International Journal of Education and Management

JUNE 2019 VOLUME4 NUMBER2

Publisher: ACADEMIC PUBLISHING HOUSE
Address: Quastisky Building, Road Town, Tortola, British Virgin Islands
UK Postal Code: VG1110

E-mail: editorial@ij-em.com
www.ij-em.com
ACADEMIC PUBLISHING HOUSE

CONTENTS

On Ways to Improve the Quality of Archives Management

Lei Hao
Lanzhou Martyrs Cemetery, Lanzhou, 730070, China

Abstract: With the rapid development of the social market economy, the quality of the archives management of public institutions needs to be upgraded to conform to the development of the times. The scientific management of information has been widely used in many institutions in China, and the information management of archives will become the future development trend. This paper studies the ways to improve the quality of archives management, analyzes the ways of archives information management of institutions, and puts forward ways to improve the quality of archives management according to the basic status of archives management in China.

Keywords: Archives management; Quality; Informationization

1. TNTRODUCTION

Archives management is the basic management of public institutions, and is the basis for the development of relevant work by Chinese institutions, and is of great significance to the development of public institutions. With the rapid development of China's social market economy, information technology is also widely used in various fields, and archive management has undergone majority of changes with the development of society. Many contents of archive management have been managed and standardized in the form of electronic content. In the new file management program, information content has been added, information technology has been used to manage archives regularly. At the same time, the scope of file management has been changed, and the destruction and storage period of archives have been adjusted, which has played a positive role in promoting the archives management of public institutions.

2. OVERVIEW OF MODERN ARCHIVES MANAGEMENT

The contents of the archives record all the work items of institutions and some private information, among which there are many words and charts of great value. With the rapid development of information technology, the informatization of archives management has become the trend of development in the future. Information technology has brought tremendous convenience to archives management, which not only greatly improves the security of archives management, but also helps to improve the efficiency of archives managers.

The contents of information-based archives management mainly include the following aspects: (1) putting electronic archives into the contents of archives management; (2) stipulating that electronic data within the scope of internal generation and external acceptance can only be preserved in electronic form; (3) stipulating that electronic archives management should hand over original data together in the process of handover; (4) The archives must be jointly supervised by the relevant departments when the files are destroyed.

3. SIGINIFICANCE OF IMPROVING THE QUALITY OF ARCHIVES MANAGEMENT

3.1 The efficiency and quality of management have been greatly improved.

At present, China has entered the era of informationization. The content of archives management has been transformed from the original centralized management of a room to a program in a computer. The computer can quickly process information and it is convenient to input, storage and output the information. The archives management system is to classify the relevant data of archives management, including data collection and disposal, which can make archives management more efficient and standardized. Information technology automates archives management. It automatically determines the authenticity, integrity, and security of archives management, and can process, classify, archive, save, and utilize information. The information management of archives has greatly improved the efficiency and quality of work of managers.

3.2 It is able to save personnel and material resources

Improve the quality of archives management can scientifically and efficiently manage the archives management, compare the information in the archives management with the current situation of the institution, and analyze the various contents in the management of enterprises, which will be high efficiency of the archives management, and strengthens the security of archives management. The archives management system centralizes the data content of the public institutions, and classifies, archives and preserves them by analyzing their contents. This unified management method greatly improves the quality of data management, saves a lot of paper information, reduces the consumption of personnel and material resources. In addition, this method is convenient for the management of the staff of the public institutions and promotes the improvement of the quality of archives management.

3.3 It is conducive to improving the security of archives management

After centralized management of archives management content, all aspects are much safer than traditional management methods, and all security work has been implemented, and the security of archives management has been improved rapidly. Archives management needs to establish an extremely strict inspection and supervision mechanism. In the process of archives retrieval, any unrelated personnel are not allowed to access archives. If it is to be consulted, it needs to be carried out under the supervision of the archivists. The security and integrity of archives are guaranteed very effectively.

4. WAYS TO IMPROVE THE QUALITY OF ARCHIVES MANAGEMENT

4.1 To strengthen the awareness of archives management and standardize the management

The awareness of archives management of employees in public institutions is very important to the work of public institutions. Some documents and materials must be filed in time to prevent the loss of materials. Archives managers need to strengthen their management awareness and make sure they are safe in collecting, sorting out, keeping, classifying and counting archives.

4.2 To improve the quality of filing and deepen the reform of management continuously

The quality of archives management can directly affect the quality of management. In order to enable file managers to adapt to modern file management, it is necessary to give full play to the creativity and enthusiasm of the archives management staff of the institution, and fundamentally improve the management ability and knowledge of archives management. In the modern archives management, the types of archives and archives carriers are diverse. Therefore, the management methods must be continuously deepened and reformed. In the modern archives management, only those who are familiar with the professional knowledge of management work can complete the modern archives management.

4.3 Analysis of the informationization path of archives management

4.3.1 Improving the archives management system

The archives management system is the theoretical basis of archives management and an important guarantee for ensuring the authenticity, standardization and security of archives management. When utilizing information-based archives management, public institutions need to improve the relevant archives management system, formulate management regulations in line with the current situation of public institutions, and improve the archives management system. Clear the responsibility of the information archive manager to make file management work more normative.

4.3.2 To strengthen the security of information archive management

Archives management is very important for the operation and operation of public institutions. Many data contents in archives management are not open to the outside world. Therefore, the security of informationized archives management is the focus of public institutions. When undertaking information management management, public institutions need to formulate relevant management regulations, archives the security of informationized archives management, and package the informationized archives management system with effective and reliable security technology to ensure the authenticity, integrity and security of file management.

4.4 Strengthen management talent construction

With the rapid development of information technology, management talents are indispensable to public institutions. Therefore, in order to be able to carry out management work better, it is necessary to intensify the construction of talents, continuously introduce management talents, conduct irregular theoretical training and practical training for existing talents, and continuously improve the computer application quality of management staff.

5. CONCLUSION

Archives management is an important work content of public institutions, and information-based archives management has become the trend of development in the future. In order to improve the quality of archives management in public institutions, public institutions need to conform to the trend of the times and seize the opportunities of the times to upgrade archives management consciousness, quality of managers, depth of reform in archives management and information-based archives management. The level of case management plays a very positive role in promoting the file management of public institutions.

REFERENCES

[1]Huang Yancheng, Talking about the misunderstanding and improvement of school archives management. Office Business, 2016(15):121-121.

[2]Hu Qiong, Talking about the effective ways to improve the scientific level of archives management. China Science and Education Innovation Guide, 2014(7): 252-253.

[3]Sun Yanguang, On how to improve the scientific level of archives management, Decision Forum - Local Public Decisions Mirror Symposium. 2016.

[4]Li Weijuan, How to improve the path selection of scientific management of archives management. Human Resource Management, 2018(3): 175-176.

Analysis on the Development and Application of 5G Mobile Communication Technology

Min Rui
China Telecom Co Guangdong branch; Guangzhou; 510081, China

Abstract: Analyze the development and application of 5G mobile communication technology, understand the status quo and future of 5G, explore the core technology, and look forward to the future application prospects. We hope to promote the rapid development of China's 5G technology and improve its international competitiveness.
Keywords: 5G technology; mobile communication; technology development; application analysis

1. ANALYSIS OF THE DEVELOPMENT STATUS AND FUTURE TRENDS OF 5G MOBIL COMMUNICATION TECHNOLOGY

1.1 Development status of 5G mobile communication technology

5G is the fifth generation mobile communication technology, which is an extension of 4G technology. In December 2018, the three major operators in South Korea launched 5G services in some parts of South Korea. This is the first commercial use in the world, and the Ministry of Industry and Information Technology officially went to China Mobile, China. Telecom and China Unicom issued the 5G system low-frequency test frequency license. In June 2019, the Ministry of Industry and Information Technology officially issued 5G commercial licenses to China Mobile, China Telecom, China Unicom and China Radio and Television, marking the official entry into the 5G commercial era.

1.2 The development trend of 5G mobile communication technology

5G mobile communication technology is an important part of the new generation of information infrastructure. It can not only effectively improve the user's network experience, but also realize the foundation of the Internet of Everything. 5G mobile communication technology will have higher speed and wider broadband, network speed. Compared with the 4G era, it is about 10 times higher, so as to meet the needs of consumers for virtual reality and ultra high definition video viewing. Moreover, 5G has higher reliability and lower latency, which can meet the application needs of industries such as intelligent manufacturing and automatic driving, and create a new economic ecology. Realize the 5G commercialization around 2020, as shown in Figure 1. At that time, people will enjoy the convenience and technological achievements brought by 5G mobile communication technology [1].

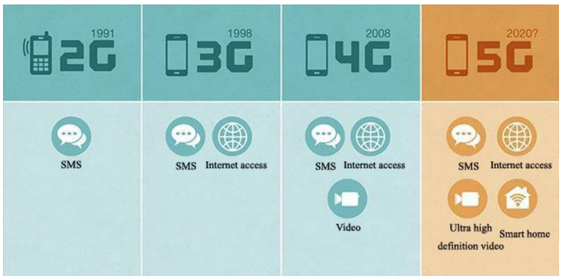


Figure 1 Mobile communication technology development process

2. THE KEY TECHNOLOGY IN 5G MOBIL COMMUNICATION TECHNOLOGY

2.1 Multiple Input Multiple Output Technology (MIMO)

Multiple-Input Multiple-Output is called MIMO, that is, multiple input and multiple output technology. Multiple transmit and receive antennas are used at the transmitting end and the receiving end respectively, so that signals are transmitted and received through multiple antennas at the transmitting end and the receiving end. Improved communication quality. The technology makes full use of space resources, and increases the channel capacity of the system by multiplying the spectrum resources and the antenna transmit power, and effectively improves the channel reliability. System capacity is one of the most important indicators to characterize a communication system. It indicates the maximum transmission rate of a communication system. For a multiple-input multiple-output (MIMO) system with a number of transmit antennas N and a number of receive antennas M, the channel is assumed to be independent Rayleigh. If the fading channel is set to N and M is large, the channel capacity C is approximately:

$$C = [\min(M, N)] BloG2(\rho/2)$$

where B is the signal bandwidth and ρ is the average SNR of the receiving end, min (M, N) is the smaller of M, N. Therefore, when the power and bandwidth are fixed, the maximum capacity or capacity upper limit of the MIMO system increases linearly with the increase of the minimum number of antennas. Under the same conditions, at the receiving end or A conventional smart antenna system using multiple antennas or antenna arrays at the transmitting end, the capacity of which increases only as the logarithm of the number of antennas increases. Therefore, multi-entry and multi-output have great potential for improving the capacity of wireless communication systems. In the 5G mobile communication, multi-input and multi-out technologies will be upgraded from 2*2 to 256*256, and even to larger scale capacity, equivalent to hundreds of times more than 4G technology.

2.2 Multi-carrier technology

The carrier wave is a radio wave carrying a specific frequency of data, and the multi-carrier uses a plurality of carrier signals to convert the transmitted data signal into parallel low-speed sub-data streams, and then transmits on each sub-channel, applying multi-carrier technology. In 5G mobile communication, the system transmission bandwidth can be effectively increased. Just like the effect of combining multiple tap water pipes of the same specification to deliver tap water, the data transfer can be completed in a unit time, which significantly improves the information transmission speed [2].

2.3 Uplink and downlink decoupling technology

Under the same transmission power, the higher the frequency of the electromagnetic wave is, the shorter the transmission distance is. Whether it is 3.5 GHz or 4.9 GHz, the signal transmission distance of the 5G base station is much closer than that of the 4G base station, and the transmission power of the 5G terminal is much smaller than that of the base station, resulting in Upside coverage is very limited and has become a problem that hinders the development of 5G technology. In June 2017, the company represented by Huawei Company proposed a new uplink and downlink decoupling technology, which effectively solved the traditional restrictions of uplink and downlink binding and the same frequency band, and greatly reduced the investment cost of base station network construction. As shown in Figure 2, the 5G terminal uses the 3.5 GHz band in the downlink, and the 1.8 GHz or 3.5 GHz band can be selected according to the distance from the base station in the uplink. If the terminal is in the 3.5 GHz uplink coverage, the 3.5 GHz carrier is used. Line data, if the terminal is outside the 3.5 GHz uplink coverage, it transmits uplink data based on 1.8 G Hz and the base station. This technology is a key technology to ensure high-speed and large-capacity 5G user experience, which effectively reduces the investment cost of operators. Once it was put forward, it was widely recognized and supported.

2.4 Multiple access technology

Solving multiple access problems, improving spectrum utilization efficiency, and reducing system signaling are the main research contents of multiple access technology. Similar to CDMA technology in the era of 3G mobile communication, the 5G era has also introduced multiple access technology. Multiple user data are transmitted and received in parallel in the same time domain and frequency domain. The current multiple access technologies mainly include Huawei SCMA, Qualcomm RSMA, and ZTE MUSA.

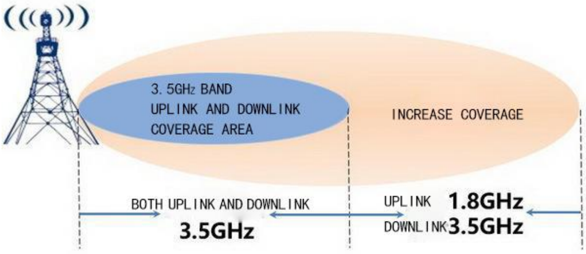


Figure 2 Schematic diagram of the uplink and downlink decoupling technology

Among them, SCMA uses the codebook to overload user data through multi-dimensional constellation modulation and sparse spread spectrum technology, so that the number of users is more than the number of resources carried, and the effect of improving spectrum utilization efficiency is achieved. RSMA is a non-orthogonal, non-synchronous, contention-based multiple access technology that allows multiple terminals to transmit data without network pre-scheduling, thereby reducing the complexity and signaling overhead of device implementation. As for which multiple access technology is selected, it will be comprehensively evaluated according to the complexity of terminal receiving processing, system capacity gain, and spectrum efficiency improvement [3].

2.5 Non-independent networking technology

In 2017, 3GPP released the first 5G international standard, which mainly includes the 5G new air interface standard for non-independent networking. The user plane is independently carried by the 5G new air interface or shared with LTE, and the control plane is anchored to LTE. Network, in the early stage of 5G mobile communication development, telecom operators only need to deploy 5G access network, and do not need to build a complete end-to-end network, so that ultra-high-speed internet access services can be realized, thereby saving a lot of construction costs.

3. EXPLORE THE APPLICATION PROSPECTS OF 5G MOBIL COMMUNICATION NETWORK TECHNOLOGY

3.1 Car driving

In view of the frequent occurrence of road traffic accidents, people are expecting more about automatic driving. With the support of 5G mobile communication technology, automatic driving is considered to be the most promising application industry. According to relevant predictions, by 2025, 5G connected cars will be More than 50 million vehicles have been launched, and many companies have launched autonomous driving programs.

3.2 Telemedicine

In March 2019, the Department of Neurosurgery, the First Medical Center of the Beijing General Hospital of PLA, completed the world's first 5G remote operation of human craniotomy and achieved great success. With the advent of the 5G era, telemedicine can optimize the allocation of medical resources, which is conducive to alleviating the current imbalance in development.

3.3 Intelligent industry

Smart factories have become the typical application of 5G technology, and intelligent robots will work together through wireless networks to achieve completely unmanned production. The smart grid is the trend of the times, and more and more power companies are launching smart grid applications based on 5G network slicing. In addition, drones will be widely used in the logistics industry, and e-commerce giants are already testing the reliability of drone delivery.

3.4 Smart Agriculture

According to the prediction of the United Nations Food and Agriculture Organization, in 2050, the grain output needs to increase by 70% to meet people's needs. Through 5G high-speed network and sensors, the growth status of crops can be monitored at any time, and adjusted according to actual conditions, effectively reducing labor costs and improving agricultural production science. Management level.

3.5 Distance education

Similar to telemedicine, due to the imbalance of economic development, the gap between educational resources is large, and high-quality educational resources have become scarce resources affecting life, residence, and transportation. The application of 5G+VR technology has broken the time and space restrictions, making remote mountain areas also the most accessible. High-quality educational resources have changed the status quo of regional economic development.

In addition to the above typical applications, 5G mobile communication technology has broad application prospects in panoramic live broadcast, intelligent building, virtual reality, augmented reality, security protection, unmanned stores, old-age support, climate warning, emergency rescue, etc. Development issues, promote economic structural upgrading and social harmony and stability, so as to better serve the construction of human civilization.

In summary, I believe that in the near future, 5G technology will bring a new round of technological revolution, continuously improve people's quality of life and promote social progress.

REFERENCES

[1]Yu Boyuan, Li Ruojun. Analysis of the development and application trend of 5G mobile communication technology. Digital Communication World, 2018(09): 154.

[2]Fan Haichuan, Wang Chuanjun. Analysis of the Application and Development Direction of 5G Mobile Communication. China New Communications, 2018, 20(18): 152.

[3]Luo Zhihui. Application and Development of 5G Mobile Communication Technology. Communication Power Technology, 2018, 35(10): 204-205.

On the Feasibility of Applying WeChat to the Teaching of English Listening and Speaking in China's Independent College

Jiawen Wang
Zhuhai College of Jilin University, Guangdong, 519000, China
E-mail: 65528312@qq.com

Abstract: This study aims at proving the feasibility of applying WeChat to China's college English teaching and learning. The study shows that students in independent colleges receive inadequate training in English class, and lack autonomous learning ability after class. Therefore their listening and speaking skills are not satisfactory, but students generally believe that it is necessary to improve these two skills. WeChat is an instant messaging App which has a wide range of features. It is widely used by college students, many of whom are very eager to take participation in learning activities based on intelligent terminals. WeChat is suitable for teachers to extend the traditional classroom, to supervise the students, providing assistance, feedback, and evaluation to students work, especially after class, so that to create a positive atmosphere of learning English. Therefore, it is a desirable platform to support teaching, and it is feasible to apply it to English listening and speaking teaching.
Keywords: WeChat; English listening and speaking teaching; Independent college

1. INTRODUCTION

China's independent colleges are mostly private-owned and application-oriented. The objection of college English teaching is, therefore, to cultivate students' English application ability. However, at present most independent colleges highlight the development of specialized courses and neglect and even cut down the English teaching hours. For the lack of autonomous learning abilities and the absence of real English teaching and learning environment, most students in such schools do not have effective English communication skills. For this reason, we need to explore new methods and new ways to change the situation. Recently, the advancement and popularity of mobile terminals make it possible for the students to have mobile-learning and the WeChat, as an APP in mobile phones, is wining prevalence in college English listening and speaking teaching.

2. PREVIOUS STUDIES AND APPLICATION OF WECHAT-BASED ENGLISH TEACHING

Wechat was created by Tencent Technology Company in January 21, 2011. The App is free to download and use. It is easy for people to communicate and has become the most popular instant messaging app in China with over 300 million users[1]. As a tool for mobile-education, WeChat could boost the education reform in higher education.In the past decade, the topic of "English teaching based on Wechat" has gained much attention of scholars and teachers. There are numerous popular English learning WeChat public platforms these days, such as "Fluent English in Speaking" on which the users can learn English by playing games, and "Daily English", which sends audio and video English learning materials to learners to improve their reading, writing and translation skills. Nevertheless, the research is far from enough when compared with the application of WeChat on other fields.

When searching literature with the key word "WeChat" and "English Teaching" on China's national knowledge infrastructure project website (CNKI), the author finds 62 articles, most of which concentrate on the exploration of WeChat-based English teaching model and autonomous learning model, as well as the learning and teaching effect of using WeChat. Most researchers hold a positive attitude towards it. Miao [2] holds that the new model of college English learning can increase the learning flexibility, and can assist students to build a better autonomous learning atmosphere. The study of Zhao [3] shows that the interactive learning of WeChat can emphasize the communication between teachers and students and to set new standard for teachers in traditional classrooms. Zhang Kexin[4]applied WeChat to the design of College English Writing Class, and carried out an empirical study on the teaching. However, there are not so many studies of WeChat-based English listening and speaking teaching in private-owned independent colleges. Therefore, this paper tries to make an empirical study to explore the need and feasibility of this new teaching form, hoping to take relevant strategies to improve college English mobile teaching and learning.

2. THE STUDY

This study first explores the current situation of English listening and speaking teaching in independent college, trying to identify the problems and then survey the students' needs of We-Chat based learning, attending to prove that it is feasible to use WeChat on English teaching.

2.1. Research Questions, Objects and Methods

Through questionnaires and interviews, this study tries to answer the following questions:

(1) What is the current situation of listening and speaking teaching in independent colleges and how about the college students listening and speaking abilities?

(2) How do college students use WeChat?

(3)What are the students' needs of learning English based on WeChat?

This study adopts a convenient research method by selecting non-English majors from Zhuhai College of Jilin University (an independent college in which the author works) as subjects, including freshmen and sophomores majoring in computer science, Logistic management, medical chemistry and tourism management. The research group make two kinds of questionnaires—one is about the current situation of English listening and speaking teaching and learning in independent school; the other is about students' requirement of WeChat—based teaching. 104 questionnaires are distributed, of which 98 are valid. SPSS and Excel are used to make data statistics.

2.2. Result and Analysis

2.2.1. The current situation of English teaching and the students' abilities

After the questionnaire and interview, we have the following findings (as shown in Table 1):

Table 1- Situation on the Speaking and Listening Teaching and Learning

	N	Minimum	Maximum	Mean	Std.Deviation
1. How do you think about your listening and speaking ability?	98	2	5	3.86	.831
2. Are you satisfied with the current English teaching situation?	98	1	5	3.20	.812
3. Do you practice English in class?	98	1	3	2.19	.554
4. Do you practice English after class?	98	1	3	2.29	.561
5. Do you think it is necessary to carry out English listening and speaking activities before and after class?	98	1	4	2.03	.872

(1) College students' English listening and speaking ability is generally poor. In the first question, "the current situation of college students' English listening and speaking abilities", the options have 5 levels, namely, "very good", "relatively good", "ordinary", "not good" and "very bad". In SPSS statistics, the options are assigned 1, 2, 3, 4, 5 point respectively. The result shows that the mean value is 3.86, close to 4, which demonstrates that the general English level of students is close to "not good". No subject choose "very good"; 64.11% of the students think that their listening and speaking ability is "not good", and 18.85% believe their oral English "very bad". In general, the current college students' English listening and speaking ability is not satisfactory.

(2)The listening and speaking teaching can not fully meet the students' needs of learning. The second question is about the students' level of satisfaction towards English teaching. The options are "very satisfied", "relatively satisfied", "just so so", "less satisfied" and "not satisfied at all", and are assigned 1,2,3,4,5 points respectively. The result displays that the average answer of the subjects is 3.20, which means that the majority are not so satisfied with English teaching. Only 1.02% are "very satisfied", and the number of "relatively satisfied" and "less satisfied" accounts for 22.43% and 25.78% respectively.

In the subsequent interviews, students generally think that English listening and speaking teaching hours are not enough. They are required to attend class only once in a week or once in two weeks, which lacks continuity and consistency. Some students complain that they even do not know who the speaking teachers are. To complete the teaching task, the teachers put emphasis on the reading and writing training and neglect listening and speaking. Also, in a limited period of time, the teachers cannot make the class interesting as well as informative, let alone to take the individual needs of students into account.

(3) Students seldom practice listening and speaking or participate in relevant activities in and after class. The main reason is that they have high level of speaking anxiety, and lack confidence. They are also short of autonomous learning ability and the school is not providing effective supervision and guidance in after-class learning.

Question 3 and 4 ask how often the student practice oral and listening English in and after class respectively. The options have three levels, namely "regularly", "occasionally", and "seldom" , which are assigned 1,2 and 3points in SPSS statistics. The result shows that the mean value for the two answers are 2.19 and 2.29 respectively. This illustrates that students in independent schools do not practice English very often. In the following interview, we find the following reasons (as shown in Table 2):

It can be seen from the result that the reasons for the lack of oral practice in class are mainly related to the students' anxiety and classroom teaching arrangements. Most of the independent college students do not have a good foundation of English, which causes them to feel anxious. Anxiety may exert great influence on language learning, especially on listening and speaking [5].

Table 2- The reasons why students are unwilling to practice oral English in class

A.I feel nervous and anxious	35.71%
B.I think the time for on-class oral practice is limited	18.37%
C.I am not interested in speaking English	23.47%
D.I think there is no chance for me to speak because the students are too many.	22.45%

Therefore, how to turn boring oral practice into an interesting activity that everyone would like to participate in and reduce their anxiety is a problem to solve in spoken English teaching.

The reasons why students are unwilling to practice oral English after class can be seen in table 3:

Table 3- The reasons why students are unwilling to practice oral English after class:

A. I would like to spend more time on my specialty learning rather than on English	40.81%
B. There is no practice platform and learning atmosphere	23.47%
C. Nobody supervises me to practice	32.65%
D. Other reasons	3.06%

As can be seen from the table 3 above, 40.81% students do not pay much attention to English learning, because they think the school do not highlight English learning so they can also neglect it. Therefore, it is urgent for the college to create a positive atmosphere of practicing English on campus. About 33%of the students rarely practice English because of the absence of supervision. The students in independent colleges are generally short of learning autonomy. With the continuous reduction of class hours, how to effectively supervise them after the class and how to cultivate their learning autonomy and establish an effective autonomous learning mode is also a problem faced by the English teachers.

(4)The fifth question is to find out students' attitudes about the necessity of carrying out English listening and speaking activities before and after class. The options are divided into five levels by the necessity degree from high to low, and are assigned with 1 to 5 points in SPSS statistics. The mean value is 2.03. Nobody choose "not necessary", 34.33% of the students choose "very necessary", 29.35% of the students choose "relatively necessary". 33.33%of the students choose" necessary". Thus, the learners believe it is highly necessary to carry out English listening and speaking activities before and after class.

2.2.2. The college students usage of WeChat and their willingness of Participating WeChat-based teaching and learning

(1) In the aspect of intelligent mobile devices, 97.99% of the students have intelligent mobile phones, of whom 89.88% have registered their WeChat accounts. All the students believe they understand the basic function of Wechat and are skillful in using it.

(2) When asked what you do using WeChat, 51.02% of the students use it for socializing; 55.10% use it for entertainment and only 22.44% use it for learning. As for the use of English public platform, 23.47% of the students say they have subscribed relevant services, but the rest 76.53% say they never tried such learning form. This demonstrates that most of the college students are not very familiar with the WeChat-based learning style and learning resources.

(3)As for the willingness of using WeChat to practice speaking and listening, 33.43% of the students say they like it very much and 43.32% say they would like to use it. They believe that "WeChat is an App tI use everyday. It is so easy and convenient that even when I stay in bed I can also learn English". Some believe that "practicing English on WeChat platform can avoid the embarrassment of face-to-face communication, and can reduce anxiety. Therefore I am willing to participate". 5.05% of the students are not willing to use it, considering it "not systematic to learn English on WeChat and will not bring any real change". Generally, the college students are willing to accept English listening and speaking materials and carry out relevant activities through WeChat.

(4) On the purpose of learning through WecChat, which can be seen in table 4, 46.94% of the students hope to use WeChat to improve spoken English, while 35.79% would like to improve their listening ability. Therefore, the demand for learning is large. In the design of teaching system, speaking and listening training can be regarded as the core, while vocabulary and reading can be seen as the supportive part, which can satisfy the purpose of most people.

Table 4-the purpose of learning through Wechat

vocabulary	speaking	reading	listening	writing	others
56.12%	46.94%	40.81%	35.79%	13.26%	4.08%

(5) On the expectation to the learning resources on WeChat platform, 60.20% of the students expect the content to be interesting, such as games and virtual communication. Meanwhile, 54.08% of the students hope the learning can be divided into various levels with individualized designs, so that all the learners of different levels can participate in it. 44.89% hope the resources can help to open their eyes and 36.73% hope the resources to be practical, being relevant to their professional courses. Only by knowing the

students' need, can we design a better platform to realize the expected teaching effect.

3. THE ANALYSIS OF FEASIBILITY OF APPLYING WECHAT TO COLLEGE ENGLISH TEACHING

The above research shows that the in-class English teaching and after-class English learning in independent colleges are not integrated together. The in-class teaching is not effective and the after-class practice lacks supervision and autonomy. However, most students are showing great passion for the new model of learning English based on intelligent mobile devices. Therefore, it is constructive to apply WeChat to English teaching as a supportive device.

First, the WeChat platform can help to establish an effective evaluation and supervision system, extending the traditional class to after-class learning, to solve the problem caused by inadequate teaching hours and students' autonomy. If there is not enough time to finish an oral practice in class, the teachers can urge the students to complete the task after class by setting up a group chatting room or assign a task through the WeChat platform. The teachers can check and aevaluate students' work and provide feedback to it.

Second, WeChat Platform can serve as a tool to provide supportive teaching after class. Some students complain that they lack a platform for practicing English after class. WeChat can provide such a platform, on which they can obtain English learning resources relevant to their classroom learning, and practice English with their classmates. The students can interact with their teachers and also other learners. The teachers can answer students' questions by sending text message, pictures, voice message, launching group talk or video chat. The students can also have a discussion on a certain topic whenever they like. In this way, a favorable English learning atmosphere can be built up.

Third, WeChat can enrich the teaching content and teaching form, making learning more appealing. Some WeChat platforms provide various speaking practice activities, such as puzzles or work-guessing games. These activities and the wide range of resources vitalize the traditional classroom and help students reduce learning anxiety, and improve classroom efficiency and effect.

At last, the WeChat-based listening and speaking teaching can meet students individual needs and improve their learning motivation. The teachers can acquire the students feedback on WeChat, and analyze different learners problems to work out an teaching plan which may suit every student's need. The learners can also choose the suitable learning resources and practices according to their levels and situation. In this way, we can improve the learning efficiency and teaching quality, to achieve better results.

4. CONCLUSION

The idea of WeChat-based English teaching is in line with features of English language acquisition and meet the need of current college English teaching. It has a strong feasibility, and is a short-cut to improve the current situation of listening and speaking teaching in independent college. When using WeChat, the teachers should first have a deep insight into the students' need, and then make relevant teaching plans and strategies accordingly.

ACKNOWLEDGMENT

This paper is a periodical study of the Teaching Quality Project of Zhuhai College of Jilin University. Project: A Study on the WeChat-based College Oral English Teaching Mode (Project Number: ZLGC20170717).

REFERENCES

[1]Zhu, X.W., Study and Design of WeChat Based Mobile Learning Platform, Journal of China's Distance Education, 2014, 5:89-93.

[2]Miao, N., English Mobile Learning Strategies in Universities and Colleges Based on WeChat, China Educational Technology, 2016, 3:136-140.

[3]Zhao, Y., The Influence of WeChant's Interaction on Students' Autonomous Learning Ability, Cultural Journal, 2018, 5: 116-119.

[4]Zhang, K.X, A Study on the WeChat-Based English Writing Teaching System, Journal of Anhui Vocational College, 2017, 6:75-78.

[5]Wang, Q.H., Analysis on Improving College Students Listening and Speaking Ability by Means of WeChat Public platform, Journal of Language Art and Sports, 2017, 8:305-306.

Research on the Framework of Integrated Management Platform in Cities

Yu Wang
Heyuan Vocational and Technical College, Guangdong, 517000, China

Abstract: Information platform is a mature and widely used management platform in the modern development model. For management in city, it is the most effective tool to improve the efficiency and quality of urban comprehensive management. Because of the advantages of information management platform, in recent years, various cities in China have carried out the construction of rapid information platform in city to achieve the goal of comprehensive management of city through the construction of the platform. However, in the process of actual construction, due to the insufficient sharing of resources within the platform and the lack of good communication between various departments, the platforms at all levels can not achieve good co-management in the actual management work. They often act independently, which limits the application effect of the integrated management platform in city. This paper studies the framework of integrated management platform in cities.
Keywords: Integrated management in cities; Information platform; Framework Research

1. INTRODUCTION

With the continuous advancement of construction in China, the management of the city has been increasing, and the difficulties of corresponding management are also constantly improving. However, with the continuous growth of modern management technology and computer network technology, it has become an inevitable trend for the development of modern management of city to realize the comprehensive management of the city through the information platform. The information management platform can effectively improve the efficiency and quality of city's management, which is the conclusion of many years of practice, but in the process of city's management, there will be many problems for the corresponding information management platform. For example, the division of responsibilities among different departments and the implementation of collaborative management are important factors that affect the efficiency and quality of information platform management. [1]

2. CONCEPT OF CITY'S INTEGRATED MANAGEMENT

City's management is a big concept. Because there are many specific tasks in city's management, and the specific scope of work is difficult to define, so it is difficult to define the specific content when defining city's management. Generally speaking, people often regard city's management as a management mode for the management of all people in the city. In the process of management, it has a high degree of compoundity and can effectively manage the management of different people. However, in the actual management process, due to the different responsibilities of various departments and the lack of departmental identification of the scope of work, there is often a lack of coordination in management, and the lack of responsible objects in specific management work. In addition, in the actual management process, it is the comprehensive management of the information platform, and all kinds of information related departments can be retrieved from the Internet, but in order to carry out offline management better, all kinds of departments issued certificates with a certain effect still need to be drawn up. Therefore, it can only be said that the information management platform has improved the efficiency of city's management to a certain extent, but in the process of actual use, it is still necessary to handle the situation between the various departments of the city. [2]

Therefore, in order to better realize the comprehensive management of the city, accelerate the efficiency and quality of city's comprehensive management, it is an urgent task to simplify the city's operation system. It is necessary to clarify the work functions of each department, and make a detailed division of the work of different departments, so that the contents of city's management work are transparent, and the people can also participate in city's management and construction work. In fact, the so-called comprehensive management of cities is to ensure that the basic functions of the city can be effectively operated through relevant legal procedures and local management policies, and to carry out a reasonable management process for the public space in cities to ensure the healthy and stable operation of the city. [3]

3. MAIN CONTENTS OF INTEGRATED MANAGEMENT PLATFORM IN CITIES

City's integrated management platform refers to a platform management mode that unifies the management of all kinds of specific work involved in the process of city's management, namely, management, command and supervision. There are many main management contents of the information platform management, including the daily management process of the city and the emergencies in the process of city's management. [4]

In the process of information platform management, the main purpose is to collect and analyze all kinds of information appearing in the process of city's management, and to warn the possible accidents in advance. This management mode can help managers find problems ahead of time and solve problems, and can effectively enhance the efficiency of city's management. However, the information platform management mode is dependent on the integrity and reliability of information. The more information appears in the process of city's management, the more reliable the warning is. Only a large number of accurate information can ensure the reliability of the platform's final early warning. At present, in the process of city's management, communication between different functional departments is not timely, which leads to the imperfection of information management platform, and the effect of early warning is unsatisfactory. [5]

4. DESIGN OF PLATFORM

The construction of an integrated platform in cities is actually the construction of a hub for the city's integrated management service center. It aims to find and solve problems faster. It can help the city to better connect with the work of different functional departments in the process of city's management to help the citizens to better handle the relevant business in cities. For a city integrated management service platform, there are three main parts, namely, the city's management sub-platform, the city's operation sub-platform and the city's service sub-platform.

The city's management sub-platform is mainly responsible for the administrative part of the city. The sub-platform involves many departments, and more links need to be considered. For example, the Planning Bureau, the Environmental Bureau, and the Construction Bureau are all part of this platform. This subsystem is possible to effectively clarify the scope and functions of work between departments, strengthen the operational efficiency of various departments in city's management, and provide better services to the people. [6]

The city's operation sub-platform is primarily responsible for the management of city's infrastructure and public service facilities. The management of this part mainly involves the process of information collection, analysis and early warning. This part of platform management mainly relies on the city's monitoring system. Good monitoring system in cities can provide a large amount of reliable information for the city's operation sub-platform, and help the platform to better complete the information collection and analysis. Especially for the case handling of the police system, the large amount of effective monitoring information provided by the city's good monitoring system. It can also help the police save a lot of time and complete the work faster and better by combing with the analysis of the city operation sub-platform.

The main responsibility of the city's service subsystem is to better handle personal business for citizens. The platform selectively publishes some information in the process of city's management and operation, and provides the ports of online platform for personal business, to facilitate citizens to handle personal business. Especially for the content of living payment, with the help of modern payment methods and computer network technology, citizens can complete living payment without leaving home, which is an important breakthrough in the city's service subsystem.

5. CONCLUSION

The construction of city's integrated management platform can effectively enhance the efficiency and quality of city's operation, and enhance the happiness of the citizens living in the city. Although there will be various problems in the specific construction, the various functional organs in the city can better define their own tasks and scope of work through the refinement of functions, effectively strengthen the operational efficiency and construction level of the city's integrated platform, and provide better service effect for the general public.

REFERENCES

[1]Zhai Baohui, Zhu Xiaolong, Li Qiuling. New Pattern of Legalization of City's Comprehensive Management, Urban and Rural Construction, 2017, (24).

[2]Wu Lun, Song Gang, Wu Qianghua, Zhu Hui, Tong Yunhai, An Xiaomi. From Digital City Management to Smart City Management: Platform Realization and Key Technologies, Urban Development Research, 2017, (06).

[3]Wang Lianfeng, Song Gang, Zhu Hui. Command and Dispatching System Based on the "Five in One" Management Internet of Things Platform in Cities, E-government, 2017, (06).

[4]Zhang Youkun, Zhai Baohui, Constructing a Standardized Support System for City's Integrated Management, Shanghai Urban Management, 2014, (04).

[5]Guo Liqiao, New Urbanization and "Multi-integration" Information Platform Based on "One Map", Urban Development Research, 2014, (03).

[6]Zhai Baohui, Improving the Scientific Level of City's Management through Standardized Management, Urban and Rural Construction. 2013, (04).

On Piano Performance and Psychological Quality

*Mengjia Lv, Mingxiao He, Xiong Yu**
Grade 2016, Music Department, School of Teacher Education, Quzhou University

Abstract: The perfect display of the ability of piano performers cannot do without their excellent psychological quality. Only when piano performers give a wholehearted performance and do not suffer from the disturbance of other psychological factors can they completely express the emotions of the works and bring the visual and auditory enjoyment to the audience. In the process of learning piano, they should not only learn the ability of piano performance, but also emphasize the cultivation of psychological quality, so as to provide guarantee for the ideal performance effect. Piano performance is a complicated performance process. Besides the requirements for performers about their technique, familiarity and excellent performance skills, the performers also have to own the good psychological quality to ensure the complete success of piano performance.
Keywords: Piano performance; Psychological quality; Cultivation

1. INTRODUCTION

At present, the technical analysis of piano performance skill, performing skill, mastery of song style is thorough. Domestic experts and scholars have made a great number of analysis and demonstrations in terms of the psychological analysis of nervous emotions and the control of nervous psychology in piano performance. Josef Hoffmann lists multiple different mental blocks in performance in the list of On Piano Performance: namely excessive nervousness, brain blank, stage fright, lack of performance desire, scattered spirit caused by excessive concentration. Huang Liqin writes in Exploration of Music that everyone has the nervous emotions, but the degree varies; it is not only because of the different characters of people, but also out of the different psychologies and motives for the nervous emotions. In Art of Piano, Zhou Weimin analyzes the enlightenment brought by the piano performance school from the development history of piano performance, and further the theoretical viewpoints of the performance school of applied psychology. Issues, such as psychology's application to piano performance, how to perform and improve the psychological quality in applied psychology, are still at the developing stage at home and abroad. Therefore, to study the cultivation of psychological quality in piano performance is a novel topic worth discussing.

2. FACTORS LEADING TO THE POOR PSYCHOLOGICAL QUALITY OF PIANO PERFORMANCE

There are many factors that have influence on the performance effect of piano performers, which will lead to the pause of performers or the poor performance state, form the huge psychological burden to the psychology of performers, hinder the normal exertion of performers, even cause the frightening psychology of piano performers to the stage and have negative impact on the performance career. The reasons that lead to the poor psychological quality in piano performance include the influence of performers' character on psychological quality, psychological loss of control caused by nervousness, lack of performance confidence caused by insufficient performance skills, and lack of stage experience.

3. HOW TO CULTIVATE GOOD PSYCHOLOGICAL QUALI

To give the best piano performance, one of the requisites is to own the good psychological quality, which may actively arouse the innovation awareness of performers. Piano performers must maintain the calm and sedate attitude, carefully and repeatedly listen to the sound they perform, reflect and adjust their performance, so as to improve their performance and improve performers' illustration of the song. Performers should keep seeking for the efficient way of solving the error caused by nervousness in the piano performance process, so as to reach the best performance effects. In the daily piano practice process, performers should attach importance to the cultivation of psychological quality. Good psychological quality may be cultivated from the following several aspects.

4. STRENGTHEN SELF-REGULATION OF PSYCHOKLOGICAL QUALITY

Different people have different abilities of adjusting the psychological quality. For the piano performers, their inner activities in performance will influence the effect of performance to a certain degree. In the process of piano learning, students often meet things like this: some piano learners are very relaxed in daily practice process and overcome the technical difficult points, with the flexible fingers, but they will turn restless and nervous in performance. This is because the performers lose the ideal state out of the disorderly inner activities, thus leading to the pause of song. Or they cannot freely play the piano nor perform the works in a complete and fluent way, thus affecting the effect of performance. Most of the people who learn piano have the problem of leading to the poor performance state out of excessive nervousness. It can be seen from these aspects that one of the key factors for the successful performance is whether the piano performers have good psychological quality. How to improve the self-regulation ability of performers? First of all, they should have the proper learning attitude, regard each practice as the performance, keep giving themselves the psychological hint that they are giving performances. For a long time, when performers give performance on the stage, they may feel relaxed in the performance. In addition to their performance desire before the show, it may promote the success of the piano performance activity. Performers should concentrate their attention in the process of public performance rather than distract their mind. Do not be disturbed by the factor of environment, nor pay attention to any error in performance. To stick to it is success. Second, believe in their ability, greet the stage of displaying themselves with full confidence, believe that they may perform the works in the best way, review their successful experience, and the recognition from teachers, classmates and friends. Third, performers should integrate themselves into the works in the performance process and common practice process. In addition to the beautiful body language, performers may forget nervousness, enjoy music, feel the essence of works and reach the effect of stabilizing the psychological quality.

5. MAKE EFFECTS TO IMPROVE THE PIANO PERFORMANCE SKILL, STABLILIZE THE PERFORMANCE PSYCHOLOGY

If the good psychological quality of a person is “firewood”, the technical ability of the person is “fire”. “Fire” is more important than “firewood” in the piano performance process. Without the stable and good music cultivation, it is useless to own the strongest psychological quality and fail to perform the touching and charming music for the audience. The old saying goes “those with the skills are bold and brave”. Those with solid skills and techniques may have good psychological quality. Performers have to illustrate the works with their music quality, fully understand the creation intention of composers and understand the connotation of the works in the premise of owning the excellent performance skills. And they should also practice a lot with time and energy by combining the efficient practice methods and master the key points before performance. Full preparations may give performers full confidence, so as to avoid the psychological nervous emotions caused by insufficient preparations and lack of confidence. If preparation before performance is insufficient, performers will lack confidence and will easily get nervous and fail to perform it well. Therefore, in order to stabilize the psychological state of performers and alleviate the nervous emotions of performers, they have to make full preparations before performance, overcome the technical difficulties and correctly master the style of works. Many problems should be noticed in the process of performance, including the style of the song, main rhythm, proper accompaniment, change of rhythm and subtle sound of change.... All of these are done immediately. Therefore, piano performers have to perfectly combine all of these in the performance process, make full use of their body and may not neglect any detail. It can be seen that performers may master the technical key points in the daily training process. Only the sufficient preparations may make performers confident in the performance, calmly finish the performance activity, so as to improve the regulation ability of psychological quality of performers.

6. INCREASE TRAINING OF IMMEDIATE STRAIN CAPACITY

The strange environment on the site of performance is an important reason for the performance error of performers. Therefore, performers should participate in the activities such as the piano performance competition and attend the concerts of various forms in daily life. In each practice, they should feel the process of the performance, summarize the practical feelings, objectively treat the performance, and remain as relaxed as they are in daily practice. To increase the stage performance experience is also an approach of training the temporary strain capacity of performers. Performers may give performances in front of people, firstly for the neighbors and then for the strangers. Train their ability of performing in front of others. Long-term training may make performers feel relaxed. Performers have to understand the environment of the performance site before performance, including the size of the stage, the number of audience, the light and stage art. Then performers should have a try of the piano used in performance, for the pianos of different brands are quite different in terms of tone and texture. When they sit before the piano, they should firstly adjust the height of the bench and the distance to the piano. Then, they should practice each key through chromatic scale, feel the weight of the keyboard, determine the volume, tone and pitch, and timely ask the piano tuner to adjust it. This way may effectively prevent the excessive nervousness of performers in performance. Rehearsal is undoubted a better solution for performers with lower psychological quality. Through the repeated practice, performers may be familiar with the environment of the performance site, so as to alleviate the nervousness and terror caused by the strange environment. More importantly, the requisites for the excellent performers include the calm performance attitude, the confidence of their performance ability and the accumulated stage experience. Performers have to know how to control their emotions, and strengthen their basic skills. They should also carefully practice each piece of works and try to perform each detail in the most perfect way. Only when performers own the solid basic skills can they randomly control the keyboard and perform it in a relaxing way. The training preparation of this objective may actively and efficiently strengthen the psychological quality of performers, reduce the nervousness of performers, immerse themselves into the performance, perfectly present their performance level and realize the best levels.

7. SELF-REFLECTION AND SELF-EVALUATION AFTER PERFORMANCE

Self-reflection and self-evaluation after performance is very important to performers, which may be neglected by people. If this performance activity is very successful, the performers should think about the reason for success and the defects, so as to perform better the next time. On the contrary, if performers hold that this performance is a failure, they should think about the reason for failure, be confident about themselves, draw lesson and try to overcome it in the next performance, and find the excellent points of performance. Find the disadvantages, make performers keep moving ahead and reaching success. Each open performance is the chance of improving their ability and training themselves. When each performance ends, they have to objectively summarize their performance activity whether it is success or failure. In this way can performers know about themselves in a sufficient, objective and comprehensive way, and gradually remove their frightening psychology in front of the audience. Performers may cultivate their psychological quality if they objectively realize the pride or inferiority caused by the wrong understanding of themselves and have a correct understanding.

8. CONCLUTION

Piano performance nvolves the technical level of piano performance, accurate illustration of music works, stable performance psychology. Performers should correctly know about the nervous psychology in the piano performance, try to control nervousness so as to reduce the performance error caused by nervous psychology. It is normal to be nervous in the performance. However, performers may successfully overcome the obstacle of psychological quality and bravely appear on the splendid stage that belongs to you if you emphasize the cultivation of psychological quality, learn to adjust the attitude, make full technical preparations and accumulate the stage experience, strengthen confidence, regard each performance as the chance of showing themselves and deem the chance as a happy thing.

REFERENCES

[1] Huang Liqin, Brief Analysis of Nervous Psychology in Performance, Music Exploration, 2007(3):119-121.

[2]Zhou Weimin, Analysis and Control of Nervous Psychology in Piano Performance, Piano Art, 2007(6):37-39.

[3]Li Pumin, Psychology and Art, Press of Capital Normal University, 1996.389-394

[4]Б.М.Теплов, translated by Sun Ye, Psychology of Music Ability, People's Education Press, 1990.

[5]Li Jialu, Piano Performance Art, People’s Music Publishing House, 2006.

[6]Li Xiao, Research of Nervous Psychology in Piano Performance Based on Perspective, Guangzhou World of Musical Instrument, 2009.

[7]Fan Yingjing, Analysis of Psychological Quality in PianoPerformance,Music Exploration, 1999(2):47-48.

[8]Nie Yaxing, Analysis of Psychologically Nervous Factors in Piano Performance, Art Education, 2007(6):84-85.

[9]Joseph Hoffman, translated by Li Suxin, On Piano Performance, Beijing Publishing Group, 2000.

[10]Luo Xiaoping, Development Information of Music Psychology in Contemporary Music Science, recorded on Journal of Nanjing Arts Institute, Periodical 5, 2004 (3): 7-16.

Research on the Development Path of Full Channel Integration of Chinese Retail Brands under the Background of New Retail

Longfei Sun
School of Management, Shanghai University, Shanghai, 200444, China
Email: education888@aliyun.com

Abstract: Under the background of new retailing, China's retail industry has some new trends, such as blurring the online and offline boundaries, individualized consumer demand and technology-driven retail reform. On the basis of discussing the connotation and development of new retail, this paper puts forward the strategy of the whole channel integration and development path of brand retailers in the new retail era.
Keywords: New retail; Full channel integration; Development path

I. INTRODUCTION

In the industry, whether Ma Yun's "New Retail", Liu Qiangdong' s "Fourth Retail Revolution" or Zhang Jindong's "Intelligent Retail", in the final analysis, is the reconstruction and reform of traditional retail, the essence of which is the integration and integration of "online + offline + logistics supply chain". Its ultimate goal is to bring about the improvement of consumer shopping experience and enterprise operation efficiency, the core is to promote the integration process of online and offline. Academics believe that "new retail" depends on the development of the Internet. Essentially, we need to use the existing big data and cloud computing and other emerging Internet technologies to connect the online and offline logistics supply chains, and reshape the new form of retail formats. The traditional online model, which relies on passenger flow and offline stores, can hardly meet the demand of current market sales. The organic combination of online and offline can fundamentally innovate the retail industry and stimulate its rapid development. [1]

2. NEW CHANGES IN CHINA'S RETAIL INDUSTRY

(1) New business technologies are becoming more sophisticated

Big data, cloud computing, artificial intelligence and the Internet of Things have been put on the development agenda, which promotes the birth of new business models. The current Internet big data and cloud computing, various Internet and its derivative networks, a variety of mobile devices and terminals effectively construct the infrastructure of new business. Artificial intelligence on the development agenda also further promotes the birth of new business models, and provides the necessary conditions for new retail. Through big data, new retailers achieve precision marketing. Based on online and offline consumer data, we can realize the portrayal of all-round customers, personalized product recommendation for customers, help enterprises to carry out customer group analysis, accurate marketing, sales analysis and inventory analysis, etc. through cloud computing, new retail to create a data processing platform. Through the construction of retail business data cloud platform, realize online and offline data exchange, including order, inventory, commodity data integration, provide a unified data management platform for retailers, enable consumers to achieve integrated consumption experience, enhance customer stickiness; through artificial intelligence, optimize the new retail recommendation system. AI can quickly match user preferences. Personalized and customized recommendation can improve customer's consumption experience in retail industry. Artificial intelligence can screen and compare the browsing records and consumption records of consumers, recommend more high-quality goods for consumers, and it is an important means of online precision marketing; through the Internet of Things, new retail can improve the efficiency of logistics operation. Internet of Things technology can help offline data, build data management closed-loop, solve the problem of offline access to consumer data, realize the combination of online convenience and offline service experience advantages, and improve the operational efficiency of the entire logistics system. [2]

(2) High digitalization of consumers and upgrading of consumer demand

Chinese consumers are highly digitized and the digital economy is in the lead. With the gradual improvement of national consumption level, the status quo of consumption tends to be more personalized, and the demand for commodity quality and consumption structure is becoming higher and higher. At the same time, it has produced great traction for the upgrading of retail sales. Compared with commodity prices, people pay more attention to the quality of commodities. High quality, high technology and personalization represent the direction of consumption upgrading. The new generation of consumers pay more attention to the quality of life, and are willing to pay for high-quality products. They often accept higher commodity premiums. More attention to the value of time: the new generation of consumers are more willing to spend money to buy time, free themselves from trivial, repetitive business, and devote themselves to other activities they love. [3]

3. TRENDS IN THE DEVELOPMENT OF NEW RETAIL INDUSTRY

(1) Blurring of the boundary between the line and the line

Online and offline boundaries are blurred, and full channel retailing is the mainstream of future development. New retailing is the integration of capital bundling and business on-line and off-line. It is the future trend to realize mutual diversion of e-commerce and e-commerce, and to form full channel resource sharing. With the rapid development of the Internet and the wide application of mobile devices and terminals, consumers usually switch back and forth between online stores and online channels in commodity trading, and then capture more commodity information, realize price comparison between the two, and finally purchase commodities, and share consumer experience and product information. Online channels and offline physical stores have gradually achieved organic integration from the original opposition. There are three popular consumption patterns: one is from online to offline, that is, through online channels to complete transactions, using offline physical stores to achieve consumer experience. The second is from offline stores to online channels, that is, consumers can scan two-dimensional codes through offline stores, and then use online channels to complete transactions. Thirdly, from offline physical stores to online channels and then to offline physical stores, that is, through the activity marketing of offline physical stores, using online channels to complete commodity or service transactions, and finally to offline physical stores to achieve consumer experience. [4]

(2) Technology-driven Retail Reform

Technology-driven will become an important driving force for the new retail reform. Technology-driven new retail revolution will eventually promote systematic changes in the supply chain system, logistics system, marketing system and operation system of retail enterprises. Intelligent, unmanned retail technology and intelligent logistics will become the focus of development; retail consumption scenarios will be deeply integrated, which will bring about the improvement of shopping experience and enterprise operation efficiency; big data and cloud computing will achieve 360-degree comprehensive interpretation of consumers, and ultimately achieve precise marketing and positioning; biometric technology and unattended payment technology will promote the further development of new retail and finance. Combination.

In the new retail era, the whole consumption process runs through a variety of digital technologies. With the improvement and maturity of artificial intelligence, virtual simulation, Internet of Things, big data and cloud computing and other emerging technologies, retail industry can effectively use these technologies to promote the smooth completion of commodity trading and consumer experience, and to a certain extent can improve the efficiency of enterprise operation, effectively reduce costs and inputs. For example, off-line physical stores use artificial intelligence technology and other electronic and Internet financial technologies to record consumers' browsing and purchasing records, and then obtain effective consumption data.

4. EXPLORING THE DEVELOPMENT PATH OF RETAIL BRAND BUSINESSMEN THROUGH ALL CHANNELS

In the traditional retail period, brand merchants rely too much on the traditional distribution network, lack of perception of C-end users, lack of efficient channels and ways to build a strong brand image; production and operation decisions are slow, and it is difficult to achieve synchronous development with the actual market needs. Brand merchants usually make unreasonable division of consumer groups when they research and develop products, which is based on personal income and population structure. This can not effectively grasp customers' shopping habits and consumption experience, so the products produced can not effectively meet consumers' personalized needs. Traditional brand merchants can not effectively handle the production and distribution of products. Grasp the needs of the current sales market, and then there are many inventory backlogs and other situations, increase the operating costs of enterprises.

With the new retail sales model, brand merchants can fully analyze the market demand and consumer personalized demand by acquiring consumer browsing records and consumption records, which is conducive to promoting the retail industry to reduce the research and development time of new products, increase the rationality of production planning and product marketability. On the other hand, brand merchants merge through retail channels. New retail opens up online and offline resources, realizes the integration of all channels. New retail platform uses terminal advantages to help brand merchants carry out marketing promotion and terminal marketing, and help brand merchants grow. [5]

5. CONCLUSION

New retailing organically combines consumer data with business operations, fundamentally changes the retail mode, and to a certain extent, guides brand merchants to produce and launch new products correctly. This retail mode can maximize the use of existing resources, achieve the best allocation of assets, improve the efficiency of enterprise operation, and enhance customer consumption experience. Brand merchants should adopt new retailing from product production to distribution. In addition, retailers are no longer simply pursuing profit growth, but focusing on consumers, paying more attention to consumers' shopping habits and personalized needs, and then adjusting the existing retail model to achieve data integration and full channel retail.

REFERENCE

[1]Patel P C, Maria João Guedes, Pearce J A. The Role of Service Operations Management in New Retail Venture Survival. Journal of Retailing, 2017, 93(2):241-251.

[2]Zakkour M. New Retail Era. Beijing Review, 2017, 60(45).36-37

[3]Lundestad G, Njølstad O. Retail 2.0: The Coming Up of a New Era for Retail Business in the 21st Century. 2011.

[4]Patel P C, Guedes M J, Ii J A P. The Role of Service Operations Management in New Retail Venture Survival. Journal of Retailing, 2017, 93(2):241-251.

[5]Xuan W, Chi T N. New retail versus traditional retail in e-commerce: channel establishment, price competition, and consumer recognition. Annals of Operations Research, 2018:1-17.

On Measures to Process Big Data Computing Information Safely and Efficiently

Qian Chen
Fuzhou University of International Studies and Trade, Fuzhou 350202, Fujian, China

Abstract: With the advent of the information age, network technology has spread to all corners rapidly, promoting the development of information technology. And people are more dependent on the network, and there will be a large amount of data to be processed. How to process big data computing information safely and effectively has become the focus of social attention, and it is also an urgent problem to be solved. This paper introduces the network information technology in the era of big data, explore the challenges faced by information processing technology, and make relevant improvement measures to provide references for the computer field.

Keywords: Big data; Information processing; Efficient technology

1. INTRODUCTION

With the rapid development of science and technology, it is widely used in people's production and life. A large number of Internet companies attach great importance to big data information processing technology, and they eager to take the lead in the online market and strive for more benefits for the company. The application of big data is extremely wide, and it is also supported by many policies. There are several projects require big data to support materials, such as, the promotion and development of “Internet +” projects, the development and improvement of artificial intelligence. Therefore, enhancing the processing technology of big data information processing technology for computers is extremely beneficial to the development of human beings. In addition, security and reliability in information processing are particularly important. Many information processing has privacy, and improving processing efficiency on the basis of ensuring information security is extremely challenging. [1]

2. UNDERSTANDING OF COMPUTING INFORMATION PROCESSING TECHNOLOGY

China's comprehensive strength has gradually improved, and its position in the international arena has also been improved. Big data information processing technology plays an important role in the development of the country. The security and reliability of data processing is also very important, which also affects the efficient and safe dissemination of information technology. Data information processing technology is mainly divided into three major directions, that is, data collection and dissemination, information storage, and data security processing technology.

2.1. Data collection and dissemination

The first step of computing information processing is to collect data collected from the internet in different ways as much as possible, and then use the computer to process the collected data, including aggregation, collation and analysis. Finally, the data are classified and integrated, and are disseminated to the network to achieve resource sharing. The entire process does not require manual operation, and there is full computer intelligence processing. Data collection is extremely important. Without data collection, computer data processing programs can not summarize and integrate data, let alone disseminate information.

2.2. Information storage

In the era of big data, the amount of information stored is very large, and the computer must have enough memory to store them. However, many old computers have a small capacity and cannot be used for the storage of big data. Therefore, it is necessary to upgrade the storage function of the computer to improve its performance. Therefore, the research and development of big data information storage technology is enhanced, and the storage capacity is increased to ensure the safe storage of data information and the integrity of data.

2.3. Data security processing technology

The biggest feature of the Internet is sharing, which can realize real-time updating of information without independent data information. All kinds of information are closely related, which is the fate community. For example, after a key piece of information is exposed, other data information will be affected to a certain extent, and it is also a characteristic of information in the context of the era of big data. In order to promote the safe management of network information, it is necessary to strengthen the security management of the overall network environment and improve related technologies to implement the security of the information network in an all-round way. [2]

3. MAJOR PROBLEMS OF NETWORK INFORMATION PROCESSING TECHNOLOGY IN THE AGE OF BIG DATA

3.1. Operating system vulnerabilities

In the process of processing big data with computer information technology, the common problem is that the operating system has loopholes. Operating system vulnerabilities mainly refer to the vulnerabilities and social vulnerabilities of the main equipment when the computer is installed and updated. In the long run, the use of this system is likely to lead to great security risks, unstable and safe imagination, and leakage of information.

3.2. Threats of natural factors

The security of network data information will also be affected by the natural environment. Computers need all kinds of electronic devices to run at the same time. Electronic devices are sensitive and easily affected by the external environment, resulting in the incomplete data transmission. At present, the software used in the computer system is very vulnerable to the influence of natural environment such as temperature, humidity and vibration, which damages the hardware facilities of the computer and affects the integrity of the information transmitted. [3]

3.3. Human factors

In addition to the influence of the previous two factors, the security of big data information processing technology is also affected by human factors. Different people have certain differences in the technology for performing operations on computers, and the damage caused to computers is also different. There are two main types of damages to computers. One is that the direct operator does not operate according to the relevant regulations, and the problems caused by irregular actions and operation errors on data processing lead to the loss of information transmission. Second, the outside world attacks the computer, especially malicious attacks, which can easily cause information damage or leakage, and also cause more serious losses.

3.4. The impact of network viruses

With the rapid development of Internet technology, the virus is also more mysterious and difficult to deal with. Network viruses can easily disrupt the process of storing, transporting and sharing big data information, causing serious damage to big data information which cannot be pre-controlled. Anti-virus software developed for viruses does not have a versatile effect. It is impossible to solve all problems. Once viruses can be multiplied organically, computer data and other files will be damaged to varying degrees.

4. RELEVANT MEASURES OF NETWORK INFORMATION SECURITY IN THE AGE OF BIG DATA

4.1. Systematic requirements

With the rapid development of information technology, the core of network information security protection is to meet the systematic requirements. By comparing and analyzing the internal and external environment of information processing, the flow between production and business is clear, which is conducive to exploring the obvious information security factors, finding problems in time and solving them in time.

4.2. Strengthening the firewall of computer

The firewall of computer is used to prevent the invasion of computer viruses. It mainly consists of a protective shield composed of software and hardware equipment, which is between the external network and the interface between public network and information network. It can protect the users of internal network from the invasion of computer viruses and other people's illegal invasion.

4.3. Establishing a secure network system

The reason for the overflow of computer viruses and their ability to multiply on computers is that unknown links can be seen everywhere in various social software, most of which are viruses. Once it is opened, the machine automatically connects to the virus and is infringed. Relevant departments should increase the supervision of network links and improve the relevant means of intrusion detection to ensure the security of resource links. Of course, the green and secure network system not only relies on the unilateral policy, but also requires the cooperation of users. In daily work, when transferring files, we should pay attention to avoiding the invasion of viruses. It is better not to open unknown links at will, but to enhance self-protection awareness, and detect and repair the operating environment outside the network at any time to avoid virus intrusion.

5. CONCLUSION

Today, with the rapid development of science and technology, big data information processing technology has become a key factor in the development of enterprises. In the data age, that ensuring the safe and effective induction and integration of data information is an important prerequisite for improving the efficiency of enterprises. Big data provides data support for the development of all walks of life and is conducive to the development of national economy.

REFERENCE

[1]Yin Xueli. How to Process Big Data Computing Information Safely and Efficiently. New Technologies and Products of China, 2018, No. 373 (15): 20-21.

[2]Li Xiangzhong. On Computer Information Security Processing Technology in the Background of Big Data. Information Technology and Informatization, 2018, 225(12): 224-226.

[3]Chen Lamei. How to Carry out Information Security Education in Computer Teaching. Curriculum Education Research: Study on Learning Law and Teaching Method, 2014:99.

Study on the Characteristics of Opioid Drug Transmission based on Infectious Disease Model

*Lu Zhang**, Zhengwen Lin, Xuan Yang*
Shanghai Lixin Institute of Accounting and Finance, Shanghai, 201209, China

Abstract: We established a predictive model of infectious disease, using the number of drugs available to calculate drug delivery rates and drug elimination rates, and plot phase tracking. The phase trajectories of predicted opioids and heroin state propagation rates in 2018 were 0.566, 0.5422, respectively, combined with the phase trajectory to the model limit, with a threshold of 0.1494.This paper uses infectious disease models to analyze the transmission characteristics of opioids, flooding factors and prediction of future events.
Keywords: opioids; infectious disease model

The epidemic model divides the population within the epidemic into three categories: s-type susceptible population (lack of immunity and infection after contact with infected people); i is susceptible (infected with infectious diseases, can be transmitted to s-type population) [1]; r is a removal model based on the occurrence, spread, development of the disease and its associated social and economic factors (separation or immunization of humans due to disease). Through this model, we can analyze the development process, prevalence and regularity of the disease, and predict its trends, which will help us find the best disease prevention and control strategies [2].

1. DATA ANALYSIS

Based on the data characteristics provided by flies, we will determine the exact location of the earliest use of opioids in the five states. We use factor analysis to accomplish this task. Due to the large number of counties and the wide variety of drugs, we will select more than 1,000 counties and counties with no serious missing types of drugs as the research object, and then get the results.

2. MODEL ESTABLISHMENT

$$\begin{cases} \dfrac{dI(t)}{dt} = \lambda S(t)I(t) - \mu I(t) \\ \dfrac{dS(t)}{dt} = -\lambda S(t)I(t) \\ \dfrac{dR(t)}{dt} = -\mu S(t)I(t) \\ S(t) + I(t) + R(t) = N \end{cases}$$

Based on the data provided and the relevant population in the United States, the following results were calculated: $\lambda = 0.87$, $\mu = 0.13$.In the synthesis of opioids, i0 = 0.016, s0 = 0.981, and r0 = 0.003.In heroin, i0 = 0.007, s0 = 0.992, and r0 = 0.001.

We replace the parameters with the matlab program and get the is pattern as the phase trace.

From the phase line, we can see that (S, I) moves from right to left along the trajectory as t increases. It can be seen from the figure that the maximum amount of synthetic opioid I(t) increases from the initial value to about t = 8, and then decreases; for heroin I(t), it always grows, and at t = 10 Reaches the maximum value. This value may be due to a shorter forecast period.

According to our model, the diffusion rate of synthetic opioids in five states in 2018 was about 0.566.In the same year, the spread of heroin in five states was approximately 0.5422.

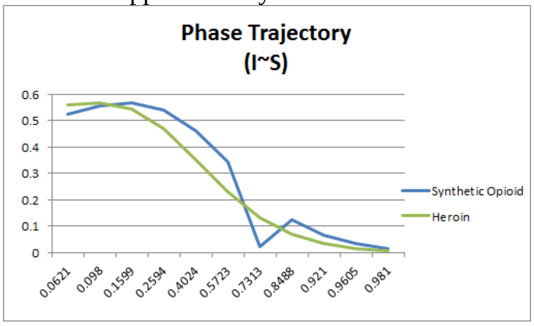


Figure 1 phase track (IS)

3. ANALYSIS RESULTS

The domain of the phase trajectory I(S) is: $\{D = (s, i) \mid s \geq 0, i \geq 0, s + i \leq 1\}$

Eliminate the dt in the above model, and $\delta = \dfrac{\lambda}{\mu}$, we can get:

So the expression for the phase trajectory is:

$$i(s) = (s_0 + i_0) - s + \frac{1}{\delta} \ln \frac{s}{s_0}$$

When $t \to \infty$, the limit values of S(t), I(t) and R(t) are expressed as: $S\infty$, $I\infty$, $R\infty$. Seeking the limits:

a. Regardless of the initial conditions S0 and I0, the drug addict will disappear (due to the short prediction period, the above phase trajectory is not obvious enough), namely: $t \to \infty$, $i \to 0$.

b. The root of the equation is at (0, σ/1).It can be concluded that when we only increase the proportion of drug users I(t), we believe that drugs are spreading, so σ/1 is a threshold.

When S0>σ/1, the drug diffuses in the diffusion. When S0≤σ/1, the drug spreads in proliferation.

The drug has narrowed the scope of transmission. The calculated threshold is 0.1494.

After the above model analysis, we can know that the spread of synthetic opioids in 2010-2017 is almost exponential growth, heroin growth first rises and then declines, but according to our model, the proportion of smokers will continue to grow, if not considering each A barrier to external factors, drug users may account for half of the total population in the next few years, which has an unpredictable impact on the national economic and cultural life of the United States.

4. CONCLUSION

Based on latitude and longitude data, we can also analyze the use of opioids mainly in the periphery of major cities, and at lower altitudes. Therefore, from these perspectives, the US government must limit the use of opioids in cities with these two characteristics. Otherwise, the use of opioids will worsen and the spread will spread from major cities to second-tier cities. It will gradually expand from lower altitudes to higher altitudes

REFERENCES

[1]Saidel T J , Jarlais D D , Peerapatanapokin W , et al. Potential impact of HIV among IDUs on heterosexual transmission in Asian settings: scenarios from the Asian Epidemic Model. International Journal of Drug Policy, 2003, 14(1):63-74.

[2]Eshima N , Tabata M , Kikuchi H , et al. Analysis of the infection system of hu- man T-cell leukaemia virus type I based on a mathematical epidemic model. Statistics in Medicine, 2001, 20(24):3891-3892.

Research on Design and Dynamic Characteristics of New B-Axis Power Tool Holder

Xinwen Li, Lang Xin, Chuan Wang*
Chengdu University of Technology, Chengdu, 610059, China

Abstract: Method: Based on the DH parameter method of robotics, the kinematics and dynamics model is established, and the torque in different directions is obtained. The three-dimensional geometric model is built by Solid Works, imported into Ansys: Workbench finite element analysis software, and dynamic simulation is performed. Modal simulation analysis and multi-objective optimization. Results show that the maximum deformation of the B-axis occurs at the shoulder and the end of the shaft. The quality of the structure is reduced by more than 10%.
Keywords: Mechanics; B-axis power tool; Optimization design; Electromechanical coupling

1. INTRODUCTION

At present, the B-axis power tool holder developed at home and abroad generally uses a robot to change the tool from the tool magazine [1], and it is relatively rare to study the multi-tool installation on the power tool holder body. Xuan Guangjin et al. [2] analyzed the key technologies of the built-in motor's tool power spindle and torque motor drive B-axis; Chen Zeshi et al. [3] based on three axes X, Y, Z for linear motion, around it rotating motion enables a rotary swing of the tool axis or table.

Based on this, this design chooses a new transmission mode with high reliability and high dynamic sensitivity to replace the traditional mechanical transmission mode. The cutter head and the cutting swing arm are driven by two different servo motor driven bevel gears mounted under the B-axis module [4-6].

2. THEORETICAL ANALYSIS

2.1. Kinematic Modeling

The B-axis power tool holder structure is simplified into an open motion chain which is a series of links connected in series through joints. The first rod is the base, and the last rod is the actuator cutter. The coordinate system fixed to the body is the base coordinate system, and the fixed connection with the connecting rods 1, *i* is called the coordinate system ∑1and ∑*i*. See Figure 1 for details.

Expressed by the matrix T_i^{i-1}, the superscript $i-1$ and the subscript *i* represent the reference coordinate system and the description coordinate system, respectively, according to the principle of left to right:

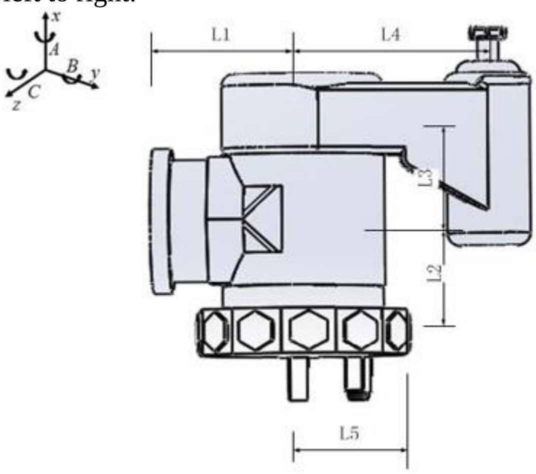


Figure 1 The structure diagram of B-axis tool holder

$$T_i^{i-1} = Rot(z_{i-1}, \theta_i) \bullet Trans(0,0,d_i) \bullet Trans(a_i,0,0) \bullet Rot(x_{i-1}, a_i)$$

$$T_i^{i-1} = \begin{bmatrix} \cos\theta_i & -\sin\theta_i \bullet \cos\alpha_i & \sin\theta_i \bullet \sin\alpha_i & L_i \bullet \cos\theta_i \\ \sin\theta_i & \cos\theta_i \bullet \cos\alpha_i & -\cos\theta_i \bullet \sin\alpha_i & L_i \bullet \cos\theta_i \\ 0 & \sin\alpha_i & \cos\alpha_i & d_i \\ 0 & 0 & 0 & 1 \end{bmatrix} \quad (1)$$

In the formula: L_i——The length of the link *i* from the joint axis *i* to *i*+1, mm; α_i——The angle between the two axes of the connecting rod *i* and *i*+1 is perpendicular to the plane of the α_i, rad; d_i——Connecting rod *i*-1 and *i* axis common normal distance, mm; θ_i ——The twist angle of the connecting rod from x_{i-1} to x_i, rad.

2.2. Dynamic Modeling

2.2.1. When turning

When the B-axis power tool holder is turned, the maximum force state occurs when the turning tool, the B-axis and the base are on the same section, that is, when the space distance is the largest, as shown in Figure 2. At this time, the turning tool is subjected to the force F_{x1}, F_{y1} and F_{z1} of the workpiece. Through the interaction force between the cutter head, the cutter and the B-axis, the force applied to the turning tool will be transmitted to the B-axis and can be expressed as F_{ax1}, F_{ay1} and F_{az1}, the bending moment is T_{a1}.

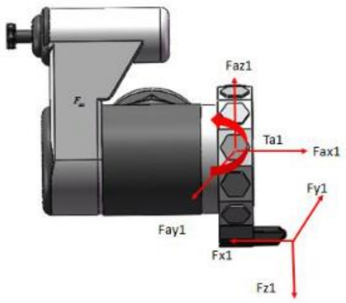


Figure 2 The load analysis diagram of B-axis tool holder when turning

2.2.2. During milling

In the same way, the milling cutter is subjected to the force of the objects F_{x2}, F_{y2} and F_{z2}. Through the interaction force between the cutter head, the milling cutter and the B-axis, the force transmitted by the workpiece of the milling cutter to the B-axis can be expressed as F_{ax2}, F_{ay2} and F_{az2}, the bending moment is T_{a2}, from which:

$$\begin{cases} T_{a1}=F_{x1}\cdot L_5-\left(F_{y1}+F_{z1}\right)\cdot L_6 \\ T_{a2}=-\left(F_{x2}+F_{z2}\right)\cdot L_4+F_{y2}\cdot L_7 \end{cases} \quad (3)$$

In the formula:L_5——The vertical distance from the tip of the turning tool to the axis of the B axis, mm;

L_6——The horizontal distance from the tip of the turning tool to the end face of the B-axis, mm.

3. SIMULATION AND OPTIMIZATION

3.1. Simulation Analysis

3.1.1. Static analysis

Through the pre-processing and applying the boundary conditions for simulation, the B-axis analysis results include total deformation, equivalent elastic strain, and equivalent stress. The specific results are shown in Figure 3.

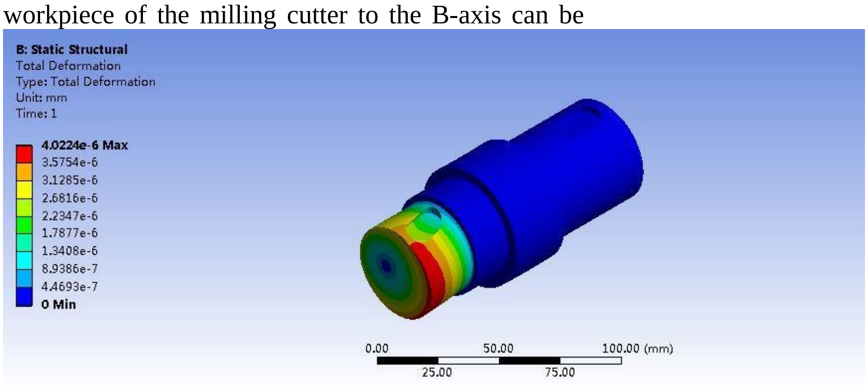
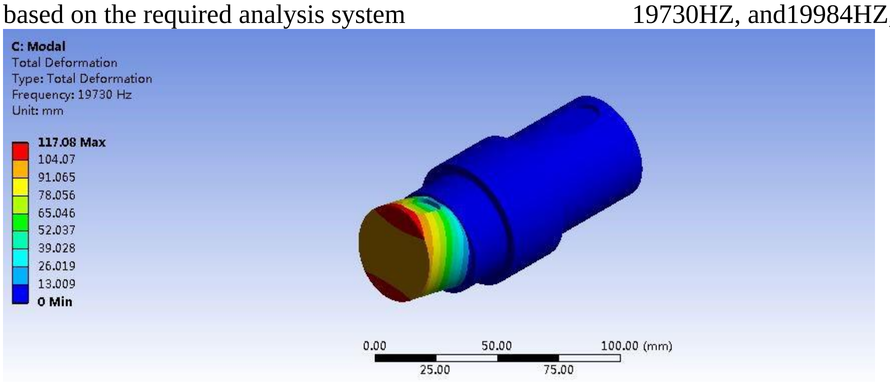


Figure 3 Statics analysis

It can be seen from the above analysis results that the B-axis has weak links such as severe deformation and stress concentration, that is, the B-axis shaft end joint.

3.2. Modal analysis. Establish a mathematical model based on the required analysis system

By solving the generalized eigenvalues and eigenvectors of the above formula, the natural frequencies and modes of the B-axis can be obtained separately. The first 4natural frequencies are: 19730HZ, and19984HZ, as shown in Figure 4.



a first order mode

Figure 4 FEM result of B-axis

It can be seen from the figure that the minimum natural frequency of the B-axis is 19730HZ, the maximum speed of the B-axis is 1500r/min, and the vibration frequency is 25HZ, the B-axis does not resonate.

2.3 Optimization Analysis

In this paper, the diameter of the outer circle of each section of the B-axis is the independent variable, and the total deformation, equivalent stress value, equivalent strain value and mass are the objective functions. The optimization results are shown in Figure 5.

13		Candidate Point 1	Candidate Point 2	Candidate Point 3
14	P1 - XYPlane.D2 (mm)	41.355	40.725	40.545
15	P2 - Plane6.D1 (mm)	40.54	38.04	36.04
16	P3 - Total Deformation Maximum (mm)	3.887E-06	4.5539E-06	5.1816E-06
17	P4 - Equivalent Elastic Strain Maximum (mm mm^-1)	2.3268E-07	2.5898E-07	2.6669E-07
18	P5 - Equivalent Stress Maximum (MPa)	0.045137	0.049481	0.050435
19	P6 - Geometry Mass (kg)	1.503	1.4596	1.4341

Figure 5 The result of simulation optimization

According to the optimization results, when the B-axis shaft segment 1 is about 41 mm and the shaft segment 4 is about 36 mm, the objective function reaches an optimum value.

4. CONCLUSION

By using the principle of D-H parameter method and the transmission principle of the B-axis power tool holder, the variable relationship between the end effector tool and the rotating joint of the whole tool holder and the structural size parameters are determined, and the simulation design is verified to meet the design requirements.

REFERENCES

[1]Chen Guowen, Application prospect of turning and milling combined machining technology in aviation industry, Aviation Precision Manufacturing Technology, 2010, 35(02):26-27.

[2]Xuan Guangjin, Hong Shoufu, Yan Kehui, Turning and milling head with B axis, Functional components, 2005, 23-25.

[3]Chen Zeshi, Zhang Qiuju, The Application of D-H Method in Kinematics Modeling of Five-Axis Machine Tool, Machine Tool & Hydraulics, 2007, 35(10):88-93.

[4]Jia Dandan, Five-axis CNC machine tool motion accuracy reliability analysis and simulation, Shenyang: Northeastern University, 2011.

[5]Jia Chunde, Jiang Zenghui, The principle of turning and milling, Beijing: National Defense Industry Press, 2003, 1-7.

[6]Gu Mingyu, Six-degree-of-freedom manipulator kinematics, dynamics analysis and computer simulation, Changchun: Jilin University, 2005.

A Probe into the Lexical Characteristics of WeChat Translate — A Corpus-based Analysis of the Word Frequency List and Keyword List of WeChat Chinese-English Translation

Zhang yan, Luo jinru*
School of Foreign Languages, Southern College, Sun Yat-Sen University 510970

Abstract: With WeChat attracting more than 850 million active users in China and other parts of the world (2017), the new WeChat Translate function attracted many people's attention for its power of offering surprisingly more proper translation than many of the existing MT translation apps. The present study built a 245,886 words corpus of WeChat translation of the daily interaction of the college students and compared the lexical characteristics of the corpus with those of the reference corpus HKCSE and statistics in previous studies on spoken and written corpora. The study finds that from the lexical level, WeChat Translate can properly reflect the general spoken style in vocabulary size, lexical density, word length and the spoken only words. But in terms of expressiveness of daily communication, Wechat Translate still need to be improved to fully convey the spokenness of English, mainly vague terms and slang.

Keyword：WeChat Translate

1. INTRODUCTION

WeChat is a free Social Networking Site i.e. SNS, offering instant messaging services for intelligent terminals. It was first launched in January 2011 by Tencent Corporate [6]. According to the financial report of the second quarter of Tencent Co. in 2017, the monthly active registered accounts of WeChat is 863 million by June, 2017 and the increase of monthly active accounts on season-by-season basis is 19.5% [18]. WeChat has become an indispensable part of Chinese people's life [5]. Through the help of WeChat Translate, people speaking different languages can also communicate through WeChat. Upon inauguration, WeChat Translate has been lauded for its power of offering surprisingly more proper translation than many of the existing MT translation apps since people had always dreaded machine translation for totally changing the style of the source text. A quantitative analysis of the corpus of the content translated through WeChat Translate might show us whether WeChat Translate can transmit the characteristics of the source material. If the answer is yes, we might offer some academic evidence for the translation quality of WeChat Translate.

WeChat has replaced many other communication means such as telephone and blogs and become the most useful daily communication means in China [5]. Chinese College Students are found to use WeChat mainly as daily interaction means among their contacts. The communication on WeChat is found to be expressed "commonly, orally, irregularly, and existing of a great quality of abbreviations, clipped speech…" and could be called a written version of spoken communication [19]. The daily communication in WeChat have the spoken language characteristics and are closely related to their student identity and are informal in style.

The hypothesis of this research is: Through comparing a corpus of WeChat communication translated into English by WeChat Translate with a reference spoken corpus to check the lexical characteristics, if the quantitative figures show more similarities between these two corpora, we might say WeChat Translate does a god job in translation from the lexical level at least.

Thus the researcher built a corpus by collecting college students' daily WeChat communication in Chinese text and also the text translated into English by WeChat Translate. The translated corpus is called C-E WeChat in short. The corpus is made up of 245,886 words and is collected from more than 120 college students from freshmen to seniors. The reference corpus is Hong Kong Corpus of Spoken English, i.e. HKCSE, a collection of nearly one million words of transcribed version of people's daily communication in all kinds of situations.

2. LITERATURE REVIEW

This section briefly provides the theoretical background of previous corpus-based studies. The previous study results on lexical characteristics of spoken English vs. written English are introduced in order to offer more background knowledge on the lexical characteristics of spoken English.

2.1 Related corpus studies on lexical characteristics

In corpus studies, corpus is generally considered as a collection of natural text either in written or transcribed spoken speech, which can serve as a basis for linguistic analysis. The most essential characteristics of corpus-based analyses are:

1) it is empirical, analyzing the actual patterns of use in authentic texts;

2) it utilizes a large and principled collection of authentic texts known as 'corpus', as the basis for analysis;

3) it makes extensive use of computers for analysis, using both automatic and interactive techniques;

4) it depends on both quantitative and qualitative analytical techniques.

Word lists sorted according to the frequency in a certain text have been considered as an effective standard methodology in corpus analysis [4]. Sinclair stated this point very clearly by noting "anyone studying a text is likely to need to know how often each different word form occurs in it" [16]. Key word analysis is often the next step to go after a researcher gets a word frequency list. "This is one of the most widely-used methods for discovering significant words, and is achieved by comparing the frequencies of words in a corpus with frequencies of those words in a (usually larger) reference corpus" [2].

When discussing the characteristics of spoken languages, scholars generally compare a spoken corpus with a written corpus to show the similarities and differences. Liu compared the conversational part of BNC spoken corpus (973,574 words) and BNC written corpus (1,000,000 words) and summarized the characteristics of spoken English in aspects like vocabulary size, coverage rates, lexical density, vocabulary growth rates, high frequency words, low frequency words, personal pronouns, word length, spoken-only words, vague terms, intensifiers, small words and slang etc [11].

According to Baker [1], WordSmith can be used to get a keyword list using a frequency list taken from one file (or corpus) compared against the frequency list of another corpus. An examination of the keywords could reveal the most significant lexical differences between two corpora, in terms of aboutness and style.

2.2 Lexical characteristics of spoken English vs. written English

The importance of lexicon has been recognized by many scholars. Smith sates that apart from differences in the lexicon, there is only one human language [17]. Wilkins also states that "while without grammar very little can be conveyed, without vocabulary nothing can be conveyed" [21]. Lexical study is the basis and the most important aspect in study of any special types of languages.

When compared with written English, the special characteristics of spoken English could be showed in an more vivid way. Liu found that roughly the same one million tokens produce 10,783 types in spoken English while in it will produce around 41,426 types in written English [11]. Bonk finds that 3,000 or more words could reach a coverage rate of 95.15% in spoken English and can satisfy the needs for successful oral communication [7]. In contrast, according to Kennedy, around 3,000 to 15,000 words are needed to satisfy the coverage rate of 95% in written texts [8]. According to Nation, lexical density refers to the ratio between the types and the tokens in any given text, TTR is mainly used to measure lexical density of a text [12]. In Liu, BNCS has 973,574 tokens producing 10,783 types. In contrast, BNCW has 1,000,000 tokens producing 41,426 types, so the TTR in BNCS and BNCW are respectively 0.0186 and 0.0414 [11]. This means spoken English has strikingly low lexical density. Liu also reported the mean word length of the vocabulary in BNCS is 6.48 letters and that in BNCW is 7.41. This indicates that the words in spoken English are mostly simple words and monosyllabic [11].

2.3 WeChat translation research gap

Human evaluations of machine translation (MT) involves many aspects of translation, including adequacy, fidelity, and fluency of the translation [9, 20]. Reeder offed an comprehensive catalog of MT evaluation techniques including evaluation of the above mentioned lexical aspects [13].

Official WeChat Translate appeared around October 2017. So no study on WeChat Translate has appeared yet. But the translation effects of a SNS for a user scale of over 850 million certainly deserves more attention.

3. RESEARCH METHODOLOGY

The research methodology for this study is corpus based. The general study could be roughly divided into the following stages:

1) Build up the study corpus of C-E WeChat (245,886 words all together);

2) Get access to the existing HKCSE (936,773 word all together) as a reference corpus;

3) Use Wordsmith to get the word frequency lists of C-E WeChat and HKCSE respectively.

4) Use Wordsmith to get the key word list comparing C-E WeChat to HKCSE.

5) Analyze the basic lexical features.

4. ANALYSIS

4.1 Small vocabulary size

The vocabulary size refers to the distinct words or types in a corpus. The vocabulary size of C-E WeChat is 9,895 and that of HKCSE is 17,813. From the previous literature we learned that the same one million tokens produce around 10,783 types in spoken English while in written English it will produce around 41,426 types. Compared with written English, the vocabulary size in WeChat and HKCSE tends to follow the characteristics of spoken English.

4.2 Low lexical density

Lexical density refers to the ratio between the types and the tokens in any given text. The TTR serves as one of the markers for genre classification and text categorization [3, 10]. and as a measure for vocabulary diversity [14]. The spoken texts are considerably less dense, on average, than most written texts. Standardized TTR (STTR) refers to the type token ration per 1000 words. Since the size of the corpora in this study is different, the STTR could better show the idea. The STTR of C-E WeChat is 40.47 while that of HKCSE is 31.18. This means vocabulary in the C-E WeChat is denser than the HKCSE. This might because of the power of MT in precisely locating the equivalent words in the other language. But in transcribed version of daily communication, "people are less concerned with the transmission of information than in writing. Furthermore, conversation is spontaneously produced with little time for planning and varying of the choice of words. Repetition is characteristic of spoken language. It may be used for emphasis to help the planning of the speaker, or to make sure that the message gets across to the hearer" [11]. WeChat interaction is also an instant communication means offering little time for people to organize their words, but since it is the written version of spoken language, people can contemplate and revise their writing so the lexical variety is denser than the spoken language.

According to the top 40 word frequency list of C-E WeChat and HKCSE. Nearly 30 words in the top 40 word frequency lists of the two are the same. From the word frequency lists of both the corpora, we can see that they have low TTR because of high frequency of pronouns, repetition of common words and expressions, wide use of monosyllable words and generalized vocabulary.

4.3 Short word length

The average word length in both C-E WeChat and HKCSE are very close, 4.14 and 4.07 respectively. But compared with BNCS's 6.48 and BNCW's 7.41 in average, the contrast is huge.

The reason for this is that the C-E Wechat corpus is mainly for daily communication for college students with not many occasions requiring abstract or complicated expressions. Also the HKCSE is the transcribed version of people's oral speech in life situations. So the the two-letter words, three-letter words and four-letter words appear most often in C-E WeChat and HKCSE.

4.4 Spoken only words

According to previous literature, there are some small words, vague terms, intensifiers, contractions and abbreviation, slang and the like generally only appear in spoken English. But there are far less spoken only words in the C-E WeChat corpus since the written conversion of the daily interaction filtered the fillers like, mm, er among others. MT translation process also tends to dismiss vague terms and assimilate intensifiers. Contractions are very common in C-E WeChat since the so-called new neural network translate system could easily recognize the casual daily interaction style and conformed this style by using contractions like *it's, I'm, he's* all the time. Abbreviations are rare, so do slang in C-E WeChat since MT translation tend to be explicit in expression and loyal to the original literal text. For Example: "delicious" (delicious) is always translated into "yummy" instead of "deli" or other oral forms and "you are pig" (you're stupid or lazy like a pig) is wrongly translated into "you're a pig? " But the extra question mark added here shows that the WeChat Translate is kind of like a thinking person and is questioning whether you really mean it.

4.5 Special lexical feature of C-E WeChat

From the top 50 of the key word list of C-E WeChat comparing with HKCSE. From the list we can see that there are some written version of spoken sounds like *HA, HAHAHA* while these laughter sounds are always transcribed into "laugh" in HKCSE. There are also a lot of student identity related words like *class, school, dorm, examination, teacher, ID, students, college, homework, exam, dormitory* among others. This could be taken as evidence that WeChat Translate is effective in reflecting the special identity of the contributors. There are also some key words related to the special environment of WeChat like the words *WeChat, November, Yuan* since WeChat is the name of the SNS and the corpus was built in November and people always inform each other time, location and specific events in WeChat. "Yuan" is the unit of Chinese money. Since WeChat has all kinds of functions like online banking, "red packet" sending, and instant paying, college students must have useed WeChat quite often to talk and deal with money related issues.

5. CONCLUSION

Through the above analysis, in terms of vocabulary size, lexical density, word length, the general feature of C-E WeChat comply with the features of HKCSE and previous researches on spoken English, thus proving that WeChat Translate can produce daily communication translation suiting the required style. WeChat Translate is also very loyal to the users in conveying the special characteristics in translation and communicate with people like a thinking people. In terms of expressiveness of daily communication, the so-called New Neural Network Translation engine of Wechat Translate still need to be improved to fully express the spokenness of English in terms of slang and other vague expressions in spoken English.

REFERENCES

[1]Baker, P, Querying Keywords. Journal of english linguistics, 2004, 32(4): 346–359.

[2]Baron, A., Rayson, P., & Archer, D, Word frequency and keyword statistics in historical corpus linguistics. Anglistik: International Journal of English Studies, 2009, 20(1): 41–67.

[3]Biber, D, Variation across speech and writing. Cambridge University Press, Cambridge, 1998.

[4]Biber, D. S, Conrad & R, Reppen corpus linguistics cambridge, Cambridge University Press, 2000.
[5]Cai Fuhan, The impacts of WeChat on daily life and the economics logic behind it. Modernized Education, 2017(25).
[6]Chen, S. H., & He, W, Study on knowledge propagation in complex networks based on preferences, taking WeChat as example. Abstract and Applied Analysis. Retrieved from, 2014.
[7]Bonk W. J, Testing ESL learners' knowledge of collocations. ERIC Documents 442309, 2000.
[8]Kennedy, G. An Introduction to corpus linguistics. Pearson Education Limited, 2000.
[9]Hovy, E.H, Toward finely differentiated evaluation metrics for machine translation. In Proceedings of the Eagles Workshop on Standards and Evaluation, Pisa, Italy. 1999.
[10]Karlgren, J. & Cutting, D. Recognizing Text Genres with Simple Metrics Using Discriminant Analysis. International Conference On Computational Linguistics. 1994.
[11]Liu, X. J, The lexical characteristics of spoken English. Retrieved from, 2007.
[12]Nation. 1. S. P, Teaching and Learning Vocabulary, NewYork: Newbury House. 1990.
[13]Reeder, F, Additional mt-eval references. Technical report, International Standards for, 2001.
[14]Schmitt, N. & McCarthy, M, Vocabulary: Description, Acquisition and Pedagogy. Cambridge University Press. 2002.
[15]Simpson, J, The new vocabulary of English. In E. G. Stanley and T. E. Hood (eds) Words. Cambridge: D. S. Brewer, 1988, 143-52.
[16]Sinclair, J M, & Coulthard, R. M, Towards an analysis of discourse: the english used by teachers and pupils. Oxford University Press. 1975.
[17]Smith, N, Improving a Tagger, in Garside, R., Leech, G., and McEnery, A. (eds.) Corpus Annotation: Linguistic Information from Computer Text Corpora, Longman, London, pp. 1997, 137–150.
[18]Tencent, Financial report of the 2nd season of 2017.
[19]Wang, Y., Song, S., Zhou, F., & Zheng, X, Chinese WeChat and blog hot words detection method based on Chinese semantic clustering. Intelligent Automation & Soft Computing, 2017, 23(4): 613–618.
[20]White, J.S. and T. O'Connell, The ARPA MT evaluation methodologies: evolution, lessons, and future approaches. In Proceedings of the First Conference of the Association for Machine Translation in the Americas, Columbia, Maryland. 1994, 193–205.
[21]Wilkins. D, ESL vocabulary learning in a TOEFL preparation class: A case study. Canadian Modern Language Review, Lessard-Clouston, M. 1996, 53(1): 97-119.

Analysis on Promoting Economic Transition of Resource-based Cities Industrial Policy

Huajun Ding, Genli Tang
School of Management Science and Engineering, Anhui University of Finance and Economics, Bengbu, Anhui, China
E-mail: dhjdzh@163.com

Abstract: resource-based cities are resource-based industries as the leading industries. Because of the non-renewability of mineral resources, these resource-based cities will face severe development dilemma after gradually losing the advantages of mineral resources, and will inevitably bear the pressure of economic transformation. How to carry out economic transformation and realize sustainable development under the situation of resource exhaustion is an urgent problem related to many resource-based cities. The government should formulate a sound legal guarantee system and relevant fiscal and taxation policies, further clarify the property rights of resources, establish compensation mechanism for resource development, declining industrial assistance and support mechanism for alternative industries to support the economic transformation of resource-based cities.

Keywords: Resource-based cities; Industrial structure; Industrial policy

1. INTRODUCTION

Generally speaking, resource-based cities refer to cities built and developed on the basis of resource development, with resource-based industries (mainly resource exploitation and initial processing) as the leading industries. Specifically, according to the sequence of resource exploitation and city formation, there are two modes for the formation of resource-based cities, one is “mining first, then city-based”, that is, cities are entirely due to resource exploitation, such as Daqing, Jinchang, Panzhihua, Karamay and so on[1]. The other is “first city, then mining”. That is, before the development of resources, there were cities. The development of resources accelerated the development of cities, such as Datong, Handan and so on. China’s resource-based cities are mostly mining cities, that is, cities with non-renewable mineral resources development and primary processing as the main industries. At present, there are 118 resource-based cities in China, including 63 coal cities, 12 non-ferrous metal cities, 8 ferrous metallurgical cities and 9 petroleum cities.

2. THE PROBLEMS OF RESOURCE-BASED CITIES IN CHINA

After decades of development, resource-based cities in China are gradually threatened by resource exhaustion. As natural resources are non-renewable resources, resource production decreases year by year. In the development and construction of resource-based cities, only the exploitation of resources is considered, while the conditions and factors of urban development are neglected, resulting in many problems. Resource-based cities are facing complex and diverse dilemmas. It is shown in the following aspects:

(1) The resource and environment base of urban development is in crisis. With the depletion of resources, the deterioration of ecological environment, the degradation of arable land, salinization and desertification, the urgent demand for water resources and other issues also follow.

(2) The location condition of resource-based cities is poor and their self-development ability is weak. Basically, these cities live on the land where resources are exploited. They lack the openness of general cities, the economic system is in a closed state, and other social service functions of cities are closely attached to the leading resource industries, lacking the space for independent operation.

(3) The industry of resource-exhausted cities is highly monotonous, or called non-equilibrium. Resource-based industry is not only the leading industry, but also the pillar industry. Cities rely heavily on the resource industry, which results in the development of cities being restricted, the function of cities being incomplete, and the development of tertiary industry and alternative industries lagging behind[2].

Therefore, in order to reverse the gradual exhaustion of resources, reduce the negative impact of declining income from resource exploitation on urban economic development, change the over-reliance on natural resources, and make resource-based cities get rid of the puzzle of “resource-rich cities thriving, resource-exhausted cities declining”, it is necessary to carry out economic transformation.

3. ANALYSIS OF THE CHARACTERISTICS OF RESOURCE-BASED CITIES IN CHINA

China’s resource-based cities are basically developed on the basis of mining areas, thus forming characteristics different from those of other cities.

3.1. The formation of cities is sudden and the layout of cities is decentralized

Generally, cities are gradually formed with the development of commodity economy, while resource-based cities are mostly formed in a short time with the large-scale development of mineral resources, and the formation of cities is sudden. At the same time, resource-based cities are often built along with mines, so the layout of cities is decentralized.

3.2. The development of urban economy has obvious periodicity and phases

As the dominant industry of resource-based cities is resource-based industries, or resource-based industries occupy a larger share of the city, therefore, resource-based industries must affect the development track of resource-based cities. In a certain regional scope, resource-based industries show obvious periodicity and stages in the process of development. Scholars at home and abroad pay more attention to this aspect and have obtained many research results. Among them, the representative theory is "spindle" theory put forward by American geologist Hubert. By analyzing the laws of resource-based cities from development to prosperity and then to decline, we can draw a conclusion that the typical characteristics of resource-based cities are that the development of cities depends heavily on the development of resource-based industries[3]. The rise and fall of cities are closely related to the amount of resource reserves and the market competitiveness of a single industry in the process of economic structure upgrading. Cities are bound to be subject to resource industries. The restraint, along with the rise and fall of resource-based industries, presents the characteristics of periodic and periodic development.

3.3. Single economic structure

Resource-based cities are mostly developed because of the exploitation of natural resources, and their economic development is strongly dependent on natural resources. In addition, the development of resource-based cities tends to pursue the expansion of the quantity of resources products for a long time. As a result, resource-based cities have obvious resource-oriented economic characteristics, which are mainly manifested in three aspects: industrial structure, employment structure and ownership structure.

4. PROBLEMS IN INDUSTRIAL TRANSITION OF RESOURCE-BASED CITIES IN CHINA

4.1. Imperfect legislation and institutional arrangement

The economic pioneer countries have formed a set of legal systems through legislation in the aspects of mine environmental management and economic structure transformation, from the central government, local government to mining enterprises to cooperate with each other and support each other. They have established an atmosphere of conscious compliance and voluntary environmental protection in mining enterprises. China should strengthen the government's environmental management system for mining enterprises, clarify the responsibilities of the government in managing mines, introduce market mechanism, and implement institutional arrangements complementary to laws and regulations. For example, Japan's implementation of the Interim Measures Act for the Revitalization of Coal-producing Areas and the Federal Coal Lease Amendment enacted by the United States are powerful guarantees for the rational development and utilization of resources and the implementation of economic transformation in coal cities. The United States has established a land reclamation margin system, which obliges mining enterprises to purchase a securities in advance or establish a land reclamation fund for abandoned mines to ensure land reclamation after mining. From the above, we can see that our legislation and institutional arrangements have just started, and there is a big gap with developed countries.

4.2. Lack of unified planning of authoritative institutions in economic transformation

The implementation of economic transformation in resource-based cities is the key to the coordinated development of regional economy. Economic pioneering countries play a guiding role from the central government to local governments, especially by setting up authoritative institutions and planning economic transformation in a unified way. The French central government is responsible for providing assistance funds, and the district governments, as the dispatched agencies of the central government, are responsible for the formulation and implementation of planning. Establishing functional departments such as the Labor Bureau and the Economic Promotion Committee shall be responsible for the comprehensive coordination of the old industrial bases. There is no such authoritative organization in China, but a working mechanism of joint promotion by the relevant departments of the state, general responsibility of the provincial people's government, linkage and coordination of resource-based cities as the main body has been initially established, and the legislative work of sustainable development of resource-based cities has just started, which shows that China is not very mature in this respect.

4.3. Transition and institutional transition cannot be carried out simultaneously

The transformation of resource-based cities must rely on the support of the economic system. Only through the continuous reform and transformation of the economic system according to the needs of the transformation can the success of the transformation be guaranteed. In the process of transformation, resource-based cities in China should adapt to the needs of urban development, establish corresponding enterprises according to the requirements of sustainable development, and not stick to the form of enterprises.

5. INDUSTRIAL POLICY MEASURES TO PROMOTE THE ECONOMIC TRANSITION OF RESOURCE-BASED CITIES IN CHINA

5.1. Establishing a sound legal guarantee system and

establishing three mechanisms: compensation for resource development, assistance for declining industries and support for alternative industries.

The resource-exhausted cities are facing the severe situation of industrial restructuring and a large number of workers changing production. Industrial transformation and sustainable development of resource-based cities is a complex system engineering, involving all aspects of economic life. At the same time, conflicts of interest between central departments and local governments at all levels continue, making it difficult to promote the transformation. Therefore, it is necessary to clarify the unified command and coordination of a government department for the transformation of resource-based cities. The experience of Germany, France, Switzerland, Japan and other countries shows that the fundamental policy to solve the sustainable development of resource-based cities is to clarify the rights and obligations of the government and enterprises in resource development through legal means. To formulate relevant laws and regulations to ensure the sustainable development of resource-based cities in law.

5.2. Develop positive investment and financial policies

To achieve the goal of sustainable development of resource-based cities, it is necessary to formulate reasonable investment policies, optimize investment structure, ensure the smooth implementation of sustainable development industrial policies and regional policies, and ensure the coordinated development of ecological environment investment and production and construction investment in proportion. Firstly, we should correctly determine the main investors of all kinds of investment projects, namely competitive projects, basic projects and public welfare projects. Second, while guaranteeing the growth of government investment in public facilities construction, the government should expand its use in ecological investment projects to change the current situation of low investment in ecological environment, serious shortage of ecological compensation and expansion of ecological deficit in national economic investment, especially to increase investment in environmental protection technology progress and development of environmental protection industry.

5.3. Clear resource property rights policy

In order to thoroughly change the extensive economic growth mode of resource-based cities, in which high resource consumption is exchanged for high economic growth, and to change the chaotic situation of responsibility and right management in resource exploitation and protection, resource-based cities should further reform the property rights system, clarify the property rights of resources, and formulate and implement a series of policies to ensure the sustainable use of resources[4].

There is no standard model for industrial transformation of resource-based cities in China that can be popularized in the same kind of cities in the whole country. Each resource-based city should select suitable transformation modes and develop successive and alternative industries with comparative advantages step by step according to its own development stage and the actual situation of urban resource types, combined with the experience and lessons of industrial transformation of resource-based cities at home and abroad. Complete the process of industrial transformation.

6. CONCLUSION

As a resource-based city, it is necessary to re-examine and plan the relationship between economic growth and sustainable development of resources and environment, abandon and revise the original extensive economic development model, find new sustainable economic growth points, adjust industrial structure, develop high-tech industries, upgrade the technical level of traditional industries, and enhance the utilization of water resources. Peace, promote economic transformation and development.

REFERENCES

[1]Antoine, Dechezleprêtre, Glachant, Matthieu, and Yann Ménière. Technology Transfer by CDM Projects: A Comparison of Brazil, China, India and Mexico. Energy Policy, 2009.

[2]ELHORST J.P. Unconditional Maximum Likelihood Estimation of Linear and Log-Linear Dynamic Models for Spatial Panels. Geographical Analysis, 2005, 37(1): 85-106.

[3]TONEK, TSUTSUI M. Dynamic DEA with network structure：A slacks-based measure approach. Omega, 2014, 42(s1): 124-131.

[4]Zeng Jian, Zhang Tongtong. Problems and Countermeasures of economic transformation of resource-based cities under the new normal And Path Selection. Theoretical Discussion, 2017(1): 81-86.

Research on the action mechanism of practical teaching in journalism course system

Chen Liu
Railway police college, Zhengzhou 450000, Henan province, China

Abstract: in order to better adapt to the development of the news industry in the new media environment, and to export more professional talents to the news industry, more and more universities in China have set up news majors in combination with their own positioning and characteristics. Although there are different ideas and approaches in professional construction, the overall goal is the same, and the curriculum system is also similar to the structure of professional courses. In the aspect of curriculum construction, especially specialized curriculum construction, the author believes that the practical teaching has great potential in promoting the development of specialized curriculum theory and the practice of specialized curriculum teaching reform, and its role is irreplaceable.
Keywords: news course; Practical teaching; Series action; Interaction; Antijamming effect

Combined with the characteristics of journalism, close to the functional needs and practical environment is the basic goal of its professional course teaching. In the setting of professional courses, we should always adhere to the theory as the basis, practice as the guidance, more close to the practice process in the relevant fields, relying on in-class practical training, professional practice and graduation practice to carry out teaching, vigorously promote actual combat teaching, explore various advantageous resources of the course, and truly realize the integration of training and combat.

1. PRACTICAL TEACHING PLAYS A CONNECTING ROLE IN THE TEACHING SYSTEM OF JOURNALISM COURSES

At present, there is no real integration between the foundation of news course construction and the goal of talent quality training. The reason is that the key and difficult problems of news course construction are not fully grasped and accurately. Therefore, it is necessary to focus on the new situation, new tasks and new standards of the development of new media, focus on the specific functions of journalism based on the content and form of journalism, and set up courses scientifically. It is undeniable that some universities have prominent problems in the existing curriculum system, such as the low integration of curriculum content, the contradiction between the teaching content and other courses, the lack of theoretical height and practical depth, or the high repetition rate of teaching content, resulting in the waste of teaching resources. Under careful consideration, the fundamental problem is that curriculum theory is divorced from practice, empty and boring, which seriously affects the teaching quality and the speed of curriculum construction. In view of this, it must be treated with caution. Relying on the course group, the course content repetition rate can be reduced through course collision. For courses that are indeed lack of feasibility, it is necessary to give up decisively. In addition, new teaching elements should be introduced on the basis of actual practice, such as innovation of teaching mode, establishment of practical training programs for cooperation within and outside the university, establishment of assessment mechanism for internship contact, etc. Through the mutual integration of various factors and mutual connection, the author gives full play to the role of practical teaching in the teaching system of journalism courses.

1.1 innovation of teaching mode

Education for all-around development in recent years, the practice and it is not hard to see in the construction of the standardization of comprehensive talents, innovation is the core content of the reform of teaching mode, teaching reform is the combat must carry out a priority, and meet the current “after 90” and even “00” after college students eager to care, linked to, eager to express the psychological demand of a kind of teaching. From the American scholar bruner’s discovery learning teaching model to the German scholar wagenschein’s example teaching model to the participation teaching model advocated by almost all education scholars nowadays, the influence of practice teaching on today’s teaching reform is everywhere. Apart from the factors of teaching popularity and model, from the perspective of the construction of news courses, the practical teaching mode is not only conducive to deepening the theoretical system of courses, but also carries out “dehydration treatment” on practical training courses, which ensures the high efficiency and practicality of practical training content. Through innovative practical teaching, we can effectively put together and link up the actual combat modules of each course, and finally form a complete actual combat assembly line. Therefore, the scientific practical teaching model not only provides relatively clear standards for the construction of journalism courses, but also ensures that the core teaching content of each course can be effectively linked, thus consolidating the overall theoretical and practical system.

1.2 establishment of practical cooperative relations

Another concentrated embodiment of effectively promoting the construction of journalism courses through practical teaching is to establish and strengthen the practical cooperation between the school and the outside. The mode of practical cooperation between the school and the outside can not only solve the shortage of talents, technology and other resources in the news functional departments, but also solve the problem of insufficient practical ability of professional teachers. Through the cooperation and joint training of news talents, the center of education and function orientation of the specialty should be adjusted, the cooperative education mechanism should be established, the training of news skills should be highlighted, and the quality of talent training should be constantly improved. At present, this mode has basically covered the journalism majors of major universities nationwide. Some universities have further expanded the scope of cooperation by combining their own development characteristics and educational background, which is more practical and plays a more obvious role. It can be seen that practical teaching not only plays a series role in the teaching content of news course system, but also plays a better coordination and series role in various internal and external resources of course construction.

2. THE INTERACTION OF PRACTICAL TEACHING IN THE TEACHING SYSTEM OF JOURNALISM COURSES

The essence of actual combat teaching is to teach according to the requirements of actual combat, to practice according to teaching, so that teaching and war become one. Its standard asks to design teaching content according to the mission that the student bears in the future, design teaching link according to actual combat environment, equip with teaching equipment according to actual combat standard, “move forward” classroom to actual combat, “extend” actual combat to classroom.[1]Achieve its in news interaction in the class teaching system, first of all, to extract the combat teaching various elements in the form of performance, in addition to the curriculum elements, teaching target, teaching mode, teaching resources and so on all has certain influence on construction course, practical teaching goal of science formulation and implementation, the teaching mode of comprehensive utilization of high efficiency, are conducive to the development of teaching resources and improve the expression of course content and the combination of theory and practice of curriculum. However, with the continuous upgrading of news functions in the new media environment, the integration process of various elements of practical teaching pattern is often accompanied by a certain randomness, which increases the cost output of news course construction and the effect is often unpredictable. Therefore, the positive interaction in this paper is analyzed and demonstrated in a relative period of time, with a certain stage, which can be summarized from three aspects:

2.1 plan the course implementation plan by correctly interpreting the actual teaching objectives

The necessity and feasibility of journalism major is closely related to its professional training objectives, and the realization of training objectives largely depends on the teaching process. It can even be said that the training objectives are actually set in combination with the teaching objectives. As an important teaching mode in journalism courses, practical teaching has become a key factor to be considered when setting teaching objectives, thus forming practical teaching objectives in the course implementation. Scientific formulation and in-depth interpretation of actual combat teaching objectives are of great benefit to the construction and implementation of the curriculum system. The optimized curriculum system not only makes the curriculum structure more stable, but also reflects the rigorous actual combat teaching process and rigorous practical teaching ideas. Therefore, in order to strive for the positive development of this interactive relationship, we should pay special attention to the following issues: 1) the curriculum construction should always take the actual combat demand as the starting point, and the curriculum positioning divorced from the actual combat demand is worthless and must be decisively abandoned.2) practical teaching goal is not the course goal, the two goals have a certain degree of fit, but the target extension is not the same, in order to deliberately meet the practical teaching goal and the wrong definition of the course goal.3) both practical teaching objectives and curriculum setting should be based on professional training objectives. Once it deviates from professional positioning and talent training direction, it is necessary to re-examine the relationship between the two and their interaction.4) the curriculum implementation should be in line with the development and change of actual combat teaching objectives. Any lagging curriculum standards should be eliminated in time or integrated as soon as possible according to the actual combat teaching objectives.

2.2 innovate the actual teaching mode through the effective setting of the course content

News course system construction on the basis of the course content, but the plate was divided by directivity of the course content, such as social form plate, plate function strategy, etc., the purpose of the division on the one hand, make the curriculum structure more clear, on the other hand according to the nature of plate can be defined the direction of actual combat, thereby improving, innovation, practical teaching mode, use the most appropriate teaching methods to deepen students’ understanding of course content. Combined with the experience of actual combat teaching, the first thing is to recognize the course positioning and fully demonstrate the feasibility of actual combat teaching in the course application. Secondly, carefully analyze its scientific nature, establish the correct curriculum content practice mode. The practical teaching mode which is not suitable for news course content cannot be used by force. Otherwise, it will not only fail to effectively connect courses, but also cause the loss of course resources. Thirdly, no matter what mode is adopted, the disconnection between theory and practical teaching should be prevented. Actual combat teaching is not completely separated from the theoretical teaching mode, on the contrary, the strong support of the theory will make it more vivid, the vision is broader. Finally, the course content should be planned as a whole to correctly understand the relationship between different modes. When multiple modes are used interchangeably, teachers should predict their effects in the principle of stability and flexibility, and then make judgment and choice.

2.3 improve the level of curriculum integration through the gradual improvement of practical teaching resources

The goal of curriculum construction is to build a curriculum system with strong scientific nature and high social adaptability, so as to cultivate professional talents adapting to functions and social development. Therefore, the vocational integration level and social integration level of curriculum are the key to test the quality of curriculum construction. The vocational and social integration level of the course is caused by a variety of factors, and its foundation is derived from various resources of the course teaching. Only constant improvement of the course teaching resources can ensure the stability and adaptability of the course implementation, and promote the course development through the overall construction of the teaching resources. In the beginning, the process of refining the advantages of practical teaching resources for journalism majors was like stripping the silk from the cocoons, but it seemed to slow down after going through hardships. The fundamental reason lies in the fact that the integration process has entered the bottleneck stage at the present stage. The integration of teachers and professional resources, the integration of professional and curriculum resources, and the integration of curriculum and co-construction resources has become a difficult problem. Therefore, it is necessary to speed up the pace of improving actual combat teaching resources and strive for substantial progress in course construction, but at the same time, it is also necessary to pay attention to the process and integrity of resource improvement. Otherwise, haste makes waste. This practice actually ignores the essence of actual combat teaching and violates its teaching rules.

3. THE ANTI-INTERFERENCE EFFECT OF PRACTICAL TEACHING IN THE TEACHING SYSTEM OF JOURNALISM COURSES

In general, its interference factors mainly come from five aspects, namely, environment, function, concept, system and resources. These factors must be considered and actually exist in the application process of practical teaching. It usually produces double or multiple interference to news courses, and then the overlapping interference results. Taking the dual interference effect as an example, the variability of the actual combat environment and the lack of professional resources usually lead to the decline of the competitiveness of the journalism major, thus affecting the overall adaptability of the curriculum. If the professional resources lose the development prospect or the development cycle is too long, the stability of the curriculum structure will be reduced. The lag of relevant teaching system and the imbalanced development of related functions will make the course system deviate from the direction to some extent. The obsolete subjective ideas, sluggish transformation and imbalanced objective functions will lead to the teaching mode becoming less and less suitable for the curriculum connotation. In view of this, the dual or multiple interference of the influencing factors can be prevented or reduced by inhibiting their interference sources.

3.1 actual combat teaching can quickly adapt to the change of actual combat environment

Actual combat teaching is a kind of teaching according to the combat requirement under the environment and condition of approximate actual combat, which covers the fundamental and contemporary requirements of modern teaching [2]. It can be seen that the simulation of actual combat environment is very important in actual combat teaching, which is closely related to journalism. As the change of actual combat environment may change the core actual combat content, actual combat teaching should be prepared for a rainy day and adjusted in time according to the new situation. It should be said that the actual combat teaching has innate advantages in adapting to the actual combat environment, which is also the core teaching embodiment. For this reason, it has greatly enhanced the social adaptability of the course content and the practical cognition of the course.

3.2 practical teaching can timely detect the imbalance of functions

The overall development of journalism is obvious to all, but the problems in its development are also very prominent, among which is the imbalance in the development of local functions. Functional imbalance reflects a deviation in understanding of its functional work and a wrong judgment in actual resource allocation. It is usually not easy to be detected before causing specific losses, and there is a lack of corresponding inspection standards in the process of performance. Actual combat teaching is a teaching process based on actual combat function. Therefore, through actual combat teaching analysis, we can timely detect the phenomenon of functional imbalance and its impact, and indirectly promote the improvement and development of specific functions through actual combat teaching process.

3.3 practical teaching can promote the development of the concept of curriculum construction

From the perspective of the process of news course construction, it has indeed achieved periodic results, which is closely related to its bold innovation and bold attempt. However, the course construction process is not always smooth sailing, and after overcoming all difficulties, it will often experience the bottleneck of development. Under such circumstances, it is necessary to either continue to make bold and bold plans or be satisfied with the status quo. Different ideas will inevitably lead to different choices. The key to the correct concept of curriculum construction lies in practice. Through practice, we can broaden our thinking, stand higher and see further, and then guide the whole process of curriculum construction with scientific concept and apply it in practice.

3.4 practical teaching can promote the innovation of curriculum reform system

System, as a standardized form of contract, is the guarantee for the steady progress of curriculum reform. Relying on system, it can not only obtain more resources and promote the scientific construction of curriculum system, but also facilitate the in-depth practical cooperation projects inside and outside the school and realize the application of actual combat teaching in the news curriculum system. On the contrary, through practical teaching, loopholes in the course of curriculum reform can be found in time. For those systems that are too rigid and obviously not conducive to curriculum reform, innovation should be encouraged to ensure that there is no contradiction in the implementation of the system, which can not only reduce the teaching burden of teachers, but also improve students' learning initiative.

3.5 practical teaching can accelerate the pace of improving course resources

The construction of practical teaching resources and curriculum resources often develop simultaneously and influence each other. One party's resources are also required by the other party's resources. Any lack of resources may lead to the failure of professional construction. Specifically, the perfection of the combat teaching resources can improve the professional and social integration of curriculum, practical teaching process itself also is helpful for the improvement of the curriculum resources and the integration, through the practical teaching process journalism professional positioning can be more clear, course plate directivity of the be clear at a glance, the essence of curriculum and externalization resources problems will be readily solved.

What needs to be emphasized specially is that, realizes the actual combat teaching the anti-interference function its premise is must guarantee each kind of essential factor to be able the balanced development, the truth is similar "the barrel law", how much water the bucket can hold depends on the shortest that plank, any shortboard in each essential factor appears will be difficult to realize the anticipated goal. In addition, anti-interference effect does not necessarily make the dual or multiple interference effect of the source of interference completely disappear, as long as the purpose of digestion or desalination can be achieved. Because the combat teaching process itself has been modified, the interference elements of change along with the process time and want to set in advance or in a short period of time for correction in reality often cannot be achieved, which further shows that the interference effect of dispelling effects than the positive interaction effect of gain in the news in the construction of curriculum more difficult to reflect.

ACKNOWLEDGEMENT

University-level educational reform project of railway police college "A study on the integration of practical training teaching and theoretical teaching of police public relations course in public security undergraduate colleges" (project number: JY2017012)

REFERENCES

[1]Li Dapeng. How to promote practical teaching reform in academic education. China youth daily, 2016-11-7(9).

[2]Guo Jianxi, Lin Wei, Hao Xiaoli. Thoughts on promoting practical teaching. Continuing education, 2016(11).

Piano Enlightenment Teaching——A Case Study of Children's Teaching

*Mingxiao He, Mengjia Lv, Instructor Xiong Yu**
Grade 2016, Music Department, School of Teacher Education, Quzhou University

Abstract: "The sound of piano was firstly brought by F. F. Chopin to us." The piano popularization education in our country has rapidly developed with the reform and opening up of the country. The number of children that learn piano is gradually increasing and preschool is also brought forward. On the one hand, it promotes the development of piano teaching. On the other hand, it also proposes higher requirements for the piano teachers. In Training of Performance Skills in Piano Teaching.
Keywords: Enlightenment of child piano; importance of fundamental teaching; cultivation of children's interest in piano

1. INTRODUCTION

At the end of 1970s, with the reform and opening up and economic development, people's living standards have been increasingly improved, so they have paid more attention to the spiritual and cultural demands. In the new century, the Chinese education field has begun the process of fully promoting quality education. At present, the national social education park with children as the subject has been formed; piano has become the top musical instrument for preschool education of children in many economically developed countries. The long-term research results of scientists indicate that learning piano is the most effective approach of developing the right hemisphere and child intelligence. More and more parents begin to attach great importance to cultivating children to learn piano. The enlightenment teaching of child piano has become the research subject of teachers and scholars.Fan Hexin studies and explores how to master the disciplines of psychological activities in several different stages in the training process of performance skills from the perspective of athletic psychology. In On Child Piano Teaching, Li Wenlan mentions: strengthen the standard of piano enlightenment education methods of children, cultivate the music quality of children; the children are at the golden period of physical power and intelligence development and the important stage of learning the piano. In Teaching Guidance of Simple Piano Course of John Thompson, Yao Fang illustrates that the reason for the popular teaching materials of John Thompson in child piano enlightenment does not lie in the market effect nor the collection of some sensational materials. By summing up and learning from the researches of experts and scholars, this paper discusses about some problems in the piano enlightenment teaching for children.

2. PROBLEMS IN PIANO ENLIGHTENMENT TEACHING FOR CHILDREN

There are multiple problems in the piano enlightenment teaching for children. Some of the piano enlightenment teachers do not realize the value and significance of teachers' accompaniment to the teaching activity; they hold that it is enough to merely cultivate children's interest in music itself, and do not pay excessive attention to the necessary procedure of forming its interest.

2.1 Selection and use of enlightenment teaching materials

With the development of piano popularization education in our country, there are more and more enlightenment teaching materials that are introduced in and written. On the one hand, it provides the space of reference and selection for enlightenment teaching. On the other hand, it also increases the difficulty of material selection. The teaching material plays the important role in the success or failure of teaching. Therefore, before starting the child enlightenment teaching, teachers should firstly make preparations of the teaching materials. Among the popular child enlightenment teaching materials, they are roughly divided into three types of stave entry types, namely treble staff introduction method, Central C introduction method, and multitone introduction method. The traditional enlightenment teaching material Basic Piano Course of Beye adopts the treble staff introduction method. Volume 1-5 of Shallow Piano Course of Thomson that is widely applied at home starts from Central C. Meanwhile, it teaches the bass and treble stave, which is gradually expanded to the high and low pitch. In addition, there is also the pitch interval introduction method and various integrated introduction methods. When we select the child piano enlightenment teaching materials, we should consider about the characteristics and limitations of a certain entry method, and also comprehensively measures the scientificity, interest and practicality of the teaching materials.

2.2 The finger strength of children is low

The fingers cannot stand still. The common symptom is the sunken fingertips, which is the "folded fingers". The "folded fingers" cannot directly pass the strength of playing to the fingertip, so that the playing sound is not that clean. Some children think if they use the fingers in a large scale by raising the fingers, their fingers will be folded, so they do not dare to practice it by raising the fingers. However, to raise the fingers in a lower way and make it the strength of wrist will lead to the poor voice quality of the keyboard. The finger strength of children is insufficient. After all, they are still young, not fully developed and still in the stage of growth.

2.3 Failure of concentrating the attention

In the learning process, attention is the only door of opening our mind. The wider the door is opened, the more knowledge we learn. Once the attention is scattered or cannot be concentrated, the door of the mind will be opened. All the useful knowledge information cannot be input. Therefore, the French biologist Georges Cuvier says, “the first quality of talent is attention.” Under normal conditions, attention enables our psychological activities towards a certain thing, so that we accept some information, inhibit other activities and other information, and concentrate all the psychological energy on the pointed things. Therefore, good attention will improve our working and learning efficiency. The attention obstacle is that people cannot point the psychological activities towards a certain concrete thing, or cannot focus all the energy to this thing, and meanwhile inhibit the attention of irrelevant things. The reasons that lead to this condition are complicated. Many severe psychological disorders may arouse the obstacle of attention. For students, they are highly nervous and anxious out of the heavy learning burdens and excessive psychological pressure, so that they cannot concentrate their attention. In addition, out of the insufficient sleep, their brain cannot be fully relaxed, which may also lead to the scattered attention.

2.4 Feeling bored at learning piano

When children are not interested in piano or the teachers teach the theoretical knowledge, children will feel bored, lack enthusiasm of piano, feel it boring and meaningless. They may firstly feel it interesting and funny, and play it carefully. However, as the difficulty is deepened, the skills get complicated and the teachers assign much homework, children have no time to practice playing the piano, will gradually feel tired of it and even want to give it up.

2. 5 Lazy in practicing piano

Learning the piano is also a tough and everlasting job. When children firstly contact piano, there will be a period of excitement, but they will gradually turn lazy, find excuse to avoid practicing the piano, purposefully delay time so as not to practice it. The assignment they finish is of poor quality and they cannot concentrate their thoughts in class nor get active. At this time, children enter the “difficulty period”. Reasons that lead to the difficult period of children include: children in this period will contradict against new knowledge and feel bored at piano practice. It requires the quantitative accumulation process so as to realize the qualitative leap. Their progress is obviously slowed down; the repeated work is increased; they fail to pass it again and again, so they are obviously bored and want to give it up. Out of the excessive requirements of parents or teachers, they have the idea that however they work hard, they cannot meet their requirements. Children will feel it tough to practice the piano, so that they cannot ensure the time of practicing the piano or they fail to practice it well for they are not fully immersed into it. The education method is improper. Excessive strictness may lead excessive psychological burdens to students and the sense of fright. Excessive indulgence may make students feel indolent and fail to make progress, so that they lose the interest of continuing to learn it. Check whether the other aspects (school education or other interest education) are proper. When students obviously feel the increased learning pressure, they urgently need a process of adjustment and adaptation.

3. SOLUTIONS TO PROBLEMS IN PIANO ENLIGHTENMENT TEACHING FOR CHILDREN

Targeting at the existing problems in child piano enlightenment teaching, we have to find the according solutions and the according measures so as to give the proper enlightenment education.

3.1 Cultivate the interest of students

In playing the piano, fingering does matter. But what matters the most is that they will like playing it all their life. At present, some parents compulsorily ask their children to learn the piano, which will make the children disgusted. Therefore, the key to the entry level is not to make fingering kill interest.

What is the correct behavior from landing to practice? The first step is to rapidly learn accompaniment, play and sing rather than excessively correct the fingering. At the beginning, do not follow the suggestions of the academism and focus on fingering; instead, we should enable children to randomly play the songs after understanding the basic fingering requirement, especially the child songs and pop songs. The reason why children like the child songs and pop songs is that they are simple and pleasant. After they feel it interesting, turn to the academism for advice for fingering. They should slowly accept the boring fingering training when they have the interest of performing interest. Second, set up a performance stage in the circle of relatives and friends. Children will soon be engaged in the practice of family party after mastering the accompaniment and rhythm. This is the simplest secret of improving children’s interest of learning piano. For example, we may learn to sing some touching child songs and healthy pop songs with children and then sing to the relatives and friends. In this way will children be increasingly interested in it.

3.2 Form the good habit

Slowly practice it at the beginning. For the new songs, children must slowly practice it at the beginning for they lack the visual play ability. The role of slow practice is that the brain has sufficient time of dealing with and allocating the attention in face of various information such as finger and keyboard, so as to avoid the rate of error and avoid the wrong tones at the beginning.

Practice it in different stages. The performance of long songs is very tiring and it is inconvenient for memorizing. Divide the song to practice it better.

Mainly practice the difficult points. This really matters. When there is the technical difficulty in the song, if they do not focus on practicing it, it will lead to the problem of the overall rhythm. And it will be increasingly difficult if they do not practice it.

Practice it with different hands. To practice it with different hands may simplify the song.

Avoid mistake. In the first several times of practicing the new song, we must avoid the wrong tone. This is because it easily leads to the disorder once the most fresh memory is wrong and it is difficult to correct it once it leads to the chronic mistakes.

3.3 Emphasize the fundamental teaching

The piano enlightenment teaching is just like building skyscrapers. We should firstly make the foundation solid and straight. If we make it weak, the building will also collapse. The enlightenment stage in piano teaching directly influences the development prospect of students. If it is made sound, students will love the art of piano, lay a solid foundation and develop towards a higher level. The irresponsible enlightenment teaching will mislead parents and students, so as to form many non-standard and even wrong habits and methods. It is difficult to be corrected even if they meet good teachers.

3.4 Cooperation and guidance of parents

The failure of the child piano enlightenment teaching depends on three aspects. The first one is the talent and diligence of children. The second is the level and attitude of teachers. The third is the guidance and cooperation of parents. The three mutually influence one another. Teachers should not only teach the students, but also guide parents to give proper guidance. The proper guidance of parents firstly comes from parents' correct understanding of children's learning the piano. For most of the children, to learn the piano is merely to improve quality, develop intelligence and cultivate ability. Even the children with great talent will not set up the objective of becoming a pianist when they just accept the enlightenment teaching. To propose the unrealistic requirements tends to the contrary effect. The cooperation between parents and teachers is shown in the guidance of all the practices after class. When the young children firstly begin to learn the piano, parents should firstly help children form the good habit of practicing the piano. For example, they should clean their hands before practicing the piano, trim the fingernail, check the height and position between the bench and the foot pad, arrange the proper light, make various preparation works of practicing the piano, and avoid the condition of drinking water and going to the toilet. Once they realize it, they may focus their attention and meet the requirement of practicing. Out of the intelligence and ability of children, parents may help them record the class requirements proposed by teachers, keep emphasizing it in practice and cultivate their ability of independently practicing the piano step by step. Parents should encourage children for their learning attitude and performance, and propose the defects, so as to make them perform better.

4. SUMMARY

"Enlightenment" means the basic and elementary knowledge for beginners. Therefore, "enlightenment" is called "entry". In terms of the division problem of the piano learning stage, some people attribute enlightenment teaching to "primary stage"; some list enlightenment teaching a stage. The latter aims to highlight the importance of enlightenment teaching, so as to arouse the enough attention of people.

REFERENCES

[1]Li Feilan. On Child Piano Teaching. People's Music, 1980 (5)

[2]Fan Hexin. Training of Performance Technique in Piano Teaching. Music Weekly, 2000.

[3]Tian Ye. Diversified Culture and Child Education-Research of Child Course Development Mode in Macao. Shanghai: East China Normal University, 2002.

[4]Yao Fangzheng. Teaching Guidance of Simple Piano Course of John Thompson. Shanghai: Shanghai Music Press, 2007. (4).

[5]Ying Shizhen. Research of Piano Art (Upper)-Piano Teaching and Performing Art. Beijing: People's Music Publishing House, 2003. 490-492.

[6]Zhou Wei. History and Status Quo of Piano Teaching Research. Beijing: Piano Art, 2005, (9): 36-38.

[7]Tao Cheng. Review of World Piano Basic Course 1. Hefei: Journal of Anhui Normal University, 1994. (2): 210-21.

[8]Ying Shizhen. Piano Teaching Methodology, Beijing: People's Music Publishing House, 2007. 28-35.

Determination of the Number of Drones Based on Fuzzy Comprehensive Evaluation Algorithm Model

Sheng Li[1*], Xiaohan Song[2]
[1] College of Software, Sichuan University, Chengdu City, Sichuan, China 610000
[2] College of Economics, Sichuan University, Chengdu City, Sichuan, China 610000

Abstract: The most influential hurricane in Puerto Rico caused catastrophic damage and countless deaths in 2017. It destroyed most of the island's cellular communications networks, highways and roads, thereby depriving residents of the right to emergency services and life-saving equipment. Therefore, it is crucial to design an effective disaster response system to save more lives. The determination of drones should be sufficient for medical supply and road network video reconnaissance. This article has indeed studied the types and quantities of drones.
Key words: drone; ahp; fuzzy comprehensive evaluation

We divide and divide the five hospitals into three areas using a divide-and-conquer strategy. Each of the three iso cargo containers is responsible for only one sub-area. We apply the Analytic Hierarchy Process (AHP) to get the weight of the main factors of the drone [1]. Then, we present a model based on the fuzzy comprehensive evaluation algorithm to evaluate the drone and then determine the type of drone we chose for each iso cargo container. Next, we use linear programming to determine the number of drones [2].

1. DATA COLLECTION

According to the analysis of the parameters of the unmanned aerial vehicle in reality, the maximum flight time when the UAV is loaded to the limit is 5% shorter than when there is no cargo. Based on the analysis of other post-disaster assistance cases, we conclude that the grid and other communication networks can be rebuilt in nearly 90 days. The number of pharmaceutical packaging configurations in the iso cargo container only needs to meet the 90-day requirement. According to the map near the Puerto Rico machine, detailed analysis of the factors related to the medical supply and system construction, such as the terrain and hospitals near Puerto Rico.

2. AHP MODEL

Taking into account the location of each iso cargo container, we developed the ahp model and considered four main factors to evaluate the drone, which are the drone's size, maximum payload capacity, maximum flight distance and video capability.

For iso cargo container a, the importance of each standard ranking from high to low is video capability, maximum flight distance, volume, and maximum payload capacity. Here, we guarantee the task of video reconnaissance, so we give it the maximum weight (in other cases it is the same).In addition, because i, ii hospital is far away, the importance of the maximum flight distance should be placed before other factors.

Starting with the first standard, we construct a comparison matrix using the 1-9 comparison method. Then we get the weight of the volume, the maximum payload capacity, the maximum flight distance and whether they are equipped with cameras. By weighting the four silvers of volume, maximum payload capacity, maximum flight distance and video function, the maximum eigenvalue is $\lambda= 4.0730$ and the consistency ratio is 0.0273.

For ISO Cargo Container B, we also do similar work. Here, the importance of each criterion sorted from high to low is video capability, maximum payload capacity, volume, maximum flight distance due to maximum medical supply demand, and the shortest distance between two hospitals. Similarly, by calculating the weights of the above four factors, the maximum eigenvalue is $\lambda=4.1803$, and the consistency ratio is 0.0675.

ISO Cargo Container C has also done a similar job. Here, the importance of each standard from high to low is video capability, maximum flight distance, maximum payload capacity, volume to meet the medical needs of hospital IV, and comprehensive considerations for video reconnaissance. By calculating the weights of the above four factors, the maximum eigenvalue is $\lambda=4.1659$, and the consistency ratio is 0.0622.

3. FUZZY COMPREHENSIVE EVALUATION MODEL

As our data shows, we need to provide assessments and rankings for drones based on the number of drones, performance and configuration capabilities. Here, we use a multi-level fuzzy comprehensive evaluation algorithm to scientifically score it.

First, we determine the membership function.

3.1 Volume member functions

We simply use a unary linear function to describe the negative correlation between volume and our rank.

$$\mu_{volume} = \begin{cases} 1, 0 \le x \le 15000 \\ \dfrac{200000 - x}{185000}, 15000 \le x \le 200000 \\ 0, x \ge 200000 \end{cases}$$

3.2 Membership function of maximum payload capacity

Similarly, we use a unary linear function to describe the positive correlation between the maximum payload capacity and our rank. Here c represents the maximum payload capacity.

$$\mu_c = \begin{cases} 0, 0 \le x \le 3 \\ \dfrac{x-3}{12}, 3 \le x \le 15 \\ 1, x \ge 15 \end{cases}$$

3.3 Membership function of the maximum flight distance

Again, we use a unary linear function to describe the positive correlation between the maximum flight distance and our rank. Here d represents the maximum flight distance.

$$\mu_D = \begin{cases} 0, 0 \le x \le 12 \\ \dfrac{x-12}{23}, 12 \le x \le 35 \\ 1, x \ge 35 \end{cases}$$

3.4 Evaluation score

Here we determine the fuzzy relation matrix.

$$R = \begin{pmatrix} 0.807 & 0.974 & 0.595 & 1 & 1 & 0.865 & 0.987 \\ 0.042 & 0.417 & 0.917 & 0.667 & 1 & 1 & 1 \\ 0.493 & 1 & 1 & 0.261 & 0.132 & 0.852 & 0.220 \\ 1 & 1 & 1 & 1 & 1 & 0 & 1 \end{pmatrix}$$

Use weights based on ahp:

WA=(0.0926 0.0573 0.3447 0.5054)□

WB=(0.1344 0.2386 0.0422 0.5848)□

WC=(0.0894 0.0428 0.2961 0.5717)□

The comprehensive evaluation score of the unmanned aerial vehicle in the iso cargo container a is

Ba=WaR=(0.9642 0.9577 0.7262 0.7001 0.4311 0.7299)□

The comprehensive evaluation score of the unmanned aerial vehicle in the iso cargo container b is

Bb=WbR=0.8574 0.9258 0.8894 0.9633 0.3908 0.9653□

The comprehensive evaluation score of the unmanned aerial vehicle in the iso cargo container c is

Bc=WcR=0.9727 0.9602 0.7669 0.7424 0.3724 0.7679□

We can see that A drone B performed best in ISO freight containers, followed by C. In ISO freight container B, Drone G scored the highest.In ISO Cargo Container C, we better choose Drone B.

In addition to the evaluations we have made above, one must also note that the Drone H is used to recover signals, which is the most important in the affected areas, where most cellular communication networks are damaged, power and Battery service interruptions still exist.Months.So every drone fleet must include a Drone H.

4. CONCLUSIONS

As for the number of drones, we ensure that a flight of the drone fleet can meet the daily needs of the hospital.In addition, it is reasonable to minimize the drone we use.

We use simple linear programming to determine the numbers.For cargo container A, we placed three Drone Bs (two for HospitalI, one for HospitalII) and one drone H. For cargo container B, we arranged two Drone G and one Drone H. For cargo container C, we Use a Drone B and a drone H.

REFERENCES

[1]Li Bing. Disaster relief experience left by the hurricane. Community, 2013(1): 59-59

[2]Zhao Deyu, Wei Lijun, Chen Qingshan, Chen Huowang, “Combination Heuristic Algorithm for 3D Packaging Problem”, Journal of Software, Vol.18, No.9, September 2007, pp.2083-2089

Analysis on the Problems in the Design of Chemical Process

Xuerong Wang, Di Fang*
College of Innovation and Entrepreneurship, Liaoning University of Petroleum and Chemical Technology, Fushun, Liaoning, 113001, China

Abstract: The chemical industry plays an important role in the modern industrial system. The chemical industry uses industrial raw materials for power, construction, mining and other industries. The most important part of the chemical production process is the chemical process design. This paper analyzes the existing safety problems by analyzing the chemical process and proposes certain solutions.
Keywords: Control; Chemical process; Safety issue

1. INTRODUCTION

The consistency, innovation and design scale of chemical technology are three main characteristics in its use. Chemical technology is mainly used in the process of converting various chemical materials into chemical products [1]. There are three stages in this process: rolling and simple extraction processing and preparation of chemical materials to be processed. Then prepare the appropriate environment and conditions to use chemical principles to generate chemical reactions, perform core reaction steps in the chemical process, and prepare for the final chemical process transformation; finally, the product is again screened according to the final standard to ensure the final The finished product meets the design requirements [2].

2. CHARACTERISTICS OF CHEMICAL PROCESS

The information and data in the chemical design process are absolutely reliable and accurate, because the information required by the chemical industry research institute to provide chemical process design, the data and information provided by the research institution will have a certain degree of error due to objective factors, chemistry The variety of processes in production leads to the complexity of the chemical process, the cumbersome and complicated chemical process, the high requirements on the equipment, the specifications of the equipment have more stringent requirements on non-standard or performance-based dimensions, so the equipment Choose to be cautious. In addition, the cumbersome chemical process has led to huge investment, and in addition, the chemical process investment is huge, the complexity of the pipeline and the special characteristics of the loading and unloading connection make the content of the development process very difficult, which requires developers to further in the design.

3. SAFETY ISSUES IN CHEMICAL PROCESS DESIGN

3.1. Safety Problems Caused by Chemical Equipment

The choice of chemical equipment is particularly important. If the quality of the equipment does not meet the standards and requirements, it can lead to serious safety accidents such as explosions and toxic gases. In order to avoid this problem, the quality standards and parameters of chemical equipment should be strictly required, and should be scientifically determined according to the measurements of the professionals in the relevant departments. Secondly, the control of chemical raw materials should be analyzed in detail according to various changes caused by different chemical properties. The quantity of chemical raw materials should also be controlled based on the measurement results of precise chemical tools to reduce the harm to workers and the environment. .

3.2. Safety Hazards of Chemical Waste

Chemical production cannot avoid the generation of chemical waste, which is very harmful to the environment and may even cause great safety problems. On the one hand, improper handling of chemical waste will produce harmful gases, causing environmental pollution. If it has not been cleaned, or the protective measures in the transfer have not been implemented, it will cause harm to the workers involved in the work. Some chemical gases are formed during the chemical treatment process, and if a gas leak occurs, it will cause more pollution in the area. In addition, when handling chemical waste, the designated landfill site should be selected and buried in accordance with the provisions of the first level to avoid major environmental pollution problems.

3.3. Process Route Safety

The complexity of the chemical process determines that a variety of processes will be used in the production of chemical products, thus forming a variety of process routes. Based on economic and safety considerations, the factory will awaken comprehensive considerations to select the most suitable process route. Every route has such problems. Therefore, when the process is put into use, the safety of each link should be comprehensively considered to avoid the occurrence of some chain reactions and reduce economic losses.

3.4. Pipeline Safety

Pipes are the medium and carrier in the chemical process, so the safety of the pipeline plays a great role in guaranteeing the transportation and reaction progress of the whole raw materials. The position requirements of the pipeline must be designed after taking into account the characteristics of the chemical product to ensure the safety of the pipeline. In order to avoid the leakage of raw materials and safety accidents, it is also necessary to consider the connection part of the pipeline to avoid corrosion.

4. CONTROL MEASURES IN CHEMICAL PROCESS DESIGN

4.1. Process Design Safety Control

The choice of materials is important during the design process. The quality of the material affects the design to a certain extent, ensures the rationality of the design product, and makes reasonable arrangements for the monitoring of the production process and the improvement of the material properties. Considering the use of resources, it is necessary to reduce the inefficiency as much as possible. In the process, the safety factor should be fully considered in the selection of chemical materials to ensure that the system can be safely produced normally.

4.2. Reasonable Selection of Chemical Equipment

The quality of chemical equipment is related to the overall operation of the chemical process and plays a very important role. Chemical equipment must meet standards to avoid safety incidents, endanger personnel, and select chemical equipment based on scientific analysis and rigorous calculations. Relevant personnel should analyze the chemical reactions of each device and design equipment that meets the standards. For different types of chemical reactions occurring in chemical processes, different characteristics should be used according to the chemical equipment. In addition, when designing the process, you can control the amount of material used, the heating rate and multi-stage reaction to reduce the pressure in the equipment and use external circulation cooling, the pressure relief device can avoid potential safety hazards.

4.3. Scientific Storage and Transportation of Chemical Raw Materials

Many safety risks cannot be avoided during the storage and transportation of chemical materials. Therefore, when formulating the standards of processing technology, a reasonable storage and transportation process is necessary. Only reasonable standards can guarantee that the process has no problems: First, the scientific and comprehensive use of chemical materials is the prerequisite for process designers to ensure the safety of equipment. Chemical composition and reaction conditions. Secondly, the chemical materials are separated and stored according to the established standards and conditions, and the temperature standards are set according to the heat resistance. Second, in order to avoid chemical reactions caused by the mixing of different substances, safety cannot be guaranteed, and transportation classification is a commonly used method during transportation. Finally, prepare a small warehouse in advance as a way to deal with emergencies.

5. CONCLUSION

The pace of modernization of China's chemical industry continues to advance, continuously improving the level of technology, and constantly updating the equipment of the chemical industry. The actual development of the chemical industry and the risk factors therein require the chemical process designers to conduct professional analysis. Only after analysis can the process be optimized through analytical factors, and effective improvement measures can be found for the safety problems in chemical raw materials. Ensure the safe and orderly development of China's chemical industry.

REFERENCES

[1]Niu Xiaohui, Analysis of safety problems and control in chemical process design, Cleaning World, 2018, 34 (11):63-64.

[2]Zhou Ronghao, Research on safety issues and control in chemical process design, Petrochemical Technology, 2018, 25(10):319.

Research on Financing Practice and Model Innovation of Technology-based SMEs—Taking the Technology Enterprise of Guanggu Science and Technology Park as an Example

Yi Liu*, Zhenwei Jiang, Jia Wu, Zhi Min, Ming Zhou
College of Finance, Hubei University of Economics, Wuhan, Hubei, 430000, China

Abstract: For a long time, the high financing threshold and narrow channel have always been important factors restricting the development of SMEs. However, since 2016 the government has introduced a series of policies to try to alleviate this dilemma. Therefore, this paper focuses on the Optics Valley Technology Park, clarifies the status quo from the perspective of the company's own operations and catering to the policy, and uses multiple regression analysis to explain the problems, and proposes solutions such as supply chain finance, business model optimization and intertemporal arbitrage.

Keywords: Technology-based SMEs; Model innovation; Binary logistic analysis

1. THE CURRENT STATUS OF SMES IN THE TECHNOLOGY VALLEY

Under the guidance of national documents, as of May 2018, the total number of high-tech enterprises in Wuhan Optics Valley Science and Technology Park reached 1,851, accounting for 60% of the total number of high-tech enterprises in the city, ranking fourth in the national high-tech zone and becoming a high-tech enterprise in Hubei Province [1]. By investigating 52 SMEs randomly sampled in the Optics Valley Science and Technology Park, 92.30% of the corporate financing channels are from banks, 80.76% of enterprises lack collateral for large loans, and 61.53% refuse to mortgage IP. 44.23% of the companies refused to hold the shares of the company held by the outside world [2].

2. THE REAL DILEMMA OF THE DEVELOPMENT OF SMES IN THE OPTICAL VALLEY SCIENCE PARK

2.1. Lack of Perfect Internal Accumulation Mechanism

Internal accumulation has many advantages such as low cost, low risk and high efficiency. However, the lack of internal accumulation is always accompanied by the entire process of survival and development of the enterprise. The technology-based SMEs in Optics Valley Technology Park are partially in the start-up period, and some are in the growth stage. The risk of technology research and development makes the capital investment at this stage with significant risks [3]. If the research and development is successful, it means that the company has entered the development stage of the growth period, and needs a lot of research and development funds to promote the funds, but there is no operating return [4]. Therefore, it must continue to compete in the market and compete in science and technology. The accumulation of internal funds at this stage is still insufficient [5]. When the enterprise reaches maturity, the certain market share makes the enterprise have certain market competitiveness. However, it still needs to invest a large amount of research funds to realize technological innovation and improve the service quality of customers. At this stage, a large amount of internal financial support is still needed.

2.2. Financial Environment and Service System Are Not Perfect

At present, China's financing guarantee system is mainly based on commercial guarantee companies, and the policy guarantee institutions are small in scale and cannot meet the financing guarantee needs of a large number of small and medium-sized enterprises [6]. The cooperation between banks and governments, venture capital institutions, scientific research institutions, high-tech industrial parks, industry associations and other stakeholders has not been deep enough. It is also urgent to provide comprehensive consulting services and support for small and medium-sized enterprises in different life cycles. strengthen. When assessing the intangible assets of technology-based enterprises, due to the lack of talents, it is necessary to cooperate with authoritative third-party institutions, but the lack of intangible assets assessment institutions also restricts the ability of commercial banks to carry out extensive technology finance business.

2.3. Bank and Enterprise Information Asymmetry

SME collateral, a shortage of collateral. However, the standard for bank lending, in simple terms, is to see whether the company has the repayment ability of the money, and the repayment ability is mainly reflected in the financial statements, accounting reports and the visibility of the enterprise. Many SMEs in the Optical Valley Science and Technology Park have asymmetric information due to imperfect management systems and incomplete information disclosure. In this way, the bank cannot grasp the overall situation of the enterprise, and cannot accurately understand the repayment ability of the enterprise, and will not lend. The technology-based SMEs in Guanggu Science and Technology Park have the characteristics of "technically intensive, capital intensive", "high risk, fast development" and "heavy growth, light assets". There is neither a formal financial statement nor a collateral with sufficient value as a guarantee, so it is difficult to obtain the trust of small loan companies. In addition, most of the working capital of SMEs is operated outside the system, and it is even more difficult for small loan companies to verify. The true cash flow of the company has greatly increased the difficulty of the technology-based SME loans in the Optical Valley Technology Park.

3. QUANTITATIVE ANALYSIS OF FACTORS AFFECTING FINANCING EFFICIENCY OF SMES IN THE TECHNOLOGY VALLEY

3.1. Sample Selection

The data comes from a field survey of technology-based SMEs in the Guanggu Science and Technology Park in Wuhan in July 2018.In order to better cope with the difficulty of financing small and medium-sized technology-based enterprises, and to avoid uncertainties, random sampling of small and medium-sized enterprises in the Optical Valley Science and Technology Park will be conducted to investigate the students' professional training, which will ensure the integrity of the questionnaire content to the greatest extent. Authenticity and reliability. A total of 52 companies were surveyed (Table 1), and 50 valid questionnaires were obtained with an effective rate of 96.15%.

3.2. Variable Selection and Model Building

3.2.1. Variable selection

Table1 Variable selection

variable	Variable meaning	Variable name	Calculation method
Dependent variable	Availability of financing and application rationality	Financing efficiency (p)	Probability of financing
Independent variable	Business growth, investment profitability	Main business growth rate (x1)	(Main income of the year - main income last year) / main income last year
	Solvency	Quick ratio (x2)	Quick-moving assets/current assets
	Capital cost	Management cost rate (x3)	Management cost / total investment
		R&D cost rate (x4)	R&D cost / total investment
		The actual annual interest rate of the loan (x5)	

3.2.2. Model establishment

Through the above analysis, in order to study the factors affecting the financing efficiency of SMEs in the Optical Valley Science and Technology Park, a binary logistic regression model is established as follows:

$$P = \frac{1}{1 + e^{-(\partial_0 + \partial_1 x_1 + \partial_2 x_2 + \partial_3 x_3 + \partial_4 x_4 + \partial_5 x_5 + \varepsilon)}}$$

Where ∂_0 is a constant, $\partial_1 \sim \partial_5$ is a coefficient of an independent variable, and ε is an error term.

The following structure was obtained according to IBM SPSS Statistics 24, and the data used during the period was collected by questionnaire and manually cataloged to obtain a binary logistic regression equation:

$$p = \frac{1}{1 + e^{-(-0.189 - 0.506x1 - 0.067x2 + 1.412x3 + 1.082x4 + 0.750x5)}}$$

It can be seen that the company's own rapid growth (main business growth rate), strong solvency (quick ratio), high bank loan interest rates can promote better financing, while management costs and R&D costs are invested. Corporate funds are in short supply.

4. OPTICS VALLEY TECHNOLOGY PARK'S SMES' SOLUTION PATH AND INNOVATION MECHANISM

4.1. Supply Chain Finance

Banks can obtain information on corporate transactions through the entire supply chain, including the amount of daily transactions, repayment ability and business conditions. After the bank understands the social status and economic strength of the enterprise in the entire supply chain, the moral hazard and information asymmetry between the enterprise and the bank are mostly eliminated. The bank no longer has to worry about the risk of default, and the technology-based SMEs can also increase. The possibility of obtaining a loan.

4.2. Entering the "New Third Board" to enhance corporate reputation

The "New Third Board" market is a non-listed company limited share price transfer system of Zhongguancun Science Park. It not only provides a good financing platform for small and medium-sized enterprises, but also regulates business operations and promotes the sustainable and healthy development of enterprises. Once a technology-based SME holds a core R&D success, it can often screen non-listed companies through the NEEQ.

4.3. Strengthening internal operations and making large-scale

Because the technology-based SMEs are in the initial stage or the growth period, the management organization structure is mostly flat: although the information transmission cost is low and there is no bias, the superior level coordination department has limited energy, and the time for linking external organizations is lacking. Therefore, small and medium-sized enterprises should develop detailed fund-use planning from the perspective of strategic development, so that each department can actively operate with a small amount of superior energy; in the case of effective control of risks, large-scale, use economies of scale and Pare Carrying out the effect, the resources and price factors form the core competitiveness of the market; actively cooperate with private banks, commercial banks, investment banks, fund management institutions, financial markets, equity investment funds, etc. to ensure the availability of financing channels Sex and diversity.

REFERENCES

[1]Wang Bin, Research on internal and external conditions for independent innovation of small and medium-sized enterprises in science and technology, Wuhan University, 2012.

[2]Fang Linyu, Research on the growth mechanism and vulnerability of independent intellectual property rights of small and medium-sized enterprises in science and technology, University of Science and Technology of China, 2010.

[3]Yang Ting, Research on the direct financing of SMEs in China, Tianjin Normal University, 2013.

[4]Hua Huiyu, Research on the financing of the new three board of science and technology small and medium enterprises, Suzhou University, 2014.

[5]Xu Li, Research on credit support for small and medium-sized enterprises in science and technology [d] Nanjing Agricultural University, 2012.

[6]Cao Qingchen, Research on financing advantages, effects and problems of SMEs in SMEs, University of International Business and Economics 2016.

Research on the Dragon's Physical Characteristics based on Gompertz Model

Ming Guan [1*], *Ze Deng* [2], *Ruiqi Liu* [2]
[1] *College of Resources and Environment, Northeast Agricultural University, Harbin, Heilongjiang, China 150030*
[2] *College of Life Sciences, Northeast Agricultural University, Harbin, Heilongjiang, China 150030*

Abstract: Game of Thrones has a plot: Daenerys Targaryen raises three dragons from infancy to adulthood. We assumed these dragons are at present. Based on the introduction of dragons in the novels and movies, we analyzed the physical characteristics of them and established the Dynamic Model of Dragon's Weight. We compared the young dragon to the Komodo Dragon, found that Gompertz model is the optimum fitting degree model after comparison. Using the dynamic model predicts the weight of a dragon will increase to 36.42 kg in 6 months. Then it would grow slower because of the limitation of food.
Keywords: Dragon's physical characteristics; Dynamic model; Gompertz model

1. INTRODUCTION

In the fictional television series Game of Thrones, based on the series of epic fantasy novels A Song of Ice and Fire, three dragons are raised by Daenerys Targaryen, the Mother of Dragons [1]. When hatched, the dragons are small, roughly 10 kg, and after a year grow to roughly 30-40 kg [2]. They continue to grow throughout their life depending on the conditions and amount of food available to them. Dragons are reptiles that are covered with scales and wings and feet. They spray fire, and their scales are very hard and thick, resistant to outside damage and flames burning. Consider these three fictional dragons are living today. Assume that the basic biology of dragons described above is accurate [3].

2. MODEL ASSUMPTION

When a dragon hatches, its young are about the size of a kitten, but an adult can grow to swallow a mammoth in one bite. The dragon has a self - attack defense mechanism, can emit dragon flame. They likes to eat mutton, fish, etc., like to use dragon flame to bake food first before eating. The dragons are unconditionally conditioned to grow throughout their lives, they are not sure of their maximum size, has two claws and two wings. And the dragon's wings were wide enough to fly long distances. The dragon is suitable for living in modern life without adverse reactions. And the dragons don't cause disease for any reason. Based on the above assumptions, we can draw the reference model of the dragon as shown in Figure 1.

3 ESTABLISH THE DYNAMIC MODEL OF DRAGON'S WEIGHT

3.1 Additional Assumptions

As a non-real animal, it is not convenient for us to carry out calculation. Through the idea of analogy, we compare the juvenile dragon to Komodo Dragon.

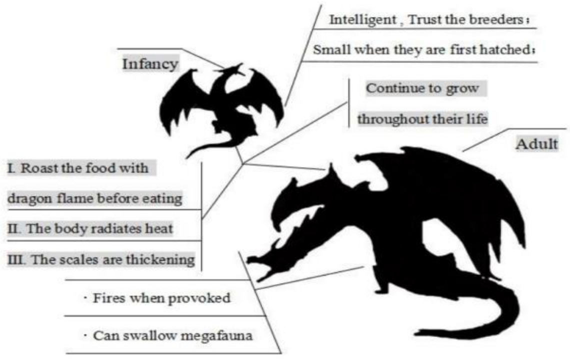


Figure 1 Reference model of the dragon

3.2 Model Establishment

We regarded the basic data of Komodo Dragon as the reference to the body mass of this lizard population at the age of 1, 2, 3, 4, 5 and 6 months. At the same time, we used three mathematical models, Von Bertalanffy and Gompertz to fit the average growth of the body mass. Food restriction on the growth of dragons isn't considered at this stage.

The body mass and daily increasing mass of Komodo Dragon at different ages are shown in Table 1.

Table1 Body Mass of Komodo Dragon at Different Ages

Months of age	The average quality /kg	Average daily Increase in mass /g	Relative growth rate /%
0	3.74		
1	8.48	153.13	77.58
2	13.24	158.74	43.83
3	18.79	179.09	34.66
4	23.24	148.45	21.18
5	26.7	112.5	13.86
6	30.94	136.33	14.71

We used Logistic, Van Bertalanffy and Gompertz mathematical models to carry out correlation analysis, and made analysis on the growth speed of Komodo Dragon at different ages, so as to predict the amount of food, energy consumption and habitat area required .The fitting degree formula is shown as follows:

$$R^2 = \sum (W - W_P)^2 / (W - W_m)^2$$

The formula for calculating the relative growth rate is as follows:

$$R^* = 2(W_t - W_0)/(W_t + W_0) \times 100\%$$

The results after fitting are shown in **Figure 2.**

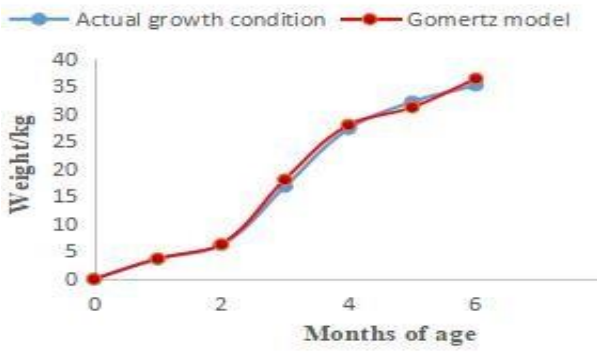


Figure 2 Actual growth and gomert

According to the fitting evaluation of the three models, Gompertz is the best fitting model for the body weight of Komodo Dragon in terms of their growth at the age of months. Therefore, the Gompertz model mentioned above is used to predict and analyze the body weight of dragons in their infancy. Based on the results predicted by the model, the dynamic model predicts that the weight of the dragon will increase to 36.42 kg after 6 months.

4. CONCLUSION

The growth of the dragon is restricted by food, and the upper limit of food quantity determines the maximum weight that the dragon may reach. We use the Gompertz model to fit the data of weight, and choose the best model to use. Using the dynamic model predicts the weight of a dragon will increase to 36.42 kg in 6 months.

REFERENCES

[1]Jie Chen, Hui Chen, Bin Chen, Study on fitting weight growth curve of xiangcun black pig with Logistic and Gompertz model. Swine Science, 2008, 35(10): 130-134.

[2]Yong Zhang, Wujun Guo , Xiaomei Li, Changji Zhang, Shuru Cheng, Ping Tian, Liping Zhang, Growth curve model selection and growth curve analysis of alpine fine wool sheep in gansu province. Henan Agricultural Science, 2016, 45(09): 125-129.

[3]Fande Kong, Study on fauna and living environment of Qinhuangdao goat village. Journal of China Environmental Management Cadre Institute, 2009, 19(01): 1-8.

[4]Xiaogang Zhang, Anwei Ma, Weiguo Zhang, Wanrong Wei, Juxia Wang, The living environment of underground rodents and its impact on metabolism. Heilongjiang Animal Husbandry and Veterinary Science, 2017(03): 219-22.

Optimal Thickness Solution of High Temperature Protective Clothing Based on Multi-Objective Genetic Algorithm

Yushu Zhu, Sensen Chen, Jiajia Lin, Jichao Pang*
College of Science, Hangzhou Normal University, Hangzhou, Zhejiang, China, 310036

Abstract: High temperature protective clothing is a kind of clothing woven from three special materials to protect special people working in high temperature environment. The professional clothing should not only have good protective performance and performance, but also have good wearing comfort. In order to reduce the research and development cost and improve the production efficiency, this paper solves the optimal thickness of the second layer and the forth layer of the high temperature protective clothing based on the Multi-objective genetic algorithm model. Combining the constraints and constraint variables, the influence of the objective function is analyzed, and the problem is realized by the probability operator and the crossover algorithm, and the optimal solution is finally obtained.
Keywords: Multi-objective genetic algorithm; High temperature protective clothing; Optimal solution

1. INTRODUCTION

Special clothing for high temperature operation can effectively prevent people from being burned when working at high temperatures. It is composed of three layers of fabric materials. This article refers to layers i, ii, and iii, respectively [1]. The i layer is the outermost layer and can be in direct contact with the external environment. The layer iii is the innermost layer of the fabric material and has a certain gap with the skin. We call this layer the iv layer [2]. In order to make this kind of garment better, this study placed the dummy with an internal body temperature of 37 ° C in a given high temperature environment while measuring the outside temperature of the dummy's skin [3].

2. MULTI-OBJECTIVE GENETIC ALGORITHM

Genetic algorithm is a method to search for optimal solutions by simulating natural evolutionary processes. Genetic algorithm is from

The representative problem may begin with a potential solution. A population consists of a certain number of individuals genetically encoded.

Each individual is an entity with a chromosome, that is, a collection of genes with many characteristics that control the individual. Therefore, there is a need to implement coding work from phenotype to genotype mapping. According to the original population, according to the principle of survival of the fittest, the optimal approximate solution is generated from generation to generation. The individual is selected from each generation by the fitness of the individual in the problem domain, and the crossover and variation are combined by the genetic operator to generate a new solution set. Such a population is like natural evolution, and the offspring population is more adapted to the environment than the previous generation, and the optimal solution to the problem can be found.

In this paper, the multi-objective genetic algorithm model is chosen to solve the problem of making the human body with the shortest temperature and the lowest skin temperature as the optimization target, so as to determine the optimal ii and iv values. So, optimize the objective function expression as:

$$Z = opt\{f_1(d_{II}, d_{IV}),\ f_2(d_{II}, d_{IV})\}$$

3. MODEL ESTABLISHMENT AND SOLUTION

The data is first encoded. The decision variable is represented by a 10-bit binary string code. Decision variable

The genetic code carried by the gene transmits the group information to the next generation. When t=0, the computer randomly initializes and generates an initial chromosome population. Then, the random initialization group is sorted and evaluated according to the preset adaptive function. If the optimal solution in the n chromosome groups remains stable for 3 consecutive times after adaptive optimization, the optimal solution is obtained. Otherwise, the genetic population with a preset probability of 0.6 crosses to hybridize with each other, and a new n chromosomes are generated. .A mutation operator is performed on a new chromosome with a mutation probability of 0.1.Finally, the decoding is performed, and after the mutation group is obtained, the operation is performed by the inverse coding operation, that is, the binary serial code vector is converted into decimal. In the maximum benefit allocation model based on the multi-objective genetic algorithm, the population size M=12 is selected, and the iteration algebra T=200 is terminated.

Restrictions:

Make sure that the outside temperature of the dummy's skin does not exceed 47 ° C for 30 minutes and the time exceeds 44 ° C for less than 5 minutes.

Objective function:

The thermal resistance is the resistance to the heat flow caused by the temperature difference between inside and outside, reflecting the separation of clothing and its materials.

Heat and insulation properties. The greater the thermal resistance, the less heat is transferred to the human body and the higher the comfort. After a lot of experiments, the thermal resistance formula is:

$$R_t = \frac{A \times (T_s - T_f)}{H_d} = R_{clo} + R_d$$

The total thermal resistance of the garment refers to the thermal resistance from the surface of the skin to the environment, which is affected by the increase in surface area and the impedance of the air layer at the boundary of the body.

In actual production, we use the basic thermal resistance value, which is the thermal resistance from the skin to the surface of the garment, and eliminates the formula of the influence of the dress on the surface area of the human body.

$$R_{cl} = R_t - \frac{R_d}{d}$$

Among them, the clothing area factor formula:

$$f_{cl} = \frac{(1+1.97R_t) + \sqrt{((1+1.97R_t)^2 - 4\times 1.97R_d)}}{2}$$

According to the above formula, the thermal resistance formula is obtained:

$$R_{总} = \frac{\ln d_2 - \ln d_1}{\lambda_1} + \frac{\ln d_3 - \ln d_2}{\lambda_2} + \frac{\ln d_4 - \ln d_3}{\lambda_3}$$

According to the investigation and research, experts comprehensive analysis and judgment, determine the weight and thermal resistance in the comfort

With a ratio of 3:7, our objective function is:

$$Y(m,R) = 0.3\sum_{i=1}^{4}\rho_i V_i + \frac{lnd_2 - lnd_1}{\lambda_1} + \frac{lnd_3 - lnd_2}{\lambda_2} + \frac{lnd_4 - lnd_3}{\lambda_3}$$

In summary, the optimal thicknesses of the second and fourth layers are:

$$d_{II} = 11.5mm$$

$$d_{IV} = 4.6mm$$

4. CONCLUSION

In this paper, when the optimal solution is obtained, the genetic algorithm is selected to optimize the solution. And because we need to comprehensively consider and influence the objective function, we use a cross algorithm to implement it in the operation process. The model of this paper can be applied to high temperature operations such as coal mine operations, fire fighting operations, and iron and steel making operations. For other high temperature protection equipment, the same model can also be used for solving.

REFERENCES

[1]Liu Wei. Multi-objective optimization evolutionary algorithm and its application research. Tianjin University, 2010.

[2]Yang Jie. Simulation and experimental study on human body heat response based on human body-clothing-environment. Tsinghua University Learning, 2016.

[3]Wang Ling,Zheng Dazhong.A simulated annealing algorithm based on Cauchy and Gaussian distribution state generators. Journal of Tsinghua University, 2000, 40(9):109-112.

Research on Existing Problems and Countermeasures of Music Education for Early Childhood

*Min yu, Xiong yu**
Music Major 2016, Teacher Education College of Quzhou University,Quzhou, Zhejiang Province, China, 324000

Abstract: The music education for early childhood constitutes a significant part of kindergarten education, plays a positive role in the mental health and personal growth of children, and makes a contribution to the comprehensive development of China's early childhood education. The analysis based on the meaning of the music education for early childhood can better highlight the importance of preschool music education and propose innovative strategies for improving the music education for early childhood, aiming to better promote its development. In the modern system of early childhood education, music education plays an important part in enlightening children and raising children's keen awareness in aesthetics and art. Further promoting music education during the process of early childhood education and exploring the cultivation of preschool music education on all aspects of children's ability are vital to achieve a perfect integration between music culture and early childhood education in the new era. Carrying out music education during the process of early childhood education to improve children's aesthetic ability is the key to realize children's overall development in modern early childhood education.

Keywords: Music Education for Early Childhood; Status Quo and Problems; Countermeasure Research

Children are extremely crucial to the whole nation. Preschool children aged between 3 and 6 are the main target of music education for early childhood. Children of this age group possess strong ability to learn new things, especially music. By carrying out music education for early childhood, children can enjoy sweet melody through the art of sound and music guidance, develop an interest in music learning, build their excellent moral character and grow up healthily, thus having their each phase of life being positively influenced[1] .

1. THE SIGNIFICANCE OF MUSIC EDUCATION FOR EARLY CHILDHOOD

Music is full of fun and colorful. Whether it is the elegance of classical music or the dynamics of pop music, they constantly convey certain thoughts and emotions to people with notes and inspire people. Music education for early childhood can enlighten children joyfully, shape their character while playing the tuneful melody, and guide children to grow up healthily and happily.[2] First of all, music education can develop children's aesthetic taste (also known as aesthetic interest). It originates from personal aesthetic ideals, influences people's aesthetic standards and comprises an important part of aesthetic education. Music education can cultivate children's aesthetic perception, imagination, creativity and judgement, and help the children to feel and appreciate the beauty of music. Secondly, different from other activities, music can develop the imagination of children, let the children voluntarily train their imagination in an unconstrained space.

Music is another language art in addition to the normal language for human beings. Currently, under the backdrop that people gain increasingly higher music aesthetics, music education for early childhood is becoming more and more important. Music education can not only train children's singing and music instrument playing, but also enhance their hearing, language expression and aesthetics, as well as cultivate their logic thinking and imagination to purify the mind and cultivate the morality. As a result, it can lay the foundation for future basic education or music re-education. Since music education is of great significance for the children, we should attach importance to it and carry out profound research, analyze the problems existed in current situation, propose optimized plans, in order to yield the best results and promote its development.

2. STATUS QUO AND PROBLEMS EXISTED IN CURRENT MUSIC EDUCATION FOR EARLY CHILDHOOD IN CHINA

In some foreign countries with developed education, music has become a key subject in early childhood education. In China, however, the music education for children is only skin-deep and even interrupted frequently. This means that the emphasis on music education for early childhood is obviously insufficient and its problems are enormous.

2.1Relative Shortage of Educational Resources for Music Education for Early Childhood

Shortage of musical instruments that cater to the children. Many kindergartens have invested heavily in teaching hardware, spared the multi-purpose halls for teaching and activities, and purchased musical instruments such as dulcimer, Chinese zither and violin. However, the kindergartens are short of percussion instruments suitable for children. Some teachers will make use of items such as used Coke bottles and fill them with sand, beans, etc. to make homemade percussion instruments. In this way, the variety of kindergarten instruments is enriched [4].

Shortage of specialized music textbooks. In kindergartens there are no specialized music textbooks, but comprehensive art textbooks. The use of textbook guarantees the music education, reflects the concept of curriculum and plays a pivotal role in teaching. According to the survey, 67% of kindergartens did not order music textbooks. Without textbooks, there will be a lack of systematic goals for teaching, the teaching quality will be difficult to evaluate and the capability children obtained from music education will be undermined. Because of a shortage of textbooks, the form of music activities organized by most of the teachers is extremely simplex, which in turn leads to children’s loss of interests in music. If the kindergartens can provide excellent textbooks suitable for the development of children, then the children’s interests in music can be increased and other aspects of the children’s ability can be improved[5]. Therefore, reasonable equipment and use of textbooks are very important.

2.2Outdated Teachers’ Concepts of Music Education for Early Childhood

Guidelines for Kindergarten Education clearly pointed out that we should face up to shortcomings of current music education for early childhood and the urgent problem is making efforts to improve it[7]. For instance, teachers’ understanding of the music education for early childhood is biased without clear teaching goals, they misunderstand that teaching children to sing and dance is enough, focus on children’s tone, standard dance movement, etc., completely restrict the vision of children. Music is a creative art. Singing and dancing vary according to people’s moods. Just like a melody can be sung gently or passionately. Previous rigid teaching completely restricts the thinking of children and conceals the meaning of music education. So children cannot feel the charm of music and enjoy the learning of music. During teaching activities, children should be put in the first place, followed by music; the order of priority should never be reversed. Teachers should liberate the children’s nature, not turn the music education into utilitarian activities.

Music education should not be carried out in a blind way, children should be guided to feel the music; meanwhile teachers can try to learn some music knowledge to help realize the comprehensive development of children.

3.COUNTERMEASURES FOR IMPROVING MUSIC EDUCATION FOR EARLY CHILDHOOD

3.1Concept Update in Music Education for Early Childhood

The new curriculum reform advocates quality education, and music education is an indispensable branch in quality education [8]. Early childhood education is the most basic education, so more attention should be paid to music education. The education authorities and kindergartens must establish feasible goals, ensure the time of music education, provide more platforms for music education, and arouse the enthusiasm of kindergarten teachers to carry out music activities. The creativity of teachers should be stimulated to make children recognize the benefits of learning music and actively learn the music, thus promoting the cultivation of children's musicality. Teachers should treat music education with a positive attitude, constantly innovate teaching modes, improve teaching methods, integrate textbook contents based on children’s learning characteristics, select the contents catering to children's psychological characteristics and close to children's life, carry out music education from various angles to raise children's awareness of appreciating beautiful things.

3.2Flexible and Innovative Teaching Methods

Teachers should try to influence the children with music emotions. The younger children can participate in music games to feel and experience. The older children can take part in some competitions to train their sense of cooperation. For example, cap-passing game, hand-pulling game, music perception game and role playing.

3.3Improvement of Professional Level of Music Teachers

According to the survey statistics, during the music education, 60% of their time is spent on teaching students singing, 29% on music appreciation, 10% on theoretical knowledge, 5% on instrument playing, 5% on improvisation and performance. Under the influence of previous exam-oriented education, teachers attach too much attention to basic education and neglect the cultivation of children’s music aesthetic ability. 70% of the teachers adopt teacher-centered teaching method, 20% of the teachers carry out music education on children with extracurricular activities, and 10% of the teachers educate through situational activities and conversations. Monotonous teaching models cannot attract the attention of children. Therefore, first of all, kindergartens should organize teachers to prepare lessons and learn from each other[9]. Secondly, the education authorities can regularly select excellent teachers from various kindergartens for teaching and research activities. Some excellent and experienced kindergarten music teachers should participate in the music teaching and research activities for early childhood, outstanding kindergarten teachers should carry out music demonstration teaching in front of the students, improve the teaching level of music for early childhood. In addition, during the process of teaching, teachers should constantly update textbooks and teaching tools to arouse the interests and enthusiasm of children in learning music, thereby improving the teaching efficiency[10]. It is notable that the support of children’s parents should be won to improve the influence of parents in children’s music education.

4.CONCLUSION

Paying attention to the particularity of music education for early childhood and finding a theoretical basis to solve problems are the most outstanding problems in current music education for early childhood. However, rigorous, systematic and complete theoretical research and problem solving related to the existing problems of music education for early childhood require collaborative efforts among experts, teachers and parents, instead of the endeavor of one party. So we should promote better development of music education for early childhood and benefit more children by making improvements.

REFERENCES:

[1]Wang Shufan. On the Value of Music Education in the Development of Early Childhood Education[J]. Art and Science, 2017,30(06):38

[2]Lei Limei. Discussion on the Value and Strategy of Music Education for Early Childhood[J]. Northern Music, 2016, 36(9): 152-153.

[3]Literature Research Methods Baidu Baike http://baike.baidu.com/item/literature research methods/4018725?sefr=cr

[4]Wang Yiying. Theory and Practice of Music Education for Preschool Children [M]. Beijing: Beijing Normal University Press, 2004

[5]Jin Man. Research on Preschool Children's Music Education Based on Enlightenment and Cultivation of Music Interests[J].Journal of Chifeng University

[6]Wang Yiying. Preschool Music Education[M]. Chongqing: Southwest Normal University Press, 2005

[7]Guidelines for Kindergarten Education (Trial) Ministry of Education 2001

[8] Jian Fuzeng. Research on the Problems and Development of Music Education for Early Childhood in China [D]. Minzu University of China, 2004

[9] Wang Jingyan. Study on the Mechanism of Aesthetic Education of “Cultivating Morality by Aesthetics”[M].Beijing:China Social Sciences Publishing House, 2015.9

[10] Zhang Zhiqin. Research on Problems and Countermeasures of Kindergarten Music Education[J]. Way of Success, 2018(25):66.

Research on Problems and Solutions of Computer Software System

Xiaoteng Yang*, Xiaoshuai Wu, Lei Zhang, Shao Ji
Taiyuan University of Science and Technology, Taiyuan, Shanxi, 030024, China

Abstract: With the development and progress of society, computers have been widely used in countries, enterprises and individuals. The most important and most critical computer software system in computer systems has the reputation of "the soul of computer software". The normal operation and use of computers is inextricably linked with computer software systems. Therefore, the maintenance and management of computer software systems is special. This paper summarizes the work of computer software system maintenance, the problems of computer software system, and finally proposes the method of computer software system maintenance.
Keywords: Computer software; Problem analysis; Solution

1. INTRODUCTION

With the popularity of computers, people are increasingly demanding software[1]. In this context, more and more programmers are beginning to develop towards software development, and strive to make users experience more convenient services [2]. As far as the current situation is concerned, China's computer software development has made initial progress, but the status quo and application of software development is still worthy of further study [3].

2. ANALYSIS OF EXISTING PROBLEMS

With the continuous advancement of current technology, computer software should also improve its own level, such as software upgrades and updates. However, in the case of actually maintaining the computer software system, the gradual upgrade of the software can not meet the requirements of the increasingly fast system. It can be said that the process of system software upgrade is also the process of system update cycle, and the system software can be optimized continuously. Make a relative guarantee for maintaining the system. Malicious damage can also lead to computer software system failures, the most significant performance is hacker attacks. Hackers have various forms of attack on computer systems. Under normal circumstances, hackers will exploit the vulnerabilities of computer systems to carry out destructive attacks on the entire system of the computer. The damage is considerable, and the computer system will be paralyzed and stolen. A large amount of information, personal, business, and national important information will be at risk.

Due to the late start of our software development, there are many shortcomings, especially the lack of core technology. The core technology is the most important part of software development, but we have little mastery of core technology, related research has not achieved higher achievements, and many technical links are insufficient, so we have to rely on advanced foreign technology, which causes we have to rely too much on foreign advanced technology products. At the same time, due to the lack of core technology, many of our companies are more willing to purchase advanced foreign technology products in software development, so they are not willing to spend a lot of material and financial resources to innovate and create their own software products.

3. SOLUTION RESEARCH

The core technology is the key to software development. Whether the developed software can meet the needs of users is directly related to the strength of its core technology. Therefore, we must work hard to master the core technologies. First, we must learn from the foreign countries that are leading the technology and learn from them. Learn their successful experiences, especially the research and development of technology. At the same time, we must conduct in-depth research on foreign basic products. Use without learning the advanced places inside. In addition, innovation is also the driving force for enterprise development. Especially for software development, innovation is undoubtedly the correct way to develop good software. First of all, we must establish a sense of innovation, we must not blindly learn, we must create our own core technology, and then build our own brand.

With the continuous advancement of current technology, computer software should also improve its own level, such as software upgrades and updates. However, in the case of actually maintaining the computer software system, the gradual upgrade of the software can not meet the requirements of the increasingly fast system. It can be said that the process of system software upgrade is also the process of system update cycle, and the system software can be optimized continuously. Make a relative guarantee for maintaining the system. Malicious damage can also lead to computer software system failures, the most significant performance is hacking. Hackers have various forms of attack on computer systems. Under normal circumstances, hackers will exploit the vulnerabilities of computer systems to carry out destructive attacks on the entire system of the computer. The damage is considerable, and the computer system will be paralyzed and stolen. A large amount of information, personal, business, and national important information will be at risk. In addition, the attack on the computer system also needs to pay attention to the virus attack, the virus is like a snake and beast, the harm is even greater. The virus will invade the inside of the computer system for a long period of time, because the virus is not easy to be discovered and detected by people, so it is more harmful to the computer system, and it needs to attract people's attention, especially the maintenance of computer system personnel.

For the problems arising from the operation, the first is to effectively improve the overall quality and professional skills of computer system maintenance personnel, and fundamentally eliminate such problems. In addition, the system deletes the problem that is affected by the system replacement. The computer system maintenance personnel can use the relevant software to carry out the necessary and focused repairs, ensure the normal and safe operation and work of the computer system, and do the daily maintenance of the computer system software. Work and management work.

The computer system network maintenance personnel can apply the hard disk card with the network symmetric copy function to perform related data transmission activities. The method is relatively simple. The computer with all the computer software installed is used as a signal transmitting device, and the other computer can be used as the receiving device. All the computers do not need to install a lot of software. The computer as the transmitting device can complete the system in advance and complete. Transferred to the computer of the receiving device, the hard disk card will protect the computer after the transfer is completed. This method of operation is not only simple and convenient, but also safe and reliable. The use of Ghost software can restore the installation of the system in time, greatly improving efficiency and facilitating daily system maintenance. The maintenance of computer software system is the key link of all application software development. The first point to improve the maintenance efficiency of computer system is to establish the awareness of system maintenance in the usual maintenance work, and use scientific means to continuously improve the computer software system. Operational and enforceable.

4. CONCLUSION

The development of computer software has promoted the continuous development of the computer field. Software is the core of computers. Nowadays, software has become an important part of people's lives. Only better standardize the development of computer software in China, thus promoting the continuous development of the computer field. With the development of computers, the maintenance of computer software has become more urgent and important, because various factors threaten computer software systems at all times. Although the maintenance software currently used by computer software systems is excellent in performance and high in efficiency, it is still necessary to check and reflect frequently.

REFERENCES

[1]Qu Jianjun, Computer software engineering management program, Information and Computer (Theoretical Edition), 2016, (07): 99-100.

[2]Guo Jia, Analysis of computer software system maintenance efficiency improvement program, Technology Innovation and Application, 2013, (32).

[3]Li Baoying, Analysis and research on related problems in computer software system maintenance, China E-commerce, 2013.

The Analysis of Computer Vision Application

Wentao Xiao[1,*], Le Huang[1], Haoran Chen[2], Tian Tian[1]
[1] College of Science and Technology, Xinjiang University, Urumqi, Xinjiang, 843000, China
[2] Xinjiang Normal University, Urumqi, Xinjiang, 830054, China

Abstract: Computer vision is a simulation of biological vision using computers and related equipment. Its main task is to obtain the three-dimensional information of the corresponding scene by processing the captured pictures or videos. Because computer vision has great potential application value in the fields of industrial and agricultural production, geology, astronomy, meteorology, medicine and military science, it has received more and more attention in the world. This paper briefly introduces two major application areas of computer vision: object detection and face recognition, which leads to the technical difficulties faced in computer vision research and the development status and research trends of computer vision.

Keywords: Computer vision; Object detection; Face recognition; Application field

1. INTRODUCTION

Computer vision refers to the use of cameras and computers instead of human eyes to identify, track and measure targets [1]. Computer vision is both a field of engineering and a challenging and important research field in the field of science [2]. Computer vision is a comprehensive discipline that has attracted researchers from all disciplines to participate in its research [3]. The object of computer vision is simply to study how to make a computer sense, analyze, and understand the surrounding environment through image sensors or other light sensors [4].

2. OBJECT DETECTION

Image detection refers to enclosing an object with a rectangular frame while classifying the image. From 14 to 16 years, R-CNN, Fast R-CNN, Faster R-CNN, YOLO, SSD and other well-known frameworks have emerged. The average accuracy (mAP) is detected on a well-known data set of computer vision on PASCAL VOC. The average detection accuracy (mAP) is also from 53.3% for R-CNN, 68.4% for Fast RCNN, and 75.9% for Faster R-CNN. The latest experiments show that Faster RCNN combines residual network (Resnet-101). Its detection accuracy can reach 83.8%. Deep learning detection speed is also getting faster and faster. From the original RCNN model, it takes more than 2 seconds to process a picture, 198 ms/sheet to Faster RCNN, and 155 frames/second to YOLO (the defect is lower precision)., only 52.7%, and finally the SSD with high accuracy and speed, the accuracy is 75.1%, and the speed is 23 frames/second.

3. FACE RECOGNITION

The face recognition system mainly includes four components: face image acquisition and detection, face image preprocessing, face image feature extraction, and matching and recognition.

3.1. Face Image Acquisition and Detection

Face image acquisition: Different face images can be captured by camera lens, such as still images, dynamic images, different positions, different expressions, etc., can be well collected. When the user is within the shooting range of the acquisition device, the acquisition device automatically searches for and captures the user's face image.

Face detection: In practice, face detection is mainly used for pre-processing of face recognition, that is, the position and size of the face are accurately calibrated in the image. The pattern features contained in the face image are very rich, such as histogram features, color features, template features, structural features, and Haar features. Face detection is to pick out the useful information and use these features to achieve face detection.

3.2. Face Image Preprocessing

Face Image Preprocessing: Image preprocessing for faces is based on face detection results, processing the image and ultimately serving the feature extraction process. The original image acquired by the system is often not directly used due to various conditions and random interference. It must be pre-processed with grayscale correction and noise filtering in the early stage of image processing. For face images, the preprocessing process mainly includes ray compensation, gradation transformation, histogram equalization, normalization, geometric correction, filtering and sharpening of face images.

3.3. Face Image Feature Extraction

Face image feature extraction: The features that can be used by the face recognition system are generally divided into visual features, pixel statistical features, face image transform coefficient features, face image algebra features, and the like. Face feature extraction is performed on certain features of the face. Face feature extraction, also known as face representation, is a process of character modeling a face. The methods of face feature extraction are summarized into two categories: one is based on knowledge representation methods; the other is based on algebraic features or statistical learning.

3.4. Face Image Matching and Recognition

Face image matching and recognition: The feature data of the extracted face image is searched and matched with the feature template stored in the database. By setting a threshold, when the similarity exceeds the threshold, the result of the matching is output. Face recognition is to compare the face features to be recognized with the obtained face feature templates, and judge the identity information of the faces according to the degree of similarity.

4. CONCLUSION

From the previous research, although some problems have been proposed and solved in the past few decades, due to the particularity and complexity of visual problems, there are still a large number of problems that need to be studied. The research focuses on the exploration of new methods and methods. Of course, the use of new description methods and solutions on the original problem is also a possible breakthrough point. Most of the problems in the visual field are not whether the problem itself is correct or not, but whether the description is appropriate and whether the solution is effective. Therefore, the exploration of the method of description and the means of solving are very important. In short, with the emphasis on quantitative research, the new way of description, the research of means of solution, and the improvement of perceptual means, the study of computer vision will usher in a more prosperous era.

REFERENCES

[1]Chen Xilin, Computer Vision: Algorithms and System Principles, Tsinghua University Press, 2000.

[2]Gao Manzhao, Projection Theory and Method in Computer Vision Research, Northwestern Polytechnical University Press, 1998.

[3]Ma Yude, Zhang Zhengyou, Computer Vision—Computational Theory and Algorithm Basis, Science Press, 1998.

[4]Zhang Yujin, Under Image Engineering—Image Understanding and Computer Vision, Tsinghua University Press, 2000.

Research on Cost Optimization Based on Network Search and Improved Genetic Algorithm

Shubin Li*, Junyu Yao, Danchen Zhao, Xinmeng Zhang
College of Architectural Engineering, Chang'an University, Xi'an, Shanxi, China 710021

Abstract: Deoxidation alloying in steelmaking is an important process in iron and steel smelting. Therefore, the optimization of alloy yield and alloy raw material cost is worthy of further study. We established mathematical modeling to predict the historical yield of the alloy, and modeled and analyzed the optimization problem between the alloy yield and cost based on the predicted results. The mathematical model is optimized by algorithm to realize the cost optimization calculation of molten steel deoxidation alloying, and the alloying scheme is given.
Keywords: network search; improved genetic algorithm; cost optimization

The cost optimization scheme for the deoxidation alloying of molten steel is defined as follows, in the case where the constraint conditions are ensured and the alloy absorption rate is as high as possible, the alloy cost is as small as possible. By establishing a multi-objective programming model, the improved genetic algorithm is used to solve the model, and the optimal raw material ratio scheme is obtained [1]. Through the analysis of experimental results, it is found that the ratio of C, Mn, S, P, Si is five. The alloy yields of the elements reached 0.98, 0.95, 0.91, 0.93, and 0.98, respectively [2]. The average yield of the alloy was increased by 0.05, 0.12, 0.07, 0.04, and 0.02 compared with the historical data of the experimental data. 25120.4055 yuan, only about 31.7% of the historical average raw material cost of experimental data [3].

1. DATA PROCESSING

Based on the processing of collected data, it is necessary to calculate ferro-vanadium nitride, FeV55N11-A, low-alumina ferrosilicon, vanadium-nitrogen alloy (import), ferrovanadium (FeV50-A), ferrovanadium (FeV50-B), and silicoalumino, silicon aluminum alloy FeAl30Si25, silicon aluminum manganese alloy ball, silicon manganese surface (silicon manganese slag), ferrosilicon (qualified block), ferrosilicon FeSi75-B, petroleum coke recarburizer. The manganese-silicon alloy FeMn64Si27 (qualified block), manganese-silicon alloy FeMn68Si18 (qualified block), silicon carbide (55%), and silicon-calcium carbon deoxidizer are price-weighted, so these alloys are weighted using the treated price. Summation, the calculation method is as follows:

$$new\_alloy(\mathrm{i}) = alloy(\mathrm{i}) * price(\mathrm{i})$$

among them $new\_alloy(\mathrm{i})$ Represents the alloy i weighting value, $alloy(\mathrm{i})$ For alloy i, $price(\mathrm{i})$ The corresponding price for alloy i.

2. ALGORITHM PROCESSING

2.1 Network Search

For the target planning model of the previous section, under the given constraints, we divide the grid for a given 16 alloys in steps of 0.01 mm, ie (maximum-minimum)*1%, and Python writes a program to perform a grid search to solve the target optimization model.

2.2 Genetic Algorithm

2.2.1 Choosing the right parameters

The parameters of the genetic algorithm for solving this problem are set as follows:

Table 1 Parameter setting of genetic algorithm

parameter	Numerical value
Initial population size M	100
Maximum number ofiterations GG	50
Mutation rate pm	0.1
Cross rate pc	1
Number of times	20

2.2.2 Coding strategy

Common coding strategies are real coding and binary coding, where real coding is used. Sixteen variables are converted: a random number sequence is converted to chromosomes ww1, ww2...., ww 16, which sets the weight of each chromosome. We know that coding length and coding strategies affect the efficiency of genetic algorithms.If the length of the mutation code is too long, the variation diversity will be limited; if it is too short, the variation efficiency will be very low. Choosing the right length of variation is the key to improving efficiency. Here, each chromosome is a two-dimensional structure, and the mutation operation is obvious, and no abnormality occurs.

2.2.3 Initial population

We introduce a penalty function to limit the constraints in the problem to find a better initial population. In the specific algorithm implementation process, we set a penalty value with a return value of 10000 for the fitness function. If the penalty value is returned if the constraint is not met, the individual is immediately eliminated, and the loop is generated until M is feasible. Solve and convert these M feasible solutions into chromosome coding.

2.2.4 Fitness function

The fitness function function refers to the fitness of each individual in the whole population, and the individual is selected according to the fitness. The fitness function directly affects the convergence speed of the algorithm and the generation of the optimal solution. For the general function optimization problem, the objective function can be directly adapted to the value function. The fitness function here should be the minimum function of each parameter. .

2.2.5 Selection Operator

Choice: There are many common selection methods, such as: roulette selection, Boltzmann selection, league selection, sorting selection, steady state selection, etc.In this problem, for the sake of simplicity of calculation, a certain elite rate is set, and the principle is the same as the sorting selection method.According to the individual’s fitness, according to the elite rules, some individuals with good traits are selected from the m-generation group to inherit into the next-generation (m+1) group.In this selection process, the greater the individual’s fitness, the greater the chance of being selected to the next generation, which fits well with the principle of natural selection.

2.2.6 Crossover operator

Common crossover methods are: single-point intersection, two-point intersection, uniform intersection, and arithmetic intersection. The dimension of the chromosome solution in this problem is two-dimensional, so the two-point intersection is the same as the single-point intersection. Randomly match each selected individual in the population M, according to the length L of the encoded bit string (here L = 16), for a pair of individuals to be crossed, with a certain probability (crossover probability Pc, randomly selected on the chromosome [An integer k in 1, L] is used as a crossover position, and the point and subsequent genes are exchanged with each other, thereby forming a new individual. The crossover operator is the basis of the extension of the search ability of the genetic algorithm and has a unique meaning.

3. CONCLUSIONS

After the above process, the final global optimal solution of the multi-objective programming optimization model is as shown in the following table.

Table 2 The final global optimal solution of the multi-objective programming optimization model

alloy	Ingredients (kg)	alloy	Ingredients (kg)
Ferric vanadium iron FeV55N11-A	9.11	Ferrosilicon FeSi75-B	3.92
Low aluminum ferrosilicon	1.942	Petroleum coke recarburizer	75.28
Vanadium-nitrogen alloy (import)	6.87	Manganese silicon alloy FeMn64Si27 (qualified block)	16.61
Ferrovanadium (FeV50-A)	2.487	Manganese silicon alloy FeMn68Si18 (qualified block)	1413
Ferrovanadium (FeV50-B)	27.34	Silicon carbide (55%)	100.7
Silicon aluminum calcium	25.1	Silicon calcium carbon deoxidizer	2.54
Silicon aluminum alloy FeAl30Si25	10.85	Silicon manganese surface (silicon manganese slag)	55.94
Silicon aluminum manganese alloy ball	0.764	Ferrosilicon (qualified block)	2.67

REFERENCES

[1]Zhao Chao. A new method for detecting abnormal rainfall values. Water Resources and Hydropower Engineering, 2012, 43(7).

[2]Ma Wei, Gu Wei, Li Fangfang, et al. Sequence-sensitive multi-source sensing data filling technique. Journal of Software, 2016, Vol.27 Issue (9):2332-2347.

[3]He Yun, Pe Dechang. Iterative filling algorithm for gene expression data based on reduced association degree. Computer Science, 2015, 42(11): 251-255.

Application Research of Intelligent Manufacturing in Automobile Engineering

Chenyu You*, Shen Guo
College of Mechanical and Automotive Engineering, Qingdao University of Technology, Qingdao, Shandong Province, 266520, China

Abstract: The automotive industry, as the main application industry of intelligent manufacturing, has greatly helped and promoted the development of intelligent manufacturing technology. However, in order to achieve breakthroughs in the key technologies of intelligent manufacturing, it is still necessary to master relevant technologies. All levels of intelligent manufacturing play a decisive role in the intelligent manufacturing of the automotive industry, and even play a decisive role. This paper focuses on the intelligent manufacturing of the automotive industry, hoping to provide greater assistance in the development of this technology.
Keywords: Automotive engineering; Intelligent manufacturing; Applied research

1. INTRODUCTION

All levels of intelligent manufacturing play a decisive role in the intelligent manufacturing of the automotive industry, and even play a decisive role [1]. At present, in the process of intelligent construction, the gap between domestic auto and key component companies and foreign companies is not large, especially in the whole vehicle manufacturing industry, independent brands and joint ventures are basically guaranteed to be at the same level, with complete The information management system realizes the integration and cooperation of multiple information management platforms [2]. As a major application industry for intelligent manufacturing, automobile companies have inextricably linked development and technology and supplier levels. Therefore, in the future work, it is necessary to strengthen research on the industry and promote the overall development of the automobile industry [3].

2. INTELLIGENT MANAGEMENT

With the gradual improvement of the current level of competition in the Chinese market, customized sales and market analysis of vehicle companies are gradually being applied by domestic and foreign automobile companies. In order to achieve these functions, the ERP of the enterprise needs to be the basic link, and the data of various data functions are docked in this way.

In the process of intelligent management, automobile manufacturers usually use Internet of Things technology to improve design, development, manufacturing and quality through system technology, which greatly reduces waste and effectively controls costs. The main advantages are: first, in the process of using the ERP system to expand the function, the information needs of suppliers and customers should be effectively processed, and the production and manufacturing processes should be arranged reasonably, so that the majority of manufacturers and suppliers can order information between customers is consistent. Secondly, on the PLM, the life cycle management of the product is used as the basic development platform to establish a virtual design collaborative development platform, so that the data appearing in the production, manufacturing and application of the product can be timely submitted to the product development and manufacturing managers. Communicate, better realize the upgrading of product design work. Finally, the relevant information in the operation process of the enterprise is fed back to the person in charge of the management of each layer of the enterprise, which makes it easier for managers at all levels to handle the handling and planning of emergency situations.

3. INTELLIGENT NEW MODE

In recent years, the market share of e-commerce platforms in China's retail industry has gradually increased. Therefore, domestic and foreign auto companies are also actively cooperating with e-commerce to strengthen sales of auto products and to be customers in e-commerce platforms. Data information collection and sales data analysis work. In the customized sales process, some enterprises' customized systems have gradually mastered the functions of actual operations, which can meet the needs and goals of customized customers. In the process of analyzing customer data, some auto companies have also carried out statistical analysis of customer portrait data, analyzed various behaviors and data of customers, further grasped the preferences of customers, and mapped adults by grasping information. Like a data graph.

The intelligent technology of the automobile body mainly talks about the body as the active link, while the safety technology is the passive link, which is also the most basic part. In this link, the functions realized mainly include automatic driving, automatic parking, automatic avoidance and so on. The intelligent products mentioned in intelligent manufacturing mainly take the Internet of Things technology and Internet technology as the main links, so as to monitor the actual running state of the products, and put forward more reasonable preventive measures and suggestions in the actual work. Or according to the analysis of the operation of big data, enterprises can also provide updated design solutions for related product technologies in actual development, thereby reducing the cost of travel for customers and providing them with quality services. These services can all be defined as smart services. At present, from China's overall intelligent manufacturing system, although China has involved in the development and research of various links, it still needs to be strengthened in many aspects of work, especially the development of automation hardware equipment in factory development. At present, China's automobile manufacturing enterprises provide complete help and support.

4. CONCLUSION

With the improvement of social development level and market economy in recent years, people's quality of life and standards have also been significantly improved. In this process, people are increasingly focusing on their own living standards. As the focus of people's attention, the automobile industry should strengthen its exploration in the future construction and development to ensure that the key technologies of intelligence can be improved. As the main application industry of intelligent manufacturing, the automotive industry has greatly helped and promoted the development of intelligent manufacturing technology. However, the key technologies in intelligent manufacturing still need to master the relevant technology suppliers. To be done.

REFERENCES

[1]Zhang Kaibi, Wan Subo, Wang Chen et al. Research on the development strategy of Chongqing automobile industry based on “Industry 4.0”. Journal of Chongqing Second Normal University, 2016, 29(2): 18-20, 42.

[2]Liu Laichao, Hu Zhiqiang, Cai Yunsheng, et al. Research and analysis of intelligent manufacturing in the automotive industry. Automotive Technician, 2017, 64(5): 60-63.

[3]Cao Yongqin. Leading the high-end development of Shanghai's automobile industry with intelligent manufacturing. Shanghai Economy, 2016, 18(1): 21-25.

Talking about the Application of Electronic Technology in Industry

Keli Zhang[1,*], Sen Huang[2]
[1]College of Mechanics and Civil Engineering, China University of Mining and Technology, Jiangsu, Xuzhou, 221116, China
[2]College of Mechanical and Electrical Engineering, Northeast Forestry University, Harbin, Heilongjiang, 150040, China

Abstract: In recent years, the rapid development of science and technology has led to the rapid development of technologies in all walks of life. Electronic technology combines the advantages of both information electronics and power electronics, and is widely used in all aspects of society. The occurrence, processing, and development of technologies such as the Internet and computers have had a major impact and complemented each other. In the context of the Internet, the development of electronic technology has had a profound impact on people's lifestyles, and at the same time boosted all walks of life. Development has promoted the development and progress of society. This paper studies the application of electronic technology in various fields of society.
Keywords: Electronic technology; Social application; Electricity

1. INTRODUCTION

Since the end of the 20th century, electronic technology has made great progress since its birth. Nowadays, the combination of electronic technology and other technologies is particularly important in the context of the Internet era [1]. Electronic technologies are used in various electronic devices and communication systems. The application is becoming more and more proficient, and at the same time, the connection between electronic technology and communication technology and computer technology is getting closer and closer, and the two complement each other and develop together [2]. People's daily life work has been inseparable from the application of electronic technology, and industrial production, national defense and military and other national social activities have also gradually applied [3]. Through the continuous development of the level of electronic technology, it has played an important role in various fields in today's society, and has achieved relatively significant application results. Therefore, this paper explores the application of electronic technology in various fields of life.

2. APPLICATION OF ELECTRONIC TECHNOLOGY IN THE FIELD OF ELECTRIC POWER

Power electronics technology refers to electronic technology used in the power field. In the power system, electronic technology plays a big role. In addition to improving the power quality and improving the power supply capacity, it also has great benefits for the safe and smooth operation of the entire power system. In the traditional power generation system, the generator set is the main way of power generation, and the application of electronic technology can effectively improve the operating characteristics of the generator set equipment. Taking large-scale power generation equipment as an example, if the static excitation can be used for control reasonably, the cost of construction can be greatly reduced, and the operation flow can be simplified, and the system becomes more stable and smoother. For the energy-saving way of wind power and hydropower generation, the excitation of variable-speed constant frequency is more advantageous. Only by changing the speed can the effective power be maximized, and electronic technology plays a big role in this aspect. The variable frequency power supply can be changed to enable the unit to perform variable speed operation to ensure a constant output of the power, so that the wind power generation and the hydroelectric power generation system can operate stably. In addition, the application of electronic technology makes the use of power resources to the maximum extent, which is of great significance to the current situation of natural resource shortage, which not only can improve the overall economic efficiency level, but also maximize the benefits.

3. APPLICATION OF ELECTRONIC TECHNOLOGY IN THE FIELD OF TRANSPORTATION

In recent years, the role of electronic technology in the transportation system in the transportation field has gradually emerged, and the application of electronic technology in the automotive field is now increasing. For example, in terms of fuel economy of automobiles, traditional fuel injection devices are no longer suitable. In combination with power electronics technology, electronically controlled devices can keep the engine at an optimal state, thus ensuring power output. Fuel consumption is reduced to a minimum. In addition, the electronic fuel injection device can also obtain an optimal working state through experiments, and input the state into the memory. When the automobile engine starts to operate, it can measure important parameters such as air flow rate and oxygen content of the exhaust pipe according to the sensor. Work in accordance with the pre-set procedures to arrange the car engine in the best working condition. And the further application of electronic technology has made many cars have entered the stage of electronic control. Various functions and various types of electronic devices constitute the automobile system, which greatly enhances the safety performance of the automobile while expanding the functions of the automobile. .With the continuous development of electronic technology, the application in the automotive field will surely become more in-depth, combined with intelligent technology, the direction of the car will continue to advance toward the intelligent electronic direction, with the constant small size of automotive components. On the basis of continuous improvement of its communication capabilities, the ultimate goal of intelligent electronic vehicles is communication network and volume miniaturization.

4. APPLICATION OF ELECTRONIC TECHNOLOGY IN THE FIELD OF MEDIA

Electronicization is now full of people's daily life, and the transformation of the media industry is also very obvious, especially in the newspaper industry. The emergence of electronic technology has made the transition from paper newspapers to electronic newspapers and magazines. The era of electronic newspapers is coming soon. It has had a great impact on the reading habits of the public. The appearance of electronic newspapers has changed the content of the original readings, so that the content can be displayed on the screen of electronic devices, and the data review function has also been improved to a certain extent. People can more easily and conveniently use various Internet platforms to screen their own useful reading materials and information materials, which can not ignore the improvement of their reading and learning efficiency. The application of electronic newspapers and magazines also solves the problem of the layout of paper newspapers and magazines, and can provide information to readers as much as possible without being bound by the number of pages. The electronic reading also makes the communication between the author and the reader build a platform and realize the timeliness of communication.

5. APPLICATION OF ELECTRONIC TECHNOLOGY IN THE BUSINESS FIELD

Based on electronic information technology, the efficiency of business activities is also getting higher and higher, which greatly promotes the development of the economy. Relying on the rapid development of computer technology and Internet technology, the development of e-commerce is also in full swing. E-commerce has built an Internet shopping mall for people, enabling people to shop at home, making the service more thoughtful and humanized, although there are still many limitations. It is undeniable that the development of e-commerce has made the second boom in the commodity economy and greatly improved the convenience of people's lives. The development of the e-commerce platform has reduced the space for the use of the real economy. At the same time, it has promoted economic transformation, reduced a large number of intermediate links, and greatly reduced the transaction costs and logistics costs of transactions, but greatly increased the quantity and efficiency of transactions. In the process of trading between buyers and sellers, the society has achieved good development and maximized the overall economic benefits of society. In the field of official e-commerce transactions, enterprises can conduct business negotiation and bidding activities on the electronic network platform, and use the electronic network platform to achieve "fair and fair, sunny and transparent" bidding activities, and the bidders can clearly grasp the bidding activities. The bidding party can effectively supervise the bidder's qualifications and bidding behavior, and the legitimate rights and interests of both parties can be effectively guaranteed.

6. CONCLUSION

The development of electronic technology constantly improves people's living standards, meets people's living needs step by step, and promotes the rapid growth of social economy while facilitating people's lives. With the continuous development and innovation of electronic technology, the application range of electronic technology will also become more and more extensive.

REFERENCES

[1]Jiang Shuangyan. Development and application of power electronics technology. Technology wind, 2015 (16): 83.

[2]Dong Hefeng. Application Research of Electronic Technology in Automobiles. Digital Technology and Applications, 2014(12): 86+88.

[3]Win Gong. The application of electronic technology in life. Electronic Production, 2015 (18): 81.

The Theory of Output in SLA and Its Implications in English Teaching

Min Jiang
Suzhou Tourism & Finance Institute, Suzhou, Jiangsu, 215104, China

Abstract: Research on second language acquisition has greatly developed since 1970s. Especially Krashen's input hypothesis and Swain's output hypothesis draw considerable attention. The purpose of this article is to apply the principles of the output hypothesis to language and literature instruction for English-language learners. A brief review of literature related to the input and output hypothesis is presented and is followed by application of the output theory to common classroom practices.
Keywords: Input; Output; English-language learners; Language production

1. INTRODUCTION

Considerable theories concerning SLA have mushroomed among which Krashen's input hypothesis and Swain's output hypothesis are of great influence. Traditionally, it was held that a large amount of language knowledge would be converted into language skills spontaneously and naturally; language production was merely the outcome of language rather than part of language learning. In English teaching practice in China, more attention was centered on training of the receptive skills such as listening and reading. Language production, speaking and writing, was mostly neglected even ignored. Foreign language teaching and learning was often criticized for "its largest investment with lowest production". So it is widely accepted that students should be given more opportunities of practicing and written language in order to improve their general language proficiency. Thus the role of language production in second language acquisition comes to be recognized especially after Swain first proposed Comprehensible Output Hypothesis in 1985. This article explores the role of output in second language teaching and its effective application in English language teaching. First, a theoretical basis for expanding on traditional teaching input to require output from the learner is presented. Second, teaching strategies emphasizing language production (i.e., output) are presented in three categories: creating a supportive learning environment, collaborative conversations, and writing.

2. LANGUAGE INPUT AND OUTPUT

2.1. A brief review of language input

Input has long been deemed important for all language learners. There is evidence that both the quality and the amount of language input learners' experiences influence native language acquisition as well as second-language acquisition. This theoretical framework, called the "input hypothesis," underlies what we "give" to students. The input hypothesis is rooted in the work of Krashen (1985) in which he proposed that second-language acquisition is a result of "comprehensible input" that is received by the learner. For years, second-language learning models held the position that comprehensible input (i.e., input that is understood by the learner) was a necessary and sufficient condition for second-language acquisition[1] and that second language learning is a largely implicit process[2]. However, recent theoretical models include output as another important part of the second-language learning process.

2.2. Language output

2.2.1. A definition of output

According to Longman Dictionary of language Teaching & Applied Linguistics, output refers to part of that of "input"—language which a learner hears or receives and from which he or she can learn. In this case, output simply means the language a learner produces compared with what the learner receives. There are some synonyms of output such as "producing language, producing the target language, language performance, using the language and speaking or writing" [3] (Swain, 2005), and "production or use" [4] (Swain & Lapkin, 1998). According to Swain, output is dynamic, not only the language produced by learners but also the activity of learner's producing the language.

The importance of output in the process of learning has been relatively unexplored until recently, e.g., Swain (2005), Swain & Lapkin, (1998) presented evidence that producing the target language (i.e., output) is important for learners. In reviewing studies of French immersion programs in Canada, Swain (2005) noted that despite "an abundance of comprehensible input," speaking and writing abilities of second-language learners remain different than those of peers who are native speakers of the language. Additional evidence suggested that input alone was not sufficient for learning a second language, particularly when learning to use correct word order (syntax) and word forms (morphology) of the new language [5] (Nunan, 2005). These findings led researchers and practitioners to explore beyond the boundaries of input and look more closely at the process of output. When learners attempt to produce the target language, they may notice that they do not know how to say or write the desired message effectively. Thus, the production of output might trigger attention and direct the learner to notice something he or she needs

2.2.2. The role of input

Swain (2005) discussed three possible functions of output in the learning process: noticing/triggering, hypothesis testing, and metalinguistic/reflective functions. When learners attempt to produce the target language, they may notice that they do not know how to say or write the desired message effectively. Thus, the production of output might trigger attention and direct the learner to notice something he or she needs to explore further in the new language. For example, a learner might use an incorrect verb tense, recognize it as incorrect, and seek input to identify the correct production. Recognizing an error and seeking new information to fill in previous gaps in knowledge are hypothesized to require cognitive processes involved in learning a second language. These cognitive processes include generating new linguistic knowledge or consolidating existing knowledge.

The second function of output is hypothesis testing (i.e., creating a "trial run" of how to communicate a message). In this case, the learner begins with a hypothesis about what the message should sound or look like, tests this hypothesis by producing it, and then receives feedback from another person regarding its correctness. The feedback should lead the student to modify the production to fit the correct form. It is suggested that this modified output prepares the student for subsequent uses of the correct form.

A third function of output, the metalinguistic (reflective) function, occurs when language is used to reflect on the language that a learner produces or is produced by others. One source of this function is collaborative dialogue in which groups of learners or learners with a teacher share ideas and are free to reflect on what is said and how it is said. The key element of this function is that through the process of speaking and reflecting the learner must realize that he or she does not understand the use of a particular language form and then talk about that process. There is some type of externalized thinking that provides output as an object of reflection.

3. IMPLICATIONS OF THE OUTPUT HYPOTHESIS

Three functions of output above discussed reveal that language output can help increase the awareness of learners of correct use of target language; that output can develop a sense of learning autonomy and that output can transmit language to language skills more effectively. Consequently, the findings may provide some useful insights for classroom teaching. The implication of the output hypothesis are numerous, but they are all have common the absolute necessity of providing learners with considerable opportunities of in-class speaking and writing. Learners need to be pushed to make use of their resources, have their linguistic abilities stretched to their fullest, reflect on their output and consider ways of modifying it to enhance comprehensibility, appropriateness and accuracy. Implications of the output hypothesis are only beginning to surface in current instructional recommendations. Emphasis on output (in addition to input) remains largely neglected in practitioner literature; specifically, the emphasis on intentional planning to create opportunities for student output is lacking. Thus, the goal of this article is to provide specific applications of the output theory to classroom practices. Strategies for encouraging output are described in three areas: creating a supportive learning environment, collaborative conversations, and writing.

3.1. Creating a supportive learning environment

Creating a "literate environment" that is rich in input provides a safe setting in which to produce and explore a new language. Teachers can encourage the process of learning by creating "classroom conditions that enable English learners to cross over the instructional divide from confusion into meaningful learning" [6] (Meyer, 2000). Teachers identified as "outstanding" in promoting literacy achievements conduct reading and writing activities daily, explicitly model literacy skills and strategies, and integrate literacy instruction with the rest of the curriculum, creating naturalistic opportunities for addressing literacy skills [7] (Pressley, 2002). To create these conditions, teachers can lower the barriers of cognitive load (i.e., the number of new concepts embedded in a lesson or text), culture load (i.e., the amount of cultural knowledge required but never explicitly explained), language load (i.e., frequency and complexity of unfamiliar English words), and learning load (i.e., what activities and tasks teachers are asking students to do with English). Teachers may also encourage the process of learning by pushing students beyond just getting their message across and by expecting a message "that is conveyed precisely, coherently, and appropriately".

3.2. Collaborative conversations

Collaborative dialogues occur when students work together to discuss and solve problems. Psychological theorists believe that learning takes place in these types of dialogues—after participating in group learning experiences learners internalize knowledge. Thus, group problem solving builds skills that can later be transferred to problem solving by individuals. Cooperative learning such as this has been identified as a motivating strategy used in high quality classrooms.

Teachers should be aware that true collaborative dialogues consist of balanced turns between the teacher and learners in the group. A common occurrence in classrooms is the routine of the teacher asking a question and children providing responses. Although this may appear to be turn taking between teachers and learners, it often results in an unnatural conversation with length of turns being unbalanced (i.e., the teacher dominates talk and learners provide responses limited in length). When a teacher uses too many closed questions (i.e., questions that have a "right" answer and that often can be answered with a single word or phrase), the purpose of the exchange is no longer to communicate but to test knowledge. To maximize opportunities for output, interactions should have a communicative goal, and learners should be expected to contribute to the conversation. The use of open questions (i.e., questions that the teacher does not "know" the answer to or questions that do not have one "right" answer) encourages learners to contribute and to provide longer, more complex responses[5] (Nunan, 2005). The interaction may be structured, however, to provide tasks appropriate to the learner's ability level. For example, a learner with a limited English vocabulary may participate in the interaction by repeating an answer modeled by the teacher or by saying a single word; a student with more advanced skills would be expected to contribute new ideas in complete sentences. In sum, the point here is that more interaction is better.

3.3. Writing

Writing in and of itself is an exercise in output. Teachers may need to provide learners with focused support to help them get started with writing. For example, learners might be encouraged to first make a list of things they know a lot about. This list can then serve as a starting point for identifying a topic to write about. Conversations between a learner and teacher can lead to a more focused topic. For example, if a learner knows a lot about basketball because he plays with his friends after school, a guided conversation with the teacher might remind him of the time he made the winning shot for his team. The story of this winning game could then become the topic for writing.

Ideas for writing may also be found in books that are read and discussed aloud. If a learner makes a personal connection to a part of the story, he or she can use this as a starting point. Finally, just as similarities in oral language (e.g., cognates) can be used as a way to make connections for English language learners in vocabulary, a comparison of written language can also be beneficial. The teacher should be aware of any differences between the first language and English in the written form and help the learners to recognize these differences. When learners are aware of these differences, they can use their first language to support writing in English. In order to build on their first language and their knowledge of differences between languages, learners may be encouraged to write in their first language and then translate the text into English.

4. CONCLUSION

With the theoretical basis of the input and output hypothesis, the article investigates the role of output, especially its application in language practical teaching. Therefore, the author suggests that language output should be more emphasized in our language teaching, in other words, more chances should be given to learners to practice English orally or in written way in a harmonious learning environment. Learners should be highly motivated to do speaking and writing with great enthusiasm inside class. Language output /production may be an efficient and effective way to optimize the efficacy of foreign language teaching and learning. Thus teaching practitioners should all take into consideration the role of output in practical utilization. It should be understood that this article does not question the essentialness of input in language acquisition. Input does play an extremely important and invaluable in second language acquisition. But we argue that input is necessary but not sufficient. Besides input, output also plays a decisive role in language learning. Several of these strategies and classroom-based activities have been explored here, but this is by no means an exhaustive description. Teachers must expect learners to not only attend to input but also to produce output as well. Teachers have the responsibility to offer opportunities for output and to respond to output by scaffolding students to produce precise, coherent, and appropriate language. Provided with these opportunities, students learning English as a second language will have a better chance to become proficient.

REFERENCE

[1]Krashen, S.D. The Input Hypothesis: Issues and Implications. White Plains, NY: Longman, 1985.
[2]Pica, T. Second Language Acquisition Research and Applied Linguistics. In E. Hinkel (Ed.), Handbook of Research in Second Language Teaching and Learning. Mahwah, NJ: Erlbaum. 2005
[3]Swain, M. The Output Hypothesis: Theory and Research. In E. Hinkel (Ed.), Handbook of Research in Second Language Teaching and Learning. Mahwah, NJ: Erlbaum. 2005.
[4]Swain, M., & Lapkin, S. Interaction and Second Language Learning: Two Adolescent French Immersion Students Working Together. Modern Language Journal.1998
[5]Nunan, D. Classroom Research. In E. Hinkel (Ed.), Handbook of Research in Second Language Teaching and Learning. Mahwah, NJ: Erlbaum. 2005
[6]Meyer, L.M. Barriers to Meaningful Instruction for English Learners. Theory into Practice. 2000
[7]Pressley, M. Reading Instruction That Works: The Case for Balanced Teaching. New York: Guilford. 2002.

Gender and Gender-Based Violence

Xinyue Ji, Shenghan Gao*
China Agricultural University, Beijing, 100083, China
**Email: jixinyue@cau.edu.cn*

Abstract: Gender is the state of expectations of how individuals choose to behave. In the society, people are generally concerned about victims of women violence and lack of attention to men victims. Due to the influence of traditional concepts and conceptualization, there is a lack of help and coverage of victims of male violence. This paper addresses the issue of men as second-class victims from a sociological perspective, and analyses the reasons why male victims of violence do not seek help from the individual and national levels. This paper hopes to re-recognize men's problems with victims of violence and provide useful insights for victims of male violence.
Keywords: Gender; Gender-based violence; Male victims

Gender is one of the important elements of a violent incident. Under the influence of traditional ideas and stereotypes, females are more likely to be victims of violence than male. Although according to data, most victims of violence are female, the number of men cannot be ignored. Affected by social, psychological, and other factors. Male-victims refuse to seek psychological and medical assistance after the violence, instead of bearing it silently. Society recognizes and protects male-victims far less than female-victims.

DEFINITION OF GENDER

Certainly, scholars agree that gender is different from sex. Gender has to do with the concept of being masculine and feminine. Historically, there have been a lot of issues concerning gender such as the insubordination of women and placing men as dominant in society. Such an occurrence has resulted in a myriad of issues such as the gender pay gap, gender-based violence, and inequality. The focus of this paper is to look at the concept of gender. It will define it and elaborate on the issue of where men have been treated as second-class victims. The paper will then use scholarly works to discuss the issue sociologically and identify findings that may increase public comprehension of the subject.

Various sociologists have come up with different definitions of gender. According to Lindsey, gender refers to the social, psychological traits and cultural practices that are associated with being male and female [1]. Lindsey shares that it is important to differentiate sex from gender since sex is the biological composition that differentiates men from women [1]. On the other hand, gender is what makes the two sexes masculine and feminine. Hence, gender is an achieved status. UNESCO provides another perspective on what gender means. According to UNESCO (n.d), gender refers to the roles and responsibilities that are given to men and women in society. The roles and responsibilities are created in families and by culture. Connell states that gender is defined as the expectations that people have regarding the behavior and capabilities of both men and women [3].

From these definitions, it is clear that sociologists do not equate gender with the physical and biological attributes of men and women. Unlike sex which is an ascribed status, it is a position given without the input of an individual. Instead, gender is an achieved status which an individual chooses. For instance, an individual may be female but chooses to act masculine. Also, according to the sociologists, it is clear that the family and society define gender. Therefore, gender is an expectation of how one should behave [5].

THE PROBLEM OF GENDER-BASED VIOLENCE

Perhaps one of the issues that matter to most about gender is men as targets of gender-based violence. There is a widespread impression that men are often the committers and females are the sufferers of gender-based violence. However, the impression is uninformed as women can also be perpetrators of the vice and men can be the victims. Male is not a case of violence. this proportion is rising in modern society. Statistical figures that explain the prevalence can collaborate these assertions. For instance, in the United Kingdom, in 2015, 13.2% of men stated that they had been sufferers of the form of violence. In 2016, the figure rose to 13.6%. In 2015, 27.1% of women were victims of gender-based violence while in 2016, the figure reduced to 26.3%. The figures indicate that for every two women who are victims of gender-based violence, one man is a victim. Brook further indicates that since the 8.8% of men which is an equivalent of men 1.4 million men in the United Kingdom have experienced intimate partner abuse from when they were about 16 years old. Also, between the years of 2015 to 2016, 28 men died as a result of violence from their spouses and girlfriends.

Unfortunately, these occurrences do not only occur in the United Kingdom; instead, they occur in different parts of the world. For instance, in the United States, 1 in out of 10 men are victims of gender-based violence or stalking which negatively impacted their normal functioning. Furthermore, 48.8% of men report to having experienced psychological aggression from their intimate partner [4].

ANALYSIS OF THE PROBLEM

The issue matters to me and the society since men who are victims of gender-based violence are treated as second-class victims. In society, more attention is being focused on women who are victims of gender-based violence while none is being focused on male victims. In a real sense, there are men who are suffering from the form of violence yet sufficient efforts are not being made to address the vice on men as much as responses are being made when women are victims. In fact, not many scholarly works have focused on the issue of men as victims of gender-based violence. Instead, many of them prefer to focus on women. The number of male victims is not much lower than the number of women victims from the relevant data. Also, rarely do mass media pay attention to men in regard to the issue accentuating the fact that these victims have been forgotten. In the mimetic environment under media construction, the audience is more aware of the violence and brutality of men in violence, and rarely encounters men victims. The situation is further compounded by the fact that 39% of men are more likely not to tell anyone including the police or even seek for help when they are victims of sexual-based violence. They are therefore abused and do not receive help. Given that the number of male victims of gender-based violence that is not reported is high, it may be that men are victims of domestic violence as much as women [1].

From a personal dimension, there are a number of reasons as to why male victims of gender-based violence do not seek help. According to Tsui, Cheung, & Leung, an estimate of 25% of men who are victims of gender-based abuse do not utilize social services [5]. The reasons as to why they do not seek these services include denial, shame, embarrassment, stigmatization, and fear. It is for this reason that men who seek social services decide not to engage in group therapy and group sharing. Instead, they prefer individual counseling [5]. Such occurrences make it had for male victims to press charges against their violators [6].

From a social dimension, society is to blame for the positioning of men as second-class citizens in regard to gender-based violence. According to Wright, the sociology of marginalization was initially designed for women [6]. Since history, society has treated gender-based violence as gendered, which implies that a particular gender perpetrates it. Also, society has treated gender-based violence as a heterosexual phenomenon that is naturally physical. By doing so, it has eliminated the concept of men as victims [7].

Also, from another social dimension, the society's conceptualization of masculinity is another reason as to why male victims of gender-based violence continue to suffer in silence. Wedgwood shares the concept of hegemonic masculinity where the practice of subordinating women and affirming men to a dominant position is legitimized [7]. The concept forms the basis for a social organization where men are responsible for their own masculinity by doing everything possible to conform to the society's expectations of being a man. It is from the conceptualization that men tend to be ridiculed for being unsubordinated by a woman which implies that they did not conform to society's expectations of being a man. It is for this reason that men fear reporting atrocities committed against them by women.

CONCLUSION

The findings of the articles bring about a greater understanding of the treatment of men as second-class victims of the form of abuse. For example, the article by Tsui, Cheung, & Leung reveals the reasons as to why men do not report themselves as victims [5]. It is for these reasons that one may deduce the possibilities of male victims of gender-based violence being underreported. The occurrence may also form the basis for the causation of bias on the issue. Persons who argue that women are the primary victims of gender-based violence may be biased and inaccurate since the assertion has not taken into account cases of underreporting among male victims [2].

On the other hand, Wedgwood and Wright show the public that the society is the cause of the marginalization of male victims of stigmatization [6, 7]. The authors bring to the fore theories that explain the expectations of men in society such as hegemonic masculinity theory. When a man fails to live up to these expectations, he faces ridicule for being less of a man. Such occurrences thus contribute to treating male victims of the vice as second-class victims.

Gender refers to the social, psychological traits and cultural practices that are associated with being male and female. In regard to gender, Men have for a long time been quiet about the abuse they go through based on gender. The exploitation does include not only physical abuse but also includes psychological manipulation. The issue matters to me and the society since men who are victims of gender-based violence are treated as second-class victims. In society, more attention is being focused on women who are victims of gender-based violence while none is being focused on male victims. Hence, society is to blame for the voiceless nature of male victim of gender-based violence [3].

REFERENCES

[1]Lindsey, L. L, The Sociology of Gender Theoretical Perspectives and Feminist Frameworks.

In Gender Roles. Routledge, 2015: 23-48.
[2]UNESCO. (n.d.). UNESCO’s Gender Mainstreaming Implementation Framework: Baseline definitions of key concepts and terms. 1-3. Retrieved September 22, 2018, from http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/BSP/GENDER/PDF/1. Baseline Definitions of key gender-related concepts.pdf
[3]Connell, R. W. Gender and power: Society, the person, and sexual politics. John Wiley & Sons, 2014.
[4]National Domestic Violence Hotline. (2017). Get the Facts & Figures on National Domestic Violence. Retrieved September 22, 2018, from https://www.thehotline.org/resources/statistics/
[5]Tsui, V., Cheung, M., & Leung, P. Help-seeking among male victims of partner abuse: men's hard times. Journal of community psychology, 2010, 38(6): 769-780.
[6]Wright, C. The Absent Voice of Male Domestic Abuse Victims: The Marginalisation of Men in a System Originally Designed for Women, 2016.
[7]Wedgwood, N. Connell's theory of masculinity–its origins and influences on the study of gender. Journal of gender studies, 2009, 18(4): 329-339.

Analysis on Spatial Correlation of Pupils' Performance

Bin Wang[1], Rui Gao[2,*], Yujuan Ling[1], Wenwen Tao[1]
[1] Chuzhou University, Chuzhou, 239000, China
[2] BeiHang University, Beijing, 100191, China
[*]E-mail: 88wangbin@163.com

Abstract: Analyze the spatial correlation of comprehensive performance of students within the six grades in a primary school in Chuzhou with spatial econometrics method. There are spatial autocorrelation with different levels of students' performance in all grades. The spatial autocorrelation of students' achievement is mainly characterized by high-high aggregation distribution in front or intermediate of the classroom and low-low gathered distribution in the back or the marginal zone of the classroom. the pattern of spatial correlation of the student's grade is determines preliminarily by achievements as the main basis of seating arrangement, and the physical and social psychological function of seat further solidify the spatial correlation of the results.
Keywords: Seat; Pupil; Performance; Spatial econometric

1. INTRODUCTION

Seat is one of the spatial arrangements of educational activities which causes an increasing attention about educational resource. It affects the interactions between teachers and students, interpersonal communication, and the enthusiasm of students and the feedback of contents, etc. If students 'seats were not arranged properly, it would have a negative influence on students, besides, it would have a direct and potential influence on the justice of education. However, for a long time, seat is an educational resource that being misuse.In academic community, the research about the influence of seats on educational justice mainly focuses on qualitative research, though there are some quantitative studies about seat also focused on the direct impaction students' performance. From the perspective of spatial measurement, this paper reveals the situation of students in classroom and analyzes the influence of space layout on students' learning activities.

2. LITERATURE REVIEW

Perkins and Wieman (2005) randomly selected students who were arranged in the back of the classroomat the beginning of the school year. After a school year's study, they found that their teaching participation was lower than those who in the front row and the probability of low academic scores was six times higher than those who in the front row.Although adjusted their seats to the front row in the middle of the course, this gap still existed [1]. Benedic and Hoga (2004)found that the probability of students who sitting in the back of the classroom getting D or F increased by 23 % [2].In the middle of the course, Perkins and Wieman (2005) moved the students who in the back of the classroom forwards and found that the probability of these students scoring A or B increased by 33.5 % and 8.5 %, respectively [1].Vander Schee (2011) found that students who sat in the front row scored obviously higher than those who sat in the back row [3]. Hirmas and others(2014)took the students who listened to the Introduction to Physical Geography course as the objects, found that there was a distinctly difference in the learning achievement of students whose seats were located high and those whose seats were located low[4]. Marco Pichierri and Gianluigi Guido (2016) reached the similar conclusions [5]. In a word, these studies show that students' seating can affect their performance in the class.

3. RESEARCH OBJECTIVES AND ASSUMPTIONS

The objective of this study is to determine the spatial relationship between student seats and grades. Specifically, so this study tries to answer the following questions:

Question 1: Does there exist seat space correlation in students 'grade? How does this correlation be spatially distributed?

Question 2: Is there a grade difference in the spatial autocorrelation of students 'performance? If there is a difference, whether there is a law of this difference can be found.

4. METHODS

In order to explore the aggregation characteristics of students 'grades in the seating space, the space-metric analysis method is used in this study. Spatial correlation is a common phenomenon, and the correlation is stronger near than far. Spatial correlation can be divided into two categories: self-correlation and cross-correlation. The (so-called) spatial self-correlation refers to the correlation of the same variable between different regional units, and the spatial cross-correlation refers to the correlation between two different variables in different regional units. This paper mainly discusses the spatial self-correlation of students' grades. The article analyzes the relationship between the student achievement and space through the angle of seat distribution, therefore, the Geoda software was used for spatial correlation analysis.

4.1. Setting of spatial weights

In order to reveal the spatial correlation, it is necessary to discuss the dependence of spatial objects, which can be expressed by spatial weight matrix. Spatial dependence can be further divided into two categories: “contiguity or adjacency” and “distance”. In this paper, the adjacent space matrix is mainly used, so the distance space matrix is not introduced here.

The spatial dependence of “adjacency” is defined as follows according to the geographic adjacency of regions j and i :

$$W_{ij}\begin{cases}1 \text{ When region i is adjacent to j}\\ 0 \text{ When region i is not adjacent to j}\end{cases}(1)$$

4.2. Making seat maps

Use GeoDa software to make regular mesh polygon shape document. Because Geoda makes regular grids as rectangles, the part of the row rectangle is the number of segmented regions, namely the number of seats. The actual number of students doesn’t have to be just a full line or the whole column, and if there is no student in a row, the score value corresponding to this seat is replaced by the average value of the students in the row.

4.3. Statistical test method of spatial correlation

This paper uses Moran’s index to judge the regional correlation of seat performance. Moran’s I is the correlation coefficient between the observed value and its spatial lagged value (the average value of all adjacent region attributes in the observed value region). The specific calculation formula is shown in Mc Cann and Anselin study [6].The Moran’s I ranges from-1 to 1.It can be divided into whole Moran’s I and local Moran’s I. If the whole Moran’s I is less than zero, it means the negative correlation of attribute value space (that is, the domain and its surroundings are high and low correlation or low and high correlation). The closer to -1, the greater the difference in distribution between attributes value regions and the smaller the similarity. If the whole Moran’s I is greater than zero, it means that the spatial positive correlation of the attribute value (that is, the domain and its surroundings are high correlation or low correlation). The closer to 1, the closer the spatial relationship of the attribute value is, and the more similar the spatial attribute value is. When the whole Moran’s I is close to or equal to zero, it means that the spatial distribution of attribute values is random, and there is no spatial correlation (that is, the field and its surroundings present as random distribution). When the local Moran’s I is positive, it means that the local space is positively correlated, that is, a high value is surrounded by a high value or a low value is surrounded by a low value. When the local Moran’s I is negative, it means a high value is surrounded by a low value or a low value is surrounded by a high value. When using Moran’s I to judge the spatial correlation, the reference value p of Moran’s I should also be combined.

In the spatial correlation analysis of students’ scores, the whole correlation analysis is first carried out to investigate the clustering characteristics of the spatial correlation of scores in the whole region. If there is spatial correlation, the local spatial autocorrelation analysis is carried out to determine the performance of this correlation in specific regions, and the local spatialautocorrelation graph is used to represent the distribution characteristics of this region.

4.4. Object

This research selected sixclassesin a common primary school in the city of Chuzhou in Chinaas the object of research.The school have six grades, the study selected one classes from each grades randomly.

4.5. Date

The data used in the study were from the primary school in the suburbs of Chuzhou city. The data of students’ seats location is collected by the head teacher, each seat corresponds to a student’s name. In the aspect of student achievement, students’ Chinese and math scores in the mid-term and final exams were collected through the head teacher, and the average scores of each student were calculated to represent students’ academic performance.

5. RESULT

5.1. Whole spatial autocorrelation analysis

In order to obtain the overall characteristics of the spatial distribution of students’ scores in grades 1 to 6 (G1toG6), the whole spatial autocorrelation analysis of the scores is carried out first.Table 1 lists the Moran index of the whole spatial autocorrelation of students’ grades. From Table 1, we can find that the Moran’s I of all grades is greater than 0, which indicates that the spatial distribution of grades 1 to 6 shows significant positive spatial autocorrelation. It shows that the spatial distribution of students’ grades presents the phenomenon of high or low clustering, that is, high-score students and high-score students gather together, low-score students and low-grade students gather together. Life gathers together.

Table 1. Summary of moran index for grades

Grade	G1	G2	G3	G4	G5	G6
Moran’s I	0.34	0.22	0.34	0.43	0.40	0.35

5.2. LOCAL OF STUDENTS GRADES SELF-RDLATED ANALYSIS.

Through the above self-related analysis of the whole spatial autocorrelation of the scores of the first to six graders, we know that the overall characteristic of the spatial distribution of student’s grades is high-high or low-low aggregation. Based on this, it’s necessary to know specific regulation of gathering characteristics .This needs local self-related analysis of student’s scores. The Fig. 1 is the graphic symbol.

From Fig. 2 to Fig.7are the self-related grid maps.

Fig. 1

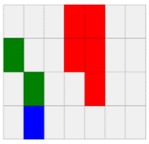


Fig. 2

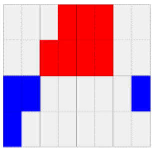


Fig. 3

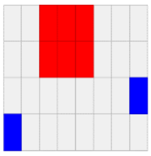


Fig. 4

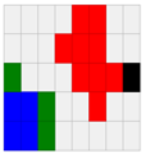


Fig. 5

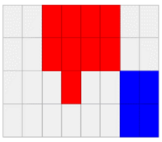


Fig. 6

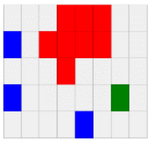


Fig. 7

Note: The top of the figure corresponds to the front of the classroom

From Fig. 2 to 7 illustrate that students grades' common characteristics that spread in the space from grade one to grade six are very obvious , that is to say, high grade students usually gather in the middle and slant to the right of the classroom, while low grade students usually gather in the four corners and behind areas of the classroom.

6. DISCUSSION

The spatial correlation of students' scores in six classes from grade one to grade six was analyzed by using the spatial measurement method. According to the analysis results, it is found that there are different degrees of spatial autocorrelation in the students' performance in the six classes of the school. On the whole, this correlation is mainly reflected as high-high-aggregation and low-low-aggregation of academic performance, and high-high-aggregation is mostly distributed in the front rowor the middle of the classroom, while low-low-aggregation is mostly distributed in the back rowor four corners of the classroom. This result shows three issues: first, students who are close to the seat influence each other in academic performance; second, this interaction mainly occurs in two groups, that is the "top students" with good grades and the "poor students" with poor grades. This shows that the influence of homogeneity among students is obvious, but the influence of heterogeneity is not. Third, "top students" are mainly distributed in the front of the classroom, "poor students" are mainly distributed in the back and the corner area of the classroom.From the above discussion, it can be seen that hypothesis one and hypothesis two are confirmed in this study.

7. CONCLUSIONS

Through the test of spatial autocorrelation of students' achievement, it is found that there are different degrees of spatial autocorrelation from grade one to grade six. On the whole, this correlation is mainly manifested in the high-high and low-low aggregation of academic performance, and the high-high aggregation mostly distributes in the front or middle of the classroom, while the low aggregation mostly distributes in the back or four corners of the classroom. The results show three problems: first, the interaction of the students whose seats are close to each other in their academic performance; second, this interaction mainly occurs among students who are born within two groups, that is, within the group of "excellent students" with good results and within the group of "poor students" with poor results. This shows that the homogeneity of students has a significant impact, while the heterogeneity is not obvious. Thirdly, the group of "top students" mainly distributes in the front and middle of the classroom, while the group of "poor students" mainly distributes in the back and corner of the classroom. From the point of view of the spatial layout of performance, the students with good performance generally concentrate on the "advantage" space of the classroom, while the students with poor performance generally concentrate on the "disadvantage" space of the classroom. Because of the influence of seats on students' learning activities, the spatial layout of seats will cause "Matthew effect" in students' academic performance.

REFERENCES

[1]Perkins, K. K., & Wieman, C. E. The surprising impact of seat location on student performance. The Physics Teacher, 2005, 43(30), 30-33.

[2]Benedict, M. E., & Hoag, J. Seating location in large lectures: Are seating preferences or location related to course performance? Journal of Economic Education, 2004, 35(3), 215-231.

[3]Vander Schee, B.A. Marketing classroom spaces: Is it really better at the front? Marketing Education Review, 2011, 21(3), 201-210.

[4]Hirmas, D. R., Slocum, T., Halfen, A. F., White, T., Zautner, E., Atchley, P. Mc Dermott, D. Effects of seating location and stereoscopic display on learning outcomes inan introductory physical geography class. Journal of Geoscience Education, 2014, 62(1), 126-137.

[5]Marco Pichierri, Gianluigi Guido.When the row predicts the grade Differences in marketing students' performance as a function of seating location. Learning and Individual Differences, 2016(49): 437-441.

[6]Mc Cann M, Anselin L. Open GeoDa, an open source tool for geovisualization and exploration. (2010-11-26)[2018-12-05]. http:// geodacenter. Asu. Edu/node/132/.

Research on the Effectiveness of Ideological and Political Education of College Students from the Perspective of Network

Jinxiu Hu
Department of Common-Required Courses, Wenzhou Vocational and Technical College, Wenzhou, Zhejiang, 325000, China

Abstract: With the continuous development of social economy, the Internet has been widely used in college students' life. At the same time, the Internet has become a common way for college students to acquire knowledge, communicate and shop. However, while the Internet has opened up the vision of college students and facilitated their lives, it has also produced some negative ideological and moral concepts for students, so the network is a double-edged sword. This paper analyzes the influence that college students' ideological and political concepts have been from the perspective of network, and puts forward some methods to improve the effectiveness of college students' ideological and political education according to the actual situation of the ideological and political education in modern universities.
Keywords: Network horizon; Ideological and political education; Effectiveness

In the network perspective, people's way of life and communication has changed greatly compared with the past. In the process of change, there are both positive and negative effects. Under such a social background, how to improve the effectiveness of Ideological and political education of college students is a problem facing us now. Our country is in a period of rapid economic development, and the network has the characteristics of convenience and richness. For contemporary college students, the network has a strong attraction. The network is a medium for disseminating information, but the information on the network is complex, some of which do not have authenticity, or some of them are villainous, which will have a certain impact on students' outlook on world, life and values. Therefore, in the network perspective, it is necessary to carry out real and effective ideological and political education for college students.

1. THE IMPACT OF NETWORK ON COLLEGE STUDENTS' IDEOLOGICAL AND POLITICAL EDUCATION

1.1. Positive influence on college students' ideological and political education from the perspective of network

1.1.1. Broadening the channels for obtaining information

In the traditional ideological and political education, the general way to obtain information is in the teaching materials or other related books, the amount of knowledge acquired is relatively small, and the speed of updating books is relatively slow, so the information acquisition has a certain lag. After the emergence of the Internet, teachers and students can easily access the information they want through the Internet, and the information obtained on the Internet is more time-efficient. The network has broadened the channels for obtaining information, and has also made the content of teachers' ideological and political education work in universities more comprehensive and richer [1].

1.1.2. Enriching the working form of ideological and political education

The most obvious feature of the network is that it is convenient, fast, time-sensitive and wide-spread, especially in the transmission of information, which is convenient for many people. At the same time, the network has two-way interactivity, and teachers and students can communicate with others in both directions and solve problems in a timely manner. In teaching management, WeChat group and QQ group are now commonly used as an auxiliary tool in teachers' teaching. They are convenient in arranging assignments and conveying leadership information. Teachers can also send some current news to students, so that students can understand domestic and foreign affairs, and carry out ideological enlightenment.

1.1.3. Innovating the means of ideological and political education

In the traditional ideological and political education, teachers usually carry out ideological and political education for students in the ideological and political classroom. One-to-one education usually happens in the office only after students make big mistakes. Relatively speaking, the coverage of ideological and political education is relatively limited and the ideological and political work is not comprehensive enough. But now, students can use anonymous way to communicate with teachers, and can be more open-minded to express their ideas [2].

1.2. Negative influence on college students' ideological and political education from the perspective of network

1.2.1. The influence on political concepts

The network is a tool across time and space. The information on the network is complex. Some radical and incorrect political ideas will appear on the network. When students see these remarks on the network, they will have a certain negative impact on their own ideas, and even lose their basic judgment ability.

1.2.2. The impact on values

The culture on the Internet comes from various regions and countries, which is complex. It is precisely because of this complexity that students feel confused. In fact, the network is a virtual space, and there are no clear legal provisions about the network environment. Most of them depend on their own moral accomplishment. Therefore, some bad information on the network will have a certain impact on the values of college students.

1.2.3. The influence on behavioral concepts

In the past, college students need to consult many books in the library before they complete their papers. But now there are many academic resources on the network. Many students copy the articles on the network directly as their own papers, which has a negative impact on academic development.

2. WAYS TO IMPROVE THE EFFECTIVENESS OF COLLEGE STUDENTS' IDEOLOGICAL AND POLITICAL EDUCATION FROM THE PERSPECTIVE OF NETWORK

2.1. Innovating the way of ideological and political education

Education should also pay attention to keeping pace with the times. In carrying out ideological and political education of college students, we should also combine the development of the times and the needs of students' development, and use modern information technology network platform to carry out ideological and political education. The use of network-based multimedia platform for ideological and political education not only strengthens the communication between teachers and students, but also expands the coverage of education. It breaks the traditional way of education, and can use voice, video, pictures to assist teaching, and even use games to carry out ideological and political education to guide students to disseminate correct ideas. In addition, it can give full play to the characteristics of the wide range of network information dissemination to disseminate red culture, enable students to feel the red spirit, and establish correct and firm beliefs [3].

2.2. Standardizing network behavior

Network culture is complex. It has not only correct and positive ideological concepts, but also negative and negative ideological concepts. College stage is the key period for students' sound psychological personality. Teachers should strengthen the ideological and political education of college students and standardize students' network behavior, and educate students by taking advantage of the situation, so that students will realize that although the network is a virtual space, it also need to abide by morality. Network security is the responsibility of every citizen. College students are a group of people with high cultural level, and they should regulate their own behavior, lead people around them to standardize network behavior, and create a good network environment. [5]

2.3. Building an educational team with high ideological and political quality

In universities, teachers are the key force to improve students' ideological and political literacy, so the workers of ideological education must have a good overall quality. First of all, it is necessary for teachers to strengthen their theoretical study of relevant knowledge and broaden their own knowledge. Furthermore, they should thoroughly study ideological and political. Finally, in the era of information technology, teachers of ideological and political education also need to have certain network technologies. In the school, the education team with high ideological and political quality should not only have good innovative spirit and ideological quality, but also have good information processing ability to take the initiative to communicate with students and improve the effectiveness of ideological and political education [6].

3. CONCLUSION

In summary, the network has positive and negative influence on the ideological and political education of college students. In order to improve the effectiveness of ideological and political education, it is necessary to innovate the method of ideological and political education, guide students to regulate network behavior, and strengthen ideological and political concepts; at the same time, schools should build the educational team with high ideological and political quality to play the leading role of teachers and guide students to form correct ideological and political concepts.

REFERENCES

[1]Liu Jia. Opportunities, Challenges and Innovations of Ideological and Political Education in Colleges and Universities from the Perspective of Network. Journal of Hubei Correspondence University, 2018, 31(19): 116-118.

[2]Zhang Huifang. Reflections on Improving the Effectiveness of College Students' Ideological and Political Education from the Network Perspective. Journal Research Guide, 2017(03): 36.

[3]Qiao Lulu. Innovative Path of Ideological and Political Education for College Students from the Perspective of Mobile Internet. Shanxi Youth, 2017(20).

[4]Liang Fengmei, Zhang Xiaotao. Thoughts on Strengthening Ideological and Political Education of Contemporary College Students from the Perspective of Network. Journal of Qiqihar Normal College,

2017(1): 1-4.
[5]Zhao Jie. The Predicament and Outlet of College Students' Ideological and Political Education from the Perspective of Network Education. Modern Educational Science, 2019(2): 74-79.
[6] Sun Caifang. Research on the Teaching Reform of Ideological and Political Education in Colleges and Universities: From the Perspective of Network Survival [J]. Learning Theory, 2017 (6): 211-213.

Research on Tourist Escape Based on 3D Cellular Automata Model

Yuxin Cai[1,], Yanshuo Zhao[2]*
[1] College of Mathematics and Quantitative Economics, Shandong University of Finance and Economics, Jinan, Shandong, 250202, Shandong, China
[2] College of Communication Engineering, Army Engineering University，Nanjing, Jiangsu, 210042, Shandong, China

Abstract: With the increase in terrorist attacks in Paris, France, people such as the Louvre are getting more and more attention. In this case, we designed an adaptive model to deal with the evacuation of the Louvre emergency. In this model, we built the ant colony algorithm based on the Greedy algorithm to get the best escape route for people in different locations. A cellular automaton diffusion model was constructed to simulate the escape process.
Keywords: ant colony algorithm; cellular automata diffusion model

Large public places, such as museums, stadiums, commercial centers, large supermarkets, shopping malls, etc., with concentrated personnel, large mobility of personnel, and due to the inherent characteristics of public places, such as the terrorist attacks or fires of tourists, the safety of tourists will be greatly affected. The Louvre is one of the largest and most visited art museums in the world, hosting millions of visitors every year [1]. But as the French terrorist attacks intensify, many popular attractions need to design and review emergency evacuation plans to help visitors escape safely in an emergency. Visitor diversity - language diversity, group size and disabled visitors also make evacuation in emergencies more challenging [2].

Therefore, how to safely and quickly evacuate personnel in the event of a disaster is not only a key issue to be considered in the design of the building, but also a key issue to be considered when formulating an emergency evacuation plan for public places.

1. EVACUATION IN THE PROMOTION OF THE PRINCIPLE

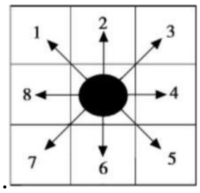
All evacuation personnel can select the least dangerous grid in the neighborhood grid as the target grid for the next time step according to the state of the neighboring grid and the state of the grid in the neighborhood. In the new model, when multiple people choose the same grid as their target grid, they will make a choice by comparing the competitiveness of the evacuated personnel. The ability to compete can move smoothly to the target grid, and the remaining evacuees choose the grid with the second highest risk. When the competitiveness is the same, one of them randomly enters the target grid while the other remains in place.

2. 3D CELLULAR AUTOMATON MODEL

2.1 Model establishment

First of all, in the 3d cellular automaton model, we divide the plane into a uniform grid of 40 * 40, and consider the tourists' physical strength and the form of travel (group or individual) to divide tourists into three types: normal tourist group tourists and Disabled tourists. Each grid is occupied by tourists, stairs, obstacles, emergency personnel, otherwise it is empty. The location and characteristics of the visitor are randomly generated. The units between the floors are connected by stairs and the rest of the location does not affect each other.

Second, each person can only move one space at a time. The direction of movement is eight directions: east, south, west, north, northeast, northwest, southeast and southwest.



.
Figure1 the possible directions of evacuees

Finally, we can determine the weight of the tourist's mobile selection direction based on the location risk, compare the weights, and finally determine the moving direction.

2.2 Hazard calculation of cellular location

When the attribute values of X2、X3 are cost-type, we use formula (1) to make unified disposal.

$$r_{ij} = \frac{a_{ij} - \min a_{ij}}{\max a_{ij} - \min a_{ij}}$$

When the attribute values of X1 、 4 are efficiency-type，we use formula (2) to make unified disposal.

A pairwise comparison matrix is constructed for the four attributes, and the attribute weights are calculated to obtain the target grid position of the evacuation personnel.

$$A = \begin{bmatrix} 1 & 1/2 & 4 & 3 \\ 2 & 1 & 7 & 5 \\ 1/4 & 1/7 & 1 & 1/2 \\ 1/3 & 1/5 & 2 & 1 \end{bmatrix}$$

CI=0.0072 CR=0.0080

After we calculated in the algorithm,we know the weights of 1, X2, X3, and X4 are 0.2884, 0.5323, 0.0675, 0.1118,and the consistency of this matrix is acceptable. As mentioned above, the evacuation behavior of personnel in an emergency has undergone a complicated decision-making process. the methods used by evacuation personnel are affected by many factors, such as the distance from the exit to the exit, to a certain extent, as well as the herd mentality.Under this condition ,we suppose that the evacuation personnel have 8 possible movements, the directional attraction probability Pdir(I,j) in a certain field of view can be obtained by the following formula:

$$P_{dir(\text{i,j})} = \frac{N_{dir(k)}}{\sum_{k=1}^{\delta} N_{dir(k)}}$$

We define Ndir(k) as the total number of people moving in the K direction within a certain field of view, k = (1, … ,8).

2.3 Analysis of cellular automata evacuation process

The safe evacuation time we need is the time it takes for a disaster to escape safely.It can be analyzed in three phases: disaster detection, alarm time (tCall the police), pre-action time (tPre), and evacuation action time (tmobile).

$$\text{REST} = t_{alarm} + t_{pre} + t_{move}$$

(1) The time from the occurrence of a disaster or terrorist attack to the acquisition of information by a person is called the disaster detection alarm time.

(2) Pre-execution time means that after the disaster detection information is sent to the system and the alarm is activated, the personnel will identify the disaster, but will not evacuate immediately, but will use the information obtained to confirm whether there is a disaster or terrorist attack. The evacuation direction of the area, search for the nearest escape route, and the time required to quickly evacuate to a safe area.

(3) Evacuation time depends mainly on changes in site environmental parameters, such as the reduction of obstacles, the time spent on rescue, and the time spent by individuals in their own psychological reactions, such as fright and panic.

Evacuation personnel in different units generate different delay times depending on factors such as the floor height of the evacuated person and the difference in the position of the obstacle.

3 results analysis

According to the cellular automata diffusion algorithm, the final population will spread to the four main exits of the Louvre. One of the results is shown below:

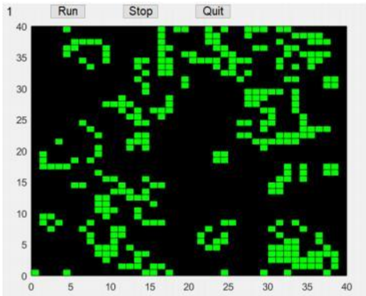


Figure 2 process 1

REFERENCES

[1]Zhu Nuo. Study on the theory of pedestrian evacuation based on video detection and cellular automate. Beijing: Beijing Jiaotong University, 2012: 32-35.

[2]Cui Xihong. Study on occupant evacuation model in large public place to consider individual character and following behavior. JOURNAL OF NATURAL DISASTERS, 2005,14(6):134-137

[3]Yue Hao. Simulation study on pedestrian evacuation flow based on Cellular Automata. ACTA PHYSICA SINICA, 2009, 58(7):3-4.

Advantage Dissemination of Chinese Traditional Sports Culture by New Media

Sun Qiang
Shandong University of Arts, Jinan, 250014, Shandong, China
E-mail: win578787@sina.com

Abstract: The traditional way of communication in our country needs people to conduct face-to-face at the beginning. After several reforms, information exchanges through telephone, network and other means of communication. With the emergence of new media and new technology, great changes have taken place in the way people communicate. With the rise of new media technology in China, many fields and corresponding cultural communicative forms are changing, the new media has played a decisive role in the dissemination and promotion of our traditional sports culture. This paper carefully analyzes the advantages of new media technology and new media communication methods in promoting traditional sports culture, and put forward corresponding ideas and suggestions.
Keywords: New media; Dissemination mode of traditional sports culture

1. OVERVIEW OF NEW MEDIA

New media communication technology and its carrier have become the main way of information exchange in our country. Similarly, the rise of new media communication technology has also propelled various industries development and promoted the efficiency of cultural communication. China’s diverse cultures show different cultural colors for people through new media. And all industries in all fields need to seize the opportunity to play their potential, improve their visibility through new media means. The new media has greatly promoted the reform and dissemination of China’s sports culture, made the traditional sports culture really integrate into people’s daily life, let people really understand what sports are, and cultivate people’s sports aesthetic feeling and lifelong sports habits[1].

New media communication mode and new media technology as new applied communication technology emerged with the continuous development of information technology in recent years. New media is a new form of media occurred under the new technology system, such as digital magazines, digital newspapers, digital broadcasting and so on. With the application of new media technology in people’s daily life in recent years, the most prominent performance is the communicative form of new media technology. At present, everyone in our country is able to use smart phones. The application of smart phone reflects the characteristics of new media communication mode, and the basis of new media technology is information technology and digital technology. It has brought great technological changes to people’s daily life [2].

2. ABUNDANT HUMANISTIC VALUE CONTAINED IN CHINESE TRADITIONAL SPORTS CULTURE

Our country is a multi-ethnic, multi-cultural country, resulting our traditional culture lasts for up to 5000 years, and Chinese traditional sports culture has also been accompanied by. The Chinese traditional sports culture we have learned today is the product that carried the wisdom of the ancients, more importantly, it contains rich humanistic value. Because our country is a multi-ethnic culture and multi-ethnic country, so each nation has its own traditional sports culture, in light of this, the sports culture of the Chinese nation is diverse. Chinese traditional sports culture carries not only the cultural connotations of different nationalities, but also the common values and humanistic connotations such as positive, united spirits. Similarly, some of the traditional Chinese sports culture also has its competitiveness. “Friendship first, competition second” has always been the core significance of our sports culture heritage. The humanistic value of Chinese traditional sports culture can not only represent the diversity of Chinese culture, but also reflect the competitiveness contained in each steps of Chinese sports [3].

3. EXTENSION OF THE COMMUNICATION FIELD OF CHINESE TRADITIONAL SPORTS CULTURE THROUGH NEW MEDIA

With the rapid improvement of science and technology and the overall economic level in recent years, great changes have not only taken place in science and technology culture but also in applied culture in China. People’s way of production, life and learning, daily contact mode is also gradually changing. And new media has gradually become a new way of cultural communication and information culture in China, even becoming the mainstream of media and technology in the process of information exchange in our country. The traditional sports culture of our country is limited by many internal and external reasons, and has been using the traditional teaching mode and communication mode. Therefore, the traditional sports culture can not really penetrate into all fields, industries, and then into people’s daily life [4-5].

3.1. New opportunities for the dissemination of Chinese traditional sports culture through new media

Traditional sports communication always maintains the way of face-to-face or on-site direct viewing. With the emergence of new media technology, people can indirectly watch programs through the Internet and other ways. New media technology provides new opportunities and platforms for the dissemination of Chinese traditional sports culture. And new media technology has been integrated into people's daily life, similarly, sports culture has gradually and really come into people's lives. People can watch sports events on the Internet or TV in real time, so as to understand the connotation and the competitive meaning of sports culture. New media not only provides a new method and way for the dissemination of Chinese traditional sports culture, but also more importantly, the dissemination of traditional sports culture through new media can let more people understand.

3.2. Breakthroughs of monopoly in reporting of traditional media through new media

Before the emergence of new media technology, the traditional means of sports events or sports culture communicationin our country were only newspapers or television that truly understand a sports form in which our country is currently in. However, with the emergence of new media technology, people can not only watch sports events in real time through internet, but also sports news directly through mobile phones, not limiting to television and newspapers. New media technology has broken the monopoly of traditional media on reporting. New media promotes the spread of traditional sports culture in China. Even in foreign countries, many people can watch sports events in China directly through mobile phones. To a certain extent, it attracts more attention of Chinese sports culture in the word, and avoids a series of problems caused by the relaying news events of traditional way, such as inaccurate situation of events, omission of manual operation, etc. Of course, the new media communication also needs manual participation, but the speed and efficiency of its dissemination are greatly enhanced, which to a certain extent improves the propaganda of sports culture, and expands the scope of the audience, so that sports culture re-enter the vision of young people.

3.3. Changing and optimizing the audience structure through new media

With the emergence of new technology, sports events and the dissemination of traditional sports culture have undergone significant changes. People can pay close attention to and understand the sports news of our country in real time, and watch sports events in real time. These changes also indirectly change and optimize the audience structure. Similarly, it have changed the age of the audience accordingly. Middle-people are the main audience during in the process of traditional media disseminating traditional sports culture in China. With the emergence of new media technology, the limitation of traditional media has been broken. The range of sports events and sports news viewers in China has also changed from middle-aged people to low-aged people. Now in the process of live broadcasting of many major sports events, not only middle-aged people pay attention to sports culture and sports competitions, but also many young people nowadays. People also gradually like to pay attention to sports events and sports news. Sports can be viewed directly through the Internet and mobile phones, resulting ore and more young people like this way of media communication and really like sports culture.

3.4. Sharing of new media promotes the spread of sports culture

The core of new media technologyis to use information technology to disseminate data and images in multiple directionsthrough more channels and methods. Nowadays, many scientific and technological means in our country are based on new media technology, which develops the sharing of new media and promotes the spread of sports culture. In the process of relaying news events and sports culture in traditional media in China, the content can only be confined to the domestic market. With the mass dissemination of information, the new media can transmit the corresponding image and data information to foreign countries, so that more countries and people in the world feel the charm of Chinese sports culture. China's new media technology is truly integrated with the development of globalization, and achieves the all-round development of China's sports culture.

4. GIVE FULL PLAY TO THE ADVANTAGES OF NEW MEDIA AND INHERITTHE CHINESE TRADITIONAL SPORTS CULTURE

4.1. Bring into play the individualized characteristics of new media and disseminate traditional sports culture

The new media technology itself has many advantages, and its most important feature is the diversification of communication modes. If our government and culture want to promote and disseminate sports culture, we must really understand the overall characteristics of the new media, make use of the personalized characteristics of the new media, so as to promote the dissemination of traditional sports culture. At present, the main new forms of communication in China are audio and video in the field of new media technology communication and development. Traditional sports culture must make good use of this feature to achieve comprehensive communication. In the process of new media dissemination, sports culture can be disseminated by combining words, images, videos and audio to provide better experience for the audience, it can not only increase people's impression on its culture, but also make people begin to love sports culture knowledge.

4.2. Use new media to inject new vitality into the dissemination of traditional Chinese culture

The audience is generally middle-aged peoplewhen traditional media disseminating traditional sports culture, due to the income, the characteristic of people and other reasons, restricting the vitality of the dissemination of Chinese traditional sports culture.whereas, the characteristics of the new media ensure the diversification of the traditional sports culture communication forms, which makes more young people like sports culture. Meanwhile, the new media communication technology also greatly improves the competitiveness of sports, leading to the age of audience transformed from middle to low-aged people, greatly expanding the scope of audience. Therefore, the new media dissemination method can better ensure and promote the dissemination of our traditional sports culture, which providing more vitality and novelty.

4.3. Use new media to display the charm of traditional sports in an all-round way

The main characteristic of traditional sports culture is to show sports spirit through corresponding sports events, and using new media's communication technology and methods can better convey sports spirit to people all over the world and the people of our country. Nowadays, people who pay attention to sports culture are getting younger and younger, which ensures that more and more young people fall in love with sports. The dissemination of new media enables young people to truly understand the characteristics of sports such as competitiveness, activeness and enthusiasm, and makes young people really fall in love with sports culture from their hearts. New media technology not only brings new vitality to the traditional sports communication, but also exhibits the vitality of our traditional sports in an all-round way in the process of communication.

4.4. Using new media to strengthen the public's cognition and understanding of Chinese traditional sports culture

In the process of disseminating our traditional sports culture, the new media can make young people and more people fall in love with sports events, and truly remember sports events, which shows that the new media dissemination method have the function to improve people's awareness of sports and stimulate people's love for sports culture. Nowadays, many traditional sports events in China are broadcasted and watched live through new media technology. Audiences have more opportunities to understand sports cultural knowledge, sports spirit and sports connotation through live broadcasting and watching. Therefore, new media can strengthen the public's understanding on Chinese traditional sports culture and enable people to truly integrate into traditional culture to experience the competitive essence, and understand the connotation beneath in the form of sports culture.

5. CONCLUSION

This paper carefully analyses the advantages of the new media in the dissemination of Chinese traditional sports culture: the new media can not only publicize the traditional sports in an all-round way, but also better carry forward the spirit of Chinese traditional sports culture, enabling our people and the world people truly understand the connotation and meaning of the spirit of Chinese traditional sports culture.People can pay more attention to sports events through new media technology, and then truly understand the spirit of sports. New media technology enhances people's enthusiasm for sports and sports culture, promoting the political goal of sports for all. It is hoped that through the careful analysis of this paper, we can promote the spread of traditional sports culture in China, so as to implement the guiding policy of national fitness.

REFERENCES

[1] Ping Jing. Advantages of New Media in Spreading Chinese Traditional Sports Culture. CultureJournal, 2018(02): 17-19.

[2]Xiao Jun. Research on the Development and Innovation of TV Sports Programs in China under the All-Media Environment. Hebei University, 2017.

[3]Huang Juan. Advantages of New Media in Spreading Chinese Traditional Sports Culture. Journalism Lover, 2016(04): 86-88.

[4]Li Baixiao. Image Writing and Cross-cultural Communication of Sports Culture in the Context of New Media. Film Review, 2016(02): 85-88.

[5]Li Ruifeng. The Research on Identity of Government, Media, Public in China's Badminton Negative Competition in London 2012 Summer Olympics". Beijing Sports University, 2015.

Research on Guidance Control of Internet News Public Opinion Communication

Bohui Shi
College of Art and Media, China University of Geosciences, Wuhan, Hubei Province, 430074, China

Abstract: With the development of online media, network communication has occupied an increasingly important position in contemporary news communication by virtue of its diversification and interactivity. This paper analyzes the dissemination of online news public opinion and studies how to do a good job of guiding public opinion communication from two aspects. Only by doing a good job of guiding public opinion in online communication can we promote the healthy growth of online media and strengthen the national media system.
Keywords: Network communication; News paradox; Guidance control

1. INTRODUCTION

As we all know, the dissemination of traditional media such as newspapers, radio and television is the spread of "point-to-face", while network communication is a kind of distributed mesh-like communication structure [1]. The news of traditional media must be checked before the publication, and finally the final editor should be the final review, which is convenient for the regulation of news public opinion. Because of the "convenient access" and non-centrality, online media has many difficulties in guiding [2].

2. NETWORK NEWS PUBLIC OPINION COMMUNICATION

With the continuous deepening of the guidance of the news and public opinion, the current network communication environment has been greatly improved, and the situation of the previous rumors has rarely appeared. The "11.1" explosion accident in Machangping, Fuquan City, Guizhou Province was shocked across the country, and netizens also paid close attention to this incident. After understanding the disaster-related information, State Councilor, Minister of Public Security Meng Jianzhu, Secretary of the Provincial Party Committee Li Zhanshu and Governor Zhao Kezhi made important instructions, which required timely release of information to guide public opinion, and all news media should strengthen the handling of accidents. Positive reports ensure that information is objective and accurate, and prevent rumors from spreading. Since then, the media has publicized the latest situation of the number of casualties and the cause of the explosion to the public in a timely manner, and disclosed the key facts that the driver tampering with the transportation route and illegally docked at the repair shop to cause an explosion, so that the netizens can understand the truth and propose Strengthen the safety education of drivers and carry out safety investigations on dangerous explosives throughout the society to prevent such accidents from happening again.

The contemporary society is gradually developing towards modernization, informatization, and networking. The Internet is gradually becoming an indispensable tool in our lives and work. Online media also occupy more and more in today's media system with its unique attributes. The more important the role. It is true that due to the short time of online media, there are still many defects and deficiencies. However, we should not devote our efforts to squandering food. Instead, we should invest more attention and support in online media to promote the healthy development of online communication. With the accelerating process of informationization, one day, the network media will gradually emerge its enormous value. Just as many government departments have opened their own government affairs microblogs today, it is more convenient to communicate with the people and has received good results.

3. "HARD CONTROL" AND "SOFT CONTROL" IN THE BOOT

In view of the current situation of network communication, this paper believes that news media guidance should be guided from two aspects: "hard control" and "soft control". "Hard control" is mainly manifested in strengthening news legislation and using network technology to control two levels; while "soft control" is mainly manifested in the timely publication of facts in the actual news dissemination process and consciously and scientifically and correctly guided.

3.1. Guided hard control

As everyone knows, having a law is a prerequisite for all legal acts. Since the introduction of the first law on the Internet in the world in 1997, the German "Information and Communication Services Act", countries around the world have stepped up their legislation on the Internet. As early as 1996, the Chinese government issued a notice requesting computer users entering the Internet to register to strengthen management and become one of the first countries to adopt Internet management measures. Subsequently, in 2000, the State Council and the Ministry of Information Industry promulgated the "Internet Information Service Management Law", “Interim Provisions on the Administration of the Internet for Publishing Press Services” and “Regulations on the Administration of Internet Electronic Announcement Services”, forming a set of comparisons. Complete legal and regulatory system.

Generally speaking, the network communication moral publicity and education activities are carried out, and the content of the civic moral construction outline is taken as the main content of online moral publicity and education, and various modern means such as sound, light and electricity are used to make “patriotic law-abiding, honesty and integrity, The basic ethics of unity, diligence, self-reliance and dedication is instilled in the netizens, thus improving their moral quality, enabling netizens to identify and resist black, yellow and gray information on the Internet, and actively choose positive information to form a good The habit of surfing the Internet, consciously abide by the rules of the network, do not commit crimes, and constantly promote the moral self-discipline of netizens.

3.2. Guided soft control

Compared with the direct “hard-boot” measures mentioned above, the most widely used in the actual news dissemination process are invisible “soft boots”. Although we can't see the existence of such guidance on the surface, it has subtly completed the task of guiding in the actual news dissemination process.

Since the reform and opening up, with the improvement of China's economic level and the continuous improvement of democratic politics, the rights of the Chinese people have been increasingly fully guaranteed. However, there have been many disharmonious factors in this process. For example, some speeches that endanger social stability are spread on the Internet. At this time, the media coverage of the media is actually the process of implementing “soft regulation”.

4. CONCLUSION

Network media and traditional media have many common attributes. They are also tools of public opinion. They also have the function of public opinion guidance. They are also the bridge and link between the party and the government to connect with the people. The attributes of online media give it some unique advantages over traditional media. Doing a good job of news media guidance in network communication can not only promote the healthy growth of online media, but also strengthen the national media system; it can also maintain social stability and contribute to the building of a harmonious society.

REFERENCES

[1]Kuang Wenbo. Network Communication Theory and Technology. Beijing: China Renmin University Press, 2007: 81-111.

[2]Zhen Shuxiu. The function of public opinion guidance of network news communication. No. 01 of 2004 (Total No. 514).

[3]Zhang Haiying. New Introduction to Network Communication. Shanghai: Fudan University Press, 2008.

Research on the Game of Morality and Interests in Live webcasting Economy from the Perspective of Internet - Taking the Cultivation Plan of "Web Sensations" as an Analytical Framework

Shiqin Deng
School of Politics and Administration, China West Normal University, Nanchong, Sichuang, 637000, China

Abstract: In the era of rapid Internet popularization, various Internet-related economic industries have also emerged. The information age has also given birth to a series of new industries, such as live webcasting economy. The so-called live webcasting economy is the economy brought by live webcasting, which is essentially a trust economy. But along with the booming development of live webcasting economy, some social problems have arisen. Live webcasting chaos such as sky-high-priced gratuity and hype are rampant, the environment of live webcasting is chaotic, interests are paramount, morality is decayed, and the mainstream values of society are impacted. Behind the prosperous live webcasting economy are the flippant and the impetuous of the society, the lack of humanity, the decay of morality, and more of a game of morality and interests. Who is the real winner in this contest? How to balance morality and interests while developing the live webcasting economy? Driven by huge economic interests, what course should morality and interests follow? In the live webcasting economy with web sensation as the core, the game of morality and interests is more intense. How to maintain the balance between the two has become an important topic of the paper.

Keywords: Live webcasting economy; Web sensation; Morality and interests; Era of Internet; humanity

1. DISCUSSION ON THE ORIGIN AND THE CONCEPT OF THE LIVE WEBCASTING ECONOMY AND WEB SENSATION

1.1. The concept and background of the live webcasting economy

The live webcasting economy is a new form of economy which means that the production and release of information are synchronized with the development of events on the scene, and certain tools and platforms are used to present the event to the public and to explain on the spot, so as to get public click rate and gratuities, relying on which profit is obtained [1]. The nation's policy support for the mass entrepreneurship and innovation, the rapid spread of the Internet, the prompt development of technologies such as big data and cloud computing, and the preference of the audience are the market sources of prosperous live webcasting. Commercial interests and value-web traffic, high desire for performance (the desire to perform and show off), and the characteristics of live webcasting are the internal vitality of its rise.

1.2. The concept and influence of web sensation

Web sensation refers to a specific group of people who have been publicized on the Internet and have become highly popular overnight. They attract fans' attention through various live webcastings, and rely on fans' gratuities to earn income. Web sensation makes people's personal pursuit more clear, helps discover their own uniqueness, has an incentive and stimulation for people's struggle, enriches people's spare time, and provides inspiration and ideas for people's creation. However, on the other hand, it also has a negative impact. Some web sensations challenge the social moral bottom line in order to attract social attention.

2. DISCUSSION ON THE RELATIONSHIP BETWEEN LIVE WEBCASTING ECONOMY AND WEB SENSATION, MORALITY AND INTERESTS

There are inextricable relationships between live webcasting economy and web sensation, morality and interests. The development of the live webcasting economy has spawned the web sensation, while the web sensation has reacted to the live webcasting economy. The real ills of the live webcasting economy and the web sensation also reflect the imbalance between people's morality and interests in modern society. Specific performances are as follows:

(1) The live webcasting economy has spawned the web sensation. Live webcasting economy, with its low threshold, strong sense of participation, high interactivity, low input and high return business model, has prompted people to join the ranks of live webcasting and become web sensations.

(2) Web sensation is the biggest selling point in the live webcasting economy. The live webcasting economy focuses on web sensation, and is committed to cultivating various anchors to meet the diverse needs of the audiences.

(3) The chaotic live webcasting and countless web sensations reflect the game of morality and interests. Behind the phenomena of sky-high-priced gratuity, taking the opportunity to hype, selling pornographic videos, intermingling the good and the bad contents in live webcasting, and the increasing number of web sensation are not only the public's psychological needs, but also a contest of morality and interests in the live webcasting economy [2].

3. MAKING THE LEAP “FROM GRASSROOTS TO WEB SENSATIONS” IS THE GAME OF MORALITY AND INTERESTS IN THE LIVE WEBCASTING ECONOMY - TAKING PAPI JIANG AS AN EXAMPLE

Papi Jiang, who is from Shanghai and 29 years old, is a graduate student of the Directing Department at the Central Academy of Drama. The estimated value of Papi Jiang has reached 300 million, realizing the transition from “low-grade version of Sophie Marceau” to “Lu Xun in the Internet era”, from a grassroot to a big shot among web sensations, and from zero to hundreds of millions of worth. There is no doubt that this is a successful counterattack in the combination of live webcasting economy and web sensation. Behind this is the wanton noise and anger of the lonely soul, the vacancy of spiritual civilization behind playing to the gallery, and the desperate struggle between morality and interests under the temptation of huge interests. The path of web sensation development in the live webcasting economy has prompted us to think more about what kind of power makes such an ordinary person succeed almost without any effort. How many lonely souls behind her success are paying for venting emotions and comforting the heart? Carnival shows the loneliness of a group of people. In the era of pan-entertainment, where should our spiritual sustenance, value orientation, and moral bottom line be placed?

4. RELEVANT PROBLEMS IN THE CURRENT LIVE WEBCASTING ECONOMY AND TRYING TO FIND SOLUTIONS

4.1. The real ills of the live webcasting economy

The ethical bottom line is gradually drifting away. Some live webcasting platforms do not hesitate to sell pornographic videos in order to obtain rich profits. Besides, some anchors sell their personality, carrying out vulgar live webcasting, in order to get fans' gratuities. This has seriously affected the construction of both network civilization environment and social mainstream values.

Live webcasting content is vulgarized and pan-entertainment. Contents of good and bad intermingle in infinite space and vast amount of information. A lot of live webcasting content is interesting and entertaining. Most of them are fast-food style. In fact, they do not have a very high educational effect in essence.

Speech orientation is difficult to control. Because network anchors do not need to be qualified for review, some of the anchors lack political attainments and media ethics, hold one-sided and superficial view of problems, arbitrarily comment on political events, provoke national sentiments, and demonize public figures. In the end, there is no winner in the game of morality and interests, and both sides suffered great losses, ultimately affecting the development of the entire country's economy and the socialization of individuals.

4.2. Ethical reflection on the cultivation plan of web sensations in the live webcasting economy

With the leap from grassroots to web sensations, the cultivation plan of web sensations in the live webcasting economy often causes a series of ethical contradictions and conflicts, which deserve people's vigilance and consideration. The surge in the number of web sensations shows an imbalance between morality and interest. Web sensations’ “personal freedom” is dispelling the traditional Chinese mainstream values. Their “rising to fame overnight” has aroused young people’s impetuous mentality of eagering for quick successes and instant benefits [3]. The economic model behind web sensations is an important driver for seeking instant successes and quick profits of web sensations, whose “getting rich quickly” has triggered a crisis of integrity in business operations.

4.3. Methods of maintaining the balance between morality and interests in the live webcasting economy

Anything existing must be reasonable. The live webcasting economy conforms to the mobile Internet era, but it also brings some social ethical issues. To resolve the contradiction between morality and interests, and promote the healthy and orderly development of the live webcasting industry, we should compliance with ethics. Driven by huge economic interests, we ought to put morality in the first place, improve self-cultivation of web sensations, and regard content as main consideration to enhance the connotation of live webcasting culture. It is necessary to accelerate the technological innovation and talent upgrading of the industry, establish and improve the guiding mechanism as well as strict review and regulatory mechanism, strengthen public welfare propaganda, and focus on mainstream value guidance.

5. CONCLUSION

Is the live webcasting economy the embodiment of the lipstick effect under the new normal economy, or the development trend of the future economy? Some insiders believe that it is the development trend of the economy in the future, and some people think that its persistence is open to question. This paper holds that there are limitations in the development space of live broadcasting economy and people should be cautiously optimistic. However, no matter what kind of economic form we are in, we should make a good balance between morality and interests when pursuing interests. Let us show the glory of humanity and the power of morality in the economic war of the 21st century.

ACKONWLEDGEMENT

This paper is supported by the Project Fund of Research on the confliction between Morality and Interest in Live Broadcasting Economy under the Visual Threshold of Internet——Taking “Cyber Celebrity” Cultivation as An Analysis Framework (Item Number：201810638082).

REFERENCES

[1]Wang Weibing. Generating Logic, Ethical Reflection and Standard Guidance of Web Sensation Economy. Truth Seeking, 2016(08): 43-49.

[2]Zhang Xiaorong and Yu Dian. Research on the Trend of Sharing Economy in China. Journal of Xinjiang Normal University (Philosophy and Social Sciences), 2018(02): 132-146.

[3]Shen Zepei. Discussion on the Live Webcasting Economy. MEDIA OBSERVER, 2017(21): 73-74.

Effects of Different Application Modes and Amounts of Biochar on Soil Nitrogen and Phosphorus

*Zhihui Wang, Dawei Yin, Zuotong Li**
College of Agronomy, Heilongjiang Bayi Agricultural University and Heilongjiang Engineering Technology Research Center for Crop Straw Utilization, Daqing 163319, Heilongjiang, China
**E-mail: lzt123455@126.com*

Abstract: In order to explore the effects of biochar on soil nutrients and effective application methods, the paper researched that the effects of biochar on the contents of nitrogen and phosphorus in the soil through a field experiment added the different application rates (0 t/hm2, 10 t/hm2, 20 t/hm2, 40 t/hm2, 80 t/hm2) and methods (above or under of ridge addition biochar). The results show when the application rate of 40 t/hm2 above ridge soil total nitrogen and available phosphorus are the highest contents. On the base of ridge, addition biochar content is 80 t/hm2 that soil total nitrogen and available phosphorus contents are the largest. Under the same application rate, soil total nitrogen and available phosphorus contents are the highest during Maize tasseling stage.

Keywords: Biochar; Application method; Application rate; Total nitrogen; Available phosphorus

1. INTRODUCTION

Biochar is a stable high-carbon product of agricultural waste biomass pyrolyzed under high temperature or low oxygen conditions. Biochar can increase the content of nutrients in the soil and increase soil fertility [1-2]. Biochar can change the physical and chemical properties of the soil, increase the specific surface area, reduce the soil bulk density, and increase the porosity [3]. These changes make the soil more suitable for crop growth. The increase of specific surface area can make the soil more abundant and absorb nutrients from the outside. The decrease of soil bulk density and the increase of porosity can increase the water holding capacity in the field, so that the plants can absorb water more fully and reduce water loss [4]. Biochar contains a large amount of inorganic and organic matter, which can be used by crops after being applied to the soil. A large amount of organic matter can increase the yield of crops by providing sufficient nutrients during crop development [5]. The surface of biochar also has a large number of charged ions, and the biochar has a large specific surface area, so it has a strong adsorption capacity, and it can adsorb the oppositely charged ions in the form of ions in the soil [6]. Biochar also has a good promoting effect on the two important elements of nitrogen and phosphorus for crop growth. Biochar increases the amount of nitrogen and phosphorus in the soil, which in turn promotes crop growth and increases crop yield.

Biochar can promote crop growth but how to apply it in specific agricultural production. There is no scientific guidance on how much to increase the soil nitrogen and phosphorus content. Therefore, in order to further explore the specific effects of biochar on soil total nitrogen and available phosphorus, we start from the two ways of carbon application (ridge, ridge bottom) and charcoal application, revealing how to improve soil nutrient use efficiency. Scientific application of biochar in agricultural production provides scientific guidance.

2. MATERIALS AND METHODS

2.1. Materials and methods

The experiment consisted of 5 treatments, 2 factors and 3 repetitions for a total of 30 treatments. The biochar consumption was set to five gradients of 0t/ hm2, 10t/ hm2, 20t/ hm2, 40t/hm2, 80t/ hm2. The method of charcoal is divided into charcoal on the ridge and carbon on the ridge. The test biochar was prepared from the mixture of corn stalk and peanut shell and purchased from Liaoning Jinhefu Agricultural Development Co., Ltd. It was prepared by the method of Chinese invention patent (ZL200710086505.4). Its basic physical and chemical properties are pH 7.94, carbon 44.06%, nitrogen content 1.53%, phosphorus content 0.78%, and potassium content 1.68%. Soil properties tested: pH 7.84, organic matter 27.59 g, available potassium 132.93 mg, available phosphorus 12.25 mg, and alkaline nitrogen 120 mg. The area of the plot is 58.5 m2, the amount of fertilizer is 360 kg/hm2, and urea (N>46%) is used as top dressing. The cultivation method is planted in a traditional small ridge of 0.65 m, and the planting density is 5000. As shown in Table 1.

Table 1. Test each processing code

Charcoal method	Charging amount				
	0t/ hm2	10t/ hm2	20t/ hm2	40t/ hm2	80t/ hm2
Ridge	CK	LSC10	LSC20	LSC40	LSC80
Ridge bottom	CK	LDC10	LDC20	LDC40	LDC80

2.2. Measurement items and methods

The contents of total nitrogen and available phosphorus in the soil at the seedling stage, jointing, tasseling, waxy and mature stages were determined. Total nitrogen was dehydrated by H2SO4 accelerator, determined by SKD-2000 automatic Kjeldahl analyzer, and soil available phosphorus was determined by NaHCO3 extraction-molybdenum anti-colorimetric method [8].

2.3. Data analysis

Statistics and analysis were performed using Excel 2015 software and Spss21.0 data processing system. The significance test was performed using the Duncan new complex range method.

3. ANALYSIS OF RESULT

3.1. Effects of different application methods and application rates of biochar on soil total nitrogen

As shown in Figure 1, charcoal on the ridges increased the total nitrogen content of the soil. LSC10, LSC20, LSC40 and LCS80 were higher than CK at seedling stage, among which LCS40 and LCS80 were more significant, and LCS40 had the highest total nitrogen content. Compared with the control, LSC40, LSC80, LSC20 and LSC10 increased by 23.92%, 15.12%, 4.36% and 0.51%, respectively. It can be seen that biochar can effectively increase the total nitrogen content in soil seedling stage and strengthen seedling stage in corn seedling stage. Has a positive meaning. When corn grows to jointing stage, the effects of each treatment on soil total nitrogen are: LSC80>LSC40>LSC10>LSC20>CK. In the corn growing to the tasseling stage and the wax maturity stage, the total nitrogen content in the soil treated by LSC40 was the largest. When mature, the total nitrogen content of each treated soil is from large to small: LSC40>LSC80>LSC20>LSC40>CK. From the whole growth period, the total nitrogen content in the soil during the tasseling period was the largest. This study showed that the total nitrogen content in the soil increased first and then decreased with the increase of biochar application. When the carbon application amount was 40 t/hm2, the total nitrogen accumulation in soil was the best.

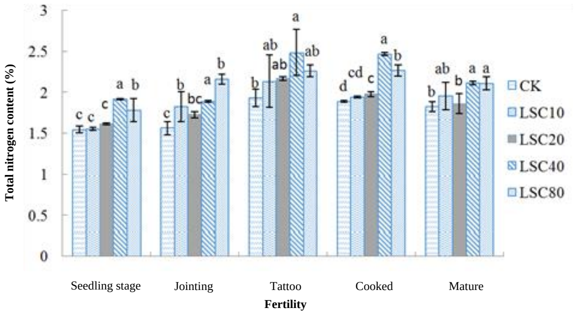


Figure 1. Effect of biochar applied to soil total nitrogen on ridge

As shown in Fig. 2, under the conditions of carbon application at the ridge, the total nitrogen content of each treated soil was higher than that of CK treatment and increased with the increase of carbon application, which was expressed as LDC80> LDC40> LDC20> LDC10> CK. The LDC80, LDC40, LDC20, and LDC10 treatments were 10.78%, 9.62%, 0.34%, and 0.11% higher than the CK treatment, respectively. In the jointing stage of maize, LDC80 treatment reached a significant level compared with the control. It can be seen that charcoal on the ridge bottom significantly promoted soil total nitrogen. In the corn tasseling stage, wax maturity stage and maturity stage, LDC80, LDC40, LDC20 and LDC10 treated soils had higher total nitrogen content than the control. Among them, LDC80 and LDC40 were treated significantly compared with the control, which increased by 20.75% and 23.05%, respectively. Tillering period), 4.42%, 14.63% (wax ripening period), 13.20%, 32.96% (mature period). Biochar was applied at the bottom of the ridge, and the amount of charcoal was positively correlated with the total nitrogen content of the soil. It can be seen that biochar is beneficial to increase the total nitrogen content in the soil. The high carbon application rate of LDC80 was most effective in promoting total nitrogen in the whole corn growth period. Biochar increases the nitrogen in the soil, promotes the utilization of nitrogen by the growth and development of corn, and plays a positive role in increasing crop yield.

3.2. Effects of different application methods and application rates of biochar on soil available phosphorus

Phosphorus is a large number of elements required for plant growth and participates in many physiological reactions in plants, such as respiration, photosynthesis, and fat metabolism. It can be seen from Fig. 3 that the effect of applying different amounts of biochar on the soil on the available phosphorus in the soil is as follows. The effective phosphorus content in the soil increases first and then decreases with the increase of carbon application, and LSC40> LSC80> LSC20 is present throughout the growth period. >LSC10>CK, the effective phosphorus content is the highest when the carbon content is 40 t/hm2. At the same time, during the whole growth period of corn, the effective phosphorus content in the soil with the same amount of carbon is increased first and then decreased. The effective phosphorus content in the soil during the tasseling period is the highest, followed by the wax maturity and maturity. The period has dropped slightly.

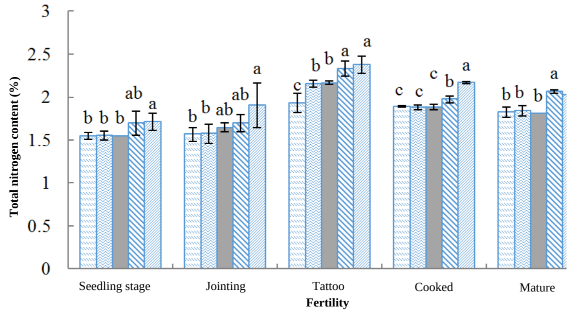


Figure 2. Effect of biochar applied to soil total nitrogen at ridge bottom

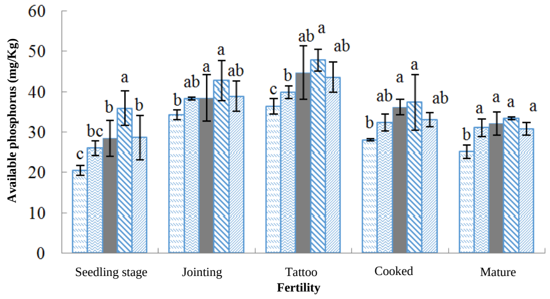


Figure 3. Effect of biochar applied to soil available phosphorus on ridge

As shown in Fig. 4, the effect of carbon application on the available phosphorus content in the soil showed that the content of available phosphorus in the soil increased with the increase of carbon application. Treatment LDC80> LDC40> LDC20> LDC10> CK, 5 treatments The effective phosphorus content was the highest when the amount of carbon applied was 80 t/hm2. Compared with the control, the effective phosphorus content of LSC80, LSC40, LSC20 and LSC10 in the seedling stage increased by 16.07%, 24.80%, 36.75% and 21.27%, respectively. The soil available phosphorus content in the seedling stage LDC80, LDC40, LDC20 and LDC10 increased by 5.91%, 15.37%, 21.34% and 23.57%, respectively.

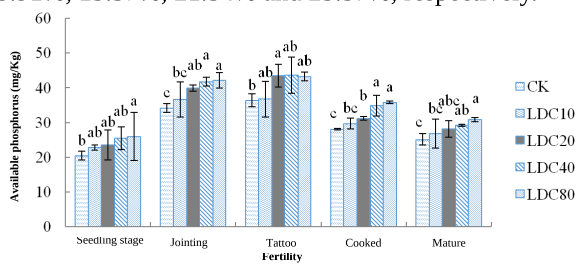


Figure 4. Effect of biochar applied to soil available phosphorus at ridge bottom

3. CONCLUSION AND DISCUSSION

This study found that the application of biochar can increase the total nitrogen content of the soil, and the input amount is proportional to the total nitrogen content of the soil. The reason is that in addition to the introduction of some nitrogen by biochar itself, it may be because the application of biochar increases the soil organic matter content, and reasonable C/N is beneficial to increase soil microbial activity and promote soil organic matter mineralization, thereby releasing more Nitrogen [7-9].

Phosphorus is a large nutrient element necessary for plant growth. The results of this study indicate that the application of biochar increases the soil available phosphorus content. The tested soil in the test area is meadow soil [10-11]. The soil has high phosphorus content but low effective phosphorus content. The application of biochar changes the physical and chemical behavior of phosphorus in the soil and promotes the effective conversion of phosphorus. Chintala et al believe that biochar itself has certain adsorption and desorption capacity for phosphorus, and it can also affect the adsorption and desorption of phosphorus by soil after being applied to soil [12].

This study has significant differences in different carbon loading and charcoal methods. In the case of carbon application on the ridge, the content of total nitrogen and available phosphorus in the soil increased first and then decreased with the increase of carbon application, reached the maximum at 40 t/hm2; the application of biochar at the ridge bottom showed the amount of carbon applied. The increase in total nitrogen and available phosphorus also increased. When the amount of biochar was 80 t/hm2, the total nitrogen and available phosphorus content of the soil was the highest. Under the premise of the same amount of charcoal, both the charcoal on the ridge and the charcoal on the ridge showed that the soil total nitrogen and available phosphorus were the highest in the corn tasseling stage.

ACKNOWLEDGMENTS

The National Thirteenth Five-year Plan key research and development project “Biochar fertilizer and microbial fertilizer research and development” (2017YFD0200803), the authors are grateful for the support of the Heilongjiang Bayi Agricultural University Three Horizontal Three Vertical Support Plan (ZRCPY201803), the Centrally Guided Local Science and Technology Development (ZY16A06), and the Agriculture and Reclamation Bureau Project (HNK135-02-05).

REFERENCES

[1]Day D., Evans R, Lee J W. Utilization of CO2 for the creation of a valuable and stable carbon co-product from fossil fuel exhaust scrubbing. Abstracts of Parers of the American Chemical Society, 2004, 227(1): 1093-1093.

[2]Yin, Y.F., He, X.H., Ren, G.A.O., Yang, Y.S. Effects of rice straw and its biochar addition on soil labile carbon and soil organic carbon. Journal of Integrative Agriculture, 2014, 13(3): 491-498.

[3]Lehmann, J., Rillig, M.C., Thies, J., Masiello, C.A., Hockaday, W.C., Crowley, D. Biochar effects on soil biota -A review. Soil Biology and Biochemistry, 2011, 43(9): 1812-1836.

[4]Bruun, E.W., Petersen, C.T., Hansen, E., Holm, J.K., Hauggaard-Nielsen H. Biochar amendment to coarse sandy subsoil improves root growth and increases water retention. Soil Use and Management, 2014, 30(1): 109-118.

[5]Lehmann J, Joseph S. Biochar for environmental management science and technology. London: Earthscan, Ltd, London, UK, 2009.

[6]Glaser B., Lehmann J., Zech W.. Ameliorating physical and chemical properties of highly weathered soils in the tropics with charcoal-areview. Biology and Fertility of Soils, 2002, 35: 219-230.

[7]Kimetu J.M., Lehmann J. Stability and stabilization of biochar and green manure in soil with different organic carbon contents. Soil Research, 2010, 48(7): 577-585.

[8]Shang, J., Geng, Z.C., Chen, X.X., Zhao, J., Geng, R., and Wang, S. “Effects of biochar on soil organic carbon and nitrogen and their fractions in a rainfed farmland,” Journal of Agro-Environment Science, 2015, 34(3), 509-517.
[9]Chintala R., Schumacher T.E., McDonald L.M. and et al. Phosphorus sorption and availability from biochar and soil/biochar mixtures. Clean-Soil, Air, Water, 2014, 42 (5): 626-634.
[10]DeLuca T H, MacKenzie M D, Gundale M.J. Biochar effects on soil nutrient transformations. Biochar for Environmental Management: Science and Technology, 2009:251-270.
[11]Steinbeiss S., Gleixner G., Antonietti M. Effect of biochar amendment on soil carbon balance and soil microbial activity. Soil Biology and Biochemistry, 2009, 41: 1301-1310.
[12]Cox D., Bezdicek D., Fauci M. Effects of compost, coal ash, and straw amendments on restoring the quality of eroded Palouse soil. Biology and Fertility of Soils, 2001, 33(5): 365-372.

Application Analysis of Environmental Protection Concept in Traffic Engineering Construction

Gang Xing
East China Jiaotong University, Nanchang, Jiangxi, 330013, China

Abstract: China's economic development and construction are closely related to the development of traffic engineering, which is of great significance to the economic development of a certain region and the improvement of people's living standards. In the process of rapid economic development, environmental problems have become increasingly prominent, and the construction industry is particularly serious. However, with the continuous development of social needs in the development of transportation engineering, the requirements for building quality, building speed and building level are constantly increasing. Environmental problems in transportation construction are also becoming more and more serious, so energy conservation and environmental protection should be put on the agenda. In this paper, the environmental pollution problems in traffic engineering construction are analyzed in detail, and the application of environmental protection concepts in traffic engineering is analyzed.
Keywords: Traffic engineering construction; Environmental protection concept

1. PREFACE

With the continuous development of the society, the scale of China's traffic engineering construction has been expanding, especially the speed of urban and rural development has increased rapidly [1]. The environmental pollution problems in the construction of the original traffic engineering have become more serious. The development of China's traffic engineering is accelerating, but each environmental awareness of enterprises has not been fully established, which has caused environmental problems in the construction of the project to have attracted the attention of all sectors of society [2]. Therefore, how to apply environmental protection concepts to the construction of traffic engineering and strengthen the protection of the environment should be paid attention to [3].

2. ENVIRONMENTAL POLLUTION PROBLEMS IN TRAFFIC ENGINEERING CONSTRUCTION

Because of the characteristics of the traffic engineering itself, it will cause water and garbage pollution, noise pollution and air pollution during its construction.

The first is water pollution and garbage pollution. During the construction of traffic engineering, the demand for water is large. In the construction process, some building materials and mechanical equipment need to be processed and washed, and concrete is poured at the same time. In the process of these, a large amount of waste water is generated, and part of the underground sewage contaminates the quality of the groundwater, which directly pollutes the environment. On the one hand, the waste residue generated during the construction process will cause pollution to the environmental battlefield through a large amount of accumulation, and the remaining abandoned cement will also affect the quality of the soil.

Then there is air pollution. The environmental control of the construction site is not controlled. The construction equipment, the exhaust emissions of the vehicles and the dust will cause pollution to the atmosphere. In the event of high winds when performing some treatment on the roadbed, the dust and dust on the site will be more scoped and the pollution will be more serious. There are also some carbon monoxide, carbon dioxide and waste gas that will be produced in large quantities during the manufacturing process of the equipment, and some dust will also be generated due to management or transportation problems in the production of some concrete.

Finally, there is noise pollution, and noise is inevitable in traffic engineering. During the operation of running equipment, especially large equipment, there will be a lot of noise, which will cause noise pollution throughout the region, and the frequency of these noises will have different effects on people. Those with low noise frequency will directly affect people. The mood has an impact, making people feel irritated; relatively high frequency noise, such as pulse and vibration, can affect people's health. At the same time, the entire equipment is not fixed at the construction site, and needs to be moved according to the construction process, so the scope of noise pollution is not fixed and constantly expanding.

3. APPLICATION OF ENVIRONMENTAL PROTECTION CONCEPT IN TRAFFIC ENGINEERING CONSTRUCTION

3.1. Pay attention to environmental protection in construction management

In the process of traffic engineering construction, if the construction can be operated normally, it is necessary to continuously improve the management work. The environmental protection concept should also be fully implemented in the management work. In order to implement the environmental protection concept into management, we must pay attention to environmental protection in every construction process. The problem is to establish a sound management mechanism throughout the construction of the project, from top to bottom to develop a unified standard for environmental protection issues throughout the entire process.

3.2. Measures against environmental pollution during construction

In view of the current environmental protection concept, the various aspects of the construction process will be rectified and the existing pollution environment will be regulated, and different solutions will be taken on the basis of the environmental protection concept for different problems in the construction process.

The first is the problem of water pollution, because in the construction process of traffic engineering, the water consumption is huge, so the water pollution is relatively serious. In the construction process, some building materials and mechanical equipment need to be processed and washed, and concrete is poured at the same time. In the process of these, a large amount of waste water is generated, and part of the underground sewage contaminates the quality of the groundwater, which directly pollutes the environment. If the water can be reused during the construction process, the waste of water can be solved well. For the treatment of sewage, a simple sewage treatment system can be established at the construction site, which is harmful to the environment and groundwater. The substance is broken down. Waste should also be treated properly.

The second is the problem of air pollution. The main source of air pollution is the dust and dust generated during the construction process. It can be effectively treated by spraying with water spray. At the same time, some dust will also be generated due to management or transportation problems in the production of some concrete. During the transportation of materials, we should try to ensure that there are as few bumps as possible to prevent dust leakage and reduce air pollution. Also for some materials that are ready to use the already fixed position, first protect them from the natural environment, and secondly, if there is too much dust during use, they should be isolated.

The third is the problem of noise. Although the progress of the traffic construction should be guaranteed, it still cannot affect the surrounding residents. Try to avoid construction at night and not affect people’s lives. Some must be constructed at night, taking into account the residents’ living and construction progress, must apply for night construction permit, so the traffic construction in residential areas must be strictly controlled, for construction with serious noise at work Construction time, for the construction of the office building area, then try to choose to work on weekends or non-working hours to prevent people from working in nearby office buildings. In addition, for some semi-finished products, large-scale equipment processing is required, and there is a lot of noise, which is carried out in the workshop and the factory as much as possible to reduce construction noise pollution.

4. CONCLUSIONS

In the development process of traffic engineering, with the continuous development of social needs, the requirements for building quality, building speed and building level are constantly improving, and the environmental problems in traffic construction are becoming more and more serious. Therefore, energy conservation and environmental protection should be put on the agenda. Therefore, this paper mainly analyzes the application of environmental protection concepts in the construction process of traffic engineering, and then proposes relative measures for pollution problems.

REFERENCES

[1]Li Qijian. Analysis of the application of environmental protection concepts in traffic engineering construction. People’s Traffic, 2019(01): 63.

[2]Zhu Zhipeng. Application of environmental protection concept in traffic engineering construction. China Hi-Tech, 2018(20): 120-122.

[3]Liu Song. Application of environmental protection concept in traffic engineering construction. Modern Property (mid-season), 2018(06): 69.

Performance and Case Analysis of Enterprise Price Discrimination

Kengcheng Zheng
Shanghai Institute of Political Science and Law, Shanghai, 201207, China

Abstract: This paper studies the price discrimination of enterprises, analyzes the concept of price discrimination from the aspects, types and performances of price discrimination, and links the example of price discrimination with the example of Apple iPhone 7 series mobile phone and Starbucks coffee pricing. The reasons for price discrimination, and finally give the view of price discrimination in this article. In the whole price discrimination, different effective demanders can get effective supply, so in the sense that demand and supply are equal, there is no anyone is discriminated against.
Keywords: Price discrimination; Theoretical economy; Price monopoly

1. INTRODUCTION

Price discrimination is essentially a price difference, usually when a good or service provider offers goods and services of the same grade and quality to different recipients. Different sales prices or rates are applied between service providers [1]. If the operator does not have a valid reason, the different prices of the same type of goods or services and certain buyers constitute price fraud.Price discrimination is an important monopolistic pricing behavior. It is a pricing strategy for monopolistic firms to obtain excess profits through differential prices [2].

2. CONDITIONS OF PRICE DISCRIMINATION

Price discrimination refers to the act of a monopolist charging different prices for the same product.Simply put, price discrimination is to sell the exact same product or provide the exact same service, but charge different consumers for different prices.To successfully achieve price discrimination, manufacturers must meet the following conditions:

(1)For the manufacturer, there must be a downward-sloping demand curve. In order to implement price discrimination, manufacturers must be able to raise prices for certain consumers without losing business. When suppliers face a downward-sloping demand curve, some consumers will continue to buy even if the price rises. The monopolist always satisfies this condition because it faces a downward-sloping demand curve.

(2)The manufacturer must be able to determine the willingness of the consumer to pay under different conditions.

(3)Manufacturers must be able to prevent low-cost consumers from reselling and selling to high-priced consumers, that is, no arbitrage.

3. TYPES OF PRICE DISCRIMINATION AND THEIR PERFORMANCE

3.1 Primary price discrimination

Primary price discrimination refers to the behavior of a complete monopolist to determine the price of a product one by one according to the highest price each consumer is willing to pay for each product unit, so it is called full price discrimination.If the monopolist knows the needs of each consumer well, then know the highest price that the consumer is willing and able to pay for any number of products.The monopolist can then use a primary price discrimination strategy to sell any product unit to the consumer at the highest price. Monopoly adopts a first-level price discrimination strategy, Like a fully competitive market, primary price discrimination can also allocate resources efficiently, maximizing the total amount of consumer surplus and producer surplus.

In real economic life, primary price discrimination is rare, because monopolists usually do not know the highest price consumers are willing to pay,Even if you know it, it is difficult to ask each consumer for a different amount.

2.2. Secondary price discrimination

Secondary price discrimination refers to a monopoly manufacturer that sells different units of the same product at different prices, and each consumer who purchases the same quantity of goods is charged the same amount.The second price strategy is not to discriminate against different consumers, but to distinguish between different purchase quantities and quantity parts.In general, the more consumers buy, the lower the price, but the opposite is true for some tight goods.

Secondary price discrimination actually deprives some consumer surplus, Using this price discrimination to implement segment pricing will help monopolists expand production and achieve greater economies of scale. Secondary price discrimination is more common in the economy.

2.3. Level 3 price discrimination

Third-tier price discrimination means that the monopolist offers different prices for the same commodity in different markets, while the same price is given in the same market.Third-tier price discrimination is most common in the real economy.E.g:The price of the same product in luxury shopping malls and supermarkets varies greatly;Many service industries often provide low-cost services to special populations such as students and seniors;The power company charges industrial electricity bills, residents' high electricity bills and other expenses.But not all monopolists can implement third-tier price discrimination.The first must have two or more markets that can be separated. If the market is indivisible, then consumers are likely to buy goods in low-priced markets and then sell them to high-priced markets, which will make price discrimination disappear.Second, the demand elasticity of each separated market must be different, otherwise the monopolist cannot set different prices.

When monopolistic manufacturers conduct price discrimination, they set higher prices in markets where demand price elasticity is less flexible;Specify a lower price in a market where the price elasticity of demand is greater.The reason vendors do this is to get more profit and get more consumer surplus.

3. PRICE DISCRIMINATION EXAMPLES

3.1. Apple phone pricing

On the occasion of the pre-sale of the Apple iPhone 7 series, the foreign media sorted out the sales price of the iPhone 7 around the world, and found that it was the most expensive in Hungary, which was 44% more expensive than the United States.

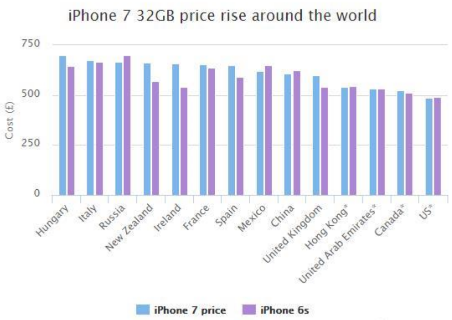


Figure 1. Apple iPhone 7 series mobile phone global pricing

Although its entry-level memory has been increased from 16GB to 32GB, the price of the iPhone 7 in the UK has already been £60 more expensive than last year's iPhone 6s.In the past few years, the price of the iPhone in the UK has been relatively stable. However, despite the rise in the price of the iPhone 7 in the UK, the price of the iPhone 7 is still one of the cheapest in the UK. Apple usually uses the US dollar as the standard to determine the selling price of the iPhone, so when the exchange rate of other countries' currencies to the US dollar declines, Apple's selling price in these countries will increase.

When Apple releases and begins selling the latest phones, European consumers will buy at the highest selling price. Among them, iPhone 7 has the highest price in Hungary, about 456058.64 Hungarian Forint (about 700 pounds); followed by Italy and Norway. Compared to their neighbors across the Atlantic, the iPhone 7 sells for hundreds of pounds in Europe. In the US, the same 32G iPhone 7 is priced at £487.75 and is priced at £521.75 in Canada.

But in fact, the iPhone 7's price calculation will be complicated by the consumption tax. In the UK and most other European countries, the iPhone 7 is priced at a sales tax, but in the US and Canada. In New York, for example, the sales tax is 8.875%. If calculated according to this, the iPhone 7 will sell for more than $700, but in other states there is no such sales tax.

Of course, the iPhone 7 has different influencing factors in different countries, including foreign exchange rates, local sales taxes, the cost of doing business, etc., which will affect the final retail price of the iPhone. But data from Apple's online stores around the world can be found that the price of the iPhone 7 fluctuates greatly. The price of iPhones in most countries in Europe has been rising, with the UK up 11%, Ireland up 22%, and New Zealand up 16%.But not all countries' iPhone prices are rising, and there are many countries where the price of iPhones is falling, including the United States, the United Arab Emirates, China and Japan, but the price cuts are still relatively small; in Russia and Mexico, iPhone The price decline was relatively significant, down by 5% and 4.5% respectively.

3.2. Starbucks coffee pricing

Starbucks, once considered a petty-bourgeois lifestyle, has recently been criticized by CCTV for its global comparison. China's most expensive medium-sized "latte coffee" costs less than $4 and sells a cup of 27 yuan in Beijing. It is nearly three times more expensive than London, almost twice as much as Mumbai in India. Accordingly, Starbucks' profit margin in China is much higher than that in the European and American markets.。

Starbucks pricing in China does have some degree of discrimination against prices. It violates certain price fairness principles. There is an inequality in implementing a price policy in China and implementing another price policy in other countries. However, as a commodity producer, it has its own pricing power and is not disturbed. Starbucks implemented this pricing policy because of China's own pricing policy, precisely because contemporary society has a bad trend. People think that the more expensive they are, the more noble and affluent they can be. Moreover, due to the large gap between the rich and the poor in China, the demand for luxury goods is very large.In addition to the high cost of your own products, there are other costs that are too high. Starbucks coffee dare to sell at a high price, which indicates that they think their prices have a market, otherwise the cruel market competition will teach them how to price properly. After all, in the coffee consumer market, consumers have too many autonomy options.When there are countless choices, the merchant's pricing freedom is consistent with the consumer's free choice.

4. CONCLUSION

If there is no price discrimination, everyone is equal. In fact, it will inevitably lead to discrimination against high "demanders" (the elasticity of consumer demand and the willingness to pay).The practice of suppliers charging each customer the price they are willing to pay is called "full price discrimination".On the surface, "complete price discrimination" seems unfair, but it may not be. This is because, in the entire price discrimination, different effective demanders can be effectively provided, so no one is discriminated against in the sense that demand and supply are equal. Discrimination against high "demanders" is not feasible, so price discrimination itself is also a fair market performance.

REFERENCES

[1]Welfare-increasing third-degree price discrimination. S. Cowan. The Rand Journal of Economics, 2016.

[2]Third-degree price discrimination in the presence of congestion externality. A. I. Czerny, A. Zhang. Canadian Journal of Economics/revue Canadienne Déconomique, 2015

[3]Price discrimination through group buying. C. Wu, H. Chiu. Hitotsubashi Journal of Economics. 2016.

[4]Quality differences, third-degree price discrimination, and welfARE. Galera F, Pedro Mendi, Molero J.C. Economic Inquiry, 2016

Research on the Entrepreneurial Motivation and Existing Problems of Returning Entrepreneurs in the Background of Urbanization

Miaomiao Lu
School of Economics, Anhui University of Finance and Economics, Anhui, 233030, China
Email: lujasmay@163.com

Abstract: With the promotion of new urbanization and the deepening of rural revitalization strategy, talent revitalization has become an important starting point for coordinated urbanization and rural revitalization. The state encourages migrant workers, college students and entrepreneurs to return to their hometowns to start businesses, promote rural employment, achieve the poverty alleviation effect of one-person employment for the whole family, and fundamentally solve the problem of rural economic development. However, in the context of urbanization, there are still many problems in the road to returning home to start business. To this end, this paper analyzes the basic situation of migrant workers, college students and entrepreneurs returning to their hometowns through questionnaires and field interviews, analyzes the driving force of returning home business and the driving effect of enterprise development, and investigates the problems of actual returning home business. Based on the opinions of relevant respondents, this paper proposes a reasonable and effective return policy for returning hometown, in order to improve the research framework of rural revitalization strategy.

Keywords: Urbanization; Motivation; Entrepreneurship; Return home

1. INTRODUCTION

Rural revitalization mainly includes rural industrial revitalization, talent revitalization, cultural revitalization, ecological revitalization, and organizational revitalization, emphasizing the promotion of comprehensive agricultural upgrading, overall rural progress, and overall development of farmers. Among them, the revitalization of talents is a major strategic measure to solve the "three rural issues" in China in the new era. In the context of urbanization, talent revitalization is a key factor in improving farmers' income, employment quality, and achieving urban-rural integration. The state encourages migrants to return to their hometowns to start businesses, and encourages university student village officials to take root at the grassroots level, which is to provide talent protection for rural revitalization [1]. With the policy of “Popular Innovation, Entrepreneurship”, the state has continuously issued relevant documents on rural revitalization and paid close attention to the issue of rural economic development. By the end of 2018, the total number of returning entrepreneurs in 341 pilot areas had reached 1.618 million, a year-on-year increase of 28.6%, and the number of employed people had reached 5.8 million, an increase of 26.5%. These returning entrepreneurs have accumulated 1.48 million market entities, a year-on-year increase of 34%. Driven by the pilot, the returning home business has flourished [2].

We team conducted on-the-spot investigations of returning migrant workers, entrepreneurs and college students to the three returning entrepreneurs, using the form of returning home entrepreneurial questionnaires and interviews, qualitative analysis of the motivations of entrepreneurs returning home and the problems in the process of entrepreneurship. The team combines the actual situation of returning hometowns in Anhui, Shandong and Fujian provinces, and proposes relevant effective policy recommendations with a view to improving the rural revitalization research framework.

2. THE STATISTICS OF THE QUESTIONNAIRE SURVEY OF RETURNING ENTREPRENEUR

2.1. Statistics on the Basic Situation of Returning Entrepreneurs

From the perspective of academic qualifications, the number of college students returning to their hometowns is relatively high, accounting for 66.67%, and primary and junior high school education each accounting for 16.67%. The general age of returning entrepreneurs with low academic qualifications is over 40 years old, while the general age of college students is less than 30 years old. This indicates that college students return home to start a large number of entrepreneurship, while fewer returnees are less educated.

In terms of gender, only 6 female valid entrepreneurs were considered to be entrepreneurs, and the female's cultural level was low. Women returning home to entrepreneurs are fewer than men, and it is more difficult to return to their hometowns.

From the point of view of the household registration, the two returning entrepreneurs are urban hukou, four are rural hukou, and the urban hukou returning entrepreneurs are all college students. This is because college students are more entrepreneurial, understand that the rural market is broader and have the courage to return home.

2.2. Comparison of Income Levels of Returning Home Entrepreneurs

Comparing the household income of returning entrepreneurs from different regions, the results show that if the age is above 40, the family income is higher, the highest income is about 1 million yuan, and the income of returning entrepreneurs under the age of 30 is relatively higher. Low, the income range is between 100,000 and 200,000. This is due to the fact that college students have less work experience and are at the beginning of their business, with relatively low income.

3. ANALYSIS OF THE MOTIVATION AND DRIVING EFFECT OF ENTREPRENEURS RETURNING TO THEIR HOMETOWNS

3.1. Analysis of the Motivation of Entrepreneurs Returning Home to Start a Business

Entrepreneurial resources and entrepreneurial opportunities attract college students to return home to start a business, which is the direct cause of college students returning to their hometowns. The entrepreneurial field of college students returning to their hometowns is closely related to the local resource endowment [3]. It is also the common practice of local governments to formulate corresponding support policies based on local natural resources advantages.

The local investment promotion policy is the direct driving force for entrepreneurs to return to their hometowns to create 3 industries. Most entrepreneurs return to their hometowns for business reform and transformation, and returning home business is one of the choices of entrepreneurs. Most returning enterprises are productive service industries, responding to the national rural revitalization strategy, providing entrepreneurs with low-cost, all-factor entrepreneurial services in terms of venues, information, training, and talents. In the case of the low threshold of returning hometown entrepreneurship, returning hometown entrepreneurs enjoy the tax reduction and fee reduction policy, reducing the cost of enterprise reform and transformation [4].

3.2. Analysis of the Driving Effect of Returning Enterprises

From the perspective of employment effectiveness, returning enterprises have achieved remarkable results in employment. College students and migrant workers returning to their hometowns are basically using the social resources around them to recruit relatives who are unemployed in the countryside and solve the employment problems of some rural unemployed people. Construction provides new impetus [5].

From the perspective of poverty alleviation, returning enterprises are the fundamental way to achieve poverty alleviation. According to statistics, an average of 1 returning enterprises can solve 10 poverty problems, that is, one person is employed to get rid of poverty.

4. THE PROBLEM OF RETURNING HOME BUSINESS

The shortage of entrepreneurial funds for migrant workers is difficult to finance. Although migrant workers have accumulated a certain amount of money while working in the city, these funds are comparable to those needed for entrepreneurship. If the business fails, the investment money will be lost. Therefore, many returning migrant workers are afraid of their feet and their entrepreneurial ideas are bound. Although rural college students have accepted higher education and have certain entrepreneurial ideas, there is still a certain gap between paper-based talks and putting knowledge into practice, especially in terms of entrepreneurial quality [6]. In the process of returning hometown entrepreneurship, rural college students often have difficulty in persisting in entrepreneurship and low entrepreneurial ability. Many rural college students are vacillating between employment and entrepreneurship.

Rural infrastructure is poor and support is weak. Returning hometown entrepreneurship not only needs mature projects, but also needs a perfect and efficient service platform. However, rural infrastructure and management level are relatively backward compared with cities [7]. Some of the incubation bases for entrepreneurs returning to their hometowns have lower standards for construction. Some public Service facilities are not only backward and obsolete, but also have low levels of entrepreneurial services.

5. POLICY RECOMMENDATIONS TO PROMOTE RETURNING HOME BUSINESS

Innovate financial services and solve financing problems. Financial institutions should strive to provide credit support for returning entrepreneurs, focus on attracting social capital, increase support for returning entrepreneurs, and tailor entrepreneurship guarantees and entrepreneurship subsidies for returning entrepreneurs. In view of the difficulties in guarantees arising during the loan process, financial institutions can investigate the existing assets of entrepreneurs and, according to the actual situation, expand the scope of collateral guarantees to help them successfully achieve financing [8].

Build a start up platform and improve service functions. The relevant government departments should upgrade the business incubator bases of the agriculture-related streets, expand the scale of the base construction according to high standards, improve and optimize the service functions, and strive to achieve the standard of “staying in the bag”. In response to the entrepreneurial needs of returning entrepreneurs, we will further plan the construction of characteristic entrepreneurial parks for agriculture-related streets and communities. Adopt a combination of government investment and market investment to provide low-cost entrepreneurial venues for returning entrepreneurs.

REFERENCES

[1]Yuan Ruran, Problems and suggestions on the entrepreneurship of returning migrant workers, China Labor Security News, 2019-02-12(003).
[2]Ma Xinmin, Investigation and thinking on the entrepreneurship of returning migrant workers in Tongchuan City, Journal of China Human Resources and Social Security, 2019, (02): 30-32.
[3]Gan Yu, Qiu Liyuan, Hu Xiaoping, An empirical analysis of the capital accumulation and entrepreneurial income of returned peasant workers--evidence from the three gorges reservoir area, Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition), 2019, 40(03): 107-113.
[4]Li Hongying, Research on the coupling mechanism of migrant workers returning to hometown and new rural culture construction, Journal of agricultural economy, 2019, (01): 82-83.
[5]Liang Shuzhen, Fu Lin, Rural college students returning hometown entrepreneurship and new rural construction from the perspective of rural revitalization strategy, Journal of Agricultural Economy, 2019, (01): 122-124.
[6]Yao Hanjun, Dong Jianyu, Jiang Lili, Analysis of the motivation, dilemma and financial demand of migrant workers returning to hometown under the perspective of rural revitalization--based on the survey of migrant workers returning from Suqian city, Journal of Marketing Weekly, 2019, (01): 112-113.
[7]Bo Lina, SWOT Analysis of rural college students returning to hometown entrepreneurship, Journal of Grain Science and Technology, 2018, 43(12): 113-115.
[8]Han Yanqi, Liu Tao, Analysis and countermeasures of college students' returning to entrepreneurship obstacles based on the perspective of social support network, Journal of SME Management and Technology, 2018, (12): 119-121.

Study on the Construction of Smart Classroom Model Based on College English Writing

Min Hua
School of Foreign Languages, Wuhan Textile University, 430200, China
E-mail: Rebecca_huamin@126.com

Abstract: Information technology is an important part of smart classrooms. The application of information technology is not only the premise of building a smart classroom, but also the key to improve the effectiveness of smart classroom teaching. In order to change the status of high-input and low-efficiency in college English writing teaching and improve students' writing literacy, we will present the actual situation of information technology in College English Smart Classroom from three aspects: pre-course, in-class and after-school. The application aims to demonstrate the teaching design of the same type of curriculum, construct a college English writing smart classroom model, and realize the writing evaluation from single to multidimensional model.

Keywords: College English writing; Smart classroom model; Construction

1. INTRODUCTION

In 2006, Professor Warren Simmons from Brown University in the United States first proposed the concept of "smart classroom" [1]. That is the cultivation of students' knowledge and skills that could not meet the needs of economic and social development [2]. Professor Simmons pointed out that wisdom education should be flexible, efficient and adaptive in terms of "wisdom", "education" and "system" [3]. It should pay full attention to the service function of education, and should emphasize the system of members of community, school and parents' participation. Subsequently, domestic researchers combined with the vision of the wisdom education system proposed by Professor Simmons to redefine the "smart classroom" from the perspective of informationization which based on constructivism, using next-generation information technologies such as big data, cloud computing and the mobile Internet. An effective classroom for intelligent teaching had been used in the whole process of "before class", "in class" and "after class".

2. WISDOM CLASSROOM TEACHING FEATURES

The premise of smart classroom teaching design is that teachers should fully grasp the students' learning status and learn dynamic data. Based on the dynamic learning data analysis design, the writing wisdom classroom teaching link has two characteristics compared with the traditional classroom teaching [4]. First, it is convenient to give full play to the advantages of the humanities quality curriculum and achieve the goal of educating people which use contextual creation as a means, and use the wisdom of "Internet +" era to pay attention to the stimulation of students' emotional will and life experience rather than the traditional classroom to blindly shape the defects of "knowledge people" [5]. The second is to fully respect the student's dominant position and realize the transformation of the learning style. The three parts that is before, during and after class are closely related to student autonomy, cooperation, inquiry and learning.

3. THE IMPLEMENTATION OF WRITING WISDOM CLASSROOM TEACHING

Instructional design is the arrangement of the teaching process. From the point of view of chain-linking structure, it can be divided into organization teaching, reviewing review, learning, consolidating new knowledge points, and arranging assignments. From the perspective of teachers, it involves preparations of lessons, teaching in class and homework, counseling, testing, etc. The implementation of writing smart classroom teaching can be divided into three stages: pre-class, in-class and after-class.

3.1 Pre-class preparation stage

Before the class, teachers should make a good diagnosis of the situation; use real-time tracking in mobile learning mode, real-time feedback, and real-time communication. In the pre-class preparation stage, the following two aspects must be prepared: First, it is the creation of the student's academic file. According to the learning scenarios in the previous wisdom classroom, teachers tend to analyze students by collecting student learning characteristics and learning state data in order to create student files. As an example, the orientation and goal of the expected audience of the course is the key preparation content before the class. The main objectives of the course are three: First, the goal of knowledge ability. On the basis of understanding the scope of application, functional use and stylistic features of the cover letter, master the writing points and writing norms of the cover letter, and improve the students' job search awareness and application ability. The second is the process and method objectives. In the form of reserved thinking questions, design questionnaires, visits and surveys, etc., students are urged to observe their own self-consciousness. In a specific case, the general rules of cover letter writing are abstracted and the process of discovering, analyzing, and solving problems in the intelligent classroom information environment is experienced. The third is emotional attitudes and values goals. It aims to contact the reality of job hunting in life, and guide college students to think about what preparations should be made for job hunting in the university stage, and promote students to establish correct values and establish a sense of struggle.

3.2 Classroom learning stage

In the class, teachers need to combine the results of pre-course learning to share the learning experience in the form of teacher-student interaction and interaction. Teachers can use collaborative interaction and instant feedback evaluation techniques to organize interactive learning activities. Practical writing results and feedback analysis will be used as an important basis to test the teaching effect of this link. The key points and difficult points in the basic knowledge of the course can be presented in the form of micro-courses. The teacher pushes the selected teaching resources in the resource management and service system of the intelligent classroom information platform, and guides and corrects the students' independent learning process in the form of tracking feedback, and cultivates their ability to obtain effective information independently. In the classroom discussion stage, students can post their opinions and questions through the mobile learning terminal. In the process of interaction or teacher-student interaction, the instructor guides the students to analyze the problem in real time, find the data, and present the process on the screen or screen. After the students observe, they spontaneously experience, practice, and participate in interactive discussions. Teachers can adjust and change classroom learning methods at any time according to the dynamic learning data, improve teaching methods, and monitor students' learning status to avoid students' inattention and refusal to communicate.

3.3 After class learning stage

After class, the teaching materials are stored online. Students can call the courseware at any time through the network. Teachers and students use the mobile communication interconnection technology to review and summarize the whole process of teaching to achieve two-way evaluation. Teachers can achieve targeted personalized counseling based on student academic files, learning status, and analysis of learning data. Based on the specific analysis of the degree of learning of each student, the personalized exercises and assignments are targeted to them. Teachers can use the tracking and recording function of the smart classroom platform to grasp the mastery of individual students, avoid repeated review of students' knowledge points, and reduce the blindness in the process of knowledge consolidation. They can also use the evaluation system of the smart classroom platform to modify student work. In order to judge the student's learning situation, push the content interpretation and analysis of the relevant knowledge points of the weak link, and extend the practice questions of relevant content, alert the students to find the deficiency through the wrong problem storage, and pay attention to their knowledge blind spots. In addition, teachers can ask students to do a summary of the content of the class, and write their own cognition and understanding of the writing style into a small form of free form, and upload it to the designated column as an important basis for teachers to improve and improve. With the evaluation feedback system, teachers can reflect on the teaching process and realize the construction of efficient classroom through teacher-student interaction.

4. CONCLUSION

Teachers should fully recognize the significance of information technology in the smart classroom by learn and use it actively. What more, the implementation of Writing wisdom classroom teaching optimize the existing teaching mode, innovate traditional teaching methods and means, maximize the role of information technology in teaching, and realize wisdom.

5. ACKNOWLEDGEMENT

This paper was sponsored by Wuhan Textile University (Project No. 2018JY058)

REFERENCES

[1]Christopher P. Dwyer, Michael J. Hogan, Ian Stewart. An evaluation of argument mapping as a method of enhancing critical thinking performance in e-learning environments. Metacognition and Learning. 2012, 7(3): 219-244.

[2]Pei-Lin Liu. A study on the use of computerized concept mapping to assist ESL learners' writing. Computers & Education. 2011, 57(4): 2548-2558.

[3]Constance Chai. Writing plan quality: Relevance to writing scores. Assessing Writing. 2007, 11(3): 198-223.

[4]Janneke Pol, Monique Volman, Jos Beishuizen. Scaffolding in teacher–student interaction: a decade of research. Educational Psychology Review. 2010, 22(3): 271-296.

[5]Paul A. Kirschner, John Sweller, Richard E. Clark. Why minimal guidance during instruction does not work: an analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. Educational Psychologist. 2006 (2).

A New Mode of College English Teaching Integrating Mobile Learning

Qifang Yu
Department of Common-Required Courses, Wenzhou Vocational and Technical College，Wenzhou, Zhejiang, 325000, China

Abstract: With the rapid development of network technology, many new technologies have been incorporated into the teaching. Mobile learning is a new type of learning mode formed in the process. With the help of mobile electronic devices, it has the advantages of convenience, flexibility and individuality. The application of mobile learning to traditional teaching mode has a complementary role. College English is very important for college students. Therefore, mobile learning can be integrated into college English teaching to form a new teaching model with reliability. This paper analyzes the advantages of mobile learning and forms a new mode of college English teaching integrating mobile learning.

Keywords: Mobile learning; College English teaching; new model

A new mode emerged after e-learning and distance learning is mobile learning. With the continuous development of information technology, smartphones and iPads have been widely used, and mobile learning has gradually matured. Because of this advantage, many colleges and universities also gradually increases the importance of mobile learning [1], especially in the field of college English teaching. The integrated mobile mode can have advantages that are not available in other teachings, and provide a reliable guarantee for the teaching quality of college English. Therefore, it is necessary to analyze the advantages of mobile learning and better play the advantages of mobile learning in traditional English teaching.

1. ADVANTAGES OF MOBILE LEARNING

(1) It can improve the flexibility of teachers' teaching and students' learning.

Mobile learning is based on mobile electronic devices, whether students or teachers, as long as there are mobile electronic facilities, wireless networks, it can be used in the environment, and there will be no restrictions on teachers and students. Moreover, in a fixed time and space, the integration of mobile learning can eliminate the limitations of traditional teaching mode. Teachers can also optimize and update the preparation of curriculum content, teaching tools, teaching materials, and teaching methods with the use of mobile learning [2]. Students can learn at any time and anywhere with the help of mobile learning tools, which has higher flexibility in learning, and can improve learning efficiency.

(2) It can strengthen communication channels between students and teachers.

In mobile learning, it is more convenient to the communication between teachers and students. They can use mobile phones and iPads to make real-time contact, which is convenient and fast. It can also alleviate the buyout and barrier between teachers and students to a certain extent, enrich the contact and communication between teachers and students, improve the emotions of teachers and students, and indirectly promote the efficiency of teaching and learning, which is of great significance to maintain a good relationship and to improve students' enthusiasm and confidence in learning.

(3) It can update resources in a timely manner and improve efficiency of learning.

Mobile learning relies on the Internet, and teachers and students can get the resources they need to learn on the Internet. With the development of Internet technology and the increase in the number of applications, data information is updated at a rapid rate. Students and teaching can obtain new resources and new materials from the Internet in time, breaking the limitations of traditional book teaching resources. Teachers can update the teaching content and materials through the network during the lectures, and provide students with more reliable and updated reference resources. Students can immediately put questions when they have problems, teachers can also answer in time to obtain the latest subject knowledge and improve learning efficiency.

2. NEW MODE OF COLLEGE ENGLISH TEACHING INTEGRATING MOBILE LEARNING

2.1 To evaluate the specific situation of students in English learning

The premise of ensuring the formation of a new model of college English teaching that integrates mobile learning is that teachers must have a certain understanding of the students' English proficiency and learning status to provide a reference for the application of mobile learning. Before the integration of mobile learning, teachers take some time to conduct in-depth communication with students to understand the actual learning situation of students and the contact with mobile technology. And they can conduct questionnaire surveys, putting questions in the class, and application communication tools for students, so that the status quo of students' English learning is roughly judged [3], and the content and goals of mobile learning are formulated in a targeted manner. At the same time, students can form good study habits and effectively construct a solid teaching foundation for a new model of mobile learning.

2.2 The guiding role of teachers in the new mode of English teaching for students to integrate mobile learning

In the process of students' learning, teachers should pay attention to the guidance of students. Teachers can appropriately arrange some reasonable tasks for students through mobile devices, so that students can try to learn online through English learning. Moreover, teachers can provide some well-known college English learning website for students, such as http:wap.iamlk.cn [4]. Students can browse the website, complete the tasks assigned by the teachers, and slowly adapt to mobile learning.

2.3 In the new mode of college English teaching that integrates mobile learning, teachers can encourage students to communicate online.

Teachers can also actively communicate with students, and timely understand the students' learning situation and problems in the learning process through the Internet. At the same time, teachers can further guide students to use English language to communicate through WeChat, blog and other software, which has a positive effect on the growth and development of students' English. Teachers can establish an English communication platform to help students communicate with the exchange students. In this platform, students can freely use English to communicate, which will improve students' oral English through practical communication, and train their interpersonal skills. At the same time, teachers should also encourage students to communicate in English in their lives.

2.4 In the new mode of college English teaching which integrates mobile learning, teachers can publish mobile learning resources and check the learning situation regularly.

Teachers can release some new resources about English learning for students, such as English materials related to students' majors, English expert lecture videos, and high-quality English movies. Students can learn by themselves according to their hobbies and their mobile devices. This learning mode can give students more free learning space and create a good English learning atmosphere. Teachers can also check students' learning situation regularly, students can specify learning results and questionable forms, feed back the problems existing in English learning to teachers regularly through e-mail and private letters [5], so that teachers can understand the shortcomings of mobile learning, and put forward suggestions for improvement to timely reply to students and promote the efficiency of mobile learning. In addition, it can improve the students' English level, and perfect the English curriculum in the later stage to provide students with high quality English classroom teaching.

3. CONCLUSION

With the increasing trend of economic globalization, English has become a necessary ability for college students. Therefore, colleges and universities attach great importance to college English teaching. With the widely use of Internet technology in teaching, network technology and equipment conditions can be used to integrate mobile learning into college English teaching, which can also meet the requirements of college students in the new teaching mode and improve students' English learning efficiency and level. This paper analyses the new mode of college English teaching which integrates mobile learning. Compared with the traditional teaching mode, it is complementary and can fully guarantee the students' learning effect. Students can get better development of English learning, and improve the efficiency and enthusiasm of students' English learning.

REFERENCES

[1]Huang Weijun. A New Mode of College English Teaching Integrating Mobile Learning. Curriculum Education Research, 2018, (43): 106-107.

[2]Huang Xin. Research on Classroom Mobile Learning Based on Mobile Phone in Higher Vocational Colleges. Overseas English, 2018, (10): 31-33.

[3]Hu Jiehui, Li Jingnan. On Construction of a New Model of College English Teaching Based on Mobile Language Learning. University Foreign Language Teaching Research, 2018, (00): 127-138+192.

[4]Liao Chunyan. Design and Practice of a New Model of English Teaching for Integrating Mobile Learning: Taking "Freight Forwarding English" as an Example. Curriculum Research (Mid-term Journal), 2017, (05): 83-85.

[5]Yuan Jing. A New Teaching Model Based on Integrated Mobile Learning in College English. Overseas English, 2017, (05): 73-74.

Reasons and Countermeasures for the Employee Turnover in Accounting Firms

Yixiao Zhou
School of Management, Shanghai University, 201800, China
Email: 734750578@qq.com

Abstact:The high turnover tends to affect the mood of employees and causes a large number of short-term acts, and employee turnover has become a major issue for many companies, so it is necessary to study the issue of employee turnover in accounting firms and fully implement extremely practical theories such as incentive mechanism. This research analyzes the high turnover systematically, finds out the reasons that affect employee turnover in accounting firms and provides relevant recommendations on such problems, which is of certain significance for the industry to cope with employee turnover and improve human resource management.
Keywords: employee turnover; accounting firm; reason; countermeasure

1. INTRODUCTION

Human resource management is divided into six sections: human resource planning, recruitment and configuration, training and development, performance management, compensation and benefits management, and employee relationship management. Among them, recruitment and configuration includes reducing employee turnover. The turnover rate is an important indicator used by the company to measure the flow of human resources within the company[1]. By analyzing the turnover rate, company could understand the its attractiveness to and satisfaction of its employees. Excessive turnover rate usually indicates that employees' mood is fluctuating extensively, labor relations are seriously contradictory, and corporate cohesion is declining. These factors lead to an increase in human resource costs (both direct and indirect costs) and a decline in organizational efficiency[2].

2. SUMMARY OF RELATED THEORIES

2.1 Staff wastage and turnover rate

2.1.1 Staff wastage

Staff wastage indicates the organization is unwilling while the individual employees are willing to voluntarily flow out. For the enterprise, this outflow is passive, and usually causes special losses to the enterprise. Resignation is an essential right belonged to employees. But due to the potential harm caused by extensive turnover, companies usually have to try to control and retain their employees, at least to avoid this phenomenon of turnover[3].

2.1.2 staff turnover rate

The turnover rate is a crucial indicator used by companies to measure the flow of human resources within a company. By examining the turnover rate, company could understand its attractiveness to and satisfaction of its employees. The high turnover rate usually indicates that the employee's mood is fluctuating, the contradiction between labor and capital is prominent, and the company's cohesiveness is declining. This leads to an increase in human resource costs (both direct and indirect costs) and a decline in organizational efficiency. However, it does not implies that the employee turnover rate should keep as low as possible. In the competitive market, maintaining a stable employee flow can benefit the company with talent competition mechanism of the survival of the fittest, to maintain the vitality and innovation consciousness of the enterprise[4-5].
According to most of literatures, the turnover rate is mostly expressed as the ratio of the number of employees per unit time to the average of the number of people at the beginning of the unit time and the number of people at the end of the period. However, this kind of algorithm may cause the turnover rate excess 100%. Therefore, a more scientific method of calculating the turnover rate should be the ratio of the number of employees in a certain unit of time to the sum of the number of employees leaving the company and the number of employees at the end of the period[6].

2.2 Cost of employee turnover

The costs incurred by labor turnover mainly includes four categories: recruitment cost, training cost, opportunity cost and cost saving, shown as the following formula:
Separation cost = R (recruitment) + T (training) + O (opportunity) + S (dissolution)
Recruitment costs include compensation of recruitment staff, recruitment advertising fees, headhunting fees, recruitment and selection costs, and related management fees, as well as background checks for senior staff, etc. On average, these costs equal to 10% - 40% of the annual salary of the recruit. The cost of training generally refers to the cost of induction training for new employees and the cost of lost employees due to the departure of old employees. The cost of induction training for new employees accounts for about 10%-30% of the annual salary of the position. The cost loss caused by the departure of

the old employees accounts for about 10%-50% of the annual salary of the position[7].

Opportunity cost refers to the loss caused by the new employees' replacement of the old employees, because of the inability to achieve the work performance of the old employees and the increasingly intensive competition caused by the departure of the old employees[8].

The cost of cancellation refers to the cost incurred when employers initiatively terminate the labor contract. This cost includes compensation. Employees who voluntarily resign usually do not have the cost of cancellation.

Research shows that the more important a job is, the higher the cost of leaving the job. The better the employee, the higher the cost of leaving the job. The longer the employee's working time, the higher the cost of leaving the job. It turns out that high-speed development and well-performance enterprises need to be achieved and driven by loyal and excellent employees. The company's excessive turnover rate will increase the cost of employee turnover, which is not conducive to the development of the company[9-10].

2.3 Theoretical basis

2.3.1 Maslow's Hierarchy of Needs

In 1943, American psychologist Abraham Maslow introduced the Maslow's Hierarchy of Needs in *Human Incentive Theory*. In this theory, Maslow divides human's needs into five categories from low to high levels, namely, physiological needs, security needs, emotional and destiny needs, respect for needs, and the highest self-fulfilling needs.

He emphasized that physiological needs are the most basic needs; it's the necessary conditions for maintaining normal life and work, and also the prerequisite for meeting other needs above. Satisfied on physiological needs, people need to meet the safety needs of personal safety and health protection. In general, human usually seek another level of persuit after satisfying the lower-level needs. That is to say, people meet individual needs step by step from low to high levels, and low-level needs are the basis.

According to Maslow's hierarchy of needs, it is possible to point out that the satisfaction of physiological needs such as salary is the primary factor for accounting firms to motivate employees. Only when employees meet physiological needs will they pursue higher levels of demand. Therefore, in order to retain employees, the firm must first consider the incentives used to meet the physiological needs of employees. In latter section, when discussing employee turnover issues his theory is also analyzed, which provides a theoretical basis for the analysis of the causes of employee turnover.

2.3.2 Two Factor Theory

American psychologist Frederick Herzberg and his assistants visited two hundred accountants and engineers in 1956, and then proposed this two-factor theory. The theory believes that the main factors affecting work motivation are motivational factor and hygiene factor. Employee satisfaction is only affected by motivational factor, while hygiene factor will reduce employee dissatisfaction rather than bringing satisfaction to them.

In order to motivate employees' enthusiasm for work, from the work itself and other factors, motivational factor not only improve employee productivity and enthusiasm, but also make them have fun at work and achieve their own accomplishment, and thus complete incentive effect.Hygiene factor are related to the elimination of employee's dissatisfaction, such as interpersonal relationships and personal welfare treatment. If hygiene factor are achieved or improved, employees can be prevented from generating dissatisfaction. These two factors enhance the enthusiasm of employees and their personal potential from both positive and negative aspects.

For accounting firms, as they contain highly intensive work but their benefits mainly depend on the labor of employees, it is better to combine these two motivation methods to mobilize the employee's subjective initiative and work enthusiasm. The two-factor theory provides a theoretical basis for how to more effectively motivate employees. That is, employees reduce dissatisfaction under the premise of health care factors, while company also improve employee satisfaction and enthusiasm with motivational factor at the same time.

3. ANALYSIS OF REASONS FOR EMPLOYEE TURNOVER IN ACCOUNTING FIRMS

According to Maslow's Hierarchy of Needs, various levels of needs are satisfied from low to high gradually, so salary has certain incentive effects only for employees who have lower-level needs, but to some extent, it can also affect those with higher-level needs, such as status, recognition and sense of belonging. Therefore, it is clear that salary considerably affects employees at all levels.

According to Herzberg's Two-Factor Theory, the satisfied or improved health care factor helps eliminate discontent and improve the job satisfaction of employees so that it can motivate employees to work, give play to their subjective initiative and stimulate their enthusiasm and potential, while the incentive factor can make employees enjoy their work, improve their work efficiency and have a sense of achievement. Based on these theories, this research analyzed the reasons for employee turnover from the perspectives of salary and welfare system, evaluation and promotion system, and employee training system.

3.1 Incomplete salary and welfare system

The salary system shows internal inequality. First, there is inequality between old and new employees. As old employees continue to leave, the accounting firms have to raise the salary level to attract more auditing talents, which leads to "same work with different pay". This greatly strengthens the resistance and dissatisfaction of old employees so that they may have the idea of job-hopping. Second, there is inequality in salary between the management and general employees. Partners often enjoy year-end dividends, while general employees undertake tedious and careful work. Due to the particularity that audit work is the most time-consuming and laborious, general employees tend to have an unhealthy mood so that barriers and obstacles may appear between the superior and subordinate. Third, resigned employees get higher pay after reemployment. Other employees may see such case of promotion and salary increase as inequality, so they may negotiate with the management or even seek new employment platforms and re-plan their careers in secret.

The salary system shows external inequality. Accounting firms are of big differences in the salary level. The basic salary of general employees in the first year is basically the same, but after two or three years, they may cause greater competitive pressure in the same industry. On the other hand, with the economic development, enterprises in other industries also have increasing demands for accounting talents and may bring about gradually increasing pressure of talent competition to some accounting firms with weak financial resources and immature management so that they may enter a vicious circle.

3.2 Irrational evaluation and promotion system

Performance management and incentive mechanism are not combined. First, enterprises without performance evaluation cannot really evaluate whether employees complete their work with quality and quantity guaranteed and increase their risks, which is a loophole in risk control and management. Second, the evaluation based on only business volume and working time is inequitable for employees, which is one-sided and incomplete, for under this evaluation mechanism, no matter how excellent the employees are, their bonuses are fixed due to the limited amount of work. The enterprises that only attach importance to the short-term effect of operating income and have no comprehensive evaluation system cannot combine evaluation with incentives and use different incentive methods for different employees and business types. Without incentive mechanism, employees may have a negative work attitude as well as an intention to leave. Third, the evaluation has high subjectivity. Most enterprises implement year-end evaluation instead of evaluation at the end of the project, so the evaluator may give scores based on the subconscious impression and the scores are less objective.

Due to the single promotion system, it takes about 13 years for a general employee in a large accounting firm to become a partner, and it takes a longer time to get promoted further. Many senior employees have received calls from headhunters before they become managers, who have been cultivated in a stressful environment for three or four years with certain working ability and can get a good salary if they serve as financial managers in large companies with less work intensity, pressure and business trip than accounting firms, so they naturally tend to choose a more comfortable environment.

3.3 Lack of training system

Accounting firms are lack of training investment. First, they have no clear direction and strategy for employee training, which cannot meet the specific needs of employees based on their actual situations as well as the different needs of the management at different planning stages based on the status quo of accounting firms. Second, executives attach less importance to training. As board members or partners, they may be more concerned about the performance and income of firms rather than employee training so that employees can only receive training from the Institute of Certified Public Accountants, who cannot advance with the times and make innovations to improve their specific skills. Third, there is no timely update of training contents or diverse training forms. As the social economy and CPA industry develop rapidly and national policies and financial regulations improve constantly, audit contents and procedures will change to some extent. However, accounting firms still keep unchanged training contents instead of advancing with the times, which is dereliction of duty of the personnel responsible for training, and as a result many problems will exist in the subsequent training.

On the other hand, accounting firms have weak management of employee career planning. The essence of career planning is to pursue perfection and realize life value, but accounting firms lack of a complete, scientific and rational career management system. Due to the increasing market competition, the management is concerned about more short-term benefits, that is, more work and higher work efficiency of employees, but pays less attention to their demands for career development, lacks of a comprehensive planning system and has shortcomings in terms of employee promotion, which will increase the intention of resignation of employees and reduce their enthusiasm, subjective initiative and teamwork. If the human resources department cannot provide rational arrangements for talent comfort and reserve, the accounting firm will lose its industrial competitiveness, which is adverse to its sustainable development.

4. MEASURES AGAINST EMPLOYEE TURNOVER

4.1 Improve talent recruitment plan and management system

The talent recruitment plan should be improved. Accounting firms should recruit employees who are more suitable for their development and needs according to their current human resources plan and development plan. According to General Secretary Xi Jinping, talents are the first resource, so it is necessary to pay special attention to employees with high quality and high-level knowledge. Accounting firms should recruit talents who are consistent with their development, and the professional development direction of employees should fit with the accounting firms. It can fundamentally reduce employee turnover to develop a talent recruitment strategy. In recruitment, recruiters should set different evaluation types and questions for different candidates. In order to obtain more stable talents and strengthen their competitiveness, accounting firms can generally adopt a “floating salary” strategy and “psychological fluctuation” strategy. On the one hand, the salary system should be consistent with the market environment and even higher than the general level so that accounting firms will not be at a disadvantage in terms of the salary system and become easier to attract candidates. On the other hand, employees based on the opportunities and challenges in the big city are willing to work in the company they like, regardless of harsh conditions.

The internal management system should be enriched. First, the internal management system is the internal law of an enterprise, so accounting firms must rely on the system to establish a fair and just environment. Second, accounting firms cannot ignore the bad effects caused by improper operation, so they should establish a punishment system to allow individuals and firms to share risks.

4.2 Design a rational salary and welfare system

The salary system should be improved. Accounting firms should design the salary system based on the actual situation, which should be combined with their strategies and cultures according to the actual salary level of internal and external employees as well as the job grade and take into account performance evaluation. After the market competition is identified, the salary improvement plan should be implemented to achieve internal and external equality. First, the management should insist on the philosophy of distribution according to work as well as the idea of salary level and develop a salary level system. In addition, the management should start from the future human development direction to systematically construct the salary system. Second, accounting firms should analyze and evaluate the jobs. They should combine the actual problems of each department with future development plans with a view to systematic job design and analyze the responsibilities of each job in details to plan and consider the job level. Third, accounting firms should make a market survey on the salary in the industry in a timely manner to grasp the salary level in the same industry, especially in the same region, for they will lack of certain competitive strength and external equality of salary at the medium and lower level in the same industry, which is adverse to the stability of firms and loyalty of employees. Accounting firms finally must depend on a benign salary management system and a progressive salary increase system to retain excellent employees. The salary of employees should consist of three basic modules, namely basic salary, bonus and welfare.

4.3 Improve the training system

The existing training provided by accounting firms is less sufficient, mandatory and personalized, so the human resources department should improve the training system. First, communication should be strengthened by the training department to make the needs of employees, especially individualized needs, fully understood so that targeted training can be carried out with a view to the promotion of employees according to their actual situations. The training should include the exchange of experience between internal employees in addition to the lectures given by external professional teachers, for such method can strengthen emotional exchange as well as experience and resource sharing between employees and improve the training effects in a more personalized and systematic manner. In addition, for professional title and qualification tests, accounting firms tend to provide leave and reimbursement for employees, but it is more professional and effective to invite teachers from professional institutions, for this can promote the proportion of certified employees and effectively improve the overall quality of the talent team. In view of the less mandatory training system, accounting firms can add more stringent training requirements and, if necessary, force new employees to participate. They should evaluate the training in a timely manner and link it to performance to prevent employees from being absent-minded in the training.

5.CONCLUSION

This research first analyzes relevant literatures on the reasons and measures for employee turnover in accounting firms from three aspects, namely research literature on employee turnover and employee turnover rate, research results of employee turnover costs, and relevant basic theories. Then, it concludes the following three reasons for the high employee turnover rate in accounting firms, namely incomplete salary and welfare system, irrational evaluation and promotion system, and lack of employee training system, mainly lack of training investment and employee career planning management.

Moreover, the research puts forward the measures against the high turnover rate in accounting firms in response to the above three problems. First, accounting firms should improve the talent recruitment plan and enrich the internal management system. Second, they should improve the salary system based on systematic design and add accident insurance, shuttle system and team welfare to improve the welfare system so as to meet the individualized needs of employees. Third, they should improve the training system and innovate in the career development plan of employees to meet the needs of employees in self-improvement and achieve better sustainable development.

In conclusion, the analysis and improvement in this research on the current high employee turnover rate in accounting firms are expected to provide certain help for the industry to increase the loyalty of employees and promote the attractiveness and market competitiveness of accounting firms.

REFERENCES

[1]A.H.Maslow.Motivation and Personalilty. New York:Harper and Row,1954:103-105

[2]Huselid MA.The impact of human resource management Practices on turnover.Academy of Management Journal,1995,38(3):635

[3]PRICE J L.Reflections on the determinants of voluntary turnover. International Journal of Manpower,2000,22:600-624

[4]Dave Patel.Different choices.Human Resource Magazine.2002,47(5):144-145

[5]Macrtz C.P.&Michael A.C.Profiles in Quitting:Integrating Process and Content Turnover Theory. Academy of Management Journal,2004,4(2):155-178

[6]Batt R.Human Resource Practice.Academy of Management Journal,2009,45(7):587-597

[7]Herzberg.The Motivation to Work. New York:John Wiley&Son,2009:213-273

[8]Waltham.Auditor fees and auit quality.Critical Perspectives on Accounting.2011:277-285

[9]Wuchun Chi,Linda Hughen,Chan-Jane Lin,Ling Lei Lisie.Determinants of Audit Staff Turnover:Evidence from Taiwan. International Journal of Auditing,2012,Vol.17(1):100-112

[10]Ravenden Sina.The research review of accounting firm transformation. Business Accounting, 2013,0503

Research on College English Teaching Reform Based on Application Talents Training Mode

Zhu Min
Xi'an Aeronautical University, Xi'an 710077, Shaanxi, China
E-mail: 77843795@qq.com

Abstract: Under the background of the current reform and development of higher education in China, how to reform, innovate and sustain the development of foreign language professional education in colleges and universities has become a hot topic for educators, and it is also one of the problems that need to be solved urgently in higher education. Under the impetus of reform, the foreign language majors in China's colleges and universities are facing the problems of reform and implementation methods in terms of discipline construction, subject characteristics, curriculum setting, and personnel training. Among them, the reform of the talent training model is the core issue of the foreign language professional teaching reform. This paper analyzes and discusses the problems existing in the reform of college English teaching under the application-oriented talent training mode, and puts forward the method of English teaching reform of applied talents.

Keywords: applied talent; training mode; English teaching; reform method

1. INTRODUCTION

At present, the talent training model is mainly developed in an all-round way. The exploration of English talent training objectives and teaching models is also adjusted with the development of the society. In recent years, with the increase of multilateral trade and cultural exchanges among countries, the exploration of applied talents and teaching models will continue year by year. Increase [1-3]. The medium and long-term development of national and local education and the "Twelfth Five-Year Plan" emphasize the combination of local undergraduate colleges and local economic development, and focus on practical effects to combine professional development with school characteristics [4-5]. The era of diversified development calls for diversified talents, promotes diversified all-round education reform, and research on talent demand analysis and training models will also flourish [6-7]. Talent cultivation is the fundamental task of colleges and universities and the core of connotation construction [8]. Colleges and universities should study the new challenges and new opportunities brought about by social development, scientific and technological progress, and national strategy for talent training, constantly update the educational concept, continuously deepen the reform of the talent training model, and better serve the society [9-12]. Therefore, the study is realistic, practical and innovative. The cultivation of applied professionals is not only an application type, but also changes in demand at any time. In order to adapt to the characteristics of its application, in the development of survival, quality, practical and perfect.

2. THE CURRENT SITUATION AND NECESSITY OF COLLEGE ENGLISH TEACHING REFORM BASED ON APPLIED TALENTS TRAINING MODEL

2.1 The Current Situation of English Teaching under the Training Mode of Applied Talents

Pay attention to the scale of the profession and ignore the quality of teaching and practice. After the enrollment expansion of colleges and universities, English education has developed rapidly. The English major has economic, tourism and tourism directions. However, there is no relatively perfect training model for talents that meets the needs of the times. The practice teaching links are weak, which makes graduates not adapt to social needs. The exam-oriented education has caused many students to "high scores and low energy". Innovative school-running philosophy advocates students-oriented, but the actual teachers are the mainstay. The student-centered essence is to consider the students' real needs, respect the students' individuality and characteristics, and cultivate students' self-learning ability. However, in teaching, although it advocates student-centered and mobilizes student initiative, in reality, teachers mostly dominate the classroom. The talent training model is diversified, but not scientific. Advocating to consolidate the basic skills of students, although the use of direction, elective and other training models, but need to be scientific. Emphasis on language-based skills courses, resulting in low student literacy. Teaching resources are diversified, but they are not systematic, scientific and popular. With the development of science and technology, the Internet has been applied to teaching practice, which greatly expands the learning space and teaching methods. However, the lack of professional guidance and management in the lack of operation makes a large number of high-quality teaching and learning resources cannot be shared. The textbook has multiple theories, light practice, and lack of systematic system of knowledge. The practice of practical English textbooks is imperfect, which affects students' interest in learning and restricts the quality of talent training.

2.2 The Necessity of College English Teaching Reform under the Mode of Applied Talents Training

Today's colleges and universities are actively promoting education reform activities, which has brought great vitality to the innovation and development of colleges and universities. However, education reform must grasp the correct direction and grasp reasonable goals before it can improve the effect of reform practice. The reform of college English education in the perspective of applied talent training is an important part of promoting the development of colleges and universities. The necessity is mainly reflected in the following aspects: First, it can meet the needs of social development. Since today is a global economic background, the demand for English talents in social development is gradually increasing, and the types of talents required also exhibit diversified development characteristics. In other words, in addition to those who need to conduct research and teaching in the field of English language and literature, social development requires more applied talents who can closely integrate many English subjects to meet the needs of social development and enterprise advancement. Therefore, college English education needs comprehensive social needs to carry out English teaching reform and cultivate applied talents. Second, it is in line with the development trend of college education. China's college education is developing in the direction of popular education. Many students will be directly employed after graduation. This requires the school's school-running methods and talent training strategies to be consistent with the development trend of college education, paying attention to the cultivation of applied talents and allowing students to the employability and professional quality have been well cultivated. Third, indicate the orientation and direction of English teaching. In the future college English teaching, it is necessary to cultivate applied talents as the fundamental goal. This is the orientation and important direction of English majors and English teaching in the future. Therefore, it is necessary for colleges and universities to attach great importance to them and provide good conditions for the cultivation of applied talents. .

3. PROBLEMS IN COLLEGE ENGLISH TEACHING REFORM

3.1 The English curriculum is too single.

Current situation shows that most of the college English courses applied in Colleges and universities are comprehensive courses. We have not constructed a diversified college English curriculum system according to the characteristics of our school and the individual needs of students. The setting of curriculum system is too single, which will affect the implementation of the concept of teaching students in accordance with their aptitude, and it is difficult to arouse the enthusiasm of college students in English learning. The teaching material is too backward, the teaching content is out of touch with the modern society, and the characteristics of keeping pace with the times are insufficient, which makes the teaching content seriously outdated. In the process of English learning, students can't touch social topics, popular elements of contemporary society, and the richness of teaching content, which will affect the improvement of students' English application ability. Focusing only on the spread of English knowledge and neglecting social development and the renewal of teaching content, the practicability and applicability of English teaching content are obviously insufficient.

3.2 English teaching mode is relatively backward

The backwardness of the English teaching model mainly refers to the fact that some colleges only pay attention to the development of English reading and writing teaching, pay too much attention to the improvement of students' literacy skills, and neglect the cultivation of oral English ability, which makes students' oral English ability weak. The backwardness of the teaching model has led to the development of college English teaching work that is too one-sided and difficult to adapt to the needs of modern Chinese for English talents, thus hindering the related work. For the development of college English teaching, its biggest purpose is to pay attention to the improvement of students' English performance, but ignore the improvement of students' English application ability. This is also the biggest drawback of China's exam-oriented education. In addition, under the traditional teaching mode, students' enthusiasm for English learning is not high, and they lack interest in English learning. It is difficult to consciously and actively carry out English learning, and the English learning atmosphere is not strong, resulting in unsatisfactory English scores.This traditional teaching mode not only pays insufficient attention to the students' subject status, but also because teachers are mainly teaching related content, so it is easy for students to fully mobilize students to learn English in the process of learning. The enthusiasm of the students has a great influence on the improvement of students' English expression ability. It is not only conducive to helping China to cultivate talents in application, but also has a serious impact on the progress and development of our society.

3.3 The overall quality of the teaching staff is weak

The faculty is an important guarantee for improving the English teaching level in colleges and universities. When teaching English to students, only a strong faculty can improve the English teaching level of colleges and universities, and also have the progress and development of students. Great help. However, in the course of the actual teaching of the students, some colleges and universities have always taught the students in English in the middle and old age.

Although such teachers have rich teaching experience, there are still many problems in terms of knowledge level and teaching ability. Most English teachers teach students mainly with teachers with lower academic qualifications. As the expansion of college enrollment continues, teachers must not only teach students time, but also correct a large number of English assignments. As a result, most teachers need to invest a lot of energy in teaching English. The emergence of this problem not only leads to teachers lacking enough rest time in the process of life and work, but also lacks sufficient time for the activities of college English teaching and research, and has no time to participate in training and further training, which affects colleges and universities. The overall level of English teacher education is not conducive to the cultivation of English applied talents.

3.4 Students are not enthusiastic about learning English

At present, due to the shortcomings of the traditional English teaching model and the disadvantages of exam-oriented education, students' enthusiasm for English learning is not high. Some students even lose their interest in English learning, which leads to the difficulty in improving their English scores. Blocked. According to the survey of online data, the survey results of students' motivation to learn English show that, as shown in Figure 1.31.7% of students study English to work, 30.3% out of interest.21.5% in order to get a special exam, get a professional certificate for finding a job in the future. 11.5% of students do not have a clear learning purpose, just to get a bachelor's degree. Only 5% are for postgraduate study. This shows that nearly one-third of students study English for job needs, and they need to take it seriously in order to meet their work needs.

Figure 1. Students learn English motivation

Students' survey of their English practice ability shows that, as shown in Figure 2, only 2.7% said they were satisfied, 2.9% said they were satisfied, 14.2% thought they were generally satisfied, 12.7% thought it didn't matter, and 67.5% said they were not satisfied. This shows that students are seriously lacking in practical ability and are anxious for our educators to solve the problem of serious shortage of students' practical ability.

4. THE METHOD OF ENGLISH TEACHING REFORM UNDER THE APPLICATION TALENT TRAINING MODE

4.1 English teaching mode practical

The training objectives of colleges and universities determine that training and internships should be part of the daily teaching of colleges and universities. The acquisition of skilled knowledge through classrooms and practice is one of the characteristics of colleges and universities. In fact, colleges and universities have accumulated a lot of successful experience in the training and internship of professional courses, forming the inherent style of colleges and universities. In the implementation of specific English training and internships, we can learn from the mode of professional training and internship. The practice of public English in colleges and universities can be arranged in the on-campus training room, in virtual and practical work related scenarios, or by using some teaching aids in the training room to create a professional career scene, to provide students with a practical application. A platform for working with specific jobs in English. The practice of public English in colleges and universities is generally that students go out of school, go to the actual work of the cooperative teaching units of the school, and be immersed in the situation, find out their own gaps in specific use, and then specifically check for missing vacancies to obtain The most profound experience and the greatest progress. The mode of public training and internship in public English in colleges and universities not only reflects the taste and practicality of English, but also greatly enriches the form of teaching.

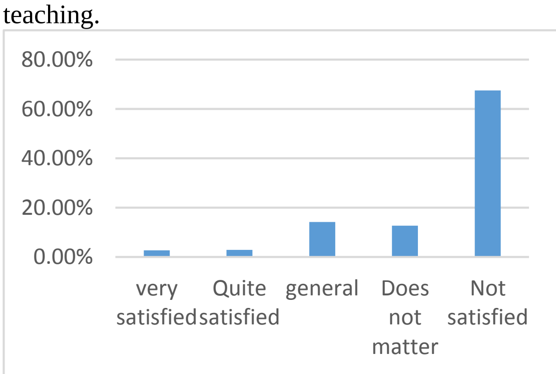


Figure 2. Students' ability to practice their English

4.2 Focus on cultivating students' learning ability

Student-centered, emphasis on students' listening and speaking ability Traditional teacher-centered teaching is far from stimulating students' willingness to learn, and even destroy their will. Some scholars have suggested that "teachers should fully recognize the importance of people-oriented, student-centered, correctly handle the relationship between teaching and learning, and focus on cultivating students' interest, strategies, methods and subjective consciousness in learning English." The new teaching model requires teachers Really "student-centered", according to the characteristics of students and the rules of learning to set teaching objectives, choose the appropriate teaching methods and teaching methods. At the same time, teachers should not pay attention to students' literacy skills, but should focus more on students' listening and speaking skills. Because of social development and international exchanges, students are required to communicate in English to understand the acquisition. The latest scientific and technological achievements from abroad and the essence of foreign culture. Returning the time to the students, leaving the classroom to the students, only the students actively participate in the classroom teaching, and actively participate in the various situational dialogues, role performances, imitations, speeches and other teaching modes designed by the teachers, so that the students can truly integrate into the English learning. In order to translate language knowledge into practical application capabilities.

4.3 Cultivate the growth of the teaching staff

Teachers are the most active and important factor in teaching. As a college English teacher, in addition to good basic English skills, it should also have a knowledge structure that meets the characteristics of colleges and universities. Knowing the weaknesses of one's own knowledge and ability, and constantly learning through theory and practice in work and life, to become a professional teacher. Professional teachers are based on a certain knowledge structure, have specialized practical teaching ability, and can exploratively solve problems in the teaching field. The professional development of teachers can be implemented in several aspects: First, we will continue to improve the institutional system that is conducive to the development of teachers. We will plan to gradually increase the investment of masters in order to provide opportunities for teachers to continue their studies or further study. Second, the school hires industry experts in the industry to regularly report to the school, open lectures, strengthen the interaction between schools and enterprises, and develop the vision and thinking of English teachers. The third is to plan to send English teachers to professional boutique colleges to observe and learn, increase their interdisciplinary knowledge and improve their professional English ability. Of course, any progress can not be separated from the individual's willingness and efforts. In addition to providing opportunities, institutions should encourage teachers to go to part-time training for relevant enterprises, undertake English training for employees, English guides for tourism industry, and translation for foreign trade enterprises. And the specific work of the exporter and other aspects, the gains from the practice are used to guide the teaching, making the teaching more realistic and professional.

5. CONCLUSION

Under the application-oriented talent training mode, college English teaching has ushered in a new development climax, which is a major development opportunity for English teaching. Therefore, both the school and the education sector should seize the opportunity, break through the constraints, realize the teaching reform, and promote the development of teaching, so as to effectively improve the students' English achievement and stimulate the students' enthusiasm for English learning, so as to improve the students' English ability. College education should put students' professional ability training in the first place. Of course, the orientation of college English teaching must be consistent with the educational goals.

REFERENCES

[1]Hathaway T, Fletcher P. An investigation of K-6 pre-service teachers' ways of experiencing the teaching of diverse learners using phenomenography. Educational Research for Policy & Practice, 2015, 17(4):1-22.

[2]Wang J P , Wang X H . Construction on Practical Talents Training Mode in Environmental Monitoring Curriculum. Journal of Education & Practice, 2017, 8.

[3]Pei, Zhengwei. Classroom discourse in college English teaching of China: a pedagogic or natural mode? Journal of Multilingual and Multicultural Development, 2015, 36(7):1-17.

[4]Zhang W , Xiang D , Silong XÜ, et al. Construction and Practice of CAP Curriculum under the Background of College Entrance Examination Reform. University Chemistry, 2018, 33(3).

[5]Shaowei W U , Wang L Z , Xiang D S , et al. Rational Positioning and Implement Strategies for Training Applied Talents and Innovative Talents in the Teaching of Instrumental Analysis. University Chemistry, 2016, 31(7).

[6]Chen J. An e-Portfolio-Based Model for the Application and Sharing of College English ESP MOOCs. Higher Education Studies, 2017, 7.

[7]Zhiyong L, Hui J, Honglei N. Exploration and practice of innovative and application-oriented talent training of civil engineering specialty: taking Xuzhou Institute of Technology as an example. Journal of Architectural Education in Institutions of Higher Learning, 2015.

[8]Kong X P, Bao-Han Q U, Hai-Tao L, et al. The Experimental Teaching Mode for Training Applied Innovative Talents. University Chemistry, 2016, 31(7).

[9]LIU Yali, ZHANG Xiaohua, ZHOU Haihui. Study and Practice on the Teaching Reform of Applied Chemistry Specialty in Hunan University in the Light of the New Engineering Education Goal. University Chemistry, 2018, 33(9).

[10]Wang Qingxi, Zhao Haojie. Research on the Safeguard Mechanism of Computer Applied Talents Training. Journal of Anyang Institute of Technology, 2016, 15(6):104-106.

[11]Zeng Y, Huang Q. Teaching Reform of Organic Chemistry Laboratory in the Transformation and Development Process of Local Universities. University Chemistry, 2018, 33(1).

[12]The Enlightenment of Oral English Skill Competition to English Teaching Reform at Vocational Colleges. Campus English, 2017(26):60.

Research on the Cultivation Mode of Online Ed. D in the University of Liverpool

Rui Gao[1,], Bin Wang[2]*
[1] Beihang University, Beijing, 100191, China
[2] Chuzhou University, Chuzhou, 239000, China
**Email: tianyagr@126.com*

Abstract: The online doctor of education program is a new type of professional doctoral degree. This paper discusses the cultivation mode of online Ed. D in the University of Liverpool from four aspects: training objectives, admission conditions, curriculum setting and learning process. The online Ed. D of the University of Liverpool has an outstanding reputation, highlighting flexibility, demonstrating practicality, and focusing on interaction and collaboration. However, due to the complete online learning, the lack of face-to-face interaction and communication, weak sense of community, strong sense of belonging, and limited degree certification and recognition, resulting in controversial training quality.
Keywords: university of Liverpool; doctor of online education; the cultivation mode

1. INTRODUCTION

Since the 20th century, Canada, the United States, the United Kingdom, Australia and other countries have carried out professional doctoral education [1]. As a professional doctorate, Doctor of Education has the largest market share in the UK. In the 21st century, online education has sprung up. “When more than a quarter of higher education students take online courses, online education is clearly mainstream.” This is the conclusion of the Babson Report on online education in 2016 [2]. John Sener predicts that “on the next five to ten years, online higher education will be fully universal and fully developed [3]. It is true that online higher education meets the dreams and needs of most people who strive to obtain the corresponding qualifications without affecting their work and life. Along with the rapid development of online education, the rapid development of modern educational technology, diversified social needs and the concept of learning society, a new type of professional doctoral training model---online doctoral program came into being.

The University of Liverpool ranks second among the top 10 institutions in the UK for online higher education [4]. Founded in 1881, The University of Liverpool is a member of the UK’s Russell Group of research-led universities and is consistently ranked in the top 200 universities worldwide. The University of Liverpool currently offers more than 30 master's, doctoral and short-term graduate online courses, including online doctoral degrees in business administration and education. As one of the first universities in the UK to offer online postgraduate courses, the University of Liverpool offers the most international online courses in the UK, with more than 8,000 students from more than 160 countries and more than 10,000 graduates.

2. THE CULTIVATION MODEL OF ONLINE Ed. D

(1)Training objectives and entry requirements

The University of Liverpool's Online Ed. D program focuses on the latest practices, research and leadership thinking in higher education, and equips doctors to become strategic leaders in higher education by acquiring the skills and knowledge. The program aims to educate university education leaders around the world and encourage doctoral students to understand the role of universities as learning places and learning institutions from a global perspective, enabling doctoral students to critically think about skills and knowledge in real-world environments around the orld. All online degree programs are 100% online, and academics can be studied anytime, anywhere without interrupting your career [5].

In order to achieve the above training objectives, the University of Liverpool has set strict entry requirements. Online Ed. D is primarily for high-level education professionals who want to take their careers to the next level without interrupting their careers. The University of Liverpool will take into account academic qualifications and work experience when enrolling students. In general, the following conditions must be met: First, Work experience. Require at least 3 years of experience in higher education related work, and priority to accept candidates with management positions. Second, educational qualifications. Applicants are required to have a master's degree, preferably a major in the social sciences, or an equivalent of a British master's degree in education. Third, applicants must interact with other higher education professionals and conduct survey exercises in the context of appropriate education to complete the assessment of the project. Fourth, the level of English. Demonstrate English language skills related to academic programs (equivalent to IELTS 7.0 or TOEFL 600) and pass the assessment of academic writing skills [6].

(2) course setting

The cultivation of online Ed.D is carried out through module courses, core module courses, doctoral development plan and graduation thesis, with a total of 540 credits (including 180 credits of graduation thesis).The length of schooling is about 4.5 years, including 2.5 years for courses and 1-2 years for graduation thesis. The specific curriculum is as follows[7]:

The preparatory module course is “Student Readiness Orientation”. This course does not take credits. The aim is to provide students with the skills and skills necessary for successful online learning, complemented by inspirational questions from students and alumni, in a rich multimedia environment.

The core module consists of nine core courses, with the exception of the first core course of 11 weeks, the remaining 8 core courses are 10 weeks, and each core course is 30 credits. These core courses are: Doctoral Development Plan (DDP),Becoming a Doctoral Practitioner，Learners and Learning, Learning: Environments, Infrastructures and Organisations, Ways of Knowing: Perspectives on Educational Research and Practice, Values in Educational Research and Practice, Action Research for Educational Leadership, Internationalisation and the Impact of Global Trends, Educational Research Methods.

The above core module courses have outstanding characteristics: first, attach importance to the training of research methods, and provide courses related to educational research methods; second, highlight professionalism and practicality.

(3)Thesis

The thesis is the cornerstone of any doctoral programme. Thesis development will last between one and two years and will consist of four stages. These stages are: developing your thesis proposal, faculty review and approval of your proposal, writing the thesis itself, and the oral examination (known as the “viva voce”) of your thesis.

(4)Learning process

Unlike the traditional doctoral student learning process, the online education doctoral learning method is 100% online learning. In online learning at the University of Liverpool, there is no fixed classroom time, you can choose when, where, or where to study.

To ensure the quality of online Ed. D students, the University of Liverpool also provides support for students' online learning processes, such as professional support teams, professional student support groups, expert support teams, course instructors, essay supervisors, online libraries and expert technical support, and so on.

3. CHARACTERISTICS OF ONLINE Ed. D

(1)Advantages of online Ed. D

First, a reputation for excellence. The University of Liverpool ranks among the top 1% of universities worldwide and is a member of 24 research universities in the UK's famous Russell Group. In addition, the UK Economic and Social Research Council (ESRC) provides accreditation standards for the University of Liverpool's online education PhD program, and the UK's Higher Quality Assurance Agency (QAA) has also included online education PhDs in the higher education framework.

Second, demonstrate practicality. The goal of the University of Liverpool's online Ed. D is to develop a leader who is confident and understands how to play a practical role in the higher education environment, while combining in-depth research knowledge with deep practical understanding. The Liverpool University Online Ed. D program focuses on practical features and is reflected in the training objectives and curriculum.

Third, flexibility is a core element. The University of Liverpool online education doctor program has great flexibility and the learning style is 100% online. British scholar John Daniel sees “flexibility” as a core element of online learning. Flexibility has multiple dimensions. For students, it means easier access to learning opportunities, easier access to learning locations, self-selection of the various academic qualifications required, and the organization of their own lives. For teachers, it expands the scope of the curriculum design, provides new (usually free) teaching resources, and allows for more diverse and creative assessments in student assessments. Evidence suggests that effective use of these choices can encourage students to participate more fully in the curriculum and improve the quality of online learning [8].

Fourth, interaction and collaboration. On the one hand, as one of the UK's leading online learning universities, the University of Liverpool prides itself on its highly interactive online learning experience, which is constantly being refined and developed to meet the needs of professionals in the UK and around the world. The research discussion is at the heart of the University of Liverpool's online learning model. There is a high degree of dynamic interaction between the teacher and the student and between the students. Each person contributes to the course discussion and comments on the work of the classmates, sharing ideas and resources, and can produce continuous synergy through the online learning process [9]. On the other hand, online collaborative learning enhances learning outcomes. Online Collaborative Learning is a theory proposed by Linda Harasim. The focus is on providing a learning environment that promotes collaboration and knowledge building through Internet facilities. Alex Kumi-Yeboah and others believe that collaborative learning in the online environment contributes to the development of students' critical thinking and problem-solving skills, the development of self-reflective skills, and the construction of knowledge and meaning [10].

(2)Disadvantages of online Ed. D

First, the quality of online education is questioned. D.

Randy Garrison and J.B. Arbaugh found that online learning students often lack social presence, cognitive presence, and teaching presence [11]. The sense of social existence, cognitive existence and teaching presence are the basic conditions and original motivation for maintaining online learning. The lack of three directly affects the quality of online education.

Second, there is a lack of face-to-face interaction and communication. Anant Deshpande found through a qualitative study of 91 online business administration doctoral students at the University of Liverpool that the lack of interpersonal interaction is a key issue for online PhDs. Most respondents particularly emphasized the lack of face-to-face communication with classmates and mentors, which is prone to frustration and isolation [12]. .Betty A. Barr and Sonya F. Miller also bluntly pointed out that social interactions in online environments are limited, and that online courses must be designed to take into account that students are not isolated. Online course teachers can increase the dialogue, encourage mutual awareness and interaction, establish appropriate network etiquette, provide group cooperation experience, ensure that group tasks are effective for all, and accept differentiated teaching practices, which can alleviate students' sense of isolation [13]. The Liverpool University’s Online Ed.D program, while maximizing network interaction through simultaneous teaching and asynchronous teaching, lacks face-to-face interaction and communication is a common problem of online education.

Third, the community's awareness is weak and the sense of belonging is not strong. Jeremy Carl Byrd believes that the Sense of Community is made up of four elements: membership, influence, integration and satisfaction, and a common emotional connection. Community awareness enables members to share a common belief and a sense of belonging and influence each other. Studies have shown that community awareness has been shown to have a significant positive impact on online student satisfaction [14]. It can be seen that online education tends to make students' community consciousness weak and their sense of belonging is not strong. The Liverpool University online education doctoral program is no exception.

Fourth, online Ed.D certification and recognition are limited. The University of Liverpool promises that there is absolutely no difference in the quality of online and campus courses [15]. The online degree certificate issued is the same as the traditional student's degree certificate, with equal status and equal treatment. As a UK university degree, the University of Liverpool's online qualifications are widely recognized internationally. The online course at the University of Liverpool has been included in the list of online universities recommended by most national ministries of education. Undoubtedly, employers in many countries do not recognize online degrees, and many communities and organizations only recognize some online degrees [16]. At present, many schools in various countries offer online degree programs, which are mixed, and many uncertified schools also offer online degree programs, which seriously affects the reputation and quality of online degrees.

REFERENCES

[1]Pamela Burnard, Tatjana Dragovic, Karen Ottewell, Wai Mun Lim. Voicing the professional doctorate and the researching professional’s identity: Theorizing the EdD’s uniqueness. London Review of Education, 2018, (1):40.

[2]Elaine Allen, Jeff Seaman. Online Report Card：Tracking Online Education in the United States. Babson Survey Research Group, LLC, 2016:2.

[3]John Sener. Why Online Education Will Attain Full Scale. Journal of Asynchronous Learning Networks, 2010, (4):4.

[4]10 Top UK Universities Ideal for Distance Learning. [2018-4.10] https://www.distancelearningportal.com/articles/294/10-top-uk-universities-ideal-for-distance-learning.html.

[5]Doctor of Education (EdD) overview. [2019-1-10] https://www.online.liverpool.ac.uk/programmes/doctor-of-education

[6]Entry requirements. [2019-1-12] https://www.online.liverpool.ac.uk/programmes/doctor-of-education/entry-requirements.

[7]Doctor of Education - Higher Education Online Programme [EB/OL]. [2019-1-15]https://www.online.liverpool.ac.uk/programmes/doctor-of-education/structure.

[8]John Daniel. making sense of flexibility as a defining element of online learning.[2019-1-20]https://teachonline.ca/tools-trends/exploring-future-education/making-sense-flexibility-defining-element-online-learning.

[9]Dhirendra Kumar. Pros and Cons of Online Education[R]. Aug 19, 2015 White Papers.

[10]Alex Kumi-Yeboah, Guangji Yuan, James Dogbey. Online collaborative learning activities: the perceptions of culturally diversegraduate students. Online Learning Journal, 2017, (4):5-27.

[11]Randy Garrison,J.B.Arbaugh.Researching the community of inquiry framework:Review,issues,and future directions．The Internet and Higher Education，2007,(3):157－172．

[12]Anant Deshpande. A qualitative examination of challenges influencing doctoral students in an online doctoral program. International Education Studies, 2016, (6):139-149.

[13]Betty A. Barr. Sonya F. Miller. Higher education: the online teaching and learning experience. Online Submission. 2013,(5):1-23.

[14]Jeremy Carl Byrd. Understanding the online

doctoral learning experience: factors that contribute to students' sense of community. The Journal of Educators Online, 2016, (2):102-135.
[15]Frequently Asked Questions. [2019-1-22]https://www.online.liverpool.ac.uk/what-to-expect/faqs
[16]Alex Coy. Advantages and disadvantages of online PHD Programs. [2019-1-22]http://www.selfgrowth.com/articles/advantages-and-disadvantages-of-online-phd-programs.

Realization of Information Management of Computer Laboratory in Colleges and Universities

Ruikun Wang
School of Computer Science and Technology, Tianjin Polytechnic University, Tianjin 300387, China

Abstract: In today's society, informatization has become the main direction of the development of the times, and computer experiment courses have become one of the important educational work in college teaching. How to use computer laboratory in colleges and universities quickly and scientifically has become an important issue in the development of every university. This paper mainly studies the related problems of informatization of computer laboratory in colleges and universities, and analyzes the effective measures for the construction of information construction of computer laboratory in colleges and universities.
Keywords: Computer; Laboratory; Information management

Since the 21st century, the information age has developed rapidly, and Internet information technology products have gradually been integrated into people's lives. Computer experiment courses have also been included in one of the important courses for cultivating talents in universities, making computer laboratory management one of the more important tasks in Colleges and universities. The information management of computer laboratory is different from the traditional management method. Whether it is the management belief or the means, it needs to adopt the information processing method to realize the scientific and effective information management of the computer laboratory.

1. THE MEANING OF INFORMATION MANAGEMENT OF LABORATORY

Information management of laboratory is actually based on network information technology, through which the related activities of the laboratory are maintained and managed by network and digitalization, including experimental learning activities, experimental teaching and system maintenance, to realize the efficient use of information for the integration and unification of information. With the advent of the information age, universities in China have gradually realized the importance of computer experiment courses, and have incorporated them into the construction projects of universities, and use laboratory management and maintenance to break the boundaries of space and time to improve teaching efficiency. In addition, the modern construction and management of university computer laboratories can effectively improve the management, so that it ensures that various resources of university computer laboratories can be systematically processed, and the effective integration of resources can enable the laboratories to achieve scientific and effective management purposes [1]. In this process, the construction of computer laboratories in colleges and universities will also be raised to a new level, so that colleges and universities can be in line with the latest concept of quality education in teaching, and effectively cultivate excellent high-quality talents for society.

2. MEASURES FOR INFORMATION MANAGEMENT OF COMPUTER LABORATORIES IN COLLEGES AND UNIVERSITIES

2.1 Experimental teaching

In the computer lab of colleges and universities, its primary responsibility is experimental teaching, and the main premise and condition for the construction of modern laboratory is experimental teaching. The main body of experimental teaching is the teacher, and the teaching object is the college students. The laboratory activities have strong practicality, so in the process of experiment teaching, the interaction between teachers and students is the most frequent, which is an important part of the construction of computer lab management. In addition, the main content of computer lab management teaching is to summarize laboratory data and experimental data, integrate and classify teaching resources, and collect and distribute experimental reports. In the experimental teaching, the mode of the experimental process and the design of the experimental related situation are the key links in the teaching of information management of laboratory. However, in this process, the teacher's experimental subject position should be displayed and the teacher should become the main guides of computer laboratory teaching [2]. For example, teachers can display laboratory resources and related learning resources with the use of network information technology, and guide students to use the Internet platform to download the required materials and learning resources to obtain experimental data. After getting the experimental data, students can write relevant experimental operations and reports in time. In this process, the teacher should guide the students to timely feedback the problems that occur during the experiment, so that teachers can prepare the next experimental course according to the actual situation of students, so as to meet the actual needs of students, and constantly improve the different experimental teaching work. Only by arranging the curriculum according to the actual situation of the students can we truly realize the meaning of the concept that teach students according to their aptitude, and continuously improve the teaching quality and efficiency of the experimental teaching.

2.2 Experimental learning

The main purpose of information management of computer laboratory in colleges and universities is to create an intelligent platform. The establishment of this platform enables students to simulate experiments and training through the use of campus network, so that students can learn in close to real experimental scenarios, including experimental operation and experimental theoretical knowledge. In addition, the experimental training of such simulation is mainly constructed by B/S organization. This structure enables students to carry out simulation experiments on the network platform. Through a series of systematic operations, students can carry out experiments in simulated laboratory situations, helping them improve their practical operation ability. In addition, when learning resource search, we should systematically collate and summarize the relevant resources, effectively integrate the laboratory information data, to make it more convenient for teachers and students to upload and download data. To a certain extent, a convenient and open data sharing platform has been created for teachers and students. The formation of this platform can effectively help teachers and students to browse and download information and make it more convenient to access learning materials. At the same time, it saves a lot of manpower and material resources for colleges and universities, and effectively improve the effectiveness of teaching of information management of computer laboratories in colleges and universities.

2.3 Maintaining management system effectively

In the information management of computer labs in universities, the information management work can be effectively operated, and the system update and maintenance is an indispensable and powerful guarantee. In recent years, the rapid development of Internet information has caused computer network systems to be constantly damaged by some viruses, which has a certain impact on the management system. As the core of the network management system of colleges and universities, computer labs should improve the management and interception of bad information, and effectively monitor and protect the network management system of computer labs to avoid the intrusion of bad information and unsafe factors [4]. In addition, when publishing information, the administrator of the computer lab can use computer programming to effectively post and manage the information. If a teacher needs to upload data, the system can automatically perform the audit, and the correct information will be automatically released. This method greatly improves the efficiency of laboratory management and further saves manpower consumption. In addition, in order to further strengthen the management, computer labs in universities can be managed through integrated systems such as campus cards, and record students' use of computers in detail to facilitate further management of administrators.

3. CONCLUSION

In general, different from traditional laboratory management, the information management of computer labs is mainlythe effective processing and dissemination of information through the use of multimedia technology and network communication to truly achieve the purpose of sharing laboratory data, so that laboratory management is no longer limited to the boundaries of time and space. The information management of computer labs can effectively help colleges and universities to integrate the resources of the laboratory, and ensure the smooth progress of the system maintenance to establish the standardization and efficiency of laboratory management.

REFERENCES

[1]Zhao Yuqing. Realization of Information Management of Computer Laboratories in Universities. China Management Informatization, 2016, 19 (20): 232-232.

[2]Chen Haoxin. The Application of Cloud Desktop Technology in the Construction and Management of Computer Laboratories in Colleges and Universities. China Management Informatization, 2017, 20(06).

[3]Yang Zhanwu. Analysis of the Problems and Countermeasures in the Management of Computer Laboratories in Colleges and Universities. China Management Informatization, 2017, 20 (08).

[4]Su Jun. Discussion on Centralized Operation and Information Management Model of Computer Laboratory. Modern Economic Information, 2017 (08): 385.

Women and Public Space in China: Taking the Square Dance as an Example

Simei Wang
Shanghai Donghai Vocational and Technical College, Shanghai, 200241, China
E-mail: wangsimei_cn@163.com

Abstract: Public space is accessible to all people freely, it serves for public purpose. One well-managed and high-quality public space can promote people to explore self-value and increase the sense of belonging. However, because of family burden and social expectation, women are excluded from public space. But public space and activity play indispensable roles in daily life, they provide development space and extend social network, strengthen social connection and generate well-being for women. In china, Confucian discourse and collectivism in Mao era still impress women deeply. The image of traditional "good women" influences their participation of public leisure activity. This article takes square dance as an example, aims to explore the relationship of public space to Chinese women, especially in public leisure space. And illustrates why participation of public space is the process of empowerment for women.

Keywords: Public Space; Square Dance; Chinese women; Empowerment

1. INTRODUCTION

Women are widely excluded from public space, range from politic to economic, even leisure. Their social network is influenced by given social roles and patriarchal ideology; the family is their center place of activity.

(1) Background

Combined with Chinese specific conditions, the majority of Chinese women participate in public leisure space through square dance. In previous researches, such activity is thought to have a significant role in promoting the protection of physical and mental health for women. This epistemological perspective ignores the essential meaning behind this phenomenon. The components, including the patriarchal nature of Confucianism, the deepening of collectivism in Mao Zedong era, the solidification of the traditional image of women, the fact that patriarchy dominates the society. Even the deprivation of female discourse, as well as the multiple gazes and given social roles for women. All of these position women in silent and passively accepted status in public space, and regard the square dance as accessible method for self-expression and social interaction.

(2) Methodology

Participatory observation is one branch of qualitative research because the observer put themselves in the same situation, they conduct and think as the research objects, so that they have a more profound understanding. Its feature is that the researcher can review data and participate in the observed activities through intensive involvement, and it aims to build an intimate relationship with the observed objects. The experience of participants can be used as the first-hand resource and is more convincing.

2. DISCUSSION

Based on empirical data, analyzes the structural and social reason for forming this specific phenomenon of square dance in China.

(1) Public space and elder women

"I am so old that cannot follow my children, especially after retirement. But square dance renders me to know more friends and explore another possibility of life."

Elder women prefer to wear colorful cloth when they dance. They are born in the 1950s or 1960s; material deprivation decides they wear plain or tattered cloth in childhood. Also, because of their age characteristics, they pay more attention to be pretty as they are older.

Square dance renders elder women become more confident. It provides a new platform for elder women to express themselves. They can explore their potential through public activity. Most of the participants of square dance are retired women, many of whom have a strong sense of loss after leaving their familiar working environment and feel abandoned by the society. At the same time, restricted by gender roles, the social expectation of women is that they devote themselves to family life.

(2) Public space and left-behind women

"I support the whole family alone because of my husband works outside. So I always feel stressed and exhausted and cannot enjoy own leisure time."

Square dance creates the sense of security. After dancing, left-behind women accompany with each other to go home. Because the absence of husband forces women to stay in the more vulnerable situation. They not only support the family, children and elder but also undertake the duty of protection. However, in the patriarchal society, women are powerless, they encounter more difficulties and barriers. The figuration of women is constructed as fragile and vulnerable, sexual objections. However, collective dance brings pleasure and increases security for them. Left-behind women form a collective identity through square dance. They become more intimate and closer. Although they stay in the same situation, mutual communication is limited. This prevents them from organizing to defend their rights. But, square dance strengthens connection and promotes them to express themselves rather than keep silent as before. They explore self-identity and collective identity through this public activity. Because identity is shaped in a specific context, conversely, context can change original identity.

(3) Public space and housewife

"After married, my life is family-oriented. Family always is prior to myself, even for leisure activity."

Because of family obligations and Confucian discourse, their lives are family-centered. In another word, the family is the priority for the housewives, their leisure time is charged by family time. Square dance is the activity and square is the place they can enjoy together. For most of the Chinese women, they need to abandon job after they married. Social contact shrinks and is confined in domestic relationships. Due to time constraints, female domestic responsibilities and endless housework often limit their ability to participate in general public activities. However， participate in square dance not only can leisure themselves, but their family also can involve with this activity.

(4) Gaze and restriction

In public space, it is unavoidable to be supervised by gaze. Although women prefer to wear colorful cloth in square dance, they never wear overexposed cloth. Their unified cloth also mainly is trouser. Tight, short and sequined cloth are also unacceptable for them. With the multiple gazes, women need to follow the schedule which is regulated by power and patriarchy. Comply with the rules for body, accord with the female image, undertake female duties and perform femininity in public space. Wearing loose clothes to cover physique, staying at home rather than in public space, read books in store rather than dance in a club, all of these symbols of cultural power impose disciplines and norms on female bodies.

Participants who wear overexposed cloth are blamed and discussed by others. Women not only do not wear this kind of cloth, but they also criticized and felt shameful for this. Public visibility of women is treated as moral looseness and alienation of social order. Public women are denounced as prostitutes. Even the society does not exclude and accuse them directly; it uses a "modern and civil" way to discriminate against these women. Creating an atmosphere and feeling that being public women is aliened, throwing different vision to them, treating them as the source of crime and evil. Thus, they must be careful about the balance between appropriate social contact and suitable visibility.

4. CONCLUSION

In conclusion, the relationship of public space to women is love and hate, it is paradoxical. On the one hand, masculinity is reinforced in public space, women suffer from multiple oppressions and are excluded from certain public space. On the other hand, women are empowered through the participation of public space. They not only can remove family pressure, but also construct a female discourse in leisure space. Participation is essential to balance this relationship. The higher intensity of participation, the more discourse is empowered. Otherwise, empowerment in public space is a long-term project. Women may suffer from the risk of being assimilated.

REFERENCES

[1]Abramson, D. B. 2006. Urban planning in china: Continuity and change. Journal of the American Planning Association. 72(2), pp.197-212.

[2]Adler, P. and Adler, P. 1994. Observational techniques, In: Denzin, N. and Lincoln, Y. eds. Handbook of Qualitative Research. CA: Sage,pp. 377–392.

[3]Aitchison, C. 2000. Post structural feminist theories of representing others: A response to the 'crisis' in leisure studies' discourse. Leisure Studies. 19(3), pp.127-144.

[4]Amin, A. 2008. Collective culture and urban public space. City. 12(1), pp.5-24.

[5]Billioud, S. 2007. Confucianism, 'cultural tradition,' and official discourse in China at the start of the new century. China Perspectives. 3(9), pp.50–65.

[6]Butler, J. 1994.Gender as performance: an interview with Judith Butler. Radical philosophy.67(Summer).

[7]Crouch, D. 2000. Places around us: embodied lay geographies in leisure and tourism. Leisure Studies. 19(2), pp.63–76.

[8]Fraser, C. 2016. Protest in contested public space. Ph. D. thesis, University of Sheffield.

[9]Fyfe, N. ed. 1998. Images of the street: Planning, identity, and control in public space. London: Rout ledge.

[10]Gehl, J. 2006.Life between buildings: Using public space. Skive: The Danish Architectural Press.

[11]Inam, A. 2011. From dichotomy to dialectic: Practicing theory in urban design. Journal of Urban Design. 16(2), pp.257-277.

[12]Iveson, K. 1998. Putting the public back into public space. Urban Policy and Research. 16(1), pp.21-33.

[13]Kirksey, S. E. and Helmreich, S. 2010. The emergence of multispecies ethnography. Cultural Anthropology. 25(4), pp.545-576.

[14]Liu, H. 2017. Claiming for square dancing women. New citizen weekly. 7(24), pp.108-108.

Thoughts on the Current Situation and Countermeasures of Talent Cultivation for Entrepreneurship and Innovation in Small Towns with Chinese Characteristics—Take the IT Town of Foshan High-Tech Zone as an Example

Jiahua Wu, Qixing Sun, Shouxuan Wu*
Neusoft Institute Guangdong, Foshan, Guangdong, 528225, China
E-mail: wujiahua@nuit.edu.cn

Abstract: In the construction of characteristic towns, the government, universities and industrial parks all play an important role. The government provides policies and supporting facilities for talent gathering, universities provide innovative blood for industrial talent demand, and industrial parks provide carrier support for industrial system construction. Taking the IT town in foshan high-tech zone as an example, this paper analyzes the current situation of entrepreneurship and innovation talent cultivation in characteristic towns, and puts forward countermeasures and thoughts on entrepreneurship and innovation talent cultivation in characteristic towns from the perspective of “college resources + industrial support + government guidance”.
Keywords: Characteristic town, Entrepreneurship and innovation, Industry

1. INTRODUCTION

On October 8, 2016, the national development and reform commission issued the guideline on accelerating the construction of small towns with beautiful characteristics, which made specific arrangements for many aspects of the construction of small towns with beautiful characteristics. The overall requirements are innovation and exploration, local conditions, industrial town, people-oriented. Attract special talents and labor force: encourage migrant farmers to return to their hometowns, strengthen school-enterprise cooperation, and cultivate talents by relying on vocational colleges and other training bases. In creating a business environment, we encourage “entrepreneurship and innovation” and propose systems to attract entrepreneurs, venture capital and incubators to build an innovation ecosystem [1].

Characteristic town is an important carrier of industrial competitiveness of major developed countries in the world, and it should also be one of the main carriers of industrial upgrading in China in the new era. Many internationally competitive industries in developed countries are concentrated in small towns rather than central cities. It is an inevitable choice for a mature country to develop high-end industry together in large and medium-sized cities and characteristic towns. This diversified combination of urbanization and industry not only provides multiple models for economic development, but also provides more personalized options for human development [2].

“Characteristic industries”: characteristic towns should be built into industrial towns and high-end industrial towns, with layout in higher education, scientific research, finance, intelligent manufacturing, biomedicine, new energy, new materials and other aspects. Characteristic towns mainly focus on their own advantages of characteristic industries; Extend the industrial chain and form a relevant industrial cluster institution of “industry itself + industry application + industry service”. Therefore, the development of characteristic industries is the core, which not only involves the production of the industry itself, but also extends to the service tertiary industry, its related applications and education and research undertakings [3].

2. CONSTRUCTION PLANNING OF IT TOWN IN FOGAO DISTRICT

Relying on the original industrial agglomeration foundation, fogao district proposes to establish the concept of five science and innovation towns. Each science and innovation town will further strengthen the industrial agglomeration effect according to its own positioning, build a chain, a strong chain and a supplementary chain in characteristic industries, form a more perfect industrial ecosystem, and promote industrial transformation and upgrading. Town in among them, IT is guangdong neusoft institute as the core, neusoft II pioneer park south China as the important carrier, relying on the resources of colleges and universities support + + industry government guidance "mode of innovation, the development of new media and animation creative, health diagnosis and wearable devices, industrial design, virtual reality and A R V R enhancement, intelligent transportation, such as 3 d printing technology. The future development strategy of the town will be to improve the level of teaching facilities in existing colleges and universities. Strengthening the functions of information technology education, training and entrepreneurship; Forming IT industry incubation cluster; Focus on supporting services industry groups, to achieve the integration of production and housing. The promotion and development of IT towns and the transformation and upgrading of industries are inseparable from the effective supply of entrepreneurship and innovation talents. Relying on universities is the main path for the cultivation of entrepreneurship and innovation talents, and the construction of science and innovation incubation chain with universities as the core and entrepreneurship incubation platform as the carrier should be continuously strengthened to integrate various elements and resources, so as to provide favorable conditions for the excavation, cultivation and development of entrepreneurship and innovation talents [4, 5].

3. CURRENT SITUATION OF DOUBLE INNOVATION TALENT CULTIVATION IN IT TOWN OF FOSHAN DISTRICT

3.1. Neusoft Institute Guangdong Provides Talent Support for IT Towns

High-quality talents are the driving force of innovation and sustainable development of characteristic towns. The construction of characteristic towns has a great demand for innovative talents. Talent support provided by colleges and universities for characteristic towns can be reflected in four aspects:

(1) Colleges and universities cultivate talents needed for the development of small towns. The outstanding college students who graduate every year are the continuous talent resources for the development of characteristic towns. They are full of passion, full of imagination and creativity, and are the driving force for innovation, entrepreneurship and development of the town.

(2) The high-quality scientific research team owned by the university can provide high-end intellectual support for the development of the town. These high-end talents have comprehensive knowledge, high scientific research quality and rich experience, and can use their r&d and management capabilities to provide services for enterprises in small towns.

(3) Colleges and universities can provide targeted management training, skill training, academic and non-academic education and other forms of education for enterprises and employees in small towns.

(4) Colleges and universities can also provide technology research and development pilot test platform and laboratory for small towns, so that technology entrepreneurs can effectively reduce the cost and cost of research and development, increase the probability of successful project research and development, and also use the platform and laboratory to train and export technical talents for enterprises.

Guangdong neussoft university always adheres to the school-running philosophy of "education creates student value", emphasizes that "the application of knowledge is more important than the possession of knowledge", implements the CDIO integrated talent training mode of industry-learning cooperation and application orientation, and runs the "five-element ability" development and innovation and entrepreneurship education throughout the whole process of IT talent training. Talents are the soul of a small town, and the gathering of more talents will strongly promote the connection and sharing of various resources and elements of characteristic towns, thus promoting the growth of the scale and quality of the new economy and the improvement of regional innovation ability.

3.2. Neusoft Institute Guangdong and Neusoft South China IT Pioneer Park Jointly Promote the "Industry-University-Research" Cooperation

The education mode of higher education, if from The University of Bologna in Italy in 1158 (The University of Bologna) as The starting point of higher education, then The University is just a teaching system, and then to Germany in 1810 Humboldt University (Humboldt University of Berlin), University, scientific research system began appearing in 1951, Stanford University (Stanford University), in The teaching, scientific research and social service system of three. After more than one hundred years of experience, the mode of higher education seems to have been basically stereotyped and generally similar. Although the development level and situation of institutions of higher learning in different countries are not balanced, there is one thing in common that is the combination of "production, study and research" in modern institutions of higher education.

The modern "industry-university-research" cooperation is market-oriented, with enterprises as the main body, and promotes the cross-boundary and collaboration between universities and scientific research institutions. This mode of cooperation can effectively integrate talents, technology, capital and other innovative elements, promote the seamless connection of discipline chain-specialty chain-entrepreneurship chain-industry chain, facilitate the research and development of cutting-edge technologies, and facilitate the breakthrough of core and key technologies. With the advance of the digital economy era, the development of new economy has changed from the previous model of enterprises as the main driving force to the driving force of innovative talents and original knowledge innovation. This transformation reflects the return of science and technology to knowledge innovation, emphasizes the role of knowledge promotion and launching, ADAPTS to the requirements of core technologies for strategic emerging industries, and highlights the important role of universities in the digital economy and high-tech fields.

As a university integrating knowledge, talents and research, it is not only a place to impart knowledge, but also a place to create knowledge. New knowledge, in turn, promotes the development of new and high technologies outside the campus. Through the cooperative innovation of “industry-university-research institute”, it will become the “engine” and “accelerator” to cultivate innovative industries in characteristic towns. College through cooperation with enterprises, construction of research center, institute of industry, to set up research funding channels and a variety of ways, research or development of the universities in areas such as the patent, intellectual property and achievements into realistic productivity, promote innovation of knowledge, education and technology, for the characteristics of small town construction conveying fresh blood, become the “engine” of the small town industry. Colleges and universities have rich knowledge reserve, advanced technology platform and strong technology research and development ability, and also take into account the cultivation of high-end talents. Through the integration of resources with the government, industry, industry and other industries, colleges and universities build a platform for scientific and technological innovation, which will become a bearing platform with “accelerator” function.

4. THOUGHTS AND COUNTERMEASURES ON THE CULTIVATION OF CREATIVE TALENTS IN IT TOWN OF FOGAO DISTRICT

The key is to emphasize the common development of people and small towns. The construction of IT town concept, the realization of construction goal and the realization of development vision cannot be separated from the cultivation and supply of various types of creative talents, and the unique path of creative talents cultivation generated by IT town can be used for reference by relevant industries and other characteristic towns.

4.1. Construct the Incubation Chain for Scientific Innovation, and Strengthen Top-Level Design for the Excavation, Cultivation and Development of Creative Talents

The innovative talents needed by the IT town in foshan high-tech zone are mainly from the surrounding universities, but the talent cultivation process is not limited to the campus and classroom. By integrating all kinds of IT resources of the surrounding universities and foshan high-tech zone, the incubation chain for innovation can be built, which is helpful to provide fertile soil for cultivating and gathering talents.

To strengthen the top-level design of double gen talent cultivation, the original SOVO college students entrepreneurship center of guangdong neusoft institute upgraded to walter innovation school of management, introduce the high-level personnel of the mainland, Hong Kong and Taiwan, from the core of education and the connotation of innovative undertaking and fusion at Stanford university and other international advanced ideas and methods of creative education, combine the domestic current situation of the innovative entrepreneurial education environment, extracting KCARC five elements. To impart Knowledge (Knowledge), the cultivating ability (Capability), casting Attitude (Attitude), provide resources (Resource), create atmosphere (Culture) as a creative elements and the objective of the reform of education, proposes the establishment across disciplinary boundaries and span boundaries between production platform and mechanism, build “course, chains, Culture” progressive integration mode of creative education, thus for students entrepreneurial DNA grafting affect life, so that the students no matter the future employment or business can better realize their life values and social values.

4.2. Attract the Participation of Social Forces, Promote Industry-University-Research Cooperation, and Provide All-Round Resources for the Excavation, Cultivation and Development of Creative Talents

As an important base of cultivating talents, science and technology is the first productivity and innovation is an important platform of the first driving force, the nature of colleges and universities in cultivating talents of double and has a very important role in the process, but only surrounding colleges and universities personnel training is difficult to avoid alienated from society, away from the characteristic station construction and industrial development. With the rapid development of information technology and the comprehensive advancement of the new situation, for double gen talent cultivation in colleges and universities gradually highlight the limitations, which requires colleges and universities to attract more social forces to participate in the training work, the mechanism of synergy innovation, complementary advantages, double gen talent cultivating characteristic town to provide a full range of resources.

Neusoft Institute Guangdong and neusoft south China IT pioneer park actively promote industry, education and research with the outside world. Neusoft and huilong technology jointly established huilong neusoft research center and obtained the provincial engineering research center. Cooperated with foshan university of science and technology to build “college of automobile electronics industry”; Neusoft great health industry landed in foshan high-tech zone and co-built cloud hospital project with foshan high-tech zone for the benefit of the people; Docking with neusoft’s superior industrial resources, such as neusoft big data, to promote the implementation of the project. In addition, IT town will regularly hold "IT" themed design exhibitions for people from all walks of life around the surrounding universities. In this way, on the one hand, IT breaks down the barriers between universities, provides opportunities for them to learn from each other, learn from each other and develop together, and at the same time, IT also provides powerful conditions for socialized talent cultivation.

4.3. Set up Venture Capital Funds to Form A Community of Interests for the In-Depth Integration of "Industry and City People" and the Cultivation of Entrepreneurship and Innovation Talents

The establishment of the ecological chain of entrepreneurship and innovation will help to combine universities, enterprises, governments and talents, so that the entrepreneurship and innovation education in colleges and universities will be closely linked to the economic development of characteristic towns. As the founder of the construction and development of IT featured towns, the government's role during this period is to build Bridges and create platforms for universities and enterprises as much as possible, and to provide assistance for the cultivation of entrepreneurship and innovation talents needed by enterprises in featured towns. The venture capital fund jointly established by the university and the enterprise will more vigorously promote the landing project of entrepreneurship and innovation talents and take root in the town, so as to promote the integration of "industry and city people".

Cities without industrial support are easily "empty cities"; Cities without industries are likely to "idle". And people become the core element that decides industry and city future development. Only with the integration of industry, city and people can urban development be full of vitality and momentum, as is the case with the construction of characteristic towns. Characteristic town is neither administrative division unit system "town," is not on the traditional planning industry (industrial) park "area", but according to innovation, open, harmonious, green, share the development philosophy, focused on the characteristic industry, the fusion characteristic culture, with the function of community tourism, fusion innovation entrepreneurship development platform and space vehicle. This definition puts forward higher requirements for the integration of characteristic small town "production city people".

"Produce city person" confluence is in person after all. Solving the problem of good people is the key to promoting the integration of industry and city. Therefore, the construction of characteristic towns should first absorb talents. Colleges and universities are the bases for the cultivation of talents. The cultivation of talents in colleges and universities should be close to the needs of small towns, targeted and multi-level talents, and a diversified and multi-level education system should be established. While gathering talents and industries, the town should constantly improve public service facilities, pay attention to ecological environment construction, and create livable production, life and ecological space. Or take the silicon valley of the United States as an example, innovation and entrepreneurship has become an important culture of Stanford university, which forms a good interaction between university culture and regional culture around technological innovation in silicon valley. Its unique atmosphere attracts talents, technology, capital and other resources from around the world to accumulate here continuously.

Neusoft Institute Guangdong, the core of IT town construction, is organized by neusoft group, a leading enterprise in China's IT industry. Therefore, the school has a strong industrial background and will link its own industrial resources such as medical care, cloud computing, big data, big health, automobile electronics and mobile new media to the IT town for implementation. Foshan high-tech zone, where it is located, is building a sub-center of guangzhou-foshan city. Public service resources such as rail transit, subway, residential facilities, commerce, education and medical care are gradually becoming reality in the new urbanization. Through the continuous integration of IT industry, urban public facilities and services, as well as higher education, the cultivation of entrepreneurship and innovation talents will explore a new road suitable for the high-quality development of IT towns.

REFERENCES

[1]The ministry of housing and urban-rural development, the national development and reform commission and the ministry of finance jointly issued the "notice on the cultivation of characteristic towns", July 1, 2016.

[2]Chen lixu, On the cultural support for the construction of characteristic towns, Journal of zhejiang provincial party school of CPC, 2016, (5), 15.

[3]Zhao Xuan, Zhang Weiliang, Lin Zhifeng, Research on crowd innovation space and interactive development of local colleges and universities based on symbiosis theory, Innovation and entrepreneurship education, February 2017, 8(1):41-42.

[4]Wang Yunqi, Li Na, Improving the role of guangxi universities in the development of regional strategic emerging industries, Economic management, 2011, 18:3.

[5] Shi Jinye, Fan Xu, Lu Jianbao, The role of American universities in regional development and its enlightenment, Science and technology management research, 2007, 5:64.

Research on Construction and Management of Multi-Functional Sports and Physical Science Laboratory

Rongsen Wang
Shandong Binzhou College, Shandong, 256600, China

Abstract: One of the most important contents of the basic theory of physical education is the experiment of sports and physical science. Doing a good job in the construction and management of the laboratory can make the resources of the laboratory more reasonable and stimulate the enthusiasm of the staff of the laboratory effectively to improve the management system of the laboratory and promote the effectiveness of experimental teaching.
Keywords: Multifunctional laboratory; Sports and physical science; Construction measures; Management measures

1. INTRODUCTION

In sports colleges and universities, students must learn the curriculum of sports and physical science. The curriculum can be divided into two parts, that is, experimental teaching and theoretical teaching, among which experimental teaching plays an important role in sports teaching. The content of experiment teaching includes sports biochemistry, sports anatomy, sports biomechanics and sports physiology [1]. If physical colleges want to cultivate students into talents with better innovative consciousness and innovative ability, the prerequisite is to have better experimental teaching conditions. Students' innovative ability, practical ability and team spirit can be well trained through experimental teaching.

2. PROBLEMS TO BE FACED IN THE CONSTRUCTION AND MANAGEMENT OF MULTI-FUNCTIONAL SPORTS AND PHYSICAL SCIENCE LABORATORY

Most of the sports colleges in China will not be able to update the laboratory equipment in time because of the small amount of funds, especially the lack of large-scale precision instruments, which will lead to serious loss of labor in the laboratory, weaken the practical value of the laboratory and eventually limit the development of laboratory.

2.1. Problems in the Construction of Laboratory

The laboratories of the previous school's sports and physical sciences are all set up according to the curriculum, and the difficulty of the experimental content is generally low. And there will be no obvious interdisciplinary phenomenon and interdisciplinary sharing. In this case, the relevant managers would let different teaching and research departments be responsible for the management of a laboratory, that is, the management mechanism adopted by the laboratory is mainly the three-level management of the college, department and teaching and research section, which is under the jurisdiction of the teaching and research section. This kind of management system will make the experimental teaching method gradually lag behind, and the laboratory is small in scale. The laboratory will be often built many times, resulting in the decentralization of resources.

2.2. The Closed Teaching and Management Methods

In the past, most of the teaching methods in colleges and universities were cramming teaching. In the experimental teaching of physical education colleges, experimental teachers first set up experimental methods and steps, and then gave detailed explanations to the students before the experiment began. In the whole process, the experimental knowledge was passively accepted, and the experimental operation was carried out according to the experimental steps written by the teacher. The experimental results obtained were basically the contents taught in the the course of repeated practice theory.

The management system of university laboratories can be divided into four kinds in detail. The first one is a laboratory with the management of department, which is used for undergraduate experiment teaching. The second one is as a place for undergraduate practice training, which is usually directly managed by the school. The third one is a public service system laboratory directly under the school. And the last one is central laboratory dedicated to scientific research. The specific contents of laboratory construction and management conclude the establishment of experimental practice courses, the construction planning of laboratories, the establishment of purchase plans for experimental instruments and the management of laboratory personnel. Although the daily management of laboratories is rather tedious, some work will have certain relevance with human, material, financial and development planning [2], which leads to the interference from many departments. Therefore, every major institutional reform will become the key content of the adjustment. At present, the laboratory of sports and physical sciences in colleges and universities is mainly managed by colleges. It aims to fulfill the teaching tasks set by the syllabus well. The closed management and teaching mode restricts the innovative thinking of college students, and the practical ability of college students decreases obviously.

3. MEASURES FOR THE CONSTRUCTION AND MANAGEMENT OF MULTI-FUNCTIONAL PHYSICAL SCIENCE LABORATORIES

3.1. Improvement of the Structure of Laboratory

There are many things involved in the reform of laboratory system in colleges and universities. In the process of reform, it is necessary to fully consider the laboratory personnel arrangement, laboratory organization structure, experimental teaching and experimental facilities, to provide effective guarantee for the rationality of the reform of laboratory management mechanism. Some sports colleges have set up experimental centers to separate all the laboratories that were originally managed by the teaching and research section. The laboratories are recombined according to the similarities among disciplines, the similarities of experimental facilities and the principle of similar requirements for laboratory technicians. In the laboratory management system, the center of director responsibility system of the experimental is established and the scientific experimental teaching group and technical group are created. After the laboratory is fully merged, the laboratory center manages and allocates the human resources, articles, and finances in the laboratory in a consistent manner. At the same time, the deputy dean in charge of the college directly leads and manages the experimental center [3].

3.2. Establishment of Experimental Teaching Group and Technical Group

The experimental teaching group consists of laboratory teachers, whose technical titles are assistant, lecturer, associate professor or professor. They are mainly managed by the experimental center in administration, and their work is mainly to teach experimental knowledge. The experimental technical group consists of teaching assistants, who can be divided into assistant experimenters, experimenters and senior experimenters [4]. The main task of teaching assistants is to maintain the experimental equipment and to prepare and manage the experiment. The establishment of laboratory center can change the original simple laboratory management system and the original closed and decentralized laboratory pattern. In addition, it can prevent the waste caused by low-level construction and equipment effectively. Furthermore, the role of the laboratory in teaching can be effectively exerted, the experimental teaching and management can be promoted.

3.3. Creation of Open Laboratories

In order to enable the laboratory to exert more significant value, it will be transformed into an open laboratory. The open laboratory can not only satisfy the requirements of the school’s experimental teaching, but also enable the teachers and students in colleges and universities to carry out scientific research activities. In addition, it can face the society and serve the social fitness activities effectively. In the process of implementing full-name fitness activities and physical fitness monitoring for college students, the multi-functional sports and physical science laboratory can play the role of communication with foreign countries, which can not only enhance students’ practical ability effectively, but also improve the comprehensiveness of experimental teaching significantly. In the organization of national fitness activities, the open laboratory can provide paid services for the public, which can not only bring wealth to society, but also maintain laboratory facilities with the money from paid services, so that the maximum benefit of the laboratory can be well played [5].

4. CONCLUSION

The experimental teaching of sports and physical science can significantly enhance students’ experimental theory knowledge and practical ability. The creation of multi-functional sports and physical science laboratory in physical education colleges can expose students to more practical sports activities. It provides not only convenience for students, but also sports activities for the people of the society, so that laboratory resources can be fully utilized.

REFERENCES

[1]Ren Shuang, On the Practical Significance of the Opening of Sports and Physical Science Laboratory in Colleges and Universities, Sports World (Academic Edition), 2017, (10): 156-157.

[2]Li Wei, Liu Xia, Research on the Construction of Comprehensive Laboratory of Sports and Physical Science in Medical Colleges and Universities, Science and Technology Vision, 2015, (29):56.

[3]Cui Youqiong, Analysis of the Construction and Management of Sports and Physical Science Laboratory in Our School, Contemporary Sports Science and Technology, 2014, 4(22):18+20.

[4]Guo Lili, Yang Ziling, On the Relationship between the Construction of Sports and Physical Science Laboratory and the Cultivation of Applied Talents in Chuzhou University, Journal of Chuzhou University, 2013, 15(05):93 -94+123.

[5]Zhang Ying, Lin Angui, Wang Pingxia, Research on the Construction and Management of Multi-Functional Sports and Physical Science Laboratory, Science and Technology Vision, 2012 (09): 13-14.

Research on Strategies for Improving College English Teaching Based on Flipped Classroom

Yan Zhang
Department of Common-Required Courses, Wenzhou Vocational and Technical College, Wenzhou, Zhejiang, 325000, China

Abstract: College English is a basic course for many universities. By English learning, students can effectively build an English knowledge system, cultivate awareness of international communication, and improve their own English comprehensive level. With the continuous advancement of teaching reform, many innovative teaching models have emerged as the times require, which has led to an overall improvement in the English teaching standards of majority of universities. Therefore, based on the analysis of the problems existing in traditional English teaching, this paper proposes some strategies for improving college English teaching based on flipped classroom, aiming at improving the overall teaching level of English in majority of universities.
Keywords: Flipped classroom; College; English teaching

1. INTRODUCTION

The flipped classroom teaching mode is a brand-new teaching mode. Under this teaching mode, teachers should fully respect the students' subject status, strengthen communication between teachers and students, and improve students' oral English. Furthermore, teachers should be good at using multimedia for classroom teaching. At the same time, teachers can also stimulate students' enthusiasm for learning through group teaching, improve students' writing ability, and enable students to improve their comprehensive ability in English learning.

2. COMMON PROBLEM IN COLLEGE ENGLISH TEACHING

2.1. Insufficient Teaching Materials in College English, Obsolete Teaching Content and Less Class Hours

Although many colleges and universities have stored a large number of teaching resources, most of them are teaching materials for different majors. However, there are few teaching resources for college English. The insufficiency of teaching resources is an important factor affecting college English teaching. In the traditional classroom teaching, teachers take textbooks as the center, and the understanding of texts in textbooks as the main teaching task. Some English teachers are also trying to introduce some background knowledge of the text to the students as much as possible, but due to the lack of English class hours and limited time, many contents can only be simply skipped. Most of the time is devoted to the understanding of the text and the analysis of the exercises after class, resulting in students' learning of English knowledge only staying on the surface [1]. College English classroom is only passive knowledge reception for students. This teaching mode is neither conducive to the improvement of students' comprehensive English quality and language ability, nor to students' interest in English learning. Moreover, many colleges and universities pay attention to the teaching of professional knowledge, most of the class hours are placed in professional courses, and there are very few class schedules for college English.

2.2. Insufficient Comprehensive Ability Level and Outdated Of English Teachers

At present, many college teachers have lower comprehensive ability and old teaching concepts. Many teachers still use traditional teaching concepts and teaching methods in the teaching process. In the teaching process, the cramming teaching method is used for English teaching, completely ignoring the students' subject status. Students can only obtain English knowledge in the classroom, while other abilities other than English knowledge can not be improved at all. In English classroom teaching, we can only hear the teachers teach English knowledge on the platform, instead of the voice of interaction between teachers and students, and students are only drowsy when they listen at a low level, let alone open their mouth to read and speak English.

2.3. Outdated Teaching Facilities

Many schools have a phenomenon of large class teaching. Large class teaching will lead to serious shortage of teaching facilities, especially the lack of such facilities as voice classrooms, multimedia teachers, and e-learning platforms, resulting in some students lacking the opportunities for learning, communication and exercise [2]. At the same time, large class teaching, classroom congestion will make the problems that Indoor air is not circulating, classroom discipline is difficult to control, and classroom atmosphere is not easy to adjust.

3. STRATEGIES FOR IMPROVEMENT COLLEGE ENGLISH TEACHING BASED ON FLIPPED CLASSROOM

3.1. To Strengthen Teachers' Understanding of Ideas of Flipping Classroom

College English classroom learning can effectively improve students' English level, however, because of the influence of traditional teaching methods, many teachers still rely too much on textbooks in the teaching process, and habitually adopt the indoctrination teaching method, resulting in the unsatisfactory effect of college English classroom teaching. Therefore, in the context of the new curriculum reform, teachers must change the traditional teaching methods and make clear the guiding position of teachers and the dominant position of students in the process of teaching. Thus, the understanding of the concept of flipping classroom teaching should be strengthened and applied to classroom teaching in China to improve students' comprehensive English ability and language level, so that English learning of students is not only restricted by memorizing vocabulary and learning grammar [3]. In the process of English teaching, students should be guided to participate actively in classroom teaching, and the communication and interaction between teachers and students should be strengthened, so that students can really learn how to communicate with others in the process of communication and interaction, and their oral English will be improved.

3.2. To Stimulate Students' Learning Initiative through the Teaching Mode of Group Cooperation

Cooperative communication is an important part of flipping classrooms, and it is the main way to practice flipping classrooms. Group cooperative learning can not only cultivate students' ability to cooperate and communicate, but also stimulate students to actively participate in English learning, so that students can be active in group learning. Before group teaching, teachers must have an understanding of the differences between students to make a reasonable grouping, so that each student can effectively exercise in group learning. Teachers can conduct English teaching activities in the form of English knowledge quiz or English drama performance. In addition, teachers can also organize some extra-curricular group learning activities, for example, let students use the extracurricular time to collect some Western cultural knowledge, and then share it with other students in the classroom.

3.3. To Broaden the Knowledge of Students through the Use of Multimedia

The Internet can provide a wealth of teaching resources for flipping classrooms. For instance, in the process of oral English teaching, teachers can use multimedia to play some classical movies, and students can enhance their oral English by watching movies. At the same time, they can accumulate more Western cultural knowledge. However, many students have limited English proficiency and are unable to use it in language, they will inevitably encounter obstacles when watching movies [4]. Therefore, when selecting an American drama, teachers should pay attention to selecting dramas with moderate difficulty according to their English level. Such a teaching method can not only promote the improvement of students' oral English, but also stimulate students' interest in learning English.

3.4. To Create a Good Atmosphere of English Learning and Stimulate Students' Enthusiasm for Learning

Teaching environment is the main place for students to learn. In addition to creating a healthy and harmonious campus environment for students, schools should also help students create an ecological environment full of English learning atmosphere and English cultural atmosphere to promote students' comprehensive English application ability. For example, schools can disseminate some knowledge of English culture through English corner, campus radio, and campus culture wall. In addition, the school can also regularly open the language room and multimedia classroom to play English movies and English music to improve students' oral English. At the same time, students can also be organized to participate in some English speeches and drama performance competitions to create a good atmosphere for students to use English to enable students to improve their comprehensive English ability and language proficiency in an environment full of English learning atmosphere [5].

4. CONCLUSION

College English is a basic course in college. Students can not only improve their comprehensive English ability and language level, but also improve their comprehensive quality and moral accomplishment through college English learning. Therefore, colleges and universities must pay attention to the importance of English classroom teaching to students, change the traditional teaching mode, and adopt new ideas and new ways to carry out classroom teaching.

REFERENCES

[1]Meng Fanying, Shao Jingjing, Effective Application of Flipped Classroom in College English Classroom Teaching, Comparative Study on Cultural Innovation, 2018, 2(36): 90-91.

[2]Guo Qinghua, Research on Flipping Classroom Teaching Mode of College Foreign Languages under the Background of Massive Open Online Course, Journal of Heilongjiang College of Education, 2018, 37(11): 136-138.

[3]Zhang Fan, The Practice and Problems of Flipped Classroom Teaching Mode of College English, Nanjing University of Aeronautics and Astronautics, 2018.

[4]Gan Lingling, Investigation and Research on the Effectiveness of Flipped Classroom Teaching Mode of College English, Examination and Evaluation (College English Teaching and Research Edition), 2017(05): 85-90.

[5]Hu Wei, Application of Concept of Flipping Classroom Teaching in College English Teaching Process, Literature Education, 2016 (03): 78-79

Studying the Association Forming Activities in a Dream of Red Mansions from the Perspective of Leisure Aesthetics

Yixue Duan
Shandong University, Weihai, Shandong, 264209, China

Abstract: A Dream of Red Mansions is the pinnacle of Chinese fiction. Different from other novels, A Dream of Red Mansions, which did not focus on official positions or riches, managed to attenuate the roles of males and vividly, delicately portray the daily leisure life of females. The Crab-Flower Club, which appeared throughout the book, was the most representative in this aspect. Hence, to analyze and study the Crab-Flower Club from the angle of leisure aesthetics and to look into the leisure thoughts of ancient Chinese people therein can provide a reference for modern people's leisure life.

Keywords: A Dream of Red Mansions, association forming, leisure activities of females, leisure aesthetics

1. INTRODUCTION

"Leisure" is a topic which has long got the attention of Chinese people but has not yet formed a structured ideological system. The modern leisure theory, which is led by the Western leisure theory, differs greatly from the ancient Chinese leisure theory. Chinese scholars further put forth leisure aesthetics based on the modern Western leisure theory after its introduction into China and thus provide a new angle for literary research. There are lots of records about leisure life in Chinese literature, especially in the fiction of the Ming and Qing dynasties. As the idea of Mr. Wu Chengzhong goes, "the existence of the fiction of the Ming and Qing dynasties, which attached importance to the nobility and citizens' entertainment life, to some extent can demonstrate the forming of leisure-themed literature with Chinese characteristics." [1]

A Dream of Red Mansions (hereafter abbreviated as Red Mansions) is an unusual novel mainly depicting females and having extraordinary standing in the history of Chinese literature. The author Mr. Cao Xue-qin (hereafter abbreviated as Mr. Cao) did not confine this novel to romantic entanglements but instead used small incidents to look at the big picture by integrating the bankruptcy of the Jia family with the destinies of those flower-like females. He also consciously or unconsciously infused his own juvenile experiences into the novel. Therefore, being a book which had females as protagonists and gave a detailed description of aristocratic females' everyday life, Red Mansions possesses the details and reality lacked in historical or literary materials. The poetry club, which took in young girls and women in Grand View Garden, is a characteristic plot in Red Mansions and has exposed the following generations to the precious scenes of females' leisure life. Because the ancient society judged females too harshly and the range of females' networking was very narrow, ancient females' poems are hard to spread and records pertinent to females' poetry societies are rarely seen. Red Mansions exactly has made up for this defect. Making analysis from the perspective of leisure aesthetics will help to explore the features in the association forming activities in Red Mansions, to understand the leisure life of females in the red mansions, to have a glimpse of the characteristics of females' poetry clubs in the Ming and Qing dynasties and to develop an insight into the ancients' ideological connotations about "leisure".

2. ALL FEMALES IN THE FAMILY WERE POETS—A FAMILY-TYPE POETRY CLUB

The Crab-Flower Club was not made up by Mr. Cao for literary creation but reflected the association forming ethos among females in the southern regions of the Yangtze River. Cheng-Zhu Neo-Confucianism dominated Mr. Cao's time, in which the idea of preserving human nature and extinguishing extra desire became a truth. Bao-chai in Red Mansions also mentioned the conception that ignorance was a virtue for women. However, the fact was not that absolute or simple. It is recorded that there were thousands of poetesses in the Ming dynasty, among which 88 were recorded in the Selected Readings of Ancient Chinese Females' Literary Works annotated by Mrs. Su Zhe-cong, some of them being mother and daughter, sisters, sisters-in-law and wives of brothers. The Fang family at Tongcheng in the Ming dynasty is an example. Fang Meng-shi, the elder daughter of Fang Da-zhen, head of the Dalisi, wrote Renlan Ge Collection and Renlan Ge Poetry Collection; the younger sister Fang Wei-yi was the author of Qingfen Ge Collection; the daughter of Fang Da-zhen's younger brother Fang Da-xuan wrote Songmao Ge Collection [2]. These examples have proved that there were a higher percentage of females able to read, write, sing and paint in the Ming and Qing dynasties. What's more, females' preference for reading and writing was supported by males in the upper social stratum. In Red Mansions, Lin Ru-hai, the father of

Miss Lin Dai-yu who ranked third in national civil examinations (in feudal China) stressed the education of his daughter and even invited the daughter of Mr. Jia Yu-cun, a poor scholar, as her tutor. Xue Bao-chai, who ever scolded Dai-yu for her quoting a sentence from Romance of the Western Chamber, a banned book at that time, was born into a family of royal businessmen, and was also educated to read by her father before his death. When Dai-yu newly entered the Jia family, the Lady Dowager asked whether she was able to read and write, and Dai-yu answered that she had only read The Four Books, which contained the gist of Confucianism. This showed that The Four Books were primers for noble girls [3]. Mrs. Jia Yuan-chun, an imperial concubine, could to some extent represent the attitude of the authority. After getting promoted to imperial concubine from royal study accompany, Yuan-chun entitled rooms in Grand View Garden and asked her sisters to poetize for entertainment when paying a visit to the Jia mansion. This demonstrates that scholars and aristocrats in the Ming and Qing dynasties did not oppose females' reading and learning, some of which was even encouraged [4].

This was the reason why learned girls were more and more and why poetry clubs for females gradually appeared. The appearance of such clubs had a close relationship with social ethos of the time. As for the association forming activities of scholars in the Ming and Qing dynasties, Mr. Xie Guo-zhen concluded "Association forming prevailed such provinces as Jiangsu, Zhejiang, Fujian, Guangdong, Jiangxi, Shandong, and Hebei at the end of the Ming dynasty with both literature and poetry clubs mushrooming and flourishing like a spring tide and spreading on both sides of the Changjiang River over hundreds of years. At that time, both intellectuals and females tended to form wine, poetry and literature clubs, and those who passed the national-level imperial examinations were inclined to make use of their connections to join clubs. [5] This reflects that association forming was popular in society at that time.

This ethos was introduced into females from males. According to the record, there were around 4000 female writers including over 3700 in the Ming and Qing dynasties. The peak of females' literary creation was directly related to the popularity of association forming. Similar to the distribution of males' association forming, females' poetry clubs could be found everywhere in the southern regions of the Yangtze River thanks to the natural advantages in cultural and economic environments. According to the conclusion in the book Obscured Modernity: Social Life and Emotional Experiences of Women in the Ming and Qing Dynasties by Ms. Zhao Cui-li, the poetry clubs of females could be divided into four types including family-type, region-type, socializing-type and alumni-type [6]. The family-type was the most commonly seen poetry club at the early stage and was especially represented by Mrs. Shen Yi-xiu, the niece of Mr. Shen Jing (a leader of the Chinese opera in the Ming dynasty) and her three daughters named Miss Ye Wan-wan, Ye Xiao-wan and Ye Xiao-luan respectively. The poetry club organized by them exerted influences on female relatives of both the Shen family and the Ye family and even other wives and children of literati in the southern region of the Yangtze River. Likewise, the Crab-Flower Club in Red Mansions, the object of this research, belongs to this type.

Grand View Garden was built to welcome the visit of Jia Yuan-chun. The Jia family placed young females and Mr. Jia Bao-yu, who enjoyed staying with girls, into the garden in order not to lay aside this garden, which cost lots of money, manpower and materials. All residents in Grand View Garden including Jia Ying-chun, Jia Tan-chun, Jia Xi-chun, Jia Bao-yu, their elder widowed sister-in-law Li Wan, two girls of cousinship named Lin Dai-yu and Xue Bao-chai, and Shi Xiang-yun, the grandniece of the Lady Dowager had an indivisible relationship with the Jia family. Hence, the Crab-Flower Club was a family-type poetry club. These females, who were restricted to such a small world as Grand View Garden, had to express their spiritual pursuit and relieve their loneliness in life by poetizing and forming poetry clubs.

3. A DIVERSITY OF EXCELLENT WORKS SHONE—THE DETAILED CHARACTERISTICS OF THE CRAB-FLOWER CLUB

How was the Crab-Flower Club founded? The Crab-Flower Club which happened in the 37th chapter was the first poetry club forming activity in Red Mansions. The beginning of this chapter stated that Jia Zheng was appointed to supervise academic work in a subordinate province and had been gone already. After this strict family leader left, all sisters and Bao-yu felt relaxed. Although Dai-yu and Bao-chai were the most knowledgeable, it was Tan-chun who put forth the idea of forming a poetry club. The initial association forming invitation was also highly elegant. She wrote a flower note in very standard language instead of simply asking a slave girl to pass on messages. Coincidentally, Jia Yun gave two pots of crab-flowers to Bao-yu. Thereupon, the white crab-flowers became the theme of the association, which was named as the Crab-Flower Club.

In the whole Red Mansions, there were five large-scale poetry club activities, including the Crab-Flower Club, the Chrysanthemum Club, the Snow Enjoying Club, the Peach Blossom Club and the Catkin Club, among which the first two were described much. Only by closely reading and dissecting the poetry club forming activities depicted in Red Mansions and seeking the characteristics of poetry clubs therein can readers get a sense of the features of females' association forming and its ideological implications.

3.1. Diverse in Form and Rigorous in Organization

Although the Crab-Flower Club was organized by girls on impulse, they who were restricted to Grand View Garden treated it as an undertaking.

Tan-chun initiated the poetry club, but the formal forming of the poetry club had a close connection with everybody in Grand View Garden. Dai-yu suggested that every participant come up with an elegant pen name, for example, Daiyu naming herself "The Queen of Bamboos", Baochai "The Lady of the Alpinia", Tanchun "The Stranger under the Plantain", etc. In Chinese history of literature, at most times, only literati would give themselves an elegant name to express their interests and ideals, for example, Mr. Tao Yuan-ming's "Wuliu Sir", Ms. Li Qing-zhao's "Yi'an Householder" and so on. This shows that those girls laid much stress on the poetry club and thus deemed the club graceful.

Hence, the poetry club had already shaped up but needed to be perfected inwardly. There were also club leaders and comparisons. Li Wan, who was born into a literary family, was elegant in manner, attitude and speech and convincing in aesthetic taste. Meanwhile, as an elder sister-in-law, she was quite qualified for this position. Except Li Wan, Ying-chun and Xi-chun, who were not good at poetizing, were appointed as deputy leaders, one taking charge of setting questions and limiting rhyme, the other transcribing poems and doing on-site supervision. They could also poetize as well. However, Daiyu, Baochai, Tanchun and Baoyu must rhyme strictly and absolutely. Participants reached a consensus that this activity was organized twice a month and someone who was seized by a whim could also become the host at other time.

In the book, the Crab-Flower Club, the Chrysanthemum Club and the Snow Enjoying Club were highlighted and described most but in different forms. The Crab-Flower Club had the most standard form in the whole book, while the other two, which were much livelier in form, marked poetry clubs' real integration into everyday life of females in the Jia family. Although differing in theme, the Chrysanthemum Club and the Snow Enjoying Club were basically consistent in form since both of them were carried out in the entertainment activities of females in the Jia family.

The Crab-Flower Club drew up rules and forms officially and had strict limitation on the rhyme and time, so these leisure activities were seriously treated in one sense. From then on, the poetry club really came on the scene in Grand View Garden. The Chrysanthemum Club was hosted by Xiang-yun, who decided to open a banquet with the hairy crabs brought over by Xu Pan, after her discussion with Bao-chai. Girls and Bao-yu chatted, poetized and tasted hairy crabs after older people left the banquet and the rhyme was not limited any more this time. Comparatively, the Snow Enjoying Club was different in some respects. Just as the words of Xiangyun went, "real celebrities behave in a gracious and liberal way spontaneously." These aristocratic girls and boys roasted venison in person while competing on couplets themed at snow.

Actually, there was a special poetry club activity as well, which contained only two people—Xiang-yun and Dai-yu. Similar to the Snow Enjoying Club, this activity, which happened in the 76 chapter, featured Xiang-yun's and Dai-yu's competition on couplets. At that time, the Jia family had shown a declining momentum, so even females who went outside scarcely could feel that the storm was coming, let alone the two girls who were strangers in the Jia family. Their verses are melancholy such as "a stork's shadow flit across the chilly pool, the poet's spirit is buried in cold moonlight"[7], which is highly gloomy. Besides, the classic scene named "Xiangling Learning to Poetize" is seen as a derivative activity of the poetry club.

3.2. Narrow in Theme, Highbrow in Content

The flower note of Tan-chun shed light on several points. First, the whole note was written in standard classical Chinese, which indicated her emphasis on this club forming activity. One couplet said, "The genius of the poetry clubs can be females, girls can also organize the tunable concert of muses."[8] According to the idea of Mr. Cao, Tan-chun, just like a thorny rose, was not willing to be second to others and aspired to be on a par with males. In some measure, Tan-chun who was endowed with leadership skills deemed the poetry club a mission within her limited range of freedom. Second, the last sentence on the note was "if you come in high spirits (here using the example of Wang Zi-you taking the boat to Dai An-dao in A New Account of the Tales of the World as a metonymy), I will wait in my eagerness (here using the expression of cleaning the path of flowers to welcome guests in the poem "For a Guest" by Du Fu as a metonymy)." [9] The two images in this couplet were very graceful, so this helped to set the keynote of the poetry club and also incarnated the aesthetic orientation of girls.

From the perspective of the poem content, what girls poetized were mostly natural sceneries like crab-flower, plum blossom, chrysanthemum, and so forth. This reflects that things that they contacted daily were only those common flowers and natural scenes that varied with the season. In addition, most of their works were poems that were about holidays and used as gifts; for example, in the parties of the Jia family, poems were often used for entertainment and during Yuan-chun's visit, girls and Bao-yu poetized under the requirement of the emperor.

This characteristic of the poetry club had much to do with the fact that most participants in the club were females. The world those unmarried girls could access was extremely small and was glutted with flowers, grasses and loneliness most of the time. Even Bao-chai, who joined the business management affairs of her family and Tan-chun who was aggressive like a thorny rose could not step out of the shackles of this tradition. Girls, who were confined to a rather small world, would even be curious about gadgets in the street, a cart of which could be bought with only a string of coins. When Granny Liu arrived at Grand View Garden and told about down-home stories, Bao-yu listened attentively and with great interest, not to mention those girls who scarcely went outside. The appearance of Granny Liu, an intruder into the red mansions, brought fresh air to Grand View Garden and the Jia family, so girls there ordered about her and made fun of her. Granny Liu was the little pebble dropping into a backwater, whose surface surged but soon returned to deadly stillness.

3.3. Getting Support from the Senior, Keeping away from the Hierarchy

These poetry club activities, which could be regarded as formal entertainment in the Jia family, were not only the private entertainment of girls, but also won support from their elders, including Mr. Jia Zheng, who was the most pedantic. In the whole book, Mrs. Wang Xi-feng played as a bridge between unmarried girls and those elders, including in affairs concerning poetry clubs. Her financial support to poetry clubs and her starting the poetry making activity with the sentence “The north wind blew hard all night” could be seen as the acceptance and support of the Jia family’s authority for poetry clubs. It was also evidence that elders in the Jia family always asked girls to poetize to liven up banquets.

In addition, participants of poetry clubs were not restricted to aristocratic girls or madams, since Xiang-ling who was a concubine joined as well. Touched so much by Xiang-ling’s serious attitude to poetry study, Dai-yu taught her as committed as possible. Actually, at the beginning, Xiang-ling’s request to learn poetry making was refused by Bao-chai, who firmly adhered to women’s commandments and disagreed that females should read many books. Actually, concubines were not really masters in the world constructed by Red Mansions; for example, Concubine Zhao was abused and laughed at by Wang Xi-feng, a junior of hers and could not be called as “mother” by her own son and daughter. However, aristocratic girls did not look down on Xiang-ling, but instead really accepted her and kept encouraging her. They separated their behaviors from secular morality and concepts and created a wonderful world of poetry.

Through several poetry club activities, a conclusion was reached that the launch and development of the poetry club was not accidental inspiration or pure writing activities, but closely attached to other activities, such as flower enjoying and catering. Such characteristics of female poetry clubs as diverse, graceful, natural and equal surfaced as well. All of these made the Crab-Flower Club the most beautiful scene in the whole Red Mansions.

4. REAL CELEBRITIES BEHAVE SPONTANEOUSLY IN A GRACIOUS AND LIBERAL WAY—THE CONNOTATION OF THE CRAB-FLOWER CLUB’S LEISURE AETHETICS

A basic understanding of the Crab-Flower Club will facilitate readers’ further and deeper exploration into the connotation of underlying leisure aesthetics therein.

Leisure culture has a long history in China. Chinese people, who live in this traditional agricultural nation and seed according to solar terms, do not need to experience the thrilling life-and-death struggles of ocean civilization at most time, so the ancients often stayed together to kill time with dancing and music in slack seasons. Besides, religious sacrifice was also an important factor influencing leisure culture and its origin. In ancient times where there were no developed technologies, people ranging from royals and nobilities to civilians, who could not understand the reasons of natural phenomena, conducted a wide assortment of sacrificial activities in order for favorable weather. These activities gradually developed into a form of entertainment with little significance of sacrifice. The most representative was such traditional activities as people in inland areas visiting temple fairs at the New Year holiday and people in coastal regions offering sacrifices to Mazu. Additionally, leisure culture is closely connected with aesthetic tastes, which can be clearly reflected from the art of lyre-playing, chess-playing, calligraphy and painting in China.

Of course, the leisure life of the ancients can often be found in history books and literary works. In The Analects of Confucius, Confucius blamed the Ji family, a big noble in Lu State, saying “He asked 64 people to play music and dance in his courtyard (only the emperor could do this according to the etiquette of Lu State). How can this be tolerated? If this can be tolerated, what cannot?”[10] Confucius was mainly intended to criticize the worse and worse moral degeneration of the world and the destruction of the ritual system, but this case could to some degree prove that leisure activities had already been endowed with a complete system in the Spring and Autumn Period. In the Wei and Jin dynasties, the segregation of men and women was not as severe as its later generations. The Shangsi Festival at March 3rd every year was a good time for outings and dating, and such elegant parties as drinking water from a winding canal with one wine cup floating on it so as to wash away ominousness were of course more welcome and promoted by the ancients. In the Song dynasty, the civil leisure activities became more diverse and colorful with the fast development of economy and the prosperity of literature. For instance, traditional Chinese operas which were popular in later generations began to thrive in the Song dynasty. In the

Ming and Qing dynasties, capitalism started to burgeon. While orthodox Confucian morality gradually ossified, some people like Li Zhi, whose behaviors rebelled against orthodoxy and Li Yu, who conducted secular entertainment, appeared successively. Fiction became the most brilliant literary form at this period, the trends of secularization, popularization, and amusement being more apparent. Hence, we can find that with the development of economy and population, leisure not only was an additional product of labor, but also developed into an independent culture or even an undertaking.

In the opinion of Mr. Zhang Hui, the essence of leisure is the state of being free and the process of activeness and creativity [11]. The association forming activities in Red Mansions can prove that association forming activities satisfy the three points totally.

4.1. Activeness

Poetry clubs were not established by the juniors under the order of the seniors in Grand View Garden, but initiated by Tan-chun to kill time during her recuperation from illness. What's more, all procedures from launching and establishment to the forms adopted were discussed and decided by girls themselves. Besides, all noble girls in Grand View Garden took the initiative to join the poetry club. Shi Xiang-yun as a female cousin did not join the establishment of the poetry club. However, during her visit and short stay in the Jia family, she, who had not timely attended the Crab-Flower Club, played host to other girls by setting up the Chrysanthemum Club. In the subsequent poetry club activities, especially the snow enjoying club, Xiang-yun was always a central person who showed an outstanding literary talent.

Another unexpected person was Xiang-ling, who suffered many mishaps in her life. Born into a big family as a noble girl, she was kidnapped and sold in her childhood and then was looted by Xue Fan to be his concubine. Learning to poetize was a special plot arranged by Mr. Cao for Xiang-ling. With strong initiative for poetry study, she first begged Bao-chai but in vain and then proactively asked Dai-yu for help. From then on, she studied hard, practiced diligently, and considered how to poetize in a better way in the day and at night, during her drinking and eating. Although some girls tried to persuade her to give up, she was not discouraged. Regarding poetry study as a mission, she had become truly obsessed. By drafting for three times, she finally got what she wanted and doped out beautiful lines in her dream, which enabled her to distinguish herself in the snow enjoying club. This embodies the activeness of girls in leisure activities.

4.2 Creativity

Although the forms and mechanism of the poetry club, which were confirmed through the group discussion of girls, were similar to those of the poetry clubs held by scholars at that time, girls poetized based on the life in Grand View Garden and decided how the poetry club should be held according to participants. This reflected the creativity of leisure subjects.

The diversity of the forms of poetry club activities also gave expression to the creativity of poetry club activities. Except the first activity where girls mainly worked at regulating procedures, other activities of the poetry club were all connected with leisure activities. For example, in the Chrysanthemum Club, Xiang-yun played host and invited females into the crab banquet, where they poetized at the theme of chrysanthemum and crab for entertainment. In the Snow Enjoying Club, the forms of competition in poetizing were more innovative. They chose the champion in accordance with the quality and quantity of couplets instead of independent poems. There were also kinds of details; for example, Bao-chai and Xiang-yun produced 12 questions on poetizing chrysanthemum and edited them into a music score. All of these demonstrated the creativity of girls in Grand View Garden as a leisure subject.

Certainly, the creativity of the leisure process was not only reflected by the external form, but blended into the poems made by these participants. Poetizing per se is a creative activity. Since ancient times, poems, having been a tool for literati and poets to express their heart and poetize their emotion, can reveal the character and thoughts of poets. So did the poems and verses in Red Mansions. Themed at the crab-flower, Bao-chai's poem was tender-hearted and restrained, Dai-yu's was romantic, refined and self-affected, and Tan-chun's was characterized by the naturalness and unconstraint of Scholar Wuliu. However, although being vague in implication, the poems created by Mr. Cao to some extent showed the characters of different roles but at the same time were not restricted by these principles. Xiang-yun, born to be bold and unconstrained, wrote such sorrowful lines as "A stork's shadow flit across the chilly pool "[12]; Dai-yu, being moody and sensitive, worked out such powerful lines as "Both the wind and the thunder reacted to the emperor's order, only the reincarnation of the celestial grass named Xiangzhu went to the fairyland"[13]; Bao-chai, who was dignified and politic, wrote the dolorous and clean line "Autumn's guest, who last graced this plot, only, as yet, in dreams of night appears"[14]. Therefore, girls' participation in poetry clubs gives perfect expression to the creativity of leisure activities.

Leisure is also closely bound up with aesthetic tastes. Commenting poems actually is a type of leisure activities. People differ in aesthetic tastes; for example, Bao-chai was favored by many people like Li Wan and Tan-chun, while Bao-yu only had eyes for Dai-yu. Hence there were always contradiction and disputes in the poetry club. These cases can be seen as the active creativity of the leisure subject in leisure activities.

4.3. The State of Being Free

The above examples which showed the creativity of leisure activities can also mirror the freedom of girls' state of leisure, which was not confined to fixed forms but in line with their interests. The state of being free can also be displayed by the forms of poetry. Except being strictly restricted at the first meeting of the Crab-Flower Club, rhythm was no longer required in the Chrysanthemum Club in Chapter 37, which was suggested by Bao-chai, who was the most rule-abiding, demure. She said, "I don't like limiting rhyme, since good poems cannot be shackled by rhyme. We should not learn those illiberal associations. Just set themes but do not limit rhyme. We simply want to amuse ourselves with inspiring verses not to embarrass others." [15] Bao-chai also stated in the first meeting of the Crab-Flower Club, "The ancients wrote to manifest their own temperaments and feelings. If they'd only written about things they'd seen, we wouldn't have so many poems today."[16] Zhi Yan-zhai made the remark that "this was really the language of a poet" [17] after this paragraph. This demonstrated that the most demure though she was, Bao-chai was not stiff or rigid. In the eyes of knowledgeable females represented by Bao-chai, poetizing was not a task, but a tool used to voice their feeling and emotion freely.

The above analysis has proved that the association forming activities in Red Mansions basically satisfy the essence of leisure activities. Poetry clubs therein include such traits as games and aesthetic standards, for example bringing people a sense of satisfaction and aesthetic pleasure through competitions, comparison and appraisal.

5. CONCLUSION

Mr. Cao vividly unfolded the poetry clubs of females in the Ming and Qing dynasties to the later generations by describing the Crab-Flower Club. Despite some artistic rendering, his work has provided rather credible written material for later generations to understand the poetry clubs of females.

Females' poetry clubs have their own unique characteristics, such as the narrow theme and tender style of poems, etc. In ancient China, the idea of leisure was embodied in every aspect. The ancients not only emphasized the pervasion of poetry in life, but held that life was poetic and full of poetry. In addition, although the ancients did not work out systematic leisure theory, their verses show that they considered humans as the subject of leisure activities, believing that only when humans gave rein to their activeness and creativity could beauty and leisure be meaningful. Just as what was written in "A Record of a Night-out at Cheng Tian Temple" by Su Shi, "Is there ever a night without the moon, or any place without bamboos and cypresses? But there is definitely a dearth of idlers like we two." [18] The Crab-Flower Club was a poetry club for females, but it was discovered that Mr. Cao, as an ancient scholar, managed to convey his leisure concepts with the club as a carrier, which had no differences with common poetry clubs in intension and with the leisure activities of the ancients in essence. The creativity, activeness and freedom in the state of leisure that girls displayed in poetry club activities exactly coincide with the leisure concept of the ancients. It was on account of the colorful activities they produced that poetry clubs were endowed with the feeling of leisure.

Leisure is an indispensable part of people's life. In the fast developing modern society, material civilization has prospered into a rather higher level. People lay more emphasis on enriching leisure life rather than becoming content with just making a living, so establishing a leisure society has become the tendency and necessity of social development. However, how to break away from vulgar leisure and realize lofty aesthetic enjoyment and spiritual relaxation from leisure life is a topic still needing deep exploration. The Crab-Flower Club, which teemed with cultural richness, can to some extent enlighten people on how to construct leisure activities and space with lofty aesthetic taste.

REFERENCES

[1]Wu Chengzhong, The Leisure and Entertainment of China's Ancient Times, Journal of Handan College, 2009, (2).

[2]Zhao Cuili, Obscured Modernity: Social Life and Emotional Experiences of Women in Ming and Qing Dynasties, Beijing: Intellectual Property Publishing House, 2015, 49-50.

[3]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009, 22-23.

[4]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009, 121-126.

[5]Xie Guozhen, Movements of Social Parties during the Ming and Qing Dynasties, Beijing: Zhonghua Book Company, 1982.

[6]Zhao Cuili, Obscured Modernity: Social Life and Emotional Experiences of Women in Ming and Qing Dynasties, Beijing: Intellectual Property Publishing House, 2015, 67-73.

[7]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company. 2009, 520-523.

[8]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009, 254.

[9]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company. 2009, 254.

[10]Confucius, The Analects of Confucius, Beijing: Zhonghua Book Company. 2006, 25.

[11]Zhang Hui, Leisure Aesthetics in A Dream of Red Mansions, Journal of Handan College, 2011, 21(3): 76-79.

[12]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009, 523.

[13]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009, 346.

[14]Cao Xueqin, A Dream of Red Mansions, Beijing:

Zhonghua Book Company, 2009, 266.
[15]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009, 262.
[16]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009: 256.
[17]Cao Xueqin, A Dream of Red Mansions, Beijing: Zhonghua Book Company, 2009: 256.
[18]Su Shi, A Literary Collection of Su Shi, Beijing: Zhonghua Book Company, 1986, 71.

Analysis on the Influencing Factors of the Business Circle along Nanchang Metro—Based on Big Data Analysis

Yuliang[1,2], Qingzheng Yin[1,3,],Zejie Liu[4]*
[1]Co-first author
[2]School of Geography and Environment, Jiangxi Normal University, Nanchang 330022, China
[3]School of Software, Jiangxi Normal University, Nanchang 330022, China
[4]School of Business, Jiangxi Normal University, Nanchang 330022, China
**E-mail: 2587063284@qq.com*

Abstract: this paper selects the business circle near three representative metro stations of Nanchang Metro line 1, compares the commonness and difference of the business circle based on web crawler and spatial analysis method, and analyzes the influencing factors of traffic data network modeling. The study found that: the opening of the metro shortened the travel time of residents to the business circle along the metro. The commercial network along the metro is mainly composed of rapid consumption, and the spatial distribution of network is uneven. The agglomeration intensity and functional structure of commercial network in different stations are different, which can be divided into three types: scattered, isolated and aggregated.
Keywords: Metro; Metro station; Business circle; Nanchang

1. INTRODUCTION

As the capital city of Jiangxi province, Nanchang city has witnessed rapid development of metro. Since 2015, two lines 1 and 2 have been opened and operated, and many businesses have settled down along the metro line. The convenient metro traffic network has exerted a huge impact on the development of Nanchang city city's business circle. According to relevant studies, for every 100 million yuan invested in rail transit projects, the average annual output GDP is about 260 million yuan [1-4].As of 2017, the total investment of Nanchang city metro line 1 reached 21 billion yuan, and the total investment of the first phase of line 2 reached 16 billion yuan. With a total investment of 37 billion yuan in line 1 and line 2, Nanchang's GDP output is about 96.2 billion yuan, while Nanchang's GDP in 2017 is 50.3 billion yuan. Therefore, the amount of benefits brought by metro construction is almost equal to 19.2% of the total GDP of Nanchang city in 2017. Thus it can be seen that the metro construction has a significant pulling effect on Nanchang's economy. Therefore, it is of practical significance to discuss the influence of metro on the business circle along the line for the urban economic development and the layout planning of commercial network [5].

2. STUDY AREA

Select representative metro stations. Firstly, consider the prosperous area; secondly, the business circle which is significantly affected by Nanchang metro; Thirdly, it reflects the influence of metro opening time on the development process of the business circle. Based on the above three points, the mature Bayi Square station, the less mature Aixihu Lake East station and the Olympic Sports Center station in the initial stage are selected. According to the relevant theories of TOD (public transit-oriented development model), the influence scope of urban rail transit stations is about a walking distance of about 10min and a radius range of about 400-800m. This paper investigates the business circle as a buffer zone with three metro stations as the center and a radius of 600m.

3. METHODS

In this paper, ArcGIS10.2 vectorized map and commercial network are used to extract the data of commercial network and estimate the core density of commercial network distribution by using spatial analysis module. Finally, OD cost matrix method is used to quantitatively analyze the influence of metro opening on the commercial circle around the metro station.

3.1. Use Python Crawler to Obtain Big Data

Is a dynamic, object-oriented scripting language, originally designed to write automation scripts, with the continuous update of the version and language new features added, more and more used for the development of independent, large projects. The python crawler is used to obtain vector data such as roads, residential areas and commercial outlets near the business circle along the metro.

3.2. Nuclear Density Analysis Is Used to Analyze the Spatial Pattern of Agglomeration in Business Circle

The kernel function is used to calculate the magnitude of each unit area based on point or broken line elements to fit each point or broken line into a smooth conical surface [6].The larger the parameter value of the search radius, the smoother and more generalized the density grid generated. The smaller the value, the more detailed the information displayed in the generated grid.

4. RESULTS

4.1. Rapid Consumption Has Become the Main Body of the Business Circle along Nanchang Metro

Researches show that, food and snacks outlets ranked the first in Aixihu Lake East station and the Olympic sports center station respectively, and the second in Bayi Square station, both accounting for a large proportion of the total number. Meanwhile, supermarkets occupy the first place in all stations, and metro passenger flow is the main source of customers for supermarkets around the metro. Therefore, the business types and formats with rapid consumption characteristics are the most common in the business outlets affected by the case.

4.2. It Reflects Three Business Spatial Distribution Modes: Dispersion, Solitary Point and Aggregation

By means of kernel density analysis, the spatial density changes of various types of businesses and formats can be obtained, and the layout characteristics of commercial outlets in each metro station area can be observed concretely. From the perspective of the overall agglomeration pattern of the commercial outlets of the three sites, it can be roughly divided into three spatial distribution patterns: dispersal pattern, solitary pattern and aggregation pattern [7]. From the perspective of the industry and format within the commercial outlets of the site, the distribution patterns of certain business types and formats show consistency.

5. CONCLUSIONS

Rail transit and urban commercial development are interrelated, and the metro business district is the confirmation of their interaction. Taking three metro stations in Nanchang as the case, this paper discusses the agglomeration characteristics of three metro commercial Spaces with the help of geospatial analysis technology, and then analyzes the factors affecting the agglomeration characteristics. Understanding the characteristics of metro commercial agglomeration and its influencing mechanism on a micro scale can provide an empirical basis for the in-depth explanation of the relationship between urban rail transit and commercial space, and help metro guide urban construction. The following conclusions are drawn:

(1) Compared with the traditional business circle, the metro business circle features fast consumption shops.

(2) The distribution of network points in the metro business circle is generally concentrated, which can be divided into three types of spatial patterns, i.e., dispersive pattern, solitary pattern and convergent pattern.

(3) Metro can shorten the travel time of residents and play an important role in indicating the location layout of businesses.

(4) Commercial attributes, business agglomeration benefits and the induction of metro are the common influencing factors of the commercial agglomeration characteristics of the three metro stations, and the differences in the development of business environment, road system and metro effect are the main reasons for the differences in the three metro business patterns.

Due to the complicated workload of metro and railway business survey, this paper only analyzes three typical stations of Nanchang metro line 1. Although it is representative to some extent, it fails to fully reflect the objective reality of commercial agglomeration of metro stations. The following research will continue to enrich and supplement the station cases, so as to better provide theoretical basis for the reasonable development of Nanchang metro business circle, create greater development conditions for Nanchang economy, bring more economic benefits, and make the economy of Nanchang city develop effectively for a long time [8].

REFERENCES

[1]Fang X Y, Chen Z N, The Distribution Pattern and Its Cause of Retailing Business along the Subway in Guangzhou, Human Geography, 2004.

[2]Fang X Y, Chen Z N, Cai G T, Agglomerative Types of Retail Business Around Subway Stations in Guangzhou, Tropical Geography, 2005, 25(1):49-53.

[3]Young B, Cooperative power: processor partnerships solidify the purchasing strength of the Subway sandwich business success, National Provisioner, 2005 (vember).

[4]Xiajin F U, Analysis of Influence on Existing Metro Station Structure in the Foundation Pit Construction on Both Sides of the Subway Station, Journal of Wuhan University of Technology, 2013.

[5]Chen Z, Feng Y, Jiang J, The Commercial Agglomeration and Influencing Factors of Nearby Subway Station, Journal of South China Normal University, 2013.

[6]Miao S J, Huang G L, Chen F, et al., Analysis of the Construction of New Metro Impact on the Existing Subway Station, Advanced Materials Research, 2014, 1030-1032:1966-1969.

[7]Zheng S, Hu X, Wang J, et al., Subways near the subway: Rail transit and neighborhood catering businesses in Beijing, Transport Policy, 2016, 51(51):81-92.

[8]Liu L, Yiye L I, Deng F, et al., Train Control and Management System of Nanchang Metro Line 1, Electric Drive for Locomotives, 2017.

Research on Information Security Management in Software Development Process

Zi Yang
College of Software Engineering, Jiangxi University of Technology, Nanchang, Jiangsu, China 341000

Abstract: With the continuous development of society, the development of the Internet and big data is also growing rapidly. Under the background of big data, informationization is deepening in all walks of life, and at the same time, the problems appearing are becoming more and more serious. Therefore, information security is increasingly causing people. Value. Software development as the main force of information implementation, how to ensure information security in the software development process is a problem we deserve to ponder. Safeguarding the security of information products developed is also an important part of our commitment to information security.
Keywords: Software development; Information security

1. INTRODUCTION

The reasons for software security issues are related to all aspects [1]. It may be because developers don't have the awareness of security development, or because developers lack knowledge about how to ensure product security, and there may be a lack of tools for development by the entire development team [2]. Therefore, research on information security in software development is necessary, and corresponding measures should be taken to reduce the occurrence of security incidents during the development process [3].

2. SECURITY SOFTWARE DEVELOPMENT PROCESS

Before the software development, the entire development team should be trained to explain the safety knowledge and basic capabilities involved in the development process.

2.1 Software security requirements analysis

The functional requirements of the system and the security of the system are equally important in the software requirements analysis phase and should be given the same attention. Security requirements, security goals, and functional requirements should be consistent. Based on risk management, the user should consider the functions that the product should have. On the other hand, from the perspective of the attacker, the vulnerability of the system that the attacker may find is passed. The analysis establishes a detailed analysis plan.

Therefore, in the stage of software requirements analysis, we must fully consider the security factors: how to implement security in the interactive interface, whether the product function is safe, what risks and threats exist in the software, whether the default configuration of the software meets the user requirements, etc.

2.2 Software security design

Only when the requirements of the software system are fully considered in the software design phase can many problems in subsequent development be avoided. The safety objectives are established through the previous safety requirements program, and the specific technologies involved in some subsequent software development are designed safely to ensure the feasibility of the specific technology of the initial risk assessment to determine the control measures. When designing a safety profile, the design of the security protocol, the processing flow between the various functional blocks, and the design between other functions must be considered. When performing detailed design, it is necessary to directly determine the coding work to ensure the realization of the security functions of each program design. Take full account of: data structure, input/output items, module design, internal processing flow, logic flow diagrams, algorithms, etc.

At the same time, the following principles should be followed when designing software security:

Such as attack surface permissions minimized, basic privacy, minimized, threat modeling, and so on. Threat modeling time should be as early as possible, the most appropriate time is in the design phase, the general method used is STRIDE threat modeling method, the process is using program modeling (Diagram), enumeration threat (Identify), mitigation Mitigate, Validation mitigation (Validate).

2.3 Security coding principles

Check all input data, code security review, code security compilation, verification, and filtering.

2.4 Safety test

There are many test modules in the software development system. In addition to our common integration test, system test, acceptance test and unit test, we also need to carry out system security test. Safety testing mainly refers to the evaluation of the safety of the system, not the tolerance of the test system to destruction and destruction. Two commonly used methods are penetration testing and fuzzy testing.

Penetration testing is the use of automated tools or manual methods to simulate an attacker. By inputting the content of the attacker, the security vulnerabilities in the development system are searched to determine the security of the system from the perspective of the attacker. The problems found in the penetration test are real, but the problems found are not comprehensive and can only be addressed to the problems envisioned.

In the fuzzy test, the program is used to attack the development system through destructive or malicious data, and observe the data results in the system to determine the reaction result of the system to the unintended input data, thereby discovering the system software failure method. A program that is not strong enough to crash, exploiting a large number of test cases, and finding bugs in vulnerabilities or reliability is a very effective vulnerability mining technique. Most of the known vulnerabilities are discovered through this technology.

Before the release of the software system, the security incident response plan should be arranged. The existing problems existing in the current situation should be fully considered and the problems that may arise in the future should be fully considered. The solutions to these possible problems should be sorted in time so that the problems can occur. Solved in time. At the same time, in the development process of the product, as long as there is a third party, it is necessary to pay special attention to the source code developed by the third party unit, as well as the contact information, so as to find the responsible person when the problem occurs.

3. INFORMATION SECURITY MANAGEMENT IN THE PROCESS OF SOFTWARE DEVELOPMENT

Although the development of software has certain regularity, not all software follows a set of standardized processes. There is no way to unify the products of software development. Therefore, the management of information security becomes more and more in the process of product development. Complexity is more important.

First, consider the whole process of software development, judge whether it meets the development requirements and standards, and continuously summarize in the process of development, so as to provide scientific and reasonable guidance for the operation of the security development process, thus forming a complete and strict Security development process assurance system.

Therefore, for the security development of software, specific problems should be analyzed. Different scenarios have different solutions for different scenarios, and customized solutions are to be solved, for example: risk-based security testing + penetration testing, security requirements analysis + Abuse case development, code review + architecture architecture risk, analysis + risk-based testing, risk assessment code review + penetration testing, etc., comprehensive consideration of all impact factors, according to the actual situation.

4. CONCLUSIONS

The security of software development is very important for the whole system. At the same time, people pay more and more attention to security. The security model for ensuring software development in the industry is also emerging one after another. However, how to make the model use it to the fullest extent makes the system benefit. We are worth considering.

REFERENCES

[1]Zhang Ping, Tian Wei, Li Wei, Information Security Management in Software Development Process. China Informatization. 2018(11).

[2]Liu Hui, Information Security Management in Software System Development Process. Informatization Construction. 2015(09).

[3]Qian Xiaohua, Enterprise Information Security Management. Information and Computer (Theoretical Edition). 2018(02).

In Search of the Effectiveness of MALL: A Case Study about Smart Phone Based EFL Learning in a Chinese Vocational College

Liwei Wang
Changzhou Hygiene Vocational Technology College
Email: greenlinda2006@163.com

Abstract: In this paper, a case study of MALL in a vocational college in Jiangsu province in China is provided. Three classes of freshmen of this college were selected to learn English in three alternative methods: traditional paper-based learning for Class 1, voluntary mobile learning with a mobile app for Class 2 and free learning (either paper-based or mobile learning) for Class 3. In this study, we kept our focus mostly on Class 2. Different learning channels were open for these participants to choose the best suitable way for their own learning. Most participants in class 2 and 3 demonstrated positive feedbacks for learning with the mobile app "Smart Phone Class". The possible correlations among different learning channels were illustrated for a systematic consideration of EFL with mobile technology. Weakness and possible improvement were also listed for further research and implementation in vocational education system of China.
Keywords: Vocational education; Smart phone; EFL; MALL

1. INTRODUCTION

English learning in Chinese vocational college focuses on fostering the skills of applying English in practical work, according to the needs of professional knowledge and skills. Students also have the awareness that learning vocational English is benefit for their work in their career. English learning in vocational colleges in China faced great challenges. Prejudice to vocational education in China leads to less concern and investment in vocational colleges. Freshmen's lower English proficiency than universities make them less confident to learn English. As learning English was regarded less valued than other technique skill courses in vocational colleges, students were also not well motivated. As they were not confident to their learning competency because they got relatively lower scores in their previous English exams, and most traditional feed-in teaching methods could not spark their interest in learning English, a great majority of them could not keep their English study everyday. As for those features supported by mobile phones, multimedia courses were also delivered to learners. In the past few years, micro teaching courses or mini course had been heavily introduced to Chinese educational institutes, schools and universities in China. Numerous studies explored key affordance of micro teaching courses to offer learners multi-level knowledge and skills [1] do not use capitals. There are greater demand for mobile learning among vocational education students and equipment conditions to carry out mobile learning [2].

In recent years, the ownership of mobile devices esp. smart phones among vocational college students has increased at an impressive rate, mobile assisted (MALL) has been widely applied. MALL has opened a new opportunity and direction in language learning and teaching [3], and students may be willing to adopt MALL which may reinforce learners' autonomous learning on their mobile devices [4]. Meanwhile, little attention had been directed to EFL learners' activities and behaviours in informal settings to support vocational English learning. Therefore, all factors of inadequate infrastructures, inadequate confidence of learning, inadequate accessibility and so on to learning resources leaded to low willingness and effectiveness to learn English under vocational institutional circumstance. To encourage students to learn English and provide wide accessibility and availability for English learning, a mobile app "Smart phone class" (SPC) was designed and developed particularly for freshmen in a nursing college. The practice intended to charge motivation for English learning in vocational colleges as well as examine the effectiveness of MALL by smart phones in vocational educational context [5-6].

2. THIS STUDY

The research was a comparative study of certain number of freshmen who majored in nursing. Before the research, all the freshman students' (8 classes) provincial high entry examination marks are collected as the reference. Meanwhile, a pre-test was given to all enrolled students. And according to their pre-test average scores, three classes, of approximately same average scores were chosen, which included 153 students in total, 2 terms were covered [7].

2.1. Objectives

To encourage students to learn English, and provide wide accessibility and availability for English learning, a mobile app was designed and developed particularly for freshmen in a nursing majored college.

The practice intended to charge motivation for English learning in vocational colleges as well as examine the effectiveness of MALL (Mobile-assisted Language Learning) by smart phones in vocational educational context.

2.2. Technology

BYOD (Bring Your Own Device) method was deployed as all students had their own mobile phones. Each learner of Class 2 was required to download the “Smart Phone Class”, its devices include accessible and sufficient teaching and learning materials related to their curriculum, as it was available for Android or ios. Both campus WiFi network and 4G were available for students, which underlines “Smart Phone Class” could be in use online or downloaded anytime anywhere. The learning materials on “Smart Phone Class” had been compressed to take up less memory space without condensing the necessary learning contents. “Smart Phone Class” offered optional online and offline choices for learners to view learning materials without Internet connection. It also provided slight personal portfolio services such as management of downloaded units, vocabulary searching and personal favourite management for individual preferences and customized requirements.

The “Smart Phone Class” was designed and developed was composed of four language skills: “Word and Expressions”, “Reading and Writing”, “Listening and Speaking”, “Grammar Training”, covering all corresponding units of English textbook for those two semesters. “Words and Expressions” presented phonetic symbols, property, pronunciation and Chinese paraphrase. In “Reading and writing”, students can follow the reading audio by looking at the English texts to practise. Important words and expressions were highlighted in the texts to assist students to learn and remember them. In “Listening and Speaking”, videos of stories, dialogues were shown to learners. And in “Grammar Training”, specific explanations were laid out as well as multiple-choice and cloze format tests. Courses downloaded were tracked while the learner was learning. Tracking records were submitted automatically to the web server when the learner accessed Internet and logged in again. Students could freely make a mark for their favourite course and stop and resume wherever they would like in the process of learning. Furthermore, they could establish their individual learning portfolio to manage courses they downloaded and learnt, and exams they took. Those courses involved multimedia features such as pictures, animations, audios and videos. In addition, the most popular courses, i.e., units downloaded and learnt most by all students were also informed. In the test sections, immediate feedback was given to learners in the form of question types: filling in blanks, multiple-choice and True/False.

The figure 1 below showed some interfaces of this application:

Figure 1. “Smart Phone Class” interfaces

In our study, the core pedagogical concept of “learner-centre” was highly employed. Different learning channels were established for learning in formal and informal settings, such as traditional teaching and learning in the classroom, learning through videos on blog sites, group discussions conducted via QQ (Chinese social software). The “Smart Phone Class” was considered as an extra channel and employed for students’ language learning in informal settings after class, anywhere outside the classroom, such as on campus, at dorm, at home, at canteens and so on. During the research, eight English units were delivered to the chosen classes by the same teacher using same teaching materials and teaching methods. At the end of each unit, students were required to review the contents using same revision materials with assigned revision methods. Class one students were required to use textbooks, in-class notes, and paper exercises. Class two students were required to use methods backed by mobile applications on smart phones, including “Smart Phone Class”, SMS (Short Message Service). Class three students were encouraged to choose either traditional revision methods or m-learning ones out of their own preferences. Along with “Smart Phone Class”, PPT slides of each class and course –related videos were shared on the college’s LMS, and notices, task reminders and test scores were pushed to learners via SMS. To go beyond the simple content-delivery model, as well as to make up for the deficiency of our mobile application “Smart Phone Class”, communicative learning was carried out through mobile QQ to promote engagements. Group discussions via mobile QQ were conducted with Class Two and Three, with 102 students joining in.

Learning out of classroom was carried on mainly in three ways in our study: downloading and sharing through LMS, individual learning with “Smart Phone Class” and group discussion through mobile QQ. Knowledge learnt in class was reviewed either by downloaded learning materials from LMS or through “Smart Phone Class”. Learning was extended to personal learning by revisions through those two channels. At the same time, scaffold collaborative learning through mobile QQ was another extension of learning in class. In reverse, individual learning and practice was also connected to group discussion by extended topics from the textbook and those complementary learning again enhance learning in the classroom. Put it in another way, knowledge learnt in previous class and supplemental learning occurred out of class were enhanced by reapplication of knowledge to students' presentations in the following class.

The figure below (Figure 2) illustrated possible connections among different channels supported in this study:

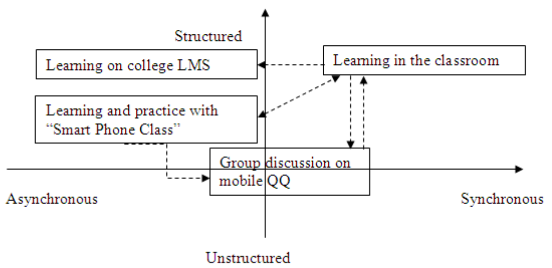


Figure 2. Possible connections among learning channels

Students in our study had evident different learning capability, learning capacity and learning motivation. To guarantee all participants at different levels receive knowledge and skill practices of English, several learning channels were displayed to them.

The one-way content delivery was going on through LMS and "Smart Phone Class". Participants saw LMS as a place to download extra learning materials while "Smart Phone Class" as a personal learning tool. The college LMS provided users with open access to the syllabi, lecture notes, course calendars, PPT and reading lists, which was fit for tight-lipped participants.

Table 1. Comparison of three exams within three classes

Score (0-100)	Class	Min	Max	Mean	SD
Entrance Exam	1	43.3	91.7	74.5	9.74
(September 2016)	2	51.7	90.3	72.7	9.42
	3	56.7	91.3	76.5	7.48
Mid-term Exam	1	50.0	90.0	72.0	9.77
(February 2017)	2	56.0	86.0	74.6	7.18
	3	43.0	92.0	74.4	9.76
Mock Exam	1	49.0	94.0	75.9	7.91
(June 2017)	2	61.0	97.0	85.9	7.62
	3	58.5	92.5	79.3	8.42

Our interviews in early study indicated over half students' initiatives to learn English were affected mainly by external factors. Parents, the teacher and someone beloved were those who initiated them to learn. The textbook and the knowledge source referred by the teacher were the two most reliable sources for learning. Nearly 10% of participants responded they believed contents on mobile applications and Internet was so useful and reliable, which became the third most reliable learning source.

Along with "Smart Phone Class" supported by the college, QQ was also introduced to our study. "*One of the key features I like 'Smart Phone Class' is I don't need to talk or communicate with others. I can learn by myself with my own steps any time.*" (Yang, a girl)

Our tracking record illustrates some participants who were shy like her spent a great deal of time on "Smart Phone Class". And this girl was found in the list of top 5 frequent users of "Smart Phone Class". It is obvious that some participants loved to do self-supported and self-paced learning with the mobile aids.

Our study also verified Attwell's hypothesis that potential application for PLEs is for self-supported and peer group learning (Attwell, 2007). It's a bit out of our expectation that unstructured and spontaneous collaborative learning were also going on in our study. Our participants replied that the sections they learned most by themselves were "Words and Expressions". Meanwhile occasionally they would practice "Reading and Writing" or completed tests with one or two classmates together. They might ask each other face-to-face how to read or what could be the right answer to a question when they were beside.

3. EVALUATION AND OUTCOMES

According to our data analysis, 90 % of students preferred to use SPC because they think they can easily use their smart phones to chick materials and no important information would be missed; while 10 % of students still voluntarily chose traditional revision methods because of the app's contents' lack of attraction and adequate authentic materials. Besides, comparing the mid-term test results and final provincial achievement test scores, students who employed m-learning methods finished more revision exercises than those who chose traditional revision methods. And the time they spent on revision almost doubled those who chose traditional revision methods. What is more, their increase in test scores was dramatically higher than the traditional control group One (as inTable 1).

Students felt it easy to handle QQ group discussion as they were so familiar with it. Despite they could chat on PCs or laptops with QQ, participants said most of time they used Mobile QQ for discussion because the WiFi hotpots on campus, at some shops and at home. Furthermore they all agreed that they could afford the cost of 3G by themselves because of the current cheap telecom traffic service.

To encourage more collaboration and interaction of learning, the popular commercial social software QQ was applied. All learners had their individual QQ accounts. 37.5% participants admitted the most frequent mobile application they used in their daily lives was QQ. Adapting to learners' conveniences and preferences, group discussions were performed regularly via QQ almost every week. One specific topic relevant to the textbook content that learned in that week was given. Participants were found quite enjoyed their chatting on the QQ groups. They attempted to express themselves in English or in Chinese. A lot of sentences mixed with Chinese and English characters were found. The discussions sometimes were funny and happy.

This informal communication provided an easy and comfortable way for learners to practice and employ English. Participants believed they enjoyed the process of discussion and found it funny. Participants who took part in group discussions felt more hands-on practice of English. Or at least they were more concern about learning English when they were in a group discussion trying to chat in English.

Participants of Class 2 were informed that the performance of exams was not the only assessment for their English learning. All formative evaluations including the attendance of classes, the access of "Smart Phone Class", the completion of unit scanning as well as the discussion in the QQ group counted in. Participants agreed that they were actively involved in those activities, especially when the group discussion was going on. To keep up with group discussions, they reviewed the points the teacher emphasized in the class, either with "Smart Phone Class" or textbooks.

Their completion of each section was recorded, in total, 50% learning activities could finish 95% of learning contents but near 25% learning progress status stopped at less than 30% completion of the content. Participants explained the reason for low completion was the technology breakdown. However, most of them could restart immediately for the first or second failure or asked for technical help from the technology assistants. As for each unit, "Word and Expression" won the No.1 completion rate. Participants stated that they would skim and scan the section "Reading and Writing" of the unit and they could spent less time to complete the "Word and Expression". At each stop point, they would resume it when they had to take English Class or take part in a discussion. The teacher's facilitation became the best reminder of learning English.

Besides, assessments also went through those few months by observing the frequency of attending group discussion, their actions of using "Smart Phone Class" and group presentations in class.

4. POSSIBLE FUTURE DEVELOPMENT

This study sought to examine the contribution of mobile educational application in EFL in vocational education context. In term of app "SPC", this mobile technology enhanced participants' autonomous learning on their mobile devices, brought to better results for most subjects, proved to be an effective means for flipped classroom; however, how to set a seamless language learning context, how to systematically document mobile learning behaviors, how to maintain learners' interests are challenges for our future study.

REFERENCES

[1]Attwell, G. Personal Learning Environments-the future of eLearning? eLearning papers, 2007, 2(1), 1-8.

[2]Balance, J.O. Mobile language learning: More than just "The platform". Language Learning &Technology, 2012, 16(3), 21-23

[3]Chen, B. Investigation of language learning motivation in vocational college. Journal of Wuhan Commercial Service College, 2009, 4, 33-37.

[4]Hu, T. The concept and teaching design of mini digital course. Guangdong Education 4, 2014, 33-35.

[5]Liwei, W. Motivation of MALL in vocational college. Xueyuan, 2013, 31.

[6]Wu, X. The analysis of english teaching in tertiary vocational college. Chinese Language Education, 2007, 11, 23-27.

[7]Zhou Jing, Bai Zhigang, & Zhang Yichun. Investigation on Current Situation of Mobile Learning in Vocational Education. Vocational and Technical Education, 2018, 39, 49-53.

Stage Control and Countermeasure Analysis of Cultural Shock

Wang Rong
Guangdong University of Foreign Studies South China Business College, Guangzhou, 510545, China
Email: rongwang@hotmail.de

Abstract: Due to the differences on social roles, life styles, values and other aspects between two countries, the people in the different cultures could have emotional uncertaintyin the spirit, get confusion in the behavior and not be able to adapt themselves to the new environment and life, which is known as "Cultural Shock". Generally, Cultural Shock has to go through four stages of honey moon, withdrawal, recovery and stability. In order to overcome Cultural Shock successfully and get used to cultural differences, it is necessary to start with the specific characteristics and related harms of each "Shock" stage, carry out stages control and analyze their solutions.
Keywords**:** cross-cultural psychology, cultural shock, stage control, countermeasures

1. STAGE CONTROL OF CULTURAL SHOCK

Cultural shock is a common sense that people often experience in intercultural communication. The intensity of cultural shock has a lot to do with factors such as the environment, experience, and education level of personal growth. It also has a great relationship with the differences between politics, economy, social concepts and values between the two cultures. The greater the difference, the greater the impact. In addition, the size of the impact of cultural shocks depends on the individual's academic qualifications, age, gender, occupation, personality, language ability, and communication skills. It is generally believed that young people are more likely to adapt than older people, and that extroverts are more likely to face cultural conflicts than culturally introverted people and overcome cultural shocks[1].

Cultural shock is a complex psychological cognitive process that requires adjustments to adapt to a certain period of time. The cultural shock and cultural shock encountered by each person may be different. The time is long and short. Generally speaking, cultural shock is a necessary process to adapt to different cultures. The adaptation process can be divided into four stages, namely : sweet period, confused period, recovery period and adaptation period[2].

During the honeymoon period, people first arrived in a foreign country, feeling fresh and inspiring about everything. After the excitement, people will enter the critical period of cultural shock--frustration period. The differences and sensitivities of "foreigners" have brought certain difficulties to the exchange of thinking and culture during this period, so that they feel the aggression of foreign culture while maintaining the maternal culture. For various objective reasons, it is impossible to get rid of the different cultures. In such an environment, heterocultural language has become the most important communication tool and thinking tool in social life. Everything that I am familiar with – from food and clothing to language thinking and even spiritual beliefs – has been challenged by cultural shocks, and there have been many "cultural shocks" in psychology and physiology[3]. Loss of appetite, insomnia, irritability, anxiety, headache and other physiological phenomena, the emergence of psychological phenomena such as loneliness, helplessness, frustration, fear, uneasiness, etc., passed through the period of confusion and entered the recovery period. The "shockers" began to try to understand the differences between local society and culture, adjust their mentality to adapt to the people and environment around them, and gradually transition to the adaptation period, and ultimately not only begin to truly accept and adapt to different cultures, but also Actively integrated into it[4].

2. MEASURES AT DIFFERENT STAGES

In the process of experiencing cultural shock, we must actively adjust our mentality in a timely manner, correctly understand the problems that arise, quickly establish a mechanism to deal with the crisis, and gradually integrate into different cultures. According to the characteristics of each period of cultural shock, there may be corresponding adjustment methods[5].

2.1Honeymoon period

Most people have a variety of wonderful illusions and expectations for different cultures before departure. This honeymoon period will last for 2 to 8 weeks. During this period, I feel happy, study hard, and progress very quickly. Therefore, the exchange students who are studying abroad for a short period of time will participate more actively in the activities of the school than the long-term scholars. The study abroad life is arranged very compactly and fully, and it is acceptable and inclusive for all things of different cultures. However, this kind of study abroad or study tour is not lacking in taking the flowers and watching the flowers. The understanding of the local society is not particularly profound, and there will even be many prejudice and stereotypes[6].

Mastering a foreign language that is as fluent as possible is a great help to slow down cultural shock. In a strange country, if you can communicate with people in a fluent foreign language, it will usually make people look good and have a good impression. At the same time, as a foreign cultural person, there must be a correct and objective understanding of the lack of adaptability at the beginning and the lack of language communication skills, and confidence. If you find that your expectations are not reasonable in the different cultures, you should make adjustments and corrections to the learning plans and methods in a timely manner.

2.2confused period

With the end of the honeymoon period, there will be deeper contacts with different cultures, and new problems will be ushered in. The most common phenomenon is psychological confusion. Physical discomfort may also occur. The confusion period lasts for about 2-3 months. Everything that was originally fresh is unintelligible or unacceptable. Start to measure everything about foreign cultures with your own cultural values. If a difference is found, it is often simply denied. The "shocker" mentally feels more depressed, lost, lonely, and even self-denial, and the feeling of homesickness is very high. Some communicators “losers” either only interact with their compatriots at this time, rejecting Separation; or they close themselves and not contact Marginalization.

In the face of this stage of the challenge, in addition to trying to learn a good foreign language, we must learn more about local folk customs and social culture. You can feel the more intuitive things in different cultures through the Internet, TV, books, etc. If possible, you should also read books on intercultural communication and improve your awareness of intercultural communication.

2.3Recovery period

After passing through the confusion period, I entered the recovery period (lasting about 3-6 months) and began to try to understand the difference between the two cultures, explore the reasons for cultural shock, slowly adapt to the environment, return to normal, and begin to know how to deal with it. People and things around, accept and learn different cultures of thinking and behavior patterns, and correctly deal with this difference. With the deepening of studying abroad, international students will gradually feel that their intercultural communication skills are constantly improving, their self-confidence is gradually restored, and they are more qualified for study and work.

Therefore, at this stage, the most important thing is to follow the customs of the country, adapt to the foreign culture and environment, and deepen mutual understanding and tolerance between the two cultures. First, we must avoid prejudice and stereotypes about a certain culture, or treat different cultures with the concept of ethnocentrism. Culture is different from high and low, high and low, and each culture has its positive and negative. Every culture should be respected and must not be negated. Second, we must understand and treat each other's words and behaviors with a positive empathy. In the new environment, you should learn new social norms, social etiquette, customs and habits.

2.4Adaptation period

During the recovery period, people began to unconsciously integrate into the local life and gradually transition to the adaptation period (about 6 months or more). At this stage, I not only accept the lifestyle of a foreign country, but also like the convenience that this new environment brings to my life. People have found a new sense of belonging in different cultures. Cultural shock is no longer the main content of study, work and life, and sometimes it does not even feel its existence. It can be said that it is getting better. More importantly, through continuous practice, a balance has been found between the two cultures. Although the culture is different, there are places worth learning and appreciation.

Although it has been adapted to the exotic environment after the baptism of time, with the development of the times and the changes of the world, new cross-cultural communication problems will emerge. In the face of any problem, there is no ultimate solution for once and for all, and cross-cultural communication is no exception. Its development will also change with the changes in political and economic environment such as globalization, and it may become more complicated and difficult. Therefore, during this period, we must still maintain the motivation and passion for continuous learning and courageously face the ever-changing reality.

3. CONCLUSION

After repeated practice, experience and overcoming difficulties in “cultural shock”, we can better understand the differences in culture and potential problems in intercultural communication, and understand our culture and the culture of each other more deeply and rationally, because of frustration. The tempering and shock will give people a chance to re-view themselves and know themselves. We should translate the negative effects of cultural shock and cultural shock into positive effects. In the face of cultural differences, we must do more than simply “seeking common ground while reserving differences”. What should be done is emotional contact and rational analysis. According to the specific situation of the "shocker", take precautionary measures as the first priority. Before going abroad, it is necessary to carry out relevant education and cross-cultural practical teaching in mind, to clarify the purpose, to make plans, and to a certain extent, to alleviate cultural shock. The impact and impact.

ACKNOWLEDGMENT

The article is one of the periodical results of the provincial key scientific project (social science) Exploration on Non-Universal Languages Disciplines at Private Universities (2014WZDXM043)

REFERENCES

[1]Hans Jürgen Heringer, Interkulturelle Kommunikation, A. Franke Verlag Tübingen und Basel, 2007

[2]Myron W. Lusting, Jolene Koester, Intercultural Competence: Interpersonal Communication Across Cultures. U.S.: Addison Wesley Longman , Inc., 1999

[3]Wu Weishan, Yan Huixian: "Introduction to Intercultural Communication", Commercial Press, 2010

[4]Mo Ai Ping, Mo Fan: Intercultural Communication Course, Peking University Press, 2016

[5]Davis, L.: The Book of Chinese and Western Culture, Foreign Language Teaching and Research Press, 2001

[6]Hu Wenzhong: The barrier across culture, Foreign Language Teaching and Research Press, 2004

Study on the Innovative Teaching Mode of "Internet and Education" in Environmental Design

Yu Guo
Xinyang Agriculture and Forestry University, Xinyang, 464000, China.
E-mail: Guoyu20004@163.com

Abstract: Combines the reform and development of "Internet + education" thinking and environmental design professional education, normalizes and reconstructs the educational resources of art design, improves the teaching mode, combines the professional teaching big data platform with the application of virtual commercial social environment, forms the teaching mode of "big data VBSE", adapts itself to the new normal of economic development, and forms and improves classroom teaching, autonomous learning and knots. The innovation and entrepreneurship education system in Colleges and universities, which integrates practice, guidance, assistance and cultural guidance, makes this teaching and personnel training method become the "standard matching" of the teaching of environmental design specialty, and then changes the talent training standard of art and design specialty.
Keywords: Environmental design; Internet + education; Innovative teaching mode Research on Teaching Model

1. INTRODUCTION

In "Strengthening and Improving Art Education in Schools in an All-round Way", the Ministry of Education pointed out: "In accordance with the requirements of a distinctive and high level, support the reform and development of art colleges and universities. We will improve the new mode of joint training of talents between art colleges and departments, scientific research institutes and industrial enterprises. Guiding colleges and universities to build art specialty with the guidance of social needs, and at the same time establishing and perfecting the teaching resources sharing system of art specialty. In recent years, leaders of the party and the state have made important arrangements for the implementation of the "Internet plus" action plan and the national big data strategy, calling for the exploration of the new mode of educational service supply, encouraging schools to make use of digital educational resources and educational service platforms, and gradually exploring new models of networked education; and exploring the supporting role of big data in changing educational methods and improving the quality of education. The proposition of these important spirits points out the direction for the innovation and development of the teaching reform of art specialty in higher education institutions in China, and also points out the direction for the teaching development of environmental design specialty. It is to strengthen the integration and innovation of application and multi-disciplinary specialty, to help the effectiveness of big data information technology in improving the quality of education, and to design and promote it by using the advantages of big data information technology in specialty. To promote the reform of teaching methods, management modes and supply modes of educational services, to support personnel training and innovation and Entrepreneurship with educational informationization, and to promote the goal of educational modernization, we should promote the reform of teaching methods, management modes and supply modes of educational services.

Today, when Chinese education is moving towards the 5 era, we take the favorable development background of "Internet +",[1] take the traditional teaching training mode as the support of inheritance, reconstruct the traditional teaching construction and personnel training mode of environmental design specialty, integrate information technology with education and teaching, and realize the training mode of art and design talents seamlessly connected with the social and commercial market in school. Type. This talent training mode is the need of social and economic development and the necessity of the survival and development of the industry.

2. THE SIGNIFICANCE OF "INTERNET + EDUCATION" INNOVATIVE TEACHING MODE FOR ENVIRONMENTAL DESIGN MAJORS

From the actual situation of the current education and teaching of environmental design specialty, it has been unable to adapt to the development of the times uniform curriculum, surprisingly similar settings, rigid and outdated teaching mode, lack of scientific and forward-looking teaching orientation, and unclear professional training objectives are common problems hindering the development of teaching of environmental design specialty, which are common to students. Lack of cultivation of creative thinking and preaching-oriented teaching are the main obstacles to the rapid development of art and design education and teaching, so that students do not have the ability to adapt to the social and commercial environment. Therefore, combining the economic development and the actual needs of the society for professionals, the "Internet +education" innovative teaching mode of the environmental design profession is put forward to study the reform and development of professional education, and actively explore a new road of organic integration of information technology, education, teaching and business environment. The theoretical significance and practical significance are as follows:

(1)Combine the thought of "Internet + education" with the reform and development of environmental design professional education, standardize and reconstruct the educational resources of art and design, improve the teaching mode, and coordinate the reform and development of art and design education in Institutions of higher learning, so that the educated high quality art and design talents can better serve the economic construction of our country.

(2) Breaking through the bottleneck of the education development of "plus internet" in environmental design specialty, this innovation is different from the existing teaching mode of art design education in various countries in the world and from the traditional teaching mode of art design education in China. It also leads the development of the industry and enhances the international competitiveness.

(3) Actively adapt to the new normal economic development, form and improve the innovative entrepreneurship education system in Colleges and universities, which integrates classroom teaching, self-learning, practice, guidance and assistance, and cultural guidance. The theme of this system is to promote quality education, to improve the quality of personnel training as the core, to focus on innovative personnel training mechanism, and to continuously improve the professional education of art design to promote steady growth and reform and adjustment structure. The contribution of benefiting people's livelihood and training a large number of innovative talents to meet the needs of the information society. It provides strong intellectual support for building an innovative country, realizing the goal of "two hundred years" and the Chinese dream of great rejuvenation of the Chinese nation.

3. THE GOAL OF "INTERNET + EDUCATION" INNOVATIVE EDUCATION MODE

The "Internet + education"[2] innovative education mode of education and teaching is different from the "Internet +" professional teaching and development mode in the environmental design specialty of applied undergraduate colleges. This mode not only produces network courses, but also makes the curriculum and personnel training plan of all arts and design disciplines changed greatly from organizational structure to basic content. It will also further promote the deep integration of industries related to the social and business environment among universities and industries. Establishing a large data platform for professional teaching combined with the application of virtual business social environment to form a "big data VBSE" teaching mode, actively adapting to the new normal economic development, forming a sound college innovation and entrepreneurship education system integrating classroom teaching, self-learning, practice, guidance and assistance, and cultural guidance, and realizing the Internet technology, business society and VBSE teaching mode, subject and college. The industrial cluster organization makes this teaching and personnel training method become the "standard matching" of the teaching of environmental design specialty, and changes the personnel training standard of art and design specialty.

4. WAYS TO ACHIEVE "INTERNET +EDUCATION" INNOVATIVE TEACHING MODE FOR ENVIRONMENTAL DESIGN MAJORS

Environmental design specialty is a combination of architectural design, interior design, public art design, landscape design and other disciplines. This major pays attention to the design aspect to promote the harmonious development of man-made and nature. Through the application of various elements, the building and environmental space can be perfectly integrated. This is a huge process of close combination of theory and practice. To complete this huge process, we need not only comprehensive multidisciplinary knowledge, but also skilled operation skills and close connection with social market demand. However, according to the current teaching mode, there is a certain distance between the teaching of environmental design specialty and the social relationship. In many cases, the theoretical knowledge taught by teachers has great limitations in expanding beyond the textbooks. It is difficult for students to expand their thinking, and it is difficult to really develop in social practice. Nor can students understand the development of the times of their major, and this kind of professional teaching which does not keep pace with the times will make it difficult for students to really apply the knowledge they have learned to practice, which will also hinder the cultivation of students' practical ability. The "Internet + education" innovative teaching model can solve these problems well.

The innovative teaching mode of "Internet + education" is to form a multi-dimensional interconnection of professional teaching resources into a big data platform and a virtual commercial social environment to form a teaching mode of "big data VBSE".

4.1. Establishment of Big Data Cloud Service Platform for Subject Teaching

4.1.1. Construction of big data cloud platform for subject teaching

"Big Data Cloud Platform for Subject Teaching" uses cloud technology to build a high-quality digital teaching resources platform. Through the interaction, storage capacity and technological advantages of the network, it can attract a large amount of teaching resources and information in a short time, and form a subject teaching resources database. The repository keeps expanding and updating continuously by using end users to upload and publish new resources. Make the traditional experiential teaching mode change into the "big data service" education mode, around teachers' teaching practice and students' learning activities, around teachers' teaching practice and students' learning activities, aiming at all levels of high-quality teaching resources created by teachers and students in each link of teaching practice, effectively collect, manage, use, refine and accumulate them. We will gradually build a good co-construction and sharing mechanism for educational resources, and promote the widespread use of high-quality resources in the teaching of environmental design. Utilizing the latest "cloud computing" technology, realizing the distribution management and sharing application of teaching resources, realizing the seamless integration of teaching resources and curriculum teaching, supporting teachers to integrate the "double classroom" teaching mode of "real classroom" with "virtual classroom" and multi-media learning plan guidance and other teaching modes, so as to meet the requirements of innovative teaching, individualized learning and teaching for teachers of environmental design specialty. Teachers' professional development and educational managers' need for efficient management.

4.1.2. Big data of subject teaching can realize cross-border integration and innovation drive

"Internet +" as a whole concept, its deep meaning is to upgrade the industry through the Internet of traditional industries. "Internet + education" is the use of information and communication technology and the Internet platform, so that the Internet and traditional environmental design professionals training process and a number of links and related professional, related institutions, professional resources repository, social and business environment needs to carry out deep integration, create a new teaching mode. It represents a new form of talent training for design, that is, to give full play to the optimization and integration of the Internet in the allocation of social resources. Through the analysis and integration of big data, it tries to clarify the supply-demand relationship between talent training and social needs, and to enhance the driving force for the development of Environmental Design Specialty and improve the quality of talent training by reforming the traditional teaching mode and the structure of talent training. In order to promote the ability of environmental design professionals in Institutions of higher learning to serve the society.

The major of environmental design in Colleges and universities should be able to use the Internet to build a "big data cloud platform of subject teaching" to form a professional teaching resource bank. Through the construction of the sharing platform of "big data cloud platform of subject teaching" in schools, it can provide students with interdisciplinary and multi-angle professional learning materials, so that students can make use of the network resources in schools. Grasping more professional knowledge of environmental design can also give full play to students' subjective initiative and let students learn online videos and courses independently, which not only strengthens the interaction between teachers and students, but also can better detect and fill gaps and improve the teaching content. Secondly, colleges and universities should fully and thoroughly share the resources of "Big Data Cloud Platform for Subject Teaching" outside the university. Through the links of "Big Data Cloud Platform for Subject Teaching" or websites of design specialties at home and abroad, excellent network courses of environmental design specialty in Colleges and universities can be included in the construction of resources for students. Can learn more diverse environmental design professional knowledge.

4.1.3. Teaching optimization based on data analysis can be realized by big data of subject teaching

Teachers can pay attention to the micro-performance of each individual student according to the data. Through the analysis of the relevant data of the students, they can adjust the education plan pertinently, so as to realize the individualized education. In the book "Learning with Big Data: The Future of Education",[3] co-authored by British scholar Victor Myer Schoenberg and Kenneth Cooker, the author mentions data-based teaching optimization, namely double-loop learning. Double-loop learning combines feedback, personalized learning, prediction and intervention, which provides valuable data for teaching optimization. Therefore, novice teachers in the primary stage of professional development can acquire data with technology, understand data with graphical tools, and senior teachers in the advanced stage of professional development can interpret data with analytical tools, predict, intervene and optimize teaching with research tools. That is to say, research teachers are still the advanced stage of "Internet +" and the development of teachers in the era. Moreover, empirical analysis supported by data will provide a more solid foundation for teaching practice and reform of environmental design.

4.2. Establishment of "VBSE" Big Data Cloud Service Platform for Subject Practice Teaching

Virtual Business Society Environment For short "VBSE", the virtual business social environment is a practical teaching mode, and the "big data VBSE" teaching mode of "Internet + education".Using the big data cloud platform of subject teaching to build a virtual business social environment on campus, simulate the real scene in the enterprise, set up various functional departments, positions, processes and cases of enterprise operation. Students hold different positions, each position has corresponding responsibilities, rights and benefits, and cooperate with each other to complete the complete process.

After a stage of experience is completed, roles can be exchanged to experience the requirements and functions of different jobs. Through systematic simulation of typical units, departments and posts in real business and social environment, students can experience pre-job training, recognize and familiarize themselves with the job contents and characteristics of different posts in enterprises of environmental design specialty, and cultivate students' comprehensive executive ability, comprehensive decision-making ability and creativity needed to engage in business management. New abilities enable them to have overall awareness and comprehensive professional accomplishment, so as to solve the problem of college students' internship. Panoramic simulation, the combination of macro and micro. Can enable students to take the initiative to run for jobs, experience the real business working environment, and then improve students' interest in learning and professional skills, but also enhance students' interpersonal skills, lay the foundation for the practical operation in the future. The "big data" BSE teaching mode of "Internet + education", the application of virtual commercial social environment, is a new method of organic integration of education, teaching and business social environment. It enables students to choose their own jobs and experience the real environment of enterprise work so as to enhance their interest in learning. Professional skills will lay the foundation for the practical operation in future work.

Moving the enterprise into the campus, constructing the "big data VBSE" teaching and training mode of "Internet + education" for people to find people's community, replacing the traditional classroom with more practical teaching environment in vocational education. The "big data VBSE" mode of "Internet plus education" "moving enterprises into the campus" is through the professional teaching cloud service platform and a number of environmental design professional colleges and universities to build training bases. The scheme of environment design is realized by virtual technology, and the business process, data, case and post responsibility and post setting of real environment design enterprise are realized by simulation technology. These scenarios and the mode of enterprise training staff are moved to campus to solve the problem of internship on campus.

5. THE THREE-DIMENSIONAL ROLE OF TEACHERS AND THE MORE INDIVIDUALIZED TRAINING MODEL HAVE STRENGTHENED THE STUDENTS'PRINCIPAL POSITION.

The "big data VBSE" teaching mode of "Internet + education" is more personalized. The "big data VBSE" teaching mode of "Internet + education" can effectively support personalized learning and promote modular design of environmental design courses. During the period of student learning, teachers can jointly design personalized training programs with their teachers according to their own development plans, according to their expected abilities. Selectively choose professional courses with knowledge structure. Each student's curriculum learning is determined by his own choice and feedback. The school learning environment can be adjusted according to the situation of each student. The student's main body status has been strengthened. Teachers' roles are transformed into designers and guides of VBSE training content.

"Big Data VBSE" teaching mode adopts open teaching design, guided by tasks, which[4] greatly stimulates individual potential, takes students as the main body, advocates independent training, promotes learning by "training", combines learning by "training" and "training". The formation of students' knowledge structure is closely related to the shaping of personality and values, which can not be separated from the guidance of teachers. Teachers' role is not limited to the mastery of knowledge, but more importantly involves the choice of knowledge, which is related to students' life planning, that is, what kind of people students want to be.[5] Since students' individualized training and personality development are respected, the effective guidance of students' development direction and life goals highlights the importance of teachers.

6. CONCLUSION

In short, the study of "Internet + education" innovative teaching mode focuses on professional inheritance and creation, high-level planning, high starting point planning, high quality construction, fully displaying the advantages of unlimited interconnected features and cloud big data, building "unlimited interconnected" environment design specialty, and shaping "omnipotent" professionals, so as to achieve the goal of "entering school is work, graduation is employment". New situation.

The "big data VBSE" teaching mode of "Internet + education" is a great change to the teaching of traditional environmental design specialty. It has great influence on the formation of social development needs, the integration of industry, University and research, and the training of applied talents with high market specifications. The positive response to the major strategic deployment made by education is of great significance to the implementation of the strategy of innovation-driven development and the strategy of strengthening the country by talents, the acceleration of the transformation of development mode, the adjustment of industrial structure and the promotion of industrial upgrading.

ACKNOWLEDGMENT

This research has been financed by the General

Project of Humanities and Social Sciences Research of Henan Education Department in 2017" Research on innovative teaching mode of "Internet + education" for Environmental Design Majors (2017-ZDJH-196).

REFERENCES

[1]Meng Yuanbei. Accelerating the Development of Modern Vocational Education to Serve Economic, Social and Human Development --- Learning from the Decision of the State Council on Accelerating the Development of Modern Vocational Education. Exploration of Higher Vocational Education, 2014 (4): 1-4.

[2]Bean Junjie, Wang Qiang. Internet + education: ice and fire days. Liaoning education, 2015 (16): 49-51.

[3]Dong Qi, Leveraging "Internet +" to innovate teacher education mode, 2018-6-08.

[4]New Way Model: Moving Enterprises into Campus and Constructing People-Finding Community-Sohu Education, 2014-08-14.

[5]China Educational Newspaper: How to Develop Vocational Education in the Future from Paper to Reality, 2014-06-19.

How to Improve Conference Efficiency and Reduce Enterprise Internal Consumption

Shangjun Wang
School of Management, Shanghai University, China
Email:13918083112@139.com

Abstract: According to statistics: every organization around the world holds more than three billion meetings every year, 40% to 50% of the working time of enterprise management is in meetings, 25% of the meetings are used to discuss other irrelevant issues, 90% of the participants admit that they are not attentive and fantastic, 70% admit that they desert to do other things in meetings, and 30% think that the meetings they attend are meaningless. Inefficient meetings have become a major "hidden disease" of enterprises nowadays, which is one of the most important factors that waste time and cost. It reflects whether the internal decision-making process of enterprises is reasonable and smooth, and reflects the management ability of management.

Keywords: Close-loop control; the preparation of meeting planning;

1. INTRODUCTION

Peter Drucker, a master of management, said, "There is a waste of time that managers themselves can control and eliminate. This factor is that managers themselves are wasting other people's time. Indeed, if everyone in an organization respects other people's time, plans and commitments, then the organization must be an efficient and effective team. When the scale of an enterprise gradually expands and management gradually increases, more and more meetings will be held within the organization[1]. The more meetings, the thicker the level of decision-making, and the less efficient meetings such as lack of planning, temporary decision-making, negotiation and indecision result in a huge waste of time and cost[2]. According to experience, the common inefficient meetings are as follows: 1. Before the meeting, the objectives of the meeting are not clear, the agenda of the meeting is uncertain, the topics are too many or the schedule of the topics is inappropriate, the participants have little relationship with the meeting, the meeting time is inappropriate, the meeting notice is not in place, the equipment required for the meeting is not fully prepared, the meeting can not start on time, the participants are absent or late without reason, etc[3]. 2. During the meeting: inadequate preparation of conference materials, the participants' rambling off-topic discussions, rash decision-making without adequate discussion, desertions of participants, serious overtime of the meeting, etc. 3. After the meeting: lacking or not timely briefing minutes, not following up on the arrangements of the meeting, and not doing closed-loop management of the remaining issues of the meeting. So how can every meeting produce value and reduce internal friction?

2. CONFERENCE PLANNING

The key to conference planning is to clarify the significance and purpose of the conference. Significance of the meeting: 1. Channels for brainstorming. Conference is a kind of media, through which different people have different ideas through collision and integration, so as to find out the decision-making opinions that are beneficial to the team or the enterprise. 2. Reflect the existence of departments and organizations. It is one of the management means for managers to transfer the work planning and management ideas of organizations and departments. 3. It is an important way of group communication. Meetings provide employees with a face-to-face group communication opportunity, which is more straightforward than telephone or email. The purpose of the meeting: 1. Develop effective communication. 2. Monitor the progress of employees' work. 3. Decision-making and resource sharing. 4. Encourage staff morale[4].

Organized meetings can be divided into two types: routine meetings and non-routine meetings. For routine meetings, managers should make a meeting sandbox in the form of calendar at the end of the previous year. The objectives, participants, time of routine organization and decision-making scope of each routine meeting should be clearly demanded. Instead of routine meetings, which are usually temporary meetings triggered by something, such meetings need to assess the need for a meeting and whether there is a better way to solve the problem.

3. PRE-SESSION PREPARATION

In previous studies, the contents of pre-conference preparation mainly focused on the following points: 1. The meeting should be held at nine o'clock in the morning and not more than an hour in order to facilitate the participants to enter the state quickly. 2. The organizer of the meeting should prepare the items needed for the meeting in advance. 3. Review conference materials in advance and confirm the list of participants.

We should make full preparations before the meeting, without unprepared and inadequately prepared meetings. There will be no meeting on issues that are not well prepared and that do not propose solutions. When notifying the meeting, it is necessary to clearly state the purpose, objectives and output requirements of the meeting. For related issues, the convenor should distribute relevant conference materials to the participants before the meeting. The participants should read the conference materials carefully and prepare for the meeting. For decision-making issues with wide coverage and great influence, the convenor should communicate with relevant personnel in advance, exchange opinions and reach consensus; for sensitive issues, it is necessary to discuss them in a small scope and form consensus before convening a large-scale meeting. If there is no consensus in the small-scale discussion, it is not advisable to attend the meeting.

Meetings should be categorized to control participants. The number of participants should be strictly controlled, and the convenor should draw up and examine the list of participants in person. Only the strong relevant personnel should be allowed to participate in the meeting and no participants should be allowed to participate. If the meeting has multiple topics, the convenor can organize the meeting according to the agenda, allowing strong stakeholders to attend the meeting in segments.

Strict control of meeting time. Meetings should be efficient and time-controlled. Meetings over an hour should have a detailed agenda. The topics of each meeting should not be too many. The schedule of the topics should be reasonable. The presiding officer should preside over the meeting in strict accordance with the agenda.

4. CONTROL IN THE MEETING

Random discussion is the most important factor affecting the effectiveness of the meeting. It is necessary to strengthen the management of meeting time and discipline requirements. The meeting should start on time and end on time, and both the host and the participants should be punctual. In the process of meeting discussion, we should strictly control the time of publication and discussion, and we should not discuss it at random. Participants should devote themselves wholeheartedly and actively participate in discussions and opinions. If, according to the agenda arrangement, the meeting time has been exhausted and the participants are still “off the topic” or “talking but not deciding”, the moderator should finish the agenda quickly. If the meeting is around brainstorming. Organizers should acknowledge that the conference is mainly about getting people’s opinions and ideas, not making important decisions. The purpose of the conference is to get the best ideas. There are also meetings that focus on “what’s best” and the goal is not to reach a final decision, but to reduce disagreements or ideas.

In order to avoid off-topic discussion, it is suggested that the presenter should communicate with the stakeholders before the meeting, collect the opinions of stakeholders before the meeting, make predictions on the conclusions of the meeting, and provide several decision-making schemes for the participants to focus on a certain range of discussions, without unlimited proliferation and spread. For sensitive issues, we should first discuss them in a small scope, form a consensus, and then hold a large-scale meeting. It is not advisable to attend the meeting if there is no consensus on the discussion within a small scope.

5. SUMMARY OF THE MEETING

Conference minutes are different from meeting minutes. They are only objective documentary materials, while meeting minutes are centralized and comprehensive reflections of the agreed matters of the meeting, and they are the goals and basis for follow-up action. They play a role of specific guidance and norms. A complete meeting record should contain several elements: 1. the theme of the meeting, the time and place of the meeting, the participants, the outline of the meeting content 2. The valuable views expressed by each participant in the meeting process are not a running account, they should conform to the “original flavor” as well as be refined. 3. Objectively describing the key conclusions formed at the meeting can not change the conclusions formed at the original meeting because of personal interest orientation. 4. Legacy issues that need to be tracked down were not resolved at the meeting. A complete tracking table for legacy issues should include problem description, proposer, responsible person, plan completion time and closure criteria.

The summary of the meeting contains three characteristics: 1. The summary of the documentary meeting objectively records the basic situation of the meeting, can not change the agenda of the meeting, can not unauthorized join the meeting without decision-making conclusions, summarist’s subjective comments should accurately and objectively describe the conclusions of the meeting. 2. The summary minutes of the meeting are not to record all the details of the meeting, but to summarize and refine them, focusing on the basic agenda, the main points of view of the participants, the consensus reached and the conclusions reached. 3. The guiding majority of the minutes of the meeting have the function of guiding the work. They convey the spirit of the meeting, the situation of the meeting, and require the relevant departments to work on the basis of the minutes and implement the conclusions of the meeting.

6. CONCLUSION

Organizational meetings often open, but found that some problems repeated out to discuss, but not yet resolved, so the next time again repeated out to re-discuss, the efficiency is very low. The reason for this is that the conclusions of each meeting have not been well implemented and the organizers have not followed up the effect of the meeting, so the objectives of the meeting have not been achieved. So how to improve the efficiency of meeting value realization? Firstly, the organizers should check whether the conclusions of the conference cover the original goals according to the conference objectives set before the meeting. Secondly, the conclusions and the remaining issues should be tracked by a dedicated person to ensure the effective implementation of the conclusions of the conference. Only in this way can the meeting be effective, and the precious time of the participants will not be wasted in vain.

Meeting is a kind of learning. Efficient meetings do not come down from the sky. It requires careful design and excellent execution. Efficient meetings not only reflect the management level of enterprises, but also effectively help enterprises reduce internal friction, improve efficiency and promote enterprise development.

REFERENCE

[1]Ma Tao, ZhengXin. A Brief Talk on Enterprise Meeting Efficiency and Improvement Measures. China Commerce, 2016(14): 25-27.

[2]Sun Mengzi. Talking about how to carry out conference management efficiently in modern enterprises. Economic and trade practice, 2016(04): 185.

[3]Huang Lu. How to improve the efficiency of decision-making meetings. China Economic and Trade Guide, 2014(28): 71-72.

[4]GuoXiaoqing. Talking about how to improve conference efficiency. Science and technology perspective, 2014(07): 267-268.

The Construction History and Style Characteristics of the "Chinese School" of "Bel canto"

Li Meng
Kunsan national university, Gunsan-si, Jeollabuk-do 54150，KOREA
Art College, Qingdao University of science and technology Shandong Qingdao, 266000, China

Abstract: since the art of "Bel canto" was introduced into China at the beginning of the last century, under the influence of the specific historical conditions, social background and cultural environment in China, the style of the traditional European school of "Bel canto" has been constantly developed and popularized, and at the same time, a "Chinese School" system of "Bel canto" with Chinese cultural characteristics has been gradually formed. The emergence of the "Chinese School" is an important page in the history of the development of "Bel canto". This article from the perspective of history, society and culture, and in-depth, emphatically analyzes the "Bel canto" and "Chinese School" several main influencing factors and construction history in the process of formation and the role of these factors on "Chinese School" formed unique style, and from the aspects of culture, art, technology and society discusses the style characteristics and the culture of the "Chinese School".
Key words: Bel canto; Chinese school; Construction history; Style characteristic

1. INTRODUCTION

"Bel canto" was introduced to China since the early twentieth century, with the Chinese traditional vocal music culture for nearly a century of intersection and grinding for a long time, in China's social and cultural background influence and unique vocal music artists carefully, arduous exploration, the European style of "Bel canto" in China get development promotion, at the same time, it has gradually formed so far in the development of "Bel canto" and "Chinese school" style system. Although after the middle of the last century, the international school of reference is somewhat diluted, but the different styles of "Bel canto" still exist. "Bel canto" so-called "Chinese school", refers to a style of sinicization of "Bel canto". The Italian "Bel canto" in technology theory, stage performances, cultural content and aesthetic form of Chinese characteristics, has set up a Chinese colorful vocal style type and vocal music thought. This is China's unique "Bel canto" school and on the world's "Bel canto" school of the important symbol. due to the geographical, cultural, social and other conditions and eastern and western singing - the basic elements of a quite different system of language, so it is more given "Bel canto" in a unique Oriental art characteristics and combined with the special meaning of Chinese and western cultures. Therefore, the study and discussion of the formation of this school and its style characteristics have a lot of theoretical and practical significance for the in-depth understanding of the "Bel canto" system itself.

2. THE CONSTRUCTION HISTORY AND THE SEVERAL MAIN FACTORS INFLUNCING THE FORMATION OF THE "CHINESE SCHOOL" OF "BEL CANTO"

The basic historical starting point as early as the mid-17th century to the 18th century, Italian opera and "Bel canto" have entered and prevailed in European countries, while "Bel canto" singing came to China at the beginning of the 20th century, about three centuries later. In these three centuries "Bel canto" has gone through two glorious golden periods with great vigor and vitality. And has formed Italy, France, Germany, and other schools, some of the epoch-making vocal music singing, education masters and a batch of famous singer groups, opera composers have long been popular in Europe. From the development process of "Bel canto", it has started from the so-called development period into the modern inheritance period. With the social, cultural and ideological changes in the west, the techniques and styles have begun to reflect the characteristics of modern "Bel canto" after the bourgeois revolution and the industrial revolution. Therefore, China is not only relatively late in the acceptance of time, but also in the style and technology of singing is different from the European countries in the early exposure to "Bel canto".

"Bel canto" of the incoming condition and way , the influence of the "Bel canto" is with Italian opera directly into other countries, specifically the Italian singer, composer of live performances and employed by countries, personally send original and authentic "Bel canto" opera to the threshold, a large number of the original, the original straight into, neighborhood relationship in the history of cultural system, and European countries to opera art and "Bel canto" the various schools of the prosperity of all countries in

Europe and later to form, and displayed after the formation of artistic features and cultural characteristics has a decisive role. Due to geographical and historical reasons and the decision of the social and cultural background, China does not have this condition, although there are western missionaries in the late Qing period court, bring the singing into China in the early 20th century and the first half, although there are a few foreigners coming to China , but the number and scope is limited, under the condition of the European and Italian singer, composer and educator, opera group also difficult to get to China, the original, the original opera and “Bel canto” also can not be face to face with in China, if you can put a small number of foreigners into as a starting point. Then it is the Chinese themselves who bring western opera and beauty into China.

Specific social background and the art, culture conditions, the influence of the “Bel canto” is a product of Italian opera and “Bel canto” in Europe of the school is also influenced by Italian opera as the product of local opera, and at the beginning of the “Bel canto” into China, although the music colleges and schools and education with “Bel canto” and the performance of the stage, but the popularization of education and on the scope of the opera the number and popularity of the Europe and the United States and cannot match. In more than half a century later, due to various social and cultural reasons, in China, although there are several opera performances, but after all, no form popularization play European opera or european-style Chinese opera big atmosphere and environment, there is no long-term gain in opera like in Europe, a large number of breeds opportunity, promote the performance, so it is not specifically for European opera, art songs or European type of the existence of Chinese opera art form, also did not become a new opera in the 1940s after the Chinese national main methods of singing, so, We can think that the European “Bel canto” appeared because of opera, but the formation of “Chinese School” is not the product of European opera or European Chinese opera.

3. THE BASIC ARTSIC STYLE AND CULTURAL CHARACTERISTICS OF “BEL CANTO”AND “CHINESE SCHOOL”

Under the influence of the above conditions, “Bel canto” “Chinese school” thus formed its own unique style system. In the form of art, the latter takes the former as the basic style and endows it with a certain chinese-style vocal music culture system. Its main artistic style features are as follows.

Technical theories mainly focus on the vocalization technology and sound requirements of European bel air singing, and combine traditional Chinese vocal music theories to train the voice, forming the technical theory characteristics of the Chinese school. Basic vocal movements are trained by means of diaphragm breathing, laryngeal apparatus descending, pharyngeal cavity opening, high position, etc., and the five vowels a, e, I, o, u in Italian, as well as the original songs in Italian as the basic training of vowel timbre and unified training of sound area and timbre. At the same time, combined with the traditional Chinese vocal music theory and methods, such as “dantian qi” with voice, emotion with voice, fight against falling, brain behind the hamstring and other techniques for basic training, more important is the Chinese lyrics articulation training and “Bel canto” training close combination.

It is the basic aesthetic principle and expression mode of the “Chinese School” of bel canto to perfect the singing technique and perform with the aesthetic requirements. Chinese traditional vocal music singing and “Bel canto” in art, technology, focused on aesthetic basic on there is a difference between the former emphasizes “character first”, “led to word” form “word rhyme spoke” characteristics, and “Bel canto” voice in the early days had to show off technology for the purpose of “technical” era, to contemporary in singing, superb skills and beautiful voice still is a means of aesthetic and performance on image. Tend to value their “sound beauty” and keep the basic aesthetic principles of “Bel canto” and “Chinese School” artistic image of expression, both pay attention to the performance of outstanding sound beauty and technique, and pays much attention to use the Italian “Bel canto” plump, metallic sound quality, wide range, linking technology and effect, brilliance and dramatic soprano, dexterous luxuriant coloratura main techniques such as performance music image, at the same time pay attention to keep the enunciation pronunciation of Chinese words and singing voice.

Singing language the “Chinese School” takes the Chinese national language as the singing language, including European operas, Chinese folk songs, art songs and songs created in the era sung in the Chinese language. The characteristics of each school first depend on its nationality and national language characteristics in singing. However, any school of “Bel canto” singers should express the style characteristics of the school by singing in the original text of the school, for example, the German school of “Bel canto” singers should sing in German. Therefore, only “Bel canto” performed in Chinese mandarin (including Chinese and western operas, art songs, songwriting and other genres) has the most basic characteristics of the Chinese school. This includes Chinese and foreign operas, art songs, Chinese folk songs, contemporary songs, etc. Therefore, no matter which country singer studies the characteristics of Chinese vocalization and its coordination and unity with “Bel canto” singing, it is the most basic and important premise for learning and mastering the Chinese school.

4. CONCLUSION

“Chinese School” is in China’s specific social environment and historical conditions of inoculation, deep broad cultural environment, the reform of social background, make the elegant, traditional opera art in Chinese art of the great vitality and realistic significance, it inherits the European “Bel canto” art beauty of sound and form, and “Bel canto” become more most of Chinese like to sing. School of China with its unique forming conditions, beautiful art performance, social role, the broad masses of the positive significance and practical significance, and makes the “Bel canto” art not only occupies the palace of the opera and art song to sing, but also into the social reality and the masses, thus has updated, unique culture and art style, has the stronger artistic vitality. Therefore, the emergence of the “Chinese School” is an important page in the history of the development of “Bel canto” art.

REFEREBCES

[1]John Roselli, Singers of Italian Opera—the history of a profession. Cambridge university press, 1992.
[2]John Roselli, The Castrati as a Professional Group and a Social Phenomenon. Cambridge university press, 1988.
[3]Bloomington, The Science of Vocal Pedagogy, Indiana university press, 1967.
[4]L.B.Henderson, How To Train Singers, Rarder Publishing Company, 1979.
[5]enneth Miller, Vocal Music EducationK, New York Prentice Hall inc., 1988.

On the Protection of Human Rights in Civil and Commercial Law

Li ChuHan[1], Tong XinXin[2,*]
[1] Department of Yangtze University, Social sports guidance and management (college of physical Education), Hubei, Jingzhou, 434000, China
[2] Department of Jingzhou Ecological Environment Bureau, Legal Section of Supervisory Detachment, Hubei, Jingzhou, 434000, China
*Email: 409484893@qq.com

Abstract: The laws governing the operation of the state are formulated by citizens, reflecting the social living conditions and historical culture. In social life, civil and commercial law has a very stable position, the basic value of the pursuit of freedom and equality. This article briefly expounds human rights, and carries out analysis and Research on the current situation of the protection of human rights in civil and commercial law, and puts forward effective solutions to the existing problems. The following views are only for reference.
Keywords: Civil and Commercial Law; Cultural Attributes; Human Rights Concept

1. INTRODUCTION

The purpose of formulating a unified civil and commercial law is to realize the macro-interests of the country and achieve the development goals, which are manifested in specific forms of rights. There are different opinions on human rights, abstract understanding and practical operation, but they all show basic characteristics, universality and morality, that is, equal enjoyment of rights[1].

2 HUMAN RIGHTS

2.1 meaning

Human rights refer to the basic rights enjoyed by human beings, showing universal adaptability and subjective initiative, and pursuing freedom and equality. The main purpose of protecting human rights and interests is to guarantee human survival and free development. Human rights have a very rich variety, covering a wide range of content, such as the right to life, freedom and dignity. In a sense, human rights reflect the rights of individuals, but in special circumstances, they can also be judged as the rights of groups and organizations. With the continuous progress and development of economic construction, people's material living standards have been greatly improved, and outstanding achievements have been made in military, economic and other aspects. The rapid development of economy has also exposed some social problems, and the legal mechanism is becoming more and more imperfect. Therefore, we should attach importance to the protection of human rights and make the market economy develop steadily and rapidly[2].

2.2 Cultural Attributes

Generally speaking, human rights are based on the requirements of social development as a whole. In western political thought, it advocates individual rights and individual freedoms, displays the cultural content of human rights in specific responsibilities, obligations and institutional frameworks, and reflects the relationship between civil rights and obligations on the basis of the realistic order in which various powers, such as civil, political, economic and social, are logically closely related to historical situations. Therefore, to some extent, the cultural attribute of human rights emphasizes how to use it. The concept of rights is the traditional cultural structure of our country, which can not be surpassed[3].

3 CURRENT SITUATION OF HUMAN RIGHTS PROTECTION IN CHINA

In the Civil Procedure Law and the General Principles of Civil Law, many principles of civil law have been established, with emphasis on the protection of human rights. Since the reform and opening up, the state has formulated a variety of civil and commercial laws and promulgated relevant legal provisions, but still can not solve civil legal problems. From the point of view of the protection of human rights in the national civil and commercial law, there are mainly the following manifestations[4].

3.1 Civil and Commercial Legislation Has a Certain Scale

Over the past two decades, many civil laws and regulations have been promulgated, and a socialist civil and commercial law system with Chinese characteristics has initially been formed. Mainly reflected in two aspects, one is the basic content of the Civil and Commercial Code, such as the General Principles of Civil Law, Economic Contract Law, Inheritance Law, Marriage Law and so on; the other is the content of civil relations are related to the formulation of relevant legal provisions, to achieve legal compliance[5].

3.2 Meet the Development Needs of Market Economy

In the process of civil legislation, attention has been paid to the relationship between the change of market economy and the development of market economy. Therefore, relevant laws have been formulated on the basis of conformity with objective reality and the development needs of market economy and objective laws. The above contents are not only embodied in the new legal provisions, but also fully embodied in the civil and commercial laws that have been improved and revised.

3.3 Research Progress of Civil and Commercial Law Theory

Perfect civil legislation under the requirements of the development of socialist national conditions with Chinese characteristics has also promoted the continuous progress of civil law theory, opened up a new road of development, and laid a good foundation for the improvement of civil legislation. In the process of continuous improvement and revision of the legal system, high-quality and high-level theories of civil and commercial law have emerged, and special works of civil law have been published. The above contents have a positive impact on civil legislation and judicial interpretation, and promote the development of civil law to a more perfect direction.

3.4 Protection of Civil Rights

At present, the civil legislation has drawn lessons and learned from the advanced civil law theory, and has formed an effective legal mechanism for human rights protection, which reflects the importance of national civil and commercial law in protecting human rights to a certain extent, and has certain legal benefits.

4 REFLECTIONS ON IMPROVING CIVIL AND COMMERCIAL LAW

At present, the civil and commercial law in operation has defects and deficiencies in the protection of human rights. From the perspective of civil and commercial law system, the biggest problem is the lack of civil and commercial code. Therefore, we should deeply explore and study the theory of civil and commercial law, and construct a practical system of civil and commercial law. (1) First of all, we should improve and repair the civil and commercial law, and most importantly, change the concept of civil and commercial legislation. Scientific and reasonable legislative system should abandon the traditional system model, follow the pace of the development of the times, steadily improve and adapt to the development of the legal system of market economy. The overall planning of civil and commercial legislation should be able to predict and analyze scientifically, and take the needs of economic and social development as the goal of establishing a reasonable civil and commercial code. To a certain extent, it avoids the blindness of legislative work, standardizes and coordinates relevant laws and regulations, and complements each other. (2) Secondly, improving civil and commercial law should pay attention to improving the efficiency and level of legislation. At present, the progress of civil and commercial legislation is slow, and the time of forming the system is relatively long. In order to improve this situation, we should integrate the changing situation of the socialist economic market and perfect the legislation. Innovation of civil and commercial law should be based on the content of judicial practice: our country's civil and commercial law theory has made some progress. However, the times are changing and developing, the level of science and technology is improving, the scope of application of e-commerce is wider, the traditional civil and commercial law can not meet the needs of economic development, so it is imperative to innovate the theory of civil and commercial law. Due to the particularity of the work of the legal organs, the judicial personnel should establish stricter standards than the administrative personnel, stipulate specific ways of life and behavior, and form a unified standard of work order. To maintain judicial fairness and justice, the most important thing is to have a clean judicial team, fully protect human rights, and play a basic role. (3) Finally, full attention should be paid to the legal mechanism, which is in line with the operation of the socialist market economy. The most important basic condition for the establishment of a country ruled by law and the realization of sustainable development is to have a sound legal operating mechanism, which is also a symbol of the survival of a country ruled by law. The basic requirements for the operation of the legal mechanism are to establish a perfect legal system for the state power organs to exercise their legislative power according to law, to guarantee the theoretical improvement and formulation of new legal provisions, and to focus on monitoring the operation and implementation of the legal mechanism. Judicial power and procuratorial power are exercised independently by judicial organs and are free from illegal interference by any administrative organs, social organizations and individuals. We should uphold the principle of fair, fair and open transparent work, combat violations of law and discipline, and put an end to corruption; among them, social organizations and citizens should consciously abide by the law, make rational use of the law, exercise their rights, and supervise state organs and law enforcement personnel. We should safeguard the authority of law and participate in the process of law enforcement, so as to realize the real "law-abiding, law-abiding, law-enforcing and law-breaking".

5 CONCLUDING REMARKS

As can be seen from the above, the civil and commercial law operated by the state protects human rights to a certain extent, but there are still shortcomings and deficiencies in the process of theoretical practice. In view of this situation, we should deeply study the theory of civil and commercial law, promote the perfection of legislation, guarantee the efficiency and quality of system implementation, attach importance to legal mechanism, and protect human rights and interests more effectively.

REFERENCES

[1]Jin Junfang. On the Protection of Human Rights by Civil and Commercial Law. Legal System and Society, 2014, 06:16-17.
[2]Zhang Cheng. Exploration of the Protection of Human Rights in Civil and Commercial Law. Wireless Interconnection Technology, 2014, 10:196.
[3]Miao Hui. Discussion on the Protection of Human Rights in Civil and Commercial Law. Legal System and Society, 2010, 24:296.
[4]Zhang Jinfang. The current situation of the protection of human rights in China's civil and commercial law and suggestions on measures. China Market, 2015, 09:76-77.
[5]Jiang Huiping. Exploration of the Value of Human Rights Protection in Civil and Commercial Law System. Legal Exposition, 2016, 03:229.

Thoughts on the Construction of Credit System in Civil and Commercial Law

Li Chu Han[1], Tong Xin Xin[2,]*
[1] Yangtze University, Social sports guidance and management (college of physical Education), Jingzhou, Hubei, 434000, China
[2] Jingzhou Ecological Environment Bureau, Legal Section of Supervisory Detachment, Jingzhou, Hubei, 434000, China
**E-mail: 409484893@qq.com*

Abstract: With the development and perfection of market economy, the construction of civil and commercial credit system has been paid more and more attention. From the point of view of building civil and commercial credit system, this article puts forward reasonable and effective measures to improve the existing problems, emphasizing the status and role of honesty and credit management in civil and commercial law, and strengthening the construction of credit rights to form a perfect system and system. Starting with the definition of credit in civil and commercial law, this article explores the significance of the construction of credit system, puts forward the idea of the construction of credit system, and provides experience for the improvement of relevant legal system in China. The following views are for reference only.

Keywords: Civil and Commercial Law; Credit System; Honesty and Credit

1. INTRODUCTION

The rapid and healthy development of the national economy can not be separated from a sound system. With the deepening trend of economic globalization, malignant incidents caused by lack of credit frequently occur. Such as ditch oil, leather capsules, melamine milk powder and other incidents. Building a good market credit system is the need of healthy and stable operation of the economy. Civil and commercial law emphasizes the principle of honesty and credit, which has a good promoting effect. Practicing the credit system of civil and commercial law can standardize market behavior, create a good market competition environment, and help people establish a correct outlook on life and values [1].

2. DEFINING THE CONCEPT OF CREDIT IN CIVIL AND COMMERCIAL LAW

The evaluation of the degree of national credit in civil and commercial law is based on the performance of individual obligations, which also highlights the most basic credit problems, which are embodied in the following aspects: First, after the parties sign a written contract or reach an agreement, they need to fulfill the provisions, including timely repayment of debts and liability for breach of contract. Secondly, the parties to an agreement or a contract should clarify each other’s credit status, while the civil actor has the ability to repay debts. At present, there is no unified concept of credit in civil and commercial law, there are some differences, roughly two kinds. One holds that “credit” is an economic evaluation, reflecting the economic solvency of civil actors; the other holds that “credit” is the social trust and evaluation based on the economic strength of civil actors [2].

3. THE IMPORTANCE OF CONSTRUCTING CREDIT SYSTEM OF CIVIL AND COMMERCIAL LAW

In order to create a free and transparent economic environment, we should adhere to the principles of fair trade and honesty and trustworthiness, and build a credit system with this goal. From the consumer’s point of view, a good reputation, stable income and credit line can guarantee the quality of their consumption, and they are in the middle and upper living standards. From the enterprise’s point of view, a good internal control management system, credibility and credit lines can invest a lower cost in the development of business, which is conducive to the development of sales channels. At the same time, enterprises can also use this system to assess transaction risk and make more accurate decisions. From the perspective of the government, the establishment of a good credit system can maintain the image of the government, improve internal efficiency, and avoid corruption. Lack of perfect guarantee of credit system will infringe the legitimate rights and interests of both sides and lead to market chaos. The ultimate goal of civil and commercial law is to establish a credit system, promote the perfection of the credit system, construct a standardized and orderly economic market, and realize fair and harmonious transactions among different economies or individuals [3].

4. PROBLEMS IN THE ESTABLISHMENT OF CREDIT SYSTEM

In the current stage of development, there is no unified concept of credit principle and no reasonable explanation of credit behavior. The original civil and commercial law did not form a persuasive view of the principle of credit and lacked specific legal regulations, which led to serious consequences.

Mainly reflected in some small and medium-sized enterprises for the credit principle understanding is not thorough, the operation is not standardized, restricting the construction of credit system. In our country's current regulations of civil and commercial law, the "principle of credit" is clearly stipulated, and it is regarded as the first criterion for the implementation of civil and commercial law. As far as the whole legal system of the country is concerned, other laws have some incompatible opinions on the construction of credit system and civil and commercial law, and few of them regard the principle of credit as the principle of judicial interpretation and enforcement. This also shows the imperfection of our country's legal system from the side. Influenced by socialism with Chinese characteristics, the national economy is in the primary stage of socialism in the long-term development stage in the future, and has great potential for development. Due to the confusion of credit market, our country lacks experience in building credit market and is prone to food safety problems, such as Sudan Red, melamine and so on. There is a certain credit crisis in China, which reflects the imperfection of laws and regulations and the lag of system construction [4, 5].

5. MEASURES TO CONSTRUCT THE CREDIT SYSTEM OF CIVIL AND COMMERCIAL LAW

5.1. Emphasizing the Role of Honesty and Credit Management

In the implementation of civil and commercial law, the most basic condition for guaranteeing the principle of honesty and trustworