแบบเพื่อเพิ่มเนื้อหาของการสอนในทางปฏิบัติ และปรับปรุงคุณภาพการจัดการของการศึกษา มหาวิทยาลัยที่มุ่งเน้นการปฏิบัติควรใช้เทคโนโลยีสารสนเทศที่ทันสมัยอย่างเต็มรูปแบบเพื่อสร้างและส่งเสริมการปรับปรุงระดับการจัดการการศึกษา

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Name of researcher

Li Xueqian

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# Chapter 1

## Introduction

### Rationale

Today, With the rapid development of modern social science and technology, as well as the gradual promotion and application of computer and network technology in various regions, the gradual application of modern information technology has undoubtedly placed a pair of high-flying wings on the improvement of the quality of university education management. It not only make the education management mode more and more diversified, but also make the school slowly become full of vitality and creative learning places. At the same time, the extensive popularization and application of modern information technology in education management also provides a more open and autonomous learning environment and inexhaustible educational resources for university students.

In particular, application-oriented undergraduate universities that pay attention to the training of practical talents can pay special attention to the process of daily teaching and education quality improvement, effectively combine online teaching and offline teaching through the Internet, and make full use of modern information technology to improve the quality of university education management. How to actively promote the in-depth integration of modern information technology and applied undergraduate education and teaching work, constantly enrich the content of education, effectively improve the quality of education management, How to actively promote the in-depth integration of modern information technology and applied undergraduate university education and teaching work, constantly enrich the educational content of applied undergraduate university, and effectively improve the quality of education management of applied undergraduate university to meet the actual needs.

This paper takes Qingdao Hengxing University, an application-oriented undergraduate university, Taking this as a concrete application example, this paper studies the popularization of modern educational information technology in the educational management of application-oriented universities and its development in

practice, in order to solve many problems in the development of information age and improve the level of educational management. It can not only deeply promote the orderly and the stability and sustainable development of applied universities; but also help China's general undergraduate colleges and universities with applied

technology as their orientation to find a way out of education management, so as to promote the quality of applied undergraduate education management, so that it can better serve the local and society, and meet the urgent need for In the process of harmonious development and sustainable development of China's contemporary economic society, the relevant practical application of high-level talents.

The research tries to solve the dilemma of China's application-oriented undergraduate education management by applying and developing modern information technology and improving the education management quality.

### **Research Questions**

1. What is the full use of modern information technology that adapt to the training of high-quality applied talents, and high-quality educational resources are not shared, which affects the improvement of the quality of education management ?

2. What are the main factors that has not made full use of modern information technology to enrich the education management quality?

3. What are the guidelines for make full use of modern information technology to provide support and education management services for the evaluation mechanism and supervision mechanism of educational management in application-oriented undergraduate universities?

### **Objective**

The objectives of this study are as follows:

1. To study promote the education management quality of application universities through the development of modern information technology.

2. To explore the different factors that affect the education management quality through the development of modern information technology.

3. To study the guidelines improve the quality of education management through the development of modern information technology.

### **Research Hypothesis/Hypotheses**

**Hypothesis 1:** Teachers' age, gender, education background and other basic information variables, Teachers' educational background and teaching methods have different influences on the popularization and wide application of modern information technology.

**Hypothesis 2:** The popularization of modern information technology in applied universities and the formulation of university education management system and the implementation of policies need more close contact and mutual integration.

**Hypothesis 3:** The sharing of educational resources for application-oriented undergraduate talents training, It plays a vital role in gradually improving the educational quality of application-oriented universities.

### **Scope of the Research**

#### **Content**

This thesis mainly studies the practical promotion and application of modern information technology in the educational management of applied universities and its development in teaching practice further promote the orderly and continuous improvement of the overall educational management level of applied universities..

#### **Population**

This paper takes Qingdao HengXing University, an application-oriented undergraduate university in China, as an example, including 200 education administrators, full-time teachers and so on.

#### **Sample Group**

This study conducted a questionnaire survey on 200 academic administration personnel and full-time teachers in Qingdao HengXing University. A total of 200 questionnaires were issued and 187 valid questionnaires were recovered.

Aiming at the three objectives of this study, 187 people were selected as research samples.

### **The Variable**

#### Independent Variable

The independent variable in hypothesis 1 is the basic information Variables of teachers, such as age, gender, educational background, teaching methods, etc.;

The independent variable in hypothesis 2 is the richness of education management content under the background of information, including the investment of education and training funds, resource sharing and information innovation.

The independent variable in hypothesis 3 is the development needs of information technology, such as the innovation of education scale and teaching model.

#### **Dependent Variable**

The dependent variable in hypothesis 1 is the development of modern information technology and the promotion of co-construction and sharing of high-quality educational resources.

The dependent variable in hypothesis 2 is the development of modern information technology, the enrichment of educational management content, and the optimization of educational management system.

The dependent variable of hypothesis 3 is the development of modern information technology, the improvement of educational services, and the improvement of the quality of educational management.

### **Advantages**

1. The school management department high care and attention to the application of educational information, and realizes the innovation of teaching methods and means through the educational reform under the sharing of modern information technology resources, which promotes the improvement of the educational management level of application undergraduate universities.

2. Through the promotion of modern information technology, teachers in application undergraduate universities reform and application undergraduate universities innovate educational management concepts, students innovate learning methods, enrich the content of practical teaching, and effectively improve the quality of education and teaching.

3. Make full use of the application and popularization of modern information technology as much as possible to promote the educational reform and the improvement of educational quality in application-oriented universities, establish and improve the education and teaching evaluation mechanism and the service and supervision functions of education management, and deeply improve the quality of education management of application-oriented undergraduate universities.

## Definition of Terms

**Modern Information Technology:** It is usually based on microelectronics technology, computer technology and telecommunications technology, forming a combination of audio, image, text, digital and various sensor signals for acquisition, processing and processing means. The modern information technology studied in this paper mainly refers to Qingdao HengXing University, represented by computer and network technology, involving education and teaching information.

**Educational information:** There are two meanings of educational information: The first is to improve the computer and modern educational information literacy of applied university students into the overall goal of talent training, to cultivate practical talents to adapt to the modern information society. The second is to effectively apply modern information technology to the teaching management and scientific research of application-oriented universities, and pay continuous attention to the effective development and rational utilization of educational information resources.

The modern information technology mentioned in this paper mainly refers to the applied undergraduate university education field in Qingdao, China. It includes the following aspects: modern information technology used in education management, education teaching, education research and so on. The purpose is to

comprehensively and deeply apply modern information technology to promote the process of education development and improve the quality and level of education management.

The relevant development of modern information technology in this study mainly refers to the active application and promotion of modern information technology in the education, teaching, management and other aspects of the practice of application-oriented universities, such as in Heng Xing University of Qingdao under the guidance of advanced education concepts, in-depth development and extensive use of information resources, training of innovative talents to meet the requirements of the information society, accelerating the realization of modern education system engineering, and improving the quality of education management.

**Teaching information:** Teaching information usually It refers to the application of modern information technology in educational management and curriculum teaching, so that all aspects of educational management can be informed and digitized, and effective management results can be produced through information technology. So as to improve education quality and efficiency.

The teaching information involved in this paper means that Qingdao Heng Xing University adopts modern teaching methods to teach Mainly in the current education management with modern teaching concept as the fundamental guidance, modern information technology as the main support.

In information teaching, the realization of information needsA series of factors such as concept, organizational structure, educational management content, educational management mode, educational technology, educational management evaluation, and educational environment. Make full and effective use of the modern information technology that has been gradually developed and promoted, actively and effectively develop the educational resources of application-oriented universities, promote information sharing, optimize the process of university education, and improve the educational quality of application-oriented undergraduate universities.

**Application-Oriented Undergraduate Universities:** China's applied technology undergraduate colleges refer to the general undergraduate colleges that focus on applied technology rather than academic orientation. They are quite different from

college students whose goal is academic study. The research object of this paper is Qingdao Heng Xing University, an application-oriented undergraduate university. "Applied Technology undergraduate" is a new level of education mode exploration combined with higher vocational education. Pilot training of application-oriented undergraduate professionals As far as possible to meet the needs of modern society for rapid economic development.

In this paper, the application-oriented undergraduate universities take "application" as the core, talent, quality and education as the guidance, It fully embodies the pursuit of the spirit of The Times and meets the requirements of modern social stability and sustainable development. Each major closely combines local characteristics, pays attention to the university focuses on cultivating the practical operation ability of students in applied universities, and focuses on cultivating application-oriented composite talents in teaching. The university focuses on "application and practicality" from the construction of teaching system. That is to say, the cultivation and cultivation of application-oriented undergraduate talents mainly achieve the application and practical knowledge, and can not only rely on the theoretical knowledge of books to do work and contribute to the society, but also focus on practical operation and practicality. The core link is practice teaching, cultivate high quality applied talents with strong adaptability and communication ability in modern society and strong market competitiveness. Application-oriented undergraduate education meets the needs of the rapid development of China's economy and society, and continuously cultivates high-level application-oriented practical talents.

## **Research Framework**

Based on the research background, research significance, literature review, research content, research goals, and key issues to be solved, this article proposes the terms and definitions of the problems discovered and related research objects, combining the scope of the research, samples, variables, and research Cases and reports, etc., and then conduct detailed analysis and research on the problem, clarify the research ideas, research methods, and technical routes, and finally find the



solutions and countermeasures to the problem, achieve the research goals, and achieve the expected results.

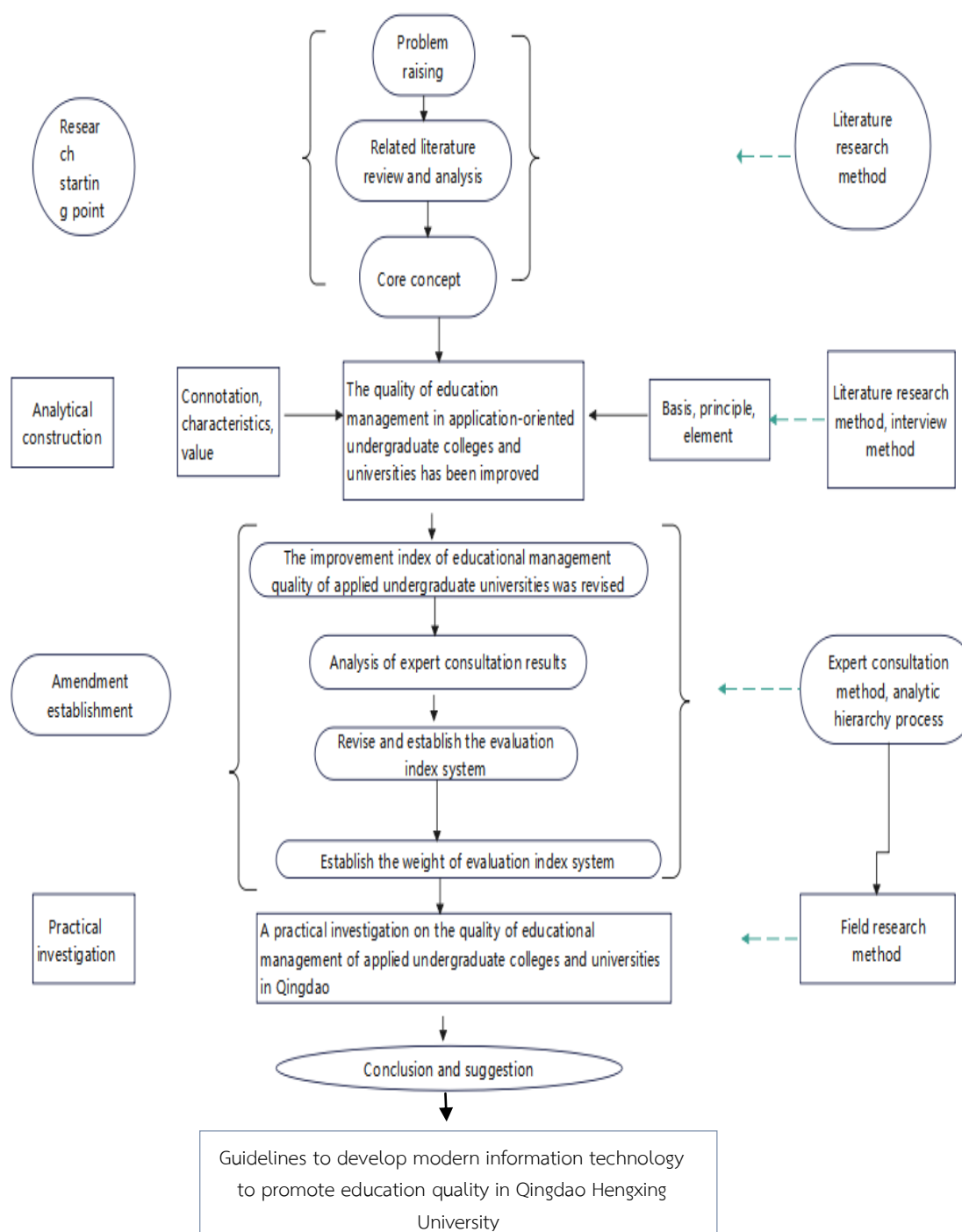


Figure 1.1 Research Framework

## Chapter 2

### Literature Review

In this study, the researchers mention that the theories and research results of domestic and foreign scholars on modern information technology and the quality of education management of undergraduate universities, as well as the guidelines for improving the quality of education management, hope that applied undergraduate universities such as Qingdao HENGXING University can be affected. On the basis of previous research results, this research conducted a detailed investigation, trying to find a breakthrough in the education management practice of application-oriented undergraduate universities, and further play the role and vision of modern information technology about improving the teaching management quality of application-oriented personnel training universities.

On this basis, the researchers analyzed the literature and the research results of wire tubes from the following aspects:

1. The concept and connotation of modern information technology
2. Quality of education management in applied universities
3. The concept of guidelines for improving the quality of education management in applied universities
4. Related research

#### **The Concept and Connotation of Modern Information Technology**

1. The Exploration on Reform of university education management and Innovation of Information

Jin Guohua. (2012). mentioned that the reform and innovation of college education and teaching. He refers in the editor "Higher Education Teaching Reform and Innovation Exploration" that in the 21st century, knowledge innovation and its creative application have It has become an inexhaustible driving force for the continuous progress of human society and an inexhaustible driving force for the development and progress of our human civilization. And it become the basis for the survival and sustainable development of every country and the nation to enhance

competitiveness. The main body of knowledge innovation is talent with realistic and innovative spirit and practical ability, especially those who serve for economic and social development. As an important base for cultivating innovative talents, universities should fully realize the significance of strengthening practical teaching to cultivate students' innovative ability. It has become the consensus of the Chinese people to participate in international competition and integrate into the flood of globalization. However, after the initial participation in international exchanges and actual competition, people found that the talent training model and talent standards established by Chinese universities in the past are still difficult to "meet the international standards" in many aspects, and there are gaps in the training goals and training modes of professional talents. The gap is very large, and this gap is mainly reflected in the aspect of cultivating undergraduates' own comprehensive quality and innovation and entrepreneurship ability. Therefore, in order to meet the needs of the new era and participate in the global economic development of international integration in the future, colleges and universities, especially application-oriented undergraduate colleges and universities, that is, all majors of application-oriented universities must pay attention to strengthening practical teaching and effectively improve students' comprehensive development quality and innovation and creativity. As an important part of China's higher education system, application-oriented undergraduate universities undertake very important educational tasks and are an important part of the improvement of the management quality of China's higher education.

Professor Jin Guohua, Vice President of Chinese Social Psychology Association, main research areas: social psychology and social group research, pedagogy and youth theory research, legal system research. Served as the president of Shanghai University of Political Science and Law, doctoral supervisor, president of Shanghai Social Psychology Association, and president of Shanghai Rule of Law Research Association. Vice President of Shanghai Social Psychology Association; He successively undertook 20 national, ministerial and municipal key research projects such as the Youth League Central Committee, the Ministry of Education, and Shanghai Philosophy and Social Sciences, among which more than 10 research

results have won awards, including: "Citizen Agency as Research Object" (2008); Shanghai Municipal Education Commission's key project "Identification and Participation: A Sociological Study on the Changes of Urban Youth's Value in the Internet Era" (2007); "Ninth Five-Year" national key textbook "Youth Studies" (1999) Wait. He has written and edited 16 books and textbooks such as "Youth Work Studies", "Modern Youth Studies", "Research on the Rule of Law of the Communist Party of China", "Research on the Reform of Letters and Visits System", and published more than 50 papers. Among them, the monograph "Modern Youth Studies" won the second prize of National Excellent Youth Books; "Youth Studies" won the first prize of National Excellent Youth Books. "Research on the Reform of Letters and Visits System" won the first prize of the second Shanghai Municipal Outstanding Achievement Award in Law; "New Theory on Educational Administration Law" won the second prize of the 10th Shanghai Educational Scientific Research Achievement Award.

Jin Guohua. (2012). another mentioned that in the 21st century, knowledge innovation and its creative application have become an inexhaustible driving force for the progress of human society, else it have become It is the basis for the survival and development of a country and a nation and the enhancement of comprehensive national strength and the competitiveness of information technology. The main body of knowledge innovation is Have a high level of realistic and innovative spirit and practical operation and hands-on ability, especially those who serve economic and social development. National higher education, such as all kinds of undergraduate universities, as an important base for training realistic innovative talents and practical operation ability talents, should fully realize the significance of strengthening practical teaching in universities to train students' realistic innovation ability and practical operation ability. Participating in international competition and joining the torrent of globalization has become a consensus recognized by ordinary Chinese. However, after initially participating in international exchanges and actual competition, people have found that the talent training model and talent standards established by Chinese universities in the past are still difficult to "be in line with international standards" in many aspects, and there is a gap in the training goals and

training models of professional talents. It is very large, and this gap is mainly reflected in the talent's practice of comprehensive quality and realistic innovation ability. Therefore, in order to meet the needs of economic development in the new era, as well as to participate in the international economy in the future and join the needs of global integration, all majors in universities must strengthen comprehensive practical teaching and improve the comprehensive quality and realistic innovation ability of applied university students. At present, it is an indispensable part of the important education component of China's higher education system, newly-built undergraduate universities aim at cultivating high-quality professional application-oriented talents in line with the actual needs of domestic industries, human resources and labor market. They are an important aspect of the undergraduate stage of the popularization of higher education. As one of the main development subjects of the country's higher education in the future, its talent training model and success will affect the country's economic and social development. Innovation is always an important soul of a nation's continuous progress and an inexhaustible driving force for a country's sustained prosperity. Recently, the Chinese government has advocated building an innovative country. Building an innovation-oriented country here means that science and technology are the key to innovation, personnel training is the core, and development education is the foundation. Facing the goal of building an innovative country, universities must comprehensively promote quality education in education. This means that colleges and universities are facing a radical change in the way they train talents, and students must have a sense of urgency in the cultivation of their ability to practice innovation. Therefore, strengthening professional practice teaching is the objective requirement of modern social economic and cultural development for talent training, a need for facing the 21st century, facing international development, and a need for training professional talents.

Wang Yuyang. (2019). mentioned that the training feature of applied undergraduate universities. As an applied undergraduate universities, The development basis of its education, the service orientation of education, the characteristics of students and the goal of talent training determine the specialization tendency of its talent training.

This requires colleges and universities not only to lay a solid theoretical foundation for the students of each major, but also to cultivate the corresponding professional practical skills and practical ability of students. In addition, realistic and innovative spirit, practical operation ability and innovation and entrepreneurship ability are indispensable parts. It can be seen that strengthening practical teaching in application-oriented universities is one of the most important ways to achieve this goal. The strengthening of practical teaching in application-oriented universities can not only stop at theoretical research, but also needs practice and innovation.

Hei Ting. (2019). mentioned that the university cooperates closely with enterprises to expand the universities' practical teaching, enhance the application ability, and initially form its own characteristics in the innovation of the practical teaching management system and the exploration of practical education models. The preliminary results in theoretical basic research and practical operation exploration of practical teaching work will also make a greater contribution to the cultivation of higher-quality applied and work talents.

2. Modern information technology is deeply integrated with the educational management of universities

Cheng Qiyong. (2020). A lecturer in the Academic Affairs Office of Sichuan University of Technology, China, mentioned that in education and teaching reform, advanced mathematics and applied mathematics research. He presided over the general research project of the Sichuan Private Education Association in 2019, "Accelerating the Research and Practice of the Deep Integration of Modern Information Technology and Undergraduate Education and Teaching" (Project Number: MBXH19YB095). Among them, the phased research result "Strive to promote the deep integration and application of modern information technology and education and teaching management in undergraduate colleges" was published in the Journal of Hubei Open Vocational College (2020). Volume 33, Issue 8. In his research, he mentioned the theoretical basis for the integration of education in undergraduate universities with modern information technology.

Qin Baoling. (2016). mentioned that information technology continues to develop and it widely promoted and applied in various fields of society and

economy. Especially in the field of education, it has been playing a very important and irreplaceable role in promoting educational reform and innovation. Undergraduate universities in my country are important positions for the development of higher education. Their teaching level and educational management level of modern educational information will directly affect the effectiveness and sustainability of educational development of universities. Therefore, undergraduate universities need to actively explore strategies to deeply integrate education and education with modern information technology. Implementation in the work to meet the sustainable development needs of universities.

Xu Zhiguo. (2016). mentioned that the characteristics of modern information technology takes communication technology and computer science as the carrier, and manages and processes related information in order to help information system design, development, installation and implementation, In this way, modern information technology has been widely promoted and applied in various industries. Information technology is the product of the times, It is a very significant symbol of the continuous progress of human civilization, and gradually become an important engine driving national economic growth. Therefore, the deep integration of education and information technology is the requirement of the development of the current era and social development, but also the need of education development, but also the need to improve the quality of education management. Information technology is different from other technologies and has the characteristics of information and technology. Informational means that the technology is Mainly act on service information. It else mainly act on the presentation of information effects and functions must be completed with the benefit of information technology.

Yu Jin. (2019). mentioned that the ultimate goal of modern information technology development is to improve the efficiency of information processing and increase the results of information processing through science and technology. Its integrated application in the field of education aims to improve the performance of education and teaching. Technicality mainly refers to the fact that information technology often corresponds to more advanced equipment, and related skills are relatively mature. It can use rich experience and convenient operation to improve

efficiency and effectiveness. Information technology also has technical commonalities, such as: relativity, sharing, dynamics, universality, etc., but its information and technical characteristics are an important theoretical basis for its integration with education and teaching.

He Ting. (2019). Mentioned that continuous innovation in education management. Analyzing the development process of education and teaching, we can find that education and teaching are constantly reforming and innovating. Especially in recent years, with the extensive promotion and practical application of modern information technology in the field of education, such as online network class, mooc, micro-class, etc., as well as multimedia presentation courseware used by teachers in class, it is fully demonstrated that modern educational technology has changed the traditional education. This educational model makes the teaching mode and content more efficient and diversified. Education management and teaching reform, the deep integration of education and modern information technology, has completely changed the original "teaching" and "learning" relationship between teachers and students in the past many years. It enables teachers and students to learn from each other and learn from each other, cooperate with each other, supervise each other and make progress together, and achieve "1+1>2" education and teaching Effect.

Zeng Yaping. (2018). Mentioned that the integration of teaching and education and modern information technology can provide a more efficient and complete interactive communication platform between teachers and students, promote the enhancement of education and teaching effects, and promote the continuous innovation and development of teaching and education. At the profess level, the integration of the two has changed the teaching work of profess, from the original classroom oral key points and knowledge points to uploading teaching courseware, building test question banks, organizing student online tests and carrying out rich teaching activities.

Wang Ming. (2018). Mentioned that at the student level, the integration of the two changes the role of students in education and teaching, from passive educators and knowledge infusions to autonomous learners. Students use information technology to independently learn what they want to learn, online



Submit homework, communicate and discuss with teachers and classmates on the network. The changes of teachers' teaching style and students' learning style have benefited from the application and popularization of modern information technology, which has played an important role in promoting the innovation of contemporary education and teaching mode. The deep integration of education and modern information technology belongs to the effective combination of the current digital information learning model and the traditional classroom teaching model. At the same time, it is also an organic combination of equal treatment and individualized teaching, and an effective combination of inquiry science and teamwork. It can be seen that the integration of education and modern information technology is an inevitable trend of the innovation and development of education and teaching, and is also the top priority to improve the quality of education.

### 3. Application of modern information technology in education management

Zhang Guoyong. (2020). Mentioned that the theoretical research results of the role of modern information technology in the education management and reform of universities in the "Inquiry into the Application of Modern Information Technology in Teaching Management" published in the Journal of Beijing Institute of Graphic Communication (December 2020) as follows: In today's society, The most important task for schools in the stage of higher education is to train talents, among which improving the quality of teaching management is one of the important tasks of schools, and it is also an indispensable lubricant for talent training. In recent years, with the continuous development of China's computer and modern information network technology, modern information technology has been widely applied to all walks of life in China's social economy, fully improve the work efficiency of major enterprises, but also improve the economic benefits of each unit. At the same time, the major universities in China have also begun to pay attention to the promotion and application of modern information technology in teaching management. In particular, application-oriented universities make full and reasonable use of modern information technology in teaching management, strive to achieve the goal of college personnel training, and actively promote the healthy, stable and sustainable development of colleges and universities.

Ge Ming. (2020). mentioned that the current advantages and disadvantages of conventional education management in Chinese colleges and universities. Among them, The advantage of the current formal traditional teaching management in domestic colleges and universities is that it is based on teachers. Teachers are the main body of scientific knowledge dissemination, and they make full use of multimedia in the whole teaching process, such as making ppt courseware, watching videos, and interacting with online teaching, which can be used to explain relevant knowledge in more detail and vividly. From the perspective of them, most teachers rely on various reference books in the conventional teaching mode to obtain relevant knowledge, use preaching teaching methods to complete the teaching goals in the textbooks, and draw up the corresponding content of the syllabus according to the talent goals of colleges and universities.

Li yongtong. (2019). mentioned that a series of knowledge intensive training. This process is more active, while students passively accept knowledge. In the process of regular teaching management in universities, the leading role of schools and teachers has been played. It can reasonably regulate the organization and management of teaching content and meet the development needs of universities. To a certain extent, students have a better understanding of knowledge through teachers' explanations. Promote more and more comprehensive knowledge reserves. The shortcoming of conventional teaching management in colleges and universities is that the conventional teaching management model can no longer meet the development needs of the information age.

Song Xiaoming. (2020). mentioned that the goal of training talent in Chinese colleges and universities is not only for the teaching of theoretical knowledge, but also pay attention to the development of students' personal characteristics. If you train students in accordance with the conventional model, it is not conducive to cultivating excellent compound talents. Conventional teaching management mainly takes teachers as the important body, ignoring the important status of students, dispelling students' enthusiasm for learning, and the whole teaching mode is relatively fixed and single in form. Generally speaking, the society is constantly developing and progressing, and the enterprise's standards for talents are updated in

real time. Therefore, it is necessary and necessary for universities to break the conventional teaching management.

Yang Jian. (2017). mentioned that the role and necessity of incorporating information technology into the teaching management of universities. As an mainly base for cultivating talents in Chinese universities, its education management is a comprehensive, systematic and task. The process of cultivating talents in universities is inseparable from the participation of university teaching management. Another word, to improve the education quality of universities and cultivate more outstanding talents, it is very important to strengthen the education management of universities. At present, the education management of my country's colleges and universities advocates the scientific, rational, and standardized development concept, and emphasizes the importance of education management.

Yu Jin. (2019). Mentioned that It is very important to consider various tasks, establish a people-oriented thinking, and rationally arrange teaching content, and conduct various student materials. Properly manage, strengthen quality supervision in the entire teaching management work. In general, the content of various tasks in the process of running a university is complicated, and teaching management needs to be It will introduce and recommend in detail the division of labor and management authority of each department, clarify the work responsibilities of each department and each post, improve the work efficiency of the whole school, and encourage application-oriented universities to cultivate more high-quality application-oriented talents who can serve the society, local economic development and social development.

Wang Yali. (2019). Mentioned that break out the conventional education management work model and improve efficiency. First of all, manual management is mainly used in routine teaching management work, which is a huge workload and is prone to work errors. Incorporating modern information technology into teaching management can improve the quality of education management and improve education management efficiency. At present, the management work of our country's universities mainly includes teaching, students, related teaching resources, teachers, etc. In recent years, my country's college education has become more and more

important, and the scale of running schools has been correspondingly too large, which has increased the workload of teaching management. If the conventional education management method is adopted, many teaching tasks such as teaching plans, examination arrangements, and upgrading of student teaching materials cannot be promoted. On this basis, information technology is added to the education management of universities, and the application of modern information technology to orderly classify various tasks can make the operation more intelligent, which not only ensures the quality of education management, but also improving the efficiency of management and accelerates the development of universities.

Zeng Yaping. (2018). Mentioned that promote the education management of universities to move forward in a standardized, intelligent and reasonable direction. The society is constantly developing, and all walks of life are progressing. The education management of our country's universities is relatively comprehensive and involves a wide range of aspects, and every aspect of it is extremely important. Once an error occurs in a certain link, it will reduce the effectiveness of the entire college teaching task and break the stability of the teaching order.

Shao Fulin. (2019). Mentioned that the education management of universities needs to strictly follow the norms and standards to refine the process, carry out scientific and effective management of each part, and incorporate modern information technology to Firmly believe that the teaching management of colleges and universities is more standardized, intelligent and reasonable. With the benefit of the information network platform, the error and the randomness of manual operation can be reduced, and the education management of our country's universities will be standardized, intelligent and reasonable.

Wei Li. (2016). Mentioned that it is To realize the popularization and application of modern information, so that education and teaching resources can reach the state of common enjoyment. This is based on the teaching and curriculum reform is an important part of the university education management of running a university and cultivating talents, it is necessary to ensure the accuracy of various materials in teaching management, so that the integration of modern information

technology can improve the authenticity of data and information, and realize the sharing of information resources.

In this way, information resources are more transparent, and the phenomenon of favoritism is prevented. Joining modern information technology in the education management of universities is supported by related hardware and software facilities, and all data information is integrated and classified. Teachers or teaching administrators can search for relevant information through keywords to facilitate information query, assist university leaders to make scientific decisions for teaching and education work, and improve the steady progress of university education management.

### **Quality of Education Management in Applied Universities**

Cheng Qiyong. (2020). Mentioned that modern information technology in the rapid development of science and technology today and education teaching and education management to the breadth and depth of organic integration of universities. According to the characteristics of different disciplines, majors and courses, promote seminar, inquiry, cooperative, and participatory teaching based on Use modern information technology to improve the independent learning and research learning ability of contemporary college students in scientific research. The establishment of a teaching cloud platform for relevant professional courses and practical courses of higher education can provide college teachers with a shared space for personal teaching, optimize the teaching design of courses, and guide college students to conduct effective online learning in a timely manner, fully realizing the current goal of applying modern information technology to education management. To raise the level of education in universities. In addition, as far as possible to train teachers to use modern educational technology, make full use of modern information technology, to reform the traditional classroom teaching mode, so that education can truly achieve the refinement of the curriculum, continue to strengthen extracurricular practice teaching, intensive teaching and more practical exercises. By reducing the teaching time of pure theoretical courses in teachers' classes, the hours of class discussion and group activities of college students can be

increased. In addition to classroom teaching, teachers also need to make reform and innovation in after-school homework, make full use of current Internet resources and educational information technology, and improve students' autonomous ability, so as to improve the level of education. This requires that, in current teaching, teachers should focus on clarifying knowledge points in classroom education encourage students to think deeply and deepen extra-curricular practice university education and independent learning through key points, difficulties, questions and growth points, so that university students can understand and learn how to apply what they have learned in college and fully apply theoretical knowledge into practice. The quality of higher education will also gradually improve.

Ge Junfeng. (2014). Mentioned that the use of information technology to effectively promote the education reform of universities, as early as 2014, Mr. Ge Junfeng from the Research Equipment Division of Jining Normal University in China pointed out the need to continue to deepen education reform measures of information technology in universities education. Due to its own advantages, modern information technology has gradually entered education classrooms of universities. It has promoted the development of classroom education in universities from different angles and multiple aspects, and has had a significant impact. Its rapid development has effectively promoted the reform of universities education. Taking a closer look at the current educational environment, before the emergence of the Internet application of information technology, education in most universities can only be carried out through the traditional education mode of teachers and students. Generally speaking, university education methods were adopted. The communication in the classroom was insufficient, and there was no timely guidance after the class, which made it difficult to interact with the students Vibes. Information technology has created new opportunities for teaching reform in universities, and provided a new teaching method: "classroom + network" teaching mode.

Zhang Lihao. (2018). Mentioned that the method is not simply preaching and flat education, but a way of absorbing the advantages of the Internet and using the network platform to provide students with more sufficient educational materials. In addition, this method is not simply classroom education and direct online education,

but a combination of old and new education models, which absorbs the advantages of both parties and can promote a new learning model for students. In-depth integration practice is not to mix, but to merge the two together and become an inseparable whole. For today's education background, how to understand the application and promotion of modern information technology and the organic integration of university courses is very important. In order to realize the grand strategy of education globalization, economic integration, win-win coexistence and common development and improve the education level of colleges and universities, it is necessary to gradually introduce modern information technology into the curriculum education of universities, make full use of the advantages of modern information technology, combine with the curriculum education of application-oriented universities, and promote the role of modern technology and the general background of education. So that the talent training of college students can meet the needs of national education and economic and social development.

Su Jie. (2018). Mentioned that The integration of the promotion and application of modern information technology with the design of specialized courses in university education requires that modern information technology be fully integrated into every element of the curriculum teaching system of application-oriented universities, making it an indispensable teaching tool for college teachers and a tool to improve their cognition and education level. Modern information technology promotes the educational reform of application-oriented universities, which will bring about great changes in the university education ideas and methods of application-oriented universities. The study also mentioned that the integration of modern information technology and applied university teaching curriculum should be combined with the reform of the curriculum system, education content and methods, and continue to emphasize the improvement of university students' learning efficiency. The promotion and application of modern information technology will be combined with the education of specialized courses in university education to provide more scientific and systematic management technology and reform direction for the university. In addition to making full use of and promoting modern information technology, university education should also pay attention to the

efficiency of students' independent learning, check whether the new university education methods are effective, whether they can stimulate students' interest in learning, so that students can more effectively absorb the knowledge and understand the knowledge they pursue. To sum up, the better combination of modern information technology and university education will not only provide the best service for university education, but also improve the educational quality of application-oriented universities.

Zhang Yan. (2019). Mentioned that The examination method and assessment form of college students' completion is not to determine the total score of the course with a traditional, single written test paper. It is very necessary to determine the final total score of this course by integrating the assessment results of students' daily assignments, speeches and discussions in class, mid-term exams and assessments, final exams, book reports or experiment reports of related majors, and small papers of related courses. In the assessment, it is necessary to make full use of modern information technology, do a good job in proportion distribution and score accounting, so as to encourage applied universities to continuously improve the mode of education management, enhance the level of education management, and more actively and effectively serve the teachers and students of universities.

Wang Feifei. (2017). Mentioned that nowadays society knows how to make full use of the popularization of modern information technology, and it is especially important to reform the classroom education mode through new technology. Only in this way can we truly realize the refinement of in-class education in application-oriented universities, strengthen extra-curricular intensive education, and advocate students to practice more, practice more and operate more after class. Only in this way can we reduce teachers' classroom education time and increase students' classroom discussion hours. The classroom education of university teachers mainly explains the knowledge point clearly and guides the practice of university students after class; . According to the characteristics of different disciplines, different majors, different theoretical courses and practical courses, make full use of modern information technology, and gradually try to implement a variety of teaching methods such as inquiry, discussion, participation and cooperation, so as to gradually



improve the ability of research learning and independent learning of university students. Make full use of the promotion of modern information technology and reform the classroom education mode through new technology, we can try to establish a cloud platform for university education and practice courses, and provide teachers with personal education space, famous teachers, online class videos, etc. We can also try to optimize the education design of practical courses, guide students to learn online, and realize online and offline interactive mixed education.

Xu Zhiguo. (2016). Mentioned that through make full use of the popularization of modern information technology, students are encouraged to think deeply, deepen their extracurricular learning. It let students understand how to apply the knowledge they have learned. Reform the examination education method, instead of using a single examination paper to determine the total course score, it is necessary to integrate the results of usual homework, classroom discussions, mid-term final exams, book reports or laboratory reports, and course essays to determine their total education course score. With the modern information technology is full used, improve management methods, and actively serve teachers and students.

Chen an. (2019). Mentioned that the national education department can provide more abundant and diversified independent learning resources for students in the higher education stage, which cannot be separated from the full application of modern information technology. Contemporary students have grown up with the development and promotion of modern information technology since childhood. In fact, in life and study, modern information technology and universities students have grown together, and they have always coexisted and symbiosis. In the current environment and background of modern information technology as the development of science and technology, it is particularly important to gradually adapt to the education methods and learning methods based on modern information technology environment conditions. Application-oriented universities need to continuously explore the comprehensive use of modern information technology and fully develop new forms of multimedia courseware and course design. Application-oriented universities should constantly build a management model that reflects independent inquiry and cooperation to improve education level, and promote teachers to reform

education methods. Finally, through the development and promotion of modern information technology to fully mobilize the enthusiasm of students, initiative and creative talent training goals.

Ding Lei. (2019). Mentioned that universities should strengthen teacher training, attach great importance to teachers' educational information concepts, concepts and capabilities, create conditions for teachers to Make full use of modern information technology to improve the teaching work in universities and raise the level of education management. Through promoting the continuous integration of modern information technology and education seriously, solidly and effectively, the quality of education in applied universities is improved. In addition, the applied university can gradually improve the educational management system by constantly updating the educational management concept. Through the promotion and application of modern information technology to optimize the education management process, continue to improve the service to teachers and students, in line with the principle of teachers and students first to carry out work, to create an application-oriented university education personalized, education refined, education accurate, education intelligent management mechanism. It can also make full use of the Internet, through the setting of open courses and open platform education of network famous teachers, and make full use of modern information technology to improve the current situation of traditional students just sitting in the classroom. In addition, modern information technology improves the education work of universities and improves the level of education management, which is also reflected in degree awarding, education management, credit recognition, course management, tuition payment, and the use of network platforms to choose their own appropriate courses. The management methods and regulations of teachers' workload calculation and education evaluation in applied university schools are also inseparable from the continuous integration of modern information technology with educational technology and management means. Make full use of modern information technology to improve the teaching work of universities, improve the level of education management, and also provide powerful conditions for the implementation of online and offline interactive mixed teaching in applied

universities. Making full use of modern information technology to improve the education work of universities can further strengthen the basic construction of online open professional courses, and the application of Internet technology can provide a strong guarantee for improving the level of education management and the implementation of education management system.

Zhang Xinyu. (2017). Mentioned that the reform of teaching service model, establish online open course learning certification, credit recognition, credit conversion, academic certification and other systems. Make full use of modern information technology to promote the co-construction and full sharing of high quality education management resources. Universities should meet the new needs of industry development and the new requirements for talent training, strengthen cooperation with practical departments and industry enterprises to develop online open courses. It can promote stronger the co-construction. And It can share mechanism of high-quality online open course resources. Accelerate the construction of a national public welfare cloud teaching platform, gather high-quality curriculum resources across the country, and expand the sharing of high-quality courses. Hire senior talents in the Internet field as part-time teachers to jointly develop methods and methods that are conducive to online and offline hybrid teaching.

Qiu Jing. (2015). Mentioned that its own advantages and characteristics of running a school, according to the cognitive ability and actual needs of learners, construct high-level online open courses with different characteristics in layers, so as to actively realize all levels of education, all levels of education, as well as all kinds of colleges and universities of famous teachers teaching videos on the Internet for public teaching, through the extensive application and promotion of modern information technology, to achieve the common sharing of excellent educational resources.

Today, in the period of rapid social and economic development, China has entered the era of modern information technology and Internet. Modern information technology has gradually been widely promoted and actively applied in all walks of life in China. According to the current domestic environment and the background of the development of The Times, organically integrating the promotion and application

of modern information technology into the education management of application-oriented universities can effectively ensure the steady improvement of the quality of education management in universities, and constantly improve the level of education management. These are the inevitable trends brought by the promotion and application of modern information technology. Based on the above points, domestic experts and scholars in relevant social fields, economic fields, especially in the field of education, as well as university education managers and teachers in the line of education, are breaking traditional inherent ideas, establishing a sense of innovation, paying attention to the importance of modern information technology in education management. And they are trying to apply Information technology penetrates into education management and university teaching management as the research object and research content. Strive to enable modern information technology to provide real help to the education management and reform of universities.

### **The Concept of Guidelines for Improving the Quality of Education Management in Applied Universities**

Zhang Guoyong. (2020). Mentioned that research on the Application of Modern Information Technology in Teaching Reform mentioned that modern information technology has gradually entered the education management of universities. It due to its own advantages. It has promoted the development of education management of universities from different angles and many aspects. And It has had a significant impact. The rapid development of modern information technology, including computer technology. And the rapid development of modern information technology else including communication technology. And the rapid development of modern information technology multimedia technology and network technology. It has effectively promoted the reform of education management. However, the promotion of information teaching methods in distinctively application of modern information technology, which are constantly updated and developed, needs further investigation.

Zhang Lihao. (2018). Mentioned that the applied undergraduate university focus on applied technology rather than academic orientation. They are relatively

different from undergraduates whose goal is academic study. Application-oriented undergraduate education So far, it's working. It plays an important role in meeting the needs of contemporary China's economic and social development. It has played an immeasurable role in training high-level applied talents for the country, actively promoting the popularization of China's higher education, and promoting China's economic and social development. These functions have obviously attracted the attention and attention of the public, making everyone reach a consensus on the extensive application of modern information technology in education.

The research object of this paper is Qingdao HengXing University, an applied university in Qingdao, China. In March 2014, the reform direction of China's Ministry of Education was clear : Among the 1,200 ordinary undergraduate universities in the country, more than 600 will gradually transform into applied technology universities, and the transformation of undergraduate colleges and universities exactly 50% of the total number of universities.

After entering the new era of information technology, from the perspective of the whole international level, higher education has gradually formed a new development trend with the promotion and application of modern information technology. That is, higher education schools in various countries have begun to attach importance to practical teaching, especially to strengthen the training of technical talents with strong practical and practical ability. Applied universities in various countries generally believe that theoretical teaching and practical teaching in schools need to complement and integrate each other, and practical teaching is very important to cultivate students' practical operation ability and realistic innovation ability. In addition, practical teaching is also an important link to promote college students to successfully find suitable jobs after graduation, find employment as soon as possible, and realize the educational goal of applying what they have learned.

"Applied Technology undergraduate" is originally a new education model of mutual, integrated development and effective combination between new undergraduate education and higher vocational education, which is an effective exploration of modern practical education. Domestic universities are trying hard to train application-oriented professionals to meet the needs of China's social and

economic development through pilot projects. China's applied technology undergraduate is actually required to "application" as the goal and core, to talent training, education quality, education concept as the guidance, fully reflect the current spirit of The Times, to meet the requirements of China's social development.

In order to meet and adapt to the requirements of higher education from all walks of life in the new situation of economic and social development, Applied universities need to fully recognize the new development direction, including the direction of related disciplines, related professional structure, related curriculum system, and related teaching content and teaching links. Applied universities should pay attention to professional construction, each major should be closely combined with local characteristics, but also pay attention to training students' practical ability, training application-oriented talents, and mainly reflect the word "application" in the construction of teaching system. Its core link is practice teaching, and practice teaching is inseparable from the promotion and application of modern information technology. All these are the only way to comprehensively and effectively improve the quality of education through the promotion and application of modern information technology. Applied universities should also pay attention to cultivating high-quality and practical application-oriented talents with strong social adaptability and market competitiveness.

Wei Jihong. (2018). Mentioned that Application undergraduate talents mainly refer to such specialized talents who can organically integrate the professional knowledge and practical operation skills they have learned, apply what they have learned, and apply theoretical knowledge to the social practice of related majors. In contemporary China, with the steady development of higher education and the sustainable development of higher education, the specific connotation of the word "professional talents" is also constantly developing. The related concepts of technical talents and applied talents, academic talents and research talents are relative in connotation and reality. Universities that cultivate applied talents are mainly applied technology universities and applied research universities.

Yao Yuan. (2015). Mentioned that the training of application undergraduate talents are talents who apply mature technology and theory to actual production

and daily life. We will optimize the type and structure of personnel training and increase efforts to train application-oriented personnel. General undergraduate education not only cultivates the right amount of basic and academic talents, but also pays attention to the cultivation of multi-standard and diversified applied technical talents, promotes the transformation of qualified general undergraduate university, changes the philosophy of running schools, and realizes The school attaches importance to the economic and social development of the country and the region. In addition, we should pay attention to the integration of production and education in the training of university students, pay attention to the cooperation between schools and enterprises, and promote the training of application-oriented and skill-based talents.

Zhang Aimin. (2018). Mentioned that Guide China's higher education schools to actively and proactively promote social and economic development, and strive to connect higher education talent training with local regional industrial layout. Adjust the professional structure with flexible and forward-looking planning, and create a number of applied technology majors that are urgently needed by local governments and industries and have prominent advantages and distinctive characteristics. Compared with other types of personnel training, such as academic type and scientific research type, China's applied technical personnel training mode has unique characteristics.

Hong Dandan. (2020). Mentioned that With the popularization and application of modern information technology, the knowledge structure of applied talents cultivated by universities is designed and cultivated around the actual needs of front-line production under the background of social economy. At present, for universities, in the aspect of education management, in the course design and setting, the selection and construction of teaching materials and other basic work links, more emphasis is placed on basic knowledge, theoretical knowledge and formed knowledge, while the strong practical discipline system is often ignored. In fact, the ability training system of this kind of applied talents is also to meet the actual needs of first-line production as the core goal. In contrast, the requirement for scientific research and development ability of such talents is not too high. In terms of ability

training, the training of application-oriented talents emphasizes the skillful use of basic knowledge, the training of practical operation skills and the flexible use of theoretical knowledge.

Zeng Yaping. (2018). Mentioned that As for the training process of applied talents, university education emphasizes the combination of practical production and operation ability, and pays more attention to practical teaching links such as production practice and experimental teaching. These links are usually important teaching activities for students to accumulate relevant professional skills, and students must integrate relevant professional knowledge for practice. In the mode of training applied talents in universities, the requirements of thesis level and defense of college students are generally not high, but the requirements of graduation design and practical operation level are more serious.

Wang ming. (2018). Mentioned that The training of application-oriented undergraduate talents is mainly the practice of application-oriented knowledge, rather than the academic talent training focusing on scientific discovery and the creation of new knowledge. In today's China, the social and economic development has an urgent and extensive demand for application-oriented talents. In today's process of social industrialization and even information technology, the demand for such talents occupies a large proportion of the demand for talents in the entire social and economic development. Application talents also need to go through a complex training and cultivation process in universities. The good and bad work of talent training and the results can also reflect the education level of an application undergraduate university.

In addition, although modern information technology has been used to improve the education management of universities in practice. There are still some gaps in the research of education management of applied undergraduate universities. In this paper, while drawing on the research achievements of previous scholars, the author tries to find a breakthrough from the education management practice of application undergraduate universities, and further discusses the effect and vision of modern information technology on the improvement of education management quality of such application talents training universities in Qingdao, China.



## Related Research

Zhang Daliang. (2016). Mentioned that the full use of modern information technology to effectively promote education reforms in universities, who was once the director of the Department of Higher Education of the Ministry of Education of China, published the foreword on China Education News Network "China Higher Education" magazine for many times, from the level of national education management. Point out the direction and make programmatic guidance for modern information technology to improve university education reform. Among them, "Using Modern Information Technology to Promote Teaching Reform and Resource Sharing" was published on May 19, 2016. The research pointed out that the extensive popularization and application of modern information technology is profoundly changing the educational quality of application universities day by day. It makes teachers and students teaching and learning, thinking mode and communication mode have unprecedented changes.

Fan Mingtao. (2019). Mentioned Today, with the promotion and application of modern information technology in all aspects of society and economy, its deep integration with university education will gradually promote the teaching reform of application-oriented universities, realize the sharing and mutual learning of high-quality teaching resources in higher education, and will greatly promote the continuous improvement of education quality in application universities. Reasonable and use of today's modern educational information technology to optimize course settings and update teaching content. Universities should study and absorb online high-quality course resources, optimize the school's curriculum, clarify the primary and secondary relationships, hierarchical relationships, and connection relationships between courses, and integrate relevant professional basic courses, core courses, professional applications and experimental practice courses.

Zhu Maolin. (2015). Mentioned that focus on improving students' overall quality and basic abilities, reshape the curriculum system, update teaching content, and reform teaching models. Timely and timely integration of today's international cutting-edge academic development results and the latest scientific research results

into education, so that today's industrial technological progress and practical operational experience into relevant courses, to improve the quality of application-oriented personnel training.

The author of this doctoral dissertation is one of the teachers of Chinese universities and is currently a full-time lecturer at Qingdao Hengxing University in China. At present, modern information technology has gradually entered the education classroom of universities due to its own advantages. It has promoted the development of classroom education in universities from different angles and multiple aspects, and has had a significant impact. The rapid development of modern information technology has effectively improved the reform of university education.

Other research in this paper includes the following parts. The researchers have done further research on the Guiding Opinions on the Development of Modern Information Technology to Promote the Teaching Reform of Application undergraduate universities in China, the Continuous Update and Development of Information Technology, and the Continuous promotion of information-based education methods in practical application. This study combines the application and promotion of modern information technology, its application in education practice, its application in education management, and its application research in personnel training, and strives to promote the stable development of application universities.

It is expected that the development achievements of modern information technology will play a role in university management, and the educational achievements brought about by the integration and mutual promotion of the two. To provide guidance for promoting teaching reform and improving education quality in China's applied universities. Through other studies, we can meet the actual demand of applied talents for China's social and economic development, provide corresponding theoretical support and guidelines for the development and progress of applied undergraduate higher education, and make due contributions to the rapid development of contemporary Chinese economy and society.

With the development and popularization of modern information technology in China today, its role has gradually penetrated into the educational

management, has been widely used, expands the scope of educational management, and gives a full space for the improvement of educational management level. With the wide use of Information technology, it is in educational management in means, methods, content and mode. And constantly have faith in the integration of information technology and education management quality improvement. Information technology and education management complement each other, information technology provides a broader space for education management, and the reform of education management also promotes the development of information technology. Many Chinese scholars have done a lot of research on this issue. Modern information technology has gradually entered the education management of universities due to its own advantages. It has promoted the development of teaching management of colleges and universities from different angles and many aspects, and has had a significant impact. The rapid development of information technology, including communication technology, computer technology, multimedia technology and network technology, has effectively promoted the reform of education management. However, the promotion of information education methods in practical application of modern information technology, which are constantly updated and developed, needs further investigation. In addition, although modern information technology has been used to promote the education management of universities in practice, there are still some gaps in the research of education management of applied undergraduate universities.

Table 2.1 Name of Literature Review

Serial number	Main references related theories and research content	Researcher and results time	Literature depth and breadth
1	Exploration of Education and Teaching Reform and Informatization Innovation in Colleges and Universities	Jin Guohua, 2012; Song Xiaoming, 2019	In 2012, the editor-in-chief published the monograph "The Reform and Innovation of College Education and Teaching"; In 2018, Heilongjiang Province, China's scientific "Thirteenth Five-Year Plan" key project and published journal papers;
2	The deep integration of modern information technology with the education and teaching of colleges and universities	Cheng Qiyong, 2020; Ge Ming, 2020	2019 China's Sichuan Provincial Private Education Association Scientific Research Projects and Published Journal Papers; China's Jiangsu Province Modern Education Technology Research 2019 Projects and Published Journal Papers
3	Research on the Application of Modern Information Technology in Teaching Reform	Zhang Guoyong, 2020; Chen An, 2019	Published papers of the Journal of Beijing Institute of Graphic Communication in 2020; published papers of "Educational Information Forum" in 2019
4	Use Information Technology to Effectively Promote Teaching Reform in Colleges and Universities	Zhang Daliang, 2016; Ge Junfeng, 2014; Li Yongtong, 2019	On May 19, 2016, "China Higher Education" published the first paper (the author Zhang Daliang is the director of the Department of Higher Education of the Ministry of Education of China) published a journal paper in 2014; 2018 China Jilin Province Higher Education Association Research Project and published " Science and Technology Information

## Chapter 3

### Research Methodology

To develop modern information technology to effectively promote the quality of China's education management in application undergraduate universities, the application of modern information technology is timely integrated into education management. So as to better develop the China's level of education management produced by the actual effect of research. Through this study, guidelines can be found for the educational management reform and innovation of general undergraduate colleges and universities in Qingdao, China, which are oriented to apply technology rather than academic, in order to meet the China's economic development and social development of China, demand for high-level applied talents, and it take a positive role in developing the quality of education management of Chinese universities. Main research methods: literature and system research, field investigation, in-depth interview, case study, information and data analysis, etc.

Researchers have the Following Procedures;

1. Population / Sample Group
2. Research Instruments
3. Data Collection
4. Data Analysis

#### **The Population / Sample Group**

##### **The Population**

The research selects the practical effects of the development of modern information technology to effectively promote the reform of education, and it improve the education quality of applied undergraduate universities in Qingdao, China. This study selects 200 teachers from Qingdao Hengxing University as the population group to investigate the actual effect of the development of modern information technology to effectively promote the quality of university's education management.

### **Sample Group**

Aiming at the application of modern information technology to develop the education management quality of applied universities in Qingdao Hengxing University, a Chinese applied undergraduate university, 200 questionnaires were distributed to 200 teachers of different ages, academic qualifications, positions, administrative management and full-time teachers, and 187 valid questionnaires were recovered. With 187 teachers as a sample group, this paper studies how the modern information technology can improve the quality of education management.

### **The Variable**

#### **Independent Variable**

Develop Modern Information Technology

#### **Dependent Variable**

To develop the quality of education management of Qingdao Hengxing University

### **Content**

In the process of developing modern information technology to effectively promote Qingdao Hengxing University's education quality, the application of modern information technology is timely integrated into education management, so as to better investigate the actual effect of improving the level of teaching management. It is expected that the research of this paper can find some guidelines for the development of the quality of education management of the general undergraduate colleges and universities in Qingdao, China, which are oriented to apply technology rather than academic.

### **Research Instruments**

On the whole, the research method of this thesis adopts the following methods: "Raising problems (pointing out the problems existing in the course of developing modern information technology to promote the quality of education management of application undergraduate universities in China) -- analyzing problems (analyzing the reasons for the problems existing in the application of modern information technology to the education management of application undergraduate universities in China from many aspects) -- solving problems (introducing education information, education information, and response this paper

guides the educational management of application universities with relevant theories such as application-oriented personnel training mode, and puts forward countermeasures on how to improve the quality of educational management of application universities in China through the improvement of modern information technology. "Technical route.

### **1. Literature Research Method.**

Through the investigation of this thesis, we can obtain the relevant materials about the reform and innovation exploration of university education management, the deep integration of modern information technology and university education management, the application of modern information technology in education management, and the effective promotion of the level of college education management by using information technology, in order to correctly and comprehensively understand and master the relevant theoretical knowledge of this issue.

### **2. Institutional Analysis.**

Based on the analysis of development and current situation of education management in China's application undergraduate universities, this thesis tries to find the reasons for the problems encountered in the education management of universities, and explore the countermeasures to better solve the improvement of the quality of application-oriented undergraduate education management.

### **3. Comparative Research Method.**

By comparing with the advanced experience of application-oriented undergraduate talent training in foreign universities, this thesis analyzes the difference of talent training objectives between domestic academic research universities and application universities, summarizes relevant advanced experience, and finds the direction of improving the quality of education in application universities.

### **4. Normative Analysis.**

Through the rational analysis of the modern information technology to promote the level of education of application-oriented undergraduate universities in China, using reasonable ideas to provide theoretical guidance and basis for the

sustainable improvement of education management of application-oriented undergraduate universities in China.

### 5. Questionnaire Survey Method

In this paper, the method of questionnaire survey is also used. It is a common method widely used in domestic and foreign scientific research and social investigation. The questionnaire form is a form used in question statistics and question reply to conduct investigation and research. It generally allows the investigator to select research samples according to the research objectives, ask questions to the research objects, and express the content of the investigation and the results to be obtained in the form of questions. Questionnaire survey is the measurement method commonly used by most researchers. This kind of targeted and effective measurement method can be used to investigate and make statistics on the problems studied, so as to collect the very real and reliable data needed by researchers.

In this study, questionnaire survey was used to obtain more accurate and reliable first-hand data. In order to solicit experts' opinions on whether all questions designed in the questionnaire are consistent with the research objectives and whether the definitions of terms in the questionnaire are accurate, experts in relevant professions should maintain consistent opinions on the quality and reliability of the questionnaire. The researchers asked three experts to evaluate the questionnaire. The evaluation uses the Item-Objective Congruence (IOC) metric developed by Rovinelli and Hambleton. (1977), Which is a procedure used in test development to evaluate the validity of content in the development phase of a project. The criteria used by IOC are described below.

+1 = all

0 = suspicious

-1 = inconsistent

All items in the questionnaire were evaluated by three experts, who rated the items according to the above criteria, with a maximum score of 1 indicating that all experts agreed on the items. Items with low scores were revised or deleted as necessary to optimize the content of the questionnaire, ensure that the



questionnaires issued were evaluated by experts, the quality was guaranteed, and the collected questionnaire data was reliable and consistent with the research objectives. This process improves the quality of the questionnaire and is conducive to obtaining a more objective comprehensive evaluation from the questionnaire.

The questionnaire survey method of this study is carried out by Wechat. The questionnaire was distributed to the respondents. In the survey study, the researchers conducted questionnaire survey and evaluation under the guidance of three domestic experts and professors in related research fields to ensure the accuracy and validity of the questionnaire. According to the relevant questions listed in the questionnaire, the respondents choose and fill in the answers according to their actual situation. This form of questionnaire is more in line with the research purpose of this paper. Compared with the interview form, questionnaire survey is more detailed and complete, easy to control and operate, and can ensure the effective recovery rate of questionnaire. In addition, the main advantage of questionnaire survey is the standardization of research and the low cost operation in practice. Among the objects of this study, questionnaires were issued to investigate the promotion of higher education quality by modern information technology, and effective questionnaires were collected and analyzed.

## **Data Collection**

In view of the many problems faced by China's applied undergraduate teaching reform, combined with the selected samples of Qingdao Hengxing University in China, the following case data are collected one by one.

The data collection methods adopted in this study mainly include questionnaire survey, data retrieval and field investigation.

1. Questionnaire survey: Questionnaire survey is the most commonly used method of data collection, because it is relatively low cost and the information obtained will be more comprehensive . In this study, the Wechat, a communication tool, was fully used to distribute the questionnaire "Modern Information Technology Promotes the development of Teaching Quality in Application-oriented undergraduate universities" to

the teachers of Qingdao Stellar University, where I work. The paper was conducted through 25 items of relevant content set in the questionnaire.

2. Access to information: access to information is the oldest way of data collection, through access to books, records and other information to get the data they want. This study conducted case analysis and research through the collection and reference of relevant management documents and regulations formed and issued by Qingdao Hengxing University, the school where I work, in the course of education management.

3. Field investigation: The research method of field investigation is to do the relevant research at the designated site that the research says is needed. It refers to the development process of things and things in order to understand the truth of the behavior, actions and thoughts of the research target and the research object. It is usually carried out in the field of the scene more intuitive, detailed investigation of the actual situation. In this paper, the researchers went deep into Qingdao HengXing University to conduct a field survey, aiming at the application and promotion of modern information technology in the university to improve the quality and level of applied university education.

In this study, the actual effect of the improvement of modern information technology on the reform of modern education and the improvement of education quality in undergraduate university in Qingdao was investigated. This study selects the teachers of Qingdao Hengxing University as the population group to investigate the practical effect of the development of modern information technology on effectively promoting the quality of education management. In view of several cases of mixed teaching of Internet, online and offline combined with modern information technology in the education reform of Qingdao Hengxing University, a domestic application-oriented undergraduate university, teachers from the School of Humanities in Qingdao Hengxing University were selected as the sample group to conduct a questionnaire survey on the improvement of education management quality.

The research selects the practical effects of the development of modern information technology to effectively promote the reform of modern education and

improve the education quality of applied undergraduate universities in Qingdao, China. This study selects about 200 teachers from Qingdao Hengxing University as the population group to investigate the actual effect of the development of modern information technology to effectively promote the quality of education management.

A total of 187 valid questionnaires were collected. Teachers of different ages, degrees, positions and positions were involved in data collection and analysis.

### **Data Analysis**

The research selects the practical effects of the improvement of the modern information technology to effectively promote the reform of education. It improve the education quality of applied undergraduate universities in Qingdao, China. This study selects 500 teachers from Qingdao Hengxing University as the population group to investigate the actual effect of the development of modern information technology to effectively promote the quality of education management. Sample group A number of cases of Internet online and offline mixed teaching with modern information technology in the course of education reform in Qingdao Hengxing University, an application-oriented undergraduate university in China. 187 teachers from the university of Humanities of Qingdao Hengxing University were selected as the sample group to conduct a questionnaire survey on the improvement of the quality of education management. The Variable Independent Variable Develop modern information technology Dependent Variable To improve the quality of education management of Qingdao Hengxing University Content In the process of developing modern information technology to effectively promote the quality of Qingdao Hengxing University, the application of modern information technology is timely integrated into education management, so as to better investigate the actual effect of developing the level of education management. It is expected that the research of this paper can find some guidelines for the improvement of the quality of education about the general undergraduate universities in Qingdao, China, which are oriented to apply technology rather than academic. Time The survey period is from September 2021 to May 2023.

The questionnaire survey was conducted in May 2023. A total of 25 questions are set according to the following research objectives.

Part I is general characteristics of sample group. (Questions 1-3).

Part II is the corresponding research purpose of questionnaire survey  
research purpose1:

Develop modern information technology and promote co-construction, sharing and innovation of high-quality education and management resources. (Questions 4-10)

Part III is the corresponding research purpose of questionnaire survey  
research purpose2:

Develop modern information technology, optimize education management system and update education management content.(Questions 11-18)

Part IV is the corresponding research purpose of questionnaire survey  
research purpose3:

Develop modern information technology and improve the reform of education management service mode. (Questions 19-25)

The data in this study was analyzed using a three-line graph. It is often used for analysis of small data sets. This questionnaire is different from science and engineering research in that the questions are described in a large number of clear words. Therefore, considering the convenience and effectiveness of the survey, the options set are relatively simple and convenient for respondents to answer. In view of this feature, statistical analysis of the data is carried out using classification and percentage, which is convenient to compare the differences between data sets.

## Chapter 4

### Results of Analysis

This research was to study Qingdao Hengxing University as an example to investigate the practical effect of the development of modern information technology on effectively promoting the quality of education management. A questionnaire survey is conducted on the improvement of the quality of teaching management by selecting several cases of the combination of online and offline teaching and modern information technology in the teaching reform of Qingdao Hengxing University, an application-oriented undergraduate university in China. Developing modern information technology is the dependent variable, improving the quality of education management of Qingdao Hengxing University is the variable. In the process of developing modern information technology to effectively improve the teaching quality of Qingdao Hengxing University, the application of modern information technology should be timely integrated into the educational management, so as to better investigate the practical effect of improving the level of teaching management. The data analysis result can be presented as follows:

1. Symbol and abbreviations
2. Presentation of data analysis
3. Results of data analysis

The details are as follows.

#### **Symbol and Abbreviations**

The data analysis in this study made use of three-line table, which is usually used for the analysis of small data sets. The questionnaire used in this study is different from that used in science and engineering research. The questions to be investigated have been described in a large number of clear words, which does not involve questions of high or low level. The respondents only need to give truthful answers according to their actual situation. Therefore, considering the convenience and effectiveness of the survey, most of the options set can be answered yes or no,

which is convenient for respondents to answer and can ensure the credibility of information. In view of this feature, the percentage of people selected by A Yes and B No is used for data statistics and analysis, which is convenient to compare the differences between data groups.

### Presentation of Data Analysis

**Table 4.1** The Results of the Questionnaire (General Characteristics of Sample Group)  
(n=187)

Questions 1-3	Number of People	Percentage
1. What is your gender?		
A. Male	44	23.53%
B. Female	143	76.47%
Total	187	100
2. What is your age?		
A. Age 18-35	128	68.45%
B. Age 35-45	47	25.13%
C. 45-55 years old	8	4.28%
D. Over 55 years old	4	2.14%
Total	187	100
3. What is your educational background?		
A. Junior college	1	0.53% below
B. Junior College	2	1.07%
C. Undergraduate	146	78.07%
D. Master	29	15.51%
E. Doctor	9	4.81%
Total	187	100

Table 4.1 shows that among the 187 valid questionnaires, 44 were male, accounting for 23.53%, and 143 were female, accounting for 76.47%. There were 128 people aged 18-35, accounting for 68.45%; Aged 35-45, 47 (25.13%); 45-55 years old, 8 people, accounting for 4.28%; Over 55 years old, 4 people, accounting for 2.14% of the education is junior college or less, 1 person, accounting for 0.53%; Junior college, 2 people, accounting for 1.07%; Undergraduate students, 146, accounting for 78.07%; Master degree, 29 people, accounting for 15.51%; Doctors, 9 people, 4.81%.

**Table 4.2** The Results of the Questionnaire (Analysis of Questionnaire Survey Results Corresponding to Research Objective 1)

(n=187)

Questions 4-10	Items	Number of People	Percentage
4. Can you use educational information tools in your daily life?			
	A. It is	178	95.19%
	B. No	9	4.81%
	Total	187	100
5. Can you use information technology to promote students' independent learning?			
	A. Yes	173	92.51%
	B. No	14	7.49%
	Total	187	100
6. The use of information technology will improve the quality of teaching, so you advocate the use of information tools?			
	A. It is	179	95.72%
	B. No	8	4.28%
	Total	187	100
7. Does using computer technology mean more work for you?			
	A. It is	139	68.98%
	B. No	58	31.02%
	Total	187	100
8. The use of information technology will make the interactive teaching process more interesting, so the use of information tools?			
	A. It is	175	93.58%
	B. No	12	6.42%
	Total	187	100
9. Will the use of information technology improve your status in the team?			
	A. It is	143	76.47%
	B. No	44	23.53%
	Total	187	100
10. Can you use information technology to improve your peers' recognition of your abilities? [single choice]			
	A. Yes	163	87.17%
	B. No	24	12.83%
	Total	187	100

Table 4.2 Shows that among the 187 valid questionnaires, the analysis results of 178 people use educational information tools daily, accounting for 95.19%. 9 people did not use it, accounting for 4.81%. There were 173 (92.51%) students who could use information technology to promote independent learning, and 14 (7.49%) students who could not. 179 people advocated the use of information tools, accounting for 95.72%, and 8 people did not advocate it, accounting for 4.28%. The use of computer technology means more work for 129 people, accounting for 68.98%, and 58 people disagree, accounting for 31.02%. The use of information technology will enable interaction. 175 people (93.58%) found the teaching process interesting, while 12 people (6.42%) disagreed. 143 people (76.47%) believed that the use of information technology would improve the status of the team, while 44 people (23.53%) disagreed. 63 people (87.17%) were able to use information technology to improve their colleagues' recognition, while 24 people (12.83%) were not.

**Table 4.3** The Results of the Questionnaire (Analysis of Questionnaire Survey Results Corresponding to Research Objective 2)

(n=187)

Questions 11-18	Items	Number of People	Percentage
11. Information technology such as computer and network technology is too difficult for you?			
	A. Yes	94	50.27%
	B. No	93	49.73%
	Total	187	100
12. The school has no choice but to use information-based teaching?			
	A. It is	<b>83</b>	44.39%
	B. No	<b>104</b>	5.61%
	Total	187	100
13. The school provides the corresponding hardware and software conditions for teachers to learn and apply information teaching?			
	A. It is	172	91.98%
	B. No	15	8.02%
	Total	187	100



Table 4.3 (Continued)

(n=187)

Questions 11-18	Items	Number of People	Percentage
14. The school provides opportunities to participate in on-campus information-based teaching training?			
	A. Yes	174	93.05%
	B. No	13	6.95%
	Total	187	100
15. The school creates opportunities to encourage participation in information-based teaching and training conferences?			
	A. It is	178	95.19 %
	B. No	94	81%
	Total	187	100
16. The school stipulates that young teachers must use information technology in class?			
	A. It is	145	77.54%
	B. No	42	22.46%
	Total	187	100
17. The school management encourages teachers to use information teaching in daily teaching?			
	A. It is	186	99.47%
	B. No	1	0.53%
	Total	187	100
18. In schools, teachers with high level of information-based teaching are valued?			
	A. Yes	163	87.17%
	B. No	24	12.83%
	Total	187	100

Table 4.3 shows that among the 187 valid questionnaires, Analysis of questionnaire survey results corresponding to research objective 2, the analysis results of 187 valid questionnaires show that 94 people (50.27%) found computer and network technology too difficult. Not difficult 93 people, accounting for 49.73 %. The school had to adopt information teaching 83 people, accounting for 44.39% and the other 104 people, accounting for 55.61%. The school provided corresponding information teaching hardware and software for 172 people, accounting for 91.98%,

and did not provide 15 people, accounting for 8.02%. The school provided information teaching training for 174 people, accounting for 93.05%, and did not provide training for 13 people, accounting for 6.95%. The school encourages student participation. There were 178 people, accounting for 95.19%, and 9 people, accounting for 4.81%, did not encourage information teaching and training meetings. A total of 145 (77.54%) young teachers were required to use information technology. The other 42, 22.46%. Management encouraged the use of 186 teachers, accounting for 99.47%. One person was not encouraged, accounting for 0.53%. There were 163 teachers with higher information level who had valuable teaching, accounting for 87.17%, and 24 others, accounting for 12.83%.

**Table 4.4** The Results of the Questionnaire(Analysis of Questionnaire Survey Results Corresponding to Research Objective 3)

(n=187)

Questions 19-25	Items	Number of People	Percentage
19. The school will be informationized teaching quality as a year-end evaluation index?			
	A. It is	155	82.89%
	B. No	32	17.11%
	Total	187	100
20. Have you ever taken courses related to educational technology at school?			
	A. Yes	163	87.17%
	B. No	24	12.83%
	Total	187	100
21. The 21st frequently watch and learn the high level of information teaching teacher lectures?			
	A. It is	161	86.1%
	B. No	26	13.9%
	Total	187	100
22. The school is able to provide sufficient expert teams to support teachers?			
	A. It is	166	88.77%
	B. No	21	11.23%
	Total	187	100

Table 4.3 (Continued)

(n=187)

Questions 19-25	Items	Number of People	Percentage
23. Schools can provide teachers with a certain amount of time to learn?			
	A. It is	167	89.3%
	B. No	20	10.7%
	Total	187	100
24. The school can provide hardware conditions to ensure that teachers can use teaching presentation courseware? [single choice]			
	A. It is	174	93.05%
	B. No	13	6.95%
	Total	187	100
25. What do you think the school education information construction needs to continue efforts in?[multiple choice]			
	A. Increase hardware investment	158	84.49%
	B. Increase investment in software	153	81.82%
	C. Increase the construction of school network resources	171	91.44%
	D. establish a mechanism to improve teachers and students' modern information technology literacy	168	89.84%
	Total	187	100

Table 4.4 shows that among the 187 valid questionnaires, Analysis of questionnaire survey results corresponding to research objective 3, the analysis results of 187 valid questionnaires show that There were 155 students, accounting for 82.89%, and 32 students, accounting for 17.11%, who believed that the school would take the improvement of the quality of information-based teaching as the year-end evaluation index. Among them, 163 (87.17%) had studied education-related courses. Four people (2.83 %) did not learn. 161 people, or 86.1%, watched or learned high-level information teaching courses, and 26 people, or 13.9%, did not watch them. The school provided expert teams to support courseware making technology for 166 people, accounting for 88.77%, and did not provide 21 people, accounting for 11.23%. 167, or 89.3%, provided time for teachers to learn, and 20, or 10.7%, did not. 174 people (93.05%) were able to provide hardware conditions guarantee, and 13

people (6.95%) did not. Finally, multiple choice, do you think the school education information construction still need to continue to work hard? It is suggested to increase the hardware investment of 158 people, accounting for 84.49%. Software investment increased by 153 people, accounting for 81.82%. The construction of school network resources was increased by 171 people, accounting for 91.44%. The establishment of mechanisms to improve teachers and students accounted for 168, for 89.84%.

## **Results of Data Analysis**

Comparing with the purpose of this study, the data analysis results of relevant studies in Corresponding to the three purposes of this study, the data analysis results of relevant studies are as follows:

### **Part I General Characteristics of Sample Group.**

The feedback results of the questionnaire are summarized as follows. Younger teachers are more likely to use educational information technology than older teachers. The education management of strengthening practice teaching has not yet formed a consistent and universal idea. In some teachers, the understanding of the mode of training applied talents and the importance of strengthening practical teaching still remain on the surface to some extent and lack of deep understanding. Even if the concept has been recognized, but limited by conditions, environment, foundation and other factors, wait-and-see, waiting, perfunctory phenomenon has a certain universality. The management level of practical teaching in schools needs to be improved. On the whole, the proportion of teachers who can adapt to practical training is not high. A large number of young teachers graduated from universities (mainly teaching and research universities) and engaged in teaching work in schools. They lack special training in practical teaching links, so they cannot become experts themselves and are unable to be competent for relevant practical guidance work.

### **Part II The Analysis Results of the Current Situation and Problems of the Modern Information Technology to Promote Education Quality in Qingdao Hengxing University.**

Study objective control the corresponding research purpose of questionnaire survey research purpose1:

To study promote the education management quality of application universities through the development of modern information technology.

Corresponding to the first research purpose, the analysis results are as follows:

The educational management means and methods to adapt to the training of high-quality applied talents are still in shortage and backward. It is manifested in the following aspect :The shortage of multimedia teaching facilities, which cannot meet the needs of teachers in the teaching environment such as case teaching and practical demonstration, and limits the enthusiasm of teachers' education and teaching reform. Many courses still stick to the traditional teaching model of "one piece of chalk and one book".

### **Part III The Analysis Results of the Main Influencing Factors of the Modern Information Technology to Promote Education Quality in Qingdao Hengxing University.**

Study objective control the corresponding research purpose of questionnaire survey research purpose2:

To explore the different factors that affect the education management quality through the development of modern information technology.

Corresponding to the second research purpose, the analysis results are as follows:

The practical training simulation site limits the opportunities for students to develop their practical ability. The existing training facilities are far from meeting the needs of teaching practice. The construction of off-campus practice base is weak, which is far from meeting the needs of teaching practice. At the present stage, there is a general phenomenon of form-based restructuring. On the one hand, it can be attributed to the tendency of managers to pursue the maximization of short-term profit after the current enterprise restructuring in our country. On the other hand, it can also be attributed to the investment of funds, human resources and even emotional investment in this field.

#### **Part IV The Analysis Results of the Guidelines for the Modern Information Technology to Promote Education Quality in Qingdao Hengxing University.**

Study objective control the corresponding research purpose of questionnaire survey research purpose<sup>3</sup>:

To study the guidelines improve the quality of education management through the development of modern information technology.

Corresponding to the third research purpose, the analysis results are as follows:

Educational management evaluation mechanism is absent. The current educational management evaluation mechanism can not meet the needs of teaching reform, can not play a role in strengthening the encouragement of practical teaching and encourage the initiative of reform and innovation in practical teaching, on the contrary, there is a restrictive tendency. In particular, the evaluation of students' practical course results and the conversion of teachers' practical teaching workload need to be further explored. This paper tries to solve the dilemma of China's application-oriented undergraduate education management by applying and developing modern information technology and improving the use of teaching information.

## Chapter 5

### Discussion Conclusion and Recommendations

The research title of this paper is Guidelines to develop modern information technology to promote education quality in Qingdao Hengxing University.

The research objectives of the present study include the following three:

1. To study promote the education management quality of application universities through the development of modern information technology.
2. To explore the different factors that affect the education management quality through the development of modern information technology.
3. To study the guidelines improve the quality of education management through the development of modern information technology.

The details are as follows.

#### Conclusion

Comparing with the purpose of this research, the data analysis results of relevant studies in Corresponding to the three purposes of this study, the data analysis results of relevant studies are as follows:

- 1. The level of education information construction of application universities have improved to meet the needs of high-quality application talents training in education.**

The undergraduate of applied technology should focus on the word "application" as the core, in order to make a new subject direction, a new professional structure and a new system. It meet and adapt to the needs of economic and social improvement, update the education content, education links, education methods and education means, and comprehensively improve the education level. The greatest impact of information technology on educational management is to promote the renewal of education methods. Else, the application of modern educational technology has great innovation in educational management, especially on the basis of educational technology changes, educational technology of

today's such as audio, video and VR brings students a more intuitive experience, and students find problems in the continuous changes, so as to achieve deeper teaching reform and better development. For teachers, it takes a very important role in the innovation of teachers' education means, especially in the reform of

Educational concepts. In addition, it is necessary for schools to develop network resources, establish education management mechanism, improve teachers and students' modern information technology literacy, increase hardware investment, increase software investment, and increase school network resources construction, in order to make high-quality talents with strong social adaptability and competitive ability.

**2. Application universities have made full use of modern information technology to enrich the content of practical teaching and improve the management quality of education.**

The education facilities and training bases for cultivating high-quality applied talents, that can not meet the needs and limit the enthusiasm of teacher education and education reform. Practice and training simulation sites limit students' opportunities for practical ability development. In today's applied universities in China, the existing education and training facilities are far from meeting the needs of teaching practice and education management. In addition, the proportion of teachers who can adapt to teaching professional courses is not very high. At present, in application-oriented universities, the old professors and teachers of theoretical teaching are not as proficient in modern information technology as the young teachers. But at present, although a large number of young teachers in schools have mastered a lot of advanced information technology, they lack special training and experience in practical teaching, and some are not qualified to engage in practical guidance work of related professions. At present, there is no good solution or consensus on how to strengthen the curriculum design and practical teaching of applied universities.

To a extent, the understanding of the mode of applied talents and the importance of strengthening practical education in universities is still relatively shallow and lacks in-depth understanding. It is necessary to continue to invest



money, manpower and emotion in this field, and change the deficiencies of practical teaching content and system through the improvement of information technology in today, so as to ultimately the quality of education.

**3. Application universities have got the guides to make full use of modern information technology to establish and promote the improvement of education management quality.**

In the current situation of social development, the improvement of information technology, it has developed the innovation of educational management, which has a great influence on the growth and improvement of students. On the basis of the change of modern information technology means, the change of educational evaluation also takes place. At present, the transformation of educational management evaluation mode brought about by the reform of resource sharing information technology is pushing application-oriented universities to update data management constantly. A large number of education management system evaluation starts from data, teachers and students can evaluate each other in the constantly updated education management system through data analysis. Establish and promote the special evaluation of education management, and clarify the evaluation criteria and methods. It is particularly important to develop modern information technology, encourage innovation, encourage reform, implement teachers' post responsibilities and update educational administration evaluation mechanism.

To sum up, With the rapid development of modern social science and technology, along with the popularization and application of today's information technology in all aspects of social and economic development, the role of modern information technology in the field of education has also been highlighted. In the daily education management and personnel training, application-oriented universities achieve the improvement of education quality through the use of computers and network technology, which shows that the importance of science and technology in the field of education has been highlighted.

By the use of information technology in today, the classroom education content of university teachers is becoming more and more rich, and the education

methods are becoming more and more diversified. In particular, application universities that focus on the cultivation of practical talents can better promote the in-depth integration of modern information technology and application undergraduate education reform through the combination of online education and offline education of the Internet, continuously enrich educational content, effectively improve teaching quality, and better cultivate students' attitude of lifelong learning and ability of active exploration and innovation. To become an applied talent needed by the society. Under the condition of resource sharing supported by modern network technology, how to use information technology in today to promote the education reform of application-oriented universities has become a top priority.

Today, with the rapid development of science and technology in the new era, with the popularization and application of modern computer and modern network technology, university has gradually become a dynamic field of study. Here, the creativity of students through the development of information technology, in the teaching of each student can deeply feel the transformation of university education. As university teachers, the emergence and application of information technology has also become the method and means for teachers to reform the education model. In this background and environment of modern science and technology, teaching helps students learn, and provides students with a more open and autonomous learning environment. College students also have the conditions and opportunities to enjoy more high-quality educational resources.

China's application-oriented universities teaching reform faces many problems. Qingdao HengXing University, as an application-oriented university in China, effectively uses and promotes information technology, strives to find a breakthrough. And it achieves the sharing of modern information resources through the Internet online and offline education, reflecting the value of information technology education resources in modern education and teaching. Better promote the education reform of universities, effectively develop the education quality of universities.

## Discussion

Research on the urgent problems that modern information technology promotes the teaching reform of applied undergraduate universities in Qingdao HengXing University of China.

It is exigent to solve the problem that information technology promotes the education reform of Qingdao HengXing University. Based on the fact that the university is a general undergraduate University with applied technology as its educational direction, rather than an academic undergraduate University. It is opposite and different from academic undergraduate (general undergraduate). In contemporary China, the higher education provided by application-oriented undergraduate universities plays a vital role in satisfying China's economic and social development. It continuously promotes the training progress of high-level applied talents and meets the demand for applied talents in all walks of life in China. In a sense, it plays a very positive role in promoting the popularization and popularization of China's higher education, promoting the improvement of talent quality and meeting the needs of society.

After entering the 21st century, from a global perspective, the cultivation of application-oriented talents requires that all majors closely combine with local characteristics, and the international higher education community has gradually formed an education model that reflects the word "application" in the construction of the education system. Practice education is the core link, and strengthening the training of university applied talents has become a new trend. In recent years, more and more people realize that improving students' social professional quality and employment competitiveness is a very important way. In the exploration of education reform, many universities in China are also focusing on strengthening the construction of practice base, the design of practice courses and the construction of practice environment. Practice teaching has gradually become an important part of training university students' practical ability and realistic innovation ability. Today, the reform of application universities in China faces many problems.

**1. The school management department attaches great importance to the education information, and the education means and methods to adapt to the high-quality applied talents insufficient**

Through the educational reform about the sharing of information technology resources, the innovation of teaching methods and means can improve the development of the educational management level of application universities.

"Applied Technology undergraduate" is a type of undergraduate education and higher vocational education combined with a new level of education mode exploration. Some provincial general undergraduate colleges, national demonstration higher vocational colleges and national large-scale backbone enterprises jointly pilot training of applied technical undergraduate talents to make the needs of economic and social improvement. In the construction of undergraduate courses in application-oriented universities, we need to pay attention to updating the teaching content and teaching links. Teaching methods and teaching means with "application" as the core, to create a new professional structure, create a new curriculum system, aiming to build a new discipline, new direction, new major to meet the needs of China's social development and economic development. And in the personnel training, pay attention to the structure of education and the new curriculum system, and constantly update the teaching content, so that it can adapt to the cultivation of high-quality applied talents with market competitiveness. Improve the means and methods of education and raise the level of education in an all-round way.

However, many application undergraduate university have shortcomings. This is decisive. If education management can not solve these problems directly, deeply understand these problems, and accept the practical value of information technology education reform based on resource sharing, it will be difficult to achieve deeper reform and innovation. Educational managers should fully realize the practical significance of information technology to the new reform of education, especially to the promotion and development of personnel training. The application of educational information must make sufficient use of the current educational and education achievements, promote the educational new reform of schools. It can thus improve the overall growth. And it can develop the students' ability.

Application-oriented talents cultivated by application universities mainly pay attention to the education and practical training of applied knowledge. Unlike academic universities, which focus on cultivating students' ability of scientific discovery and creativity. With the continuous development of society and economy, there is a wide demand for applied talents. In the accelerated pace of industrialization in today's society and the advancement of modern science and technology information technology, the proportion of demand for such applied talents is very large. This provides a broader space and opportunity for the stability and continuous development of application universities.

Application-oriented talents need to go through a complex and difficult talent training process, at the same time, it can also reflect the education level of an application-oriented university. Constantly strengthen the practical teaching of practical training, adhere to the learning of curriculum theory knowledge, pay attention to the combination of theory and practice training training mode, and strive to improve the comprehensive professional quality and ability of college students. Use modern information teaching methods to develop vocational education and promote employment, focus on cultivating application talents, face the market, face the society, take ability as the base, service as the orientation, and take employment as the orientation. This can broaden the training of application-oriented undergraduate talents, adapt to the greater opening of China's education system, maintain the necessary mobility, help people choose more suitable education, more conducive to the training of compound talents, and better realize the goal of university teaching reform to effectively promote social and economic development.

**2. Through the promotion of information technology, the teachers of application universities have reformed and innovated the concept of education management, and the education facilities and cultivating high-quality application-oriented talents cannot be demand.**

The improvement of the society requires more teachers to have the courage to self-analyze, to face their own problems in the teaching process, to accept new educational concepts, to follow scientific educational laws, so as to realize their own understanding of education and teaching. In fact, there are two factors that

determine the quality of education, one is the teacher and the other is the student. Teachers' education quality affects students' learning quality. Information technology based on resource sharing is of great significance to the reform of education, which requires the joint efforts of all teachers to achieve greater development. Teachers must change their educational concept and recognize the great value of information technology.

According to the observation and research, most teachers are willing to change their way of education, but it is inevitable that some teachers lack the ability to change. And it especially some older professors do not like to change their way of education. No consensus has been reached on strengthening practical teaching in application universities, and some university teachers' understanding of the mode of cultivating application-oriented talents. And the importance of strengthening practical education remains superficial to a certain extent, lacking in-depth understanding. Even if they have a conceptual understanding, they are limited by conditions, environment, foundation and other factors, and the phenomenon of wait-and-see, waiting, and perfunctory still exists. The teaching staff of application education needs to be improved.

On the whole, the proportion of teachers who can adapt to practical education is not very high. Many young teachers come from the universities directly enter the school to engage in teaching work, lack of special training in practical teaching links, so temporarily can not become experts, some of them are not fit for the relevant guidance work. In this sense, teachers with rich education experience and education experience are needed to play a leading role in driving young teachers to effectively improve the quality of education.

After that, the multimedia education facilities in the application of modern information technology are insufficient, which can not meet the needs of teachers in the education environment. Such as case education and practice demonstration, which limits the enthusiasm of teacher education reform. Simulated internships and training venues will limit students' opportunities for practical ability development. The existing training facilities are far from meeting the needs of teaching practice. At present, the construction of off-campus practice base is weak and can not meet the

needs of teaching practice. Today, the practice base has the phenomenon of floating form. On the one hand, this can be attributed to the tendency of managers to maximize short-term profits after the restructuring of Chinese enterprises. On the other hand, this is also due to the limited financial, human and emotional investment in this field.

**3. Make full use of modern information technology to develop the education structure, establish and improve the evaluation mechanism of education and teaching and the service and supervision function of education management, in order to develop the quality of education of application universities.**

There are parts of limitations in the education evaluation mechanism of application universities. Many of the existing teaching evaluation mechanisms can not make the needs of practical education reform. And it can not become a role in strengthening and encouraging practical education. Some universities lack the enthusiasm to encourage the reform and innovation of practical teaching links, especially in the evaluation of students' practical course results. Else, the conversion of teachers' practical education workload. There is a tendency to limit that needs to be explored further.

Therefore, the current today's information technology has a more obvious guiding role for university teachers. And students are more willing to accept the new education methods. Students' innovative learning methods will enrich the content of practical education and effectively improve the quality of education. The innovation of university students' learning style will reflect the effect of educational management reform and innovation in application-oriented universities.

It has a strong impact on students' transformation and development, and also innovates students' learning methods to a certain extent. On this basis, students' cognitive level will also change greatly through the realization of more in-depth updating of education means and the transformation of education methods. Students rely on the Internet to master the knowledge system within the scope of the Internet. Students' cognition gradually turns to autonomous learning. Knowledge on the Internet has been able to greatly satisfy students' learning and cognition, and

students must make greater breakthroughs in the process of continuous learning and practice. By modern information technology's help, the cognitive level of students has been continuously improved, and the teaching methods have also undergone greater changes. Under the current teaching method, students' learning mode will also change and constantly update, in order to develop the students' learning ability. The innovation of students' learning methods will inevitably bring better learning effect and experience, enhance students' innovative ability and practical ability, make full use to their subjective initiative, and then achieve greater breakthroughs and better learning results, and fully reflect the effect of applied undergraduate education reform and innovation.

## **Recommendations**

### **1. Recommendations for the application of research findings, Modern information technology enriches teaching content, and innovative instructional design.**

In today's China, the deep integration of talent training and education of modern information technology and application universities will surely promote the modern education reform. Through the continuous realization of high-quality teaching resources sharing of online courses, through MOOCs, micro-courses, online teaching, and video teaching, the continuous improvement of education quality is promoted. Modern information technology is widely used in all walks of life in social and economic development. At the same time, it is profoundly changing the communication mode, thinking mode and education mode of teachers and students in application universities. Through the development of information education, promoting education reform will surely achieve good results.

Internet technology has realized knowledge sharing all over the world and gathered the wisdom of many people. Global knowledge sharing has helped teachers form knowledge reserves of both depth and breadth. The improvement of today's information technology has changed the personal vision of teachers, which determines the quality of teaching design and the depth and breadth of education content. The Internet connects all online and offline knowledge with people.



Application universities' teachers can make use of knowledge to help realize knowledge growth. Resource sharing has greatly promoted the improvement of teachers' personal knowledge ability, and also greatly enriched the education content, which become a very major role in the growth and improvement of students.

The sharing of resources brought by the innovation of today's information technology also drives the innovation of educational technology and the renewal of educational ideas. The combination of online and offline education is based on the renewal and reform of educational ideas. Because the new sharing of resources and the integration of ideas, teachers' teaching design has also undergone great changes, more prominent students' dominant position, to develop the healthy of students.

## **2. Modern information technology updates teaching methods, it has great innovation for classroom teaching, especially on the basis of changes in technology.**

Modern technology such as audio, video and VR brings students more intuitive experience, students find problems in the continuous changes, so as to achieve deeper teaching reform and better development. The most important effect of information technology on teaching reform is to promote the renewal of teaching means, especially the reform of educational ideas.

First, the implementation of university cooperation, hard combination, work-study training education model, the implementation of flexible learning system. The school continues to improve the reform of education, implement a variety of models, and promote orderly training for enterprises. Keep close contact School-enterprise cooperation with modern enterprises. Continuously strengthen the practical ability of college students' practical training, increase social experience and practical operation ability, and gradually change the traditional talent training model centered on university schools and classrooms. Establish an internship system to accept students. We will gradually establish and improve the work-study system, carry out free vocational education trials in some colleges and universities, and gradually promote it after accumulating experience.

Second, In the field of education in today's society, universities adhere to the imparting of theoretical knowledge, enhance students' learning and practical

ability, provide opportunities and environments for the combination of theoretical and practical training, and reform educational training models. Application universities effectively and purposefully strengthen the construction of practical training bases and practical teaching, pay attention to the cultivation of students' professional quality and skills, strive to improve students' comprehensive quality, and promote the development of vocational ability. By promoting employment, it shows the improvement of the quality of applied university education.

Third, Application-oriented universities always adhere to the university's academic education and vocational qualification training of related majors. And implement a "dual certificate" employment mechanism for application-oriented talents with graduation certificates and vocational qualification certificates.

### **3. Evaluation of modern information technology innovation education, reform the mode of personnel training and improve the mechanism for training application-oriented personnel.**

The popular modern information technology brings about changes in educational evaluation. For example, at present, the transformation of educational evaluation mode brought about by the resource-sharing information technology reform is promoting application-oriented undergraduate universities to constantly update data management. A large number of educational evaluation starts from data. Students can carry out educational teaching evaluation and self-learning evaluation in the continuous update through data analysis, which promotes the smooth progress of teaching reform in universities.

Managers make full use of various favorable conditions to organize and coordinate the team, make the role of education manpower, financial and material resources. And It effectively achieve the objectives of education management. Educational administrators use educational laws, decisions, orders, instructions and rules to provide strong guidance, regulation and influence on educational activities. The development of education should be planned according to the law of national economic development and the characteristics of education. To guide, regulate and influence educational activities from the perspective of economics, and to use the

motivation theory of the work and behavioral science in educational management activities to stimulate and mobilize the enthusiasm of educational personnel.

### **Recommendations for Future Research**

Through the research on the improvement of modern information technology to effectively develop the reform and innovation of education in China's application universities. It is found that the application of today's information technology is timely integrated into the traditional education. In order to better improve the education level of the actual effect. To find a guideline for the teaching reform and innovation of such general universities of China. That are oriented to apply technology rather than academic, which can better make the social development and economic development of China, and play a role in developing the popularization of higher education of China.

#### **1. The national and university management attach importance to the application of education information to better guide the development of education quality of application universities.**

National and university management departments play a decisive role in promoting the quality of education by today's information technology. If the education management cannot solve these problems head-on, deeply understand these problems, and accept the actual value of improving the quality of information technology education based on resource sharing, it will be difficult to achieve deeper reform and innovation. The education management is fully play of the practical significance of today's information technology for the improvement of education quality, especially for the promotion and improvement of personnel training, and will continue to promote the development of education quality in application universities.

Establish a "dual certificate" employment mechanism for application-oriented talents with graduation certificates and vocational qualification certificates, and develop the improvement of education management in application universities. Optimize the educational structure and broaden the training part of application talents. On the one hand, vocational education is employment education, focusing on cultivating application talents; The goal of the school is ability oriented, service

oriented, employment oriented, market oriented and society oriented. On the other hand, application-oriented undergraduate education ADAPTS to the further opening of China's education. And it is conducive to the cultivation of compound talents. Vocational education can neither be regarded as the ultimate education, nor can it be included in the track of "academic education" or "exam-oriented education". Whether it is the type of education or the level of education, it is open and can leave more room for the flow and development of talents. The smooth development of applied talents is the improvement of vocational education and the training of applied education talents.

## **2. Teachers of application-oriented universities dare to change their own educational concepts and reform and innovate their teaching methods.**

The current social development needs more teachers to have the courage to self-analyze, dare to face their own problems in the teaching process. At the same time, it accept the new education concept, follow the scientific law of education, so as to achieve their own education reform of a new understanding. The teachers of application universities change their own educational ideas and make clear the great value of information technology. Teachers with rich education experience and education experience need to play a leading role in promoting young teachers to effectively improve the quality of education and teaching through the application of information technology.

There is a strong correlation between the way students learn and the way teachers teach. The reform of educational technology means with the sharing of today's information technology resources. It will certainly have a strong influence on the transformation and development of students. Today, it innovates students' education methods to a certain extent, realizes more in-depth updating of teaching means and transformation of education methods, and brings great changes to students' cognitive level. Relying on the combination about online and offline education, students achieve greater breakthroughs in continuous learning and practice. The innovation of students' learning methods will inevitably bring better learning effect and experience, enhance students' innovation and practical ability. It can give a play to students' subjective initiative, achieve better learning effect. And it

can fully reflect the effectiveness of improving the education quality of application-oriented universities.

### **3. Modern information technology promotes teaching reform and broadens the training channels for application-oriented universities.**

Application-oriented talents mainly apply Instead of focusing on the cultivation of scientific knowledge discovery ability and the cultivation of new knowledge creation ability. Today's society has a wide demand for application-oriented talents. In the process of informatization and social industrialization, the country has a large demand for such talents. It provides a broad space for the development of applied universities.

To develop vocational education and promote employment by means of modern information-based teaching methods, with the focus on cultivating application-oriented talents, the school aims to be competency-based, service-oriented and employment-oriented, facing the market and society. In this way, we can broaden the training of application undergraduate talents, adapt to the greater openness of China's education, and maintain the necessary liquidity.

How to guide Qingdao Hengxing University to effectively use and promote modern information technology, achieve the information resources' sharing. It reflect the value of information technology in modern education management, and how to develop the quality of applied undergraduate management of China .Through the development of modern information technology are the key issues of this thesis.

To sum up, this research tries to solve many problems in the improvement of education quality of application universities. In China, by applying and developing today's information technology and improving the use of education information. This this research tries to find a breakthrough in the education reform practice of application universities, and further discusses the effect and vision of information technology on the improvement of the education quality of such application universities in China. By the gradual introduction of modern information technology into the education, class of universities, the combination of online and offline education will certainly improve the development of the education quality in China's application universities from different angles. And from many aspects, more conducive

to the new training of application composite talents, and better realize the goal of effectively promoting social and economic development. It hopes to find a way out for the improvement of educational management quality in China universities.

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## Appendices

Appendix A  
List of Specialists and Letters of Specialists Invitation  
for IOC Verification

Name of Experts	Position/Office
1. Professor Dr. Yang Shuzeng	Qingdao Hengxing University
2. Professor Dr. Wang Kairong	Qingdao Hengxing University
3. Professor Dr. Jiangwei	Qingdao Hengxing University

Appendix B  
Official Letter



Ref.No. MHESI 0643.14/538

Bansomdejchaopraya Rajabhat University  
1061 Itsaraparb Hirunrujee  
Thonburi Bangkok 10600

3 July 2023

RE: Invitation to validate research instrument

Dear Professor Dr. Yang Shuzeng

Mrs. Li Xueqian is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. She is undertaking research entitle "Guidelines to develop modern information technology to promote education quality in Qingdao Hengxing University"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)  
Dean of Graduate School

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Thonburi Bangkok 10600

3 July 2023

RE: Invitation to validate research instrument

Dear Professor Dr. Wang Kairong

Mrs. Li Xueqian is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. She is undertaking research entitle "Guidelines to develop modern information technology to promote education quality in Qingdao Hengxing University"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr. Kanakorn Sawangcharoen)  
Dean of Graduate School

Bansomdejchaopraya Rajabhat University  
Tel.+662-473-7000  
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Ref.No. MHESI 0643.14/ 590

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3 July 2023

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Appendix C  
Research Instrument

## Questionnaire

### Developing modern information Technology to improve the Teaching quality of application-oriented undergraduate schools Questionnaire

Modern information technology is mainly represented by multimedia technology and network technology. In order to fully understand the current situation of using modern information technology in education and teaching in our school, further do a good job in the management and guidance of modern information technology education, optimize classroom teaching means, so as to improve classroom teaching efficiency and effectively improve the quality of school education and teaching, this questionnaire is specially designed. Thank you for your active participation in your busy schedule. Please reply according to the actual situation.

#### [Single choice question]

1. What is your gender? \*
  - A. Male
  - B. Female
  
2. What is your age? \*
  - A. Ages 18-35
  - B. Between 35 and 45 years old
  - C. 45-55 years old
  - D. Over 55 years old
  
3. What is your educational background? \*
  - A. Below the junior college level
  - B. Specialty
  - C. Undergraduate
  - D. Master's degree
  - Dr. E.
  
4. Can you use the tools of education informatization in your daily life? \*
  - A. Yes
  - B. No
  
5. Can you use information technology to promote students' independent learning? \*
  - A. Yes
  - B. No

6. The use of information technology will improve the quality of teaching, so you advocate the use of information tools? \*

A. Yes

B. No

7. Does using computer technology mean more work for you? \*

A. Yes

B. No

8. The use of information technology will make the interactive teaching process more interesting, so the use of information tools? \*

A. Yes

B. No

9. Will the use of information technology improve your standing in the team? \*

A. Yes

B. No

10. Can you use information technology to improve your peers' recognition of your abilities? \*

A. Yes

B. No

11. Information technology such as computer and network technology is too difficult for you?\*

A. Yes

B. No

12. Schools require the use of information teaching, there is no choice?\*

A. Yes

B. No

13. The school provides corresponding hardware and software conditions for teachers to learn and apply information teaching?\*

A. Yes

B. No

14. The school provides opportunities to participate in on-campus information-based teaching training? \*

A. Yes

B. No

15. The school creates opportunities to encourage participation in information-based teaching training conferences ?\*

A. Yes

B. No

16. The school stipulated that young teachers must use information technology in class?\*

A. Yes

B. No

17. The school management encourages teachers to use information-based teaching in daily teaching?\*

A. Yes

B. No

18. In schools, teachers with high level of information-based teaching are valued ?\*

A. Yes

B. No

19. The school will take the quality of information-based teaching as an indicator of the year-end assessment ?\*

A. Yes

B. No

20. You have taken courses related to educational technology in school ?\*

A. Yes

B. No

21. Often watch and learn the lectures of teachers with high information teaching level ?\*

A. Yes

B. No

22. The school is able to provide teachers with an adequate team of experts (teaching experts, information technology experts, etc.) to support their learning and use of instructional presentation technology (e.g., PPT, Flash, web pages, etc.)? \*

A. Yes

B. No

23. The school can provide teachers with a certain amount of time to learn teaching presentation courseware making technology (such as PPT, Flash, web pages, etc.)?\*

A. Yes

B. No

24. Schools can give teachers the opportunity to try as much as possible to use teaching presentation courseware (e.g. : PPT, Flash, learning Web pages, etc.) in the teaching process, to reform the teaching model ?\*

- A. Yes
- B. No

[Multiple choice question]

25. In your opinion, what efforts should be made in the informatization construction of school education?\*

- A. Increase hardware investment
- B. Increase investment in software
- C. Increase the construction of network resources
- D. Establish a mechanism to improve teachers and students' information literacy

*“\*” indicates the required questions. The above is all the contents of the questionnaire. Please fill in the questionnaire truthfully according to your situation. Thank you so much for your active participation in this survey.*

Appendix D  
The Results of the Quality Analysis of  
Research Instruments



## The Results of the Quality Analysis of Research Instruments

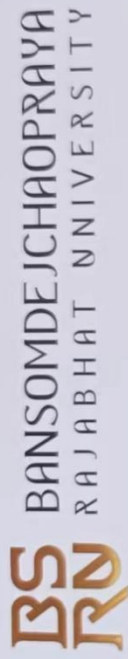
The consistency evaluation results of questionnaire survey on developing modern information technology to promote education quality in Qingdao Hengxing University. A total of 25 questions are set according to the following research objectives.

Clause/Items	expert 1	expert 2	expert 3	IOC	Conclu sion
Part I is general characteristics of sample group. (Questions 1-3).					
1. What is your gender?	1	1	1	1.00	consistent
2. What is your age?	1	1	1	1.00	consistent
3. What is your educational background?	1	1	1	1.00	consistent
Part II is the corresponding research purpose of questionnaire survey research purpose1. (Questions 4-10)					
4. Can you use the tools of education informatization in your daily life?	1	1	1	1.00	consistent
5. Can you use information technology to promote students' independent learning?	1	1	1	1.00	consistent
6. The use of information technology will improve the quality of teaching, so you advocate the use of information tools?	1	1	1	1.00	consistent
7. Does using computer technology mean more work for you?	1	1	1	1.00	consistent
8. The use of information technology will make the interactive teaching process more interesting, so the use of information tools?	1	1	1	1.00	consistent
9. Will the use of information technology improve your standing in the team?	1	1	1	1.00	consistent
10. Can you use information technology to improve your peers' recognition of your abilities?	1	1	1	1.00	consistent

Clause/Items	expert 1	expert 2	expert 3	IOC	Conclu sion
<b>Part III is the corresponding research purpose of questionnaire survey research purpose2. (Questions 11-18)</b>					
11. Information technology such as computer and network technology is too difficult for you ?	1	1	1	1.00	consistent
12. Schools require the use of information teaching, there is no choice?	1	1	1	1.00	consistent
13. The school provides corresponding hardware and Software conditions for teachers to learn and apply information teaching?	1	1	1	1.00	consistent
14. The school provides opportunities to participate in on- campus information based teaching training?	1	1	1	1.00	consistent
15. The school creates opportunities to encourage participation in information-based teaching training conferences ?	1	1	1	1.00	consistent
16. The school stipulated that young teachers must use information?	1	1	1	1.00	consistent
17. The school management encourages teachers to use information-based teaching in daily teaching?	1	1	1	1.00	consistent
18. In schools, teachers with high level of information-based teaching are valued ?	1	1	1	1.00	consistent
<b>Part IV is the corresponding research purpose of questionnaire survey search purpose3. (Questions 19-25)</b>					
19. The school will take the quality of information-based Teaching as an indicator of the year-end assessment?	1	1	1	1.00	consistent
20. You have taken courses related to educational technology in school ?	1	1	1	1.00	consistent
21. Often watch and learn the lectures of teachers with high information teaching level?	1	1	1	1.00	consistent

Clause/Items	expert 1	expert 2	expert 3	IOC	Conclu sion
22. The school is able to provide teachers with an adequate team of experts (teaching experts, information technology experts, etc.) to support their learning and use of instructional presentation technology (e.g., PPT, Flash, web pages, etc.)?	1	1	1	1.00	consistent
23. The school can provide teachers with a certain amount of time to learn teaching presentation courseware making technology (such as PPT, Flash, web pages, etc.)?	1	1	1	1.00	consistent
24. Schools can give teachers the opportunity to try as much as possible to use teaching presentation courseware (e.g. : PPT, Flash, learning Web pages, etc.) in the teaching process, to reform the teaching model ?	1	1	1	1.00	consistent
<b>[Multiple choice question]</b>					
25. In your opinion, what efforts should be made in the informatization construction of school education?*					
A. Increase hardware investment					
B. Increase investment in software					
C. Increase the construction of network resources	1	1	1	1.00	consistent
D. Establish a mechanism to improve teachers and students' information literacy					

Appendix E  
Certificate of English



This is to certify that

***Miss Li Xueqian***

Achieved BSRU English Proficiency Test (BSRU-TEP) level

**C1**

Given on 2<sup>nd</sup> May 2022

(Assistant Professor Dr Kulsirin Aphiratvoradej)  
Director

Appendix F  
The Document for Acceptance Research

## Journal of Harbin Engineering University (JHEU)

ISSN : 1006-7043

Phone / Whatsapp : +91 98840 78453

Website : <https://harbinengineeringjournal.com/index.php/journal/index>

### Acceptance Letter

Dear Author(s): **Li Xueqian, Nonnathi Dulyadaweessid ,Niran Sutheeniran ,Sarayuth Sethakhajorn , Patchara Dechhome**

Paper ID	JHEU_21
Paper Title	Guidelines to develop modern information technology to promote education quality in Qingdao Hengxing University

This is to enlighten you that the above manuscript was reviewed and appraised by the review committee members of **IFERP** and it is accepted for the purpose of publication in the “**Journal of Harbin Engineering University (JHEU)**”.

You have to send the following documents to [swathi@iferp.net](mailto:swathi@iferp.net) before 15<sup>th</sup> October 2023.

1. **Proof of Registration/Payment - Scanned | Online Received Email**
2. **IFERP Copyright form** <https://www.iferp.in/copyright/>

**Note:**

1. The above manuscript will be published on or before 30<sup>th</sup> October 2023.
2. **Journal of Harbin Engineering University (JHEU)** a SCOPUS Indexed Q4 Journal.
3. Author(s) will receive Publication information and Published Paper link through IFERP
4. You will receive the Volume/ Issue information of your paper very soon.
5. It is mandatory to submit the copyright form before the article gets processed for final publication.

## Research Profile

**Name-Surname:** Li Xueqian  
**Birthday:** February 13, 1976  
**Place of Birth:** Qingao China

### **Educational background:**

- Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University, in 2020
- Master of Public Administration, Ocean University of China, in 2010  
Business Administration, Bansomdejchaopraya Rajabhat University, in 2015
- Bachelor's degree in Chinese Language and Literature from Shandong Normal University, in 2005

### **Work experience:**

- University Lecturer, Qingdao Hengxing University Position, Organization, from 2020 to the present
- University lecturer, Qingdao Qiushi University, China from 2010 to 2020

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### **Li Xueqian**

Guidelines to develop modern information technology to promote education quality in Qingdao Hengxing University 2023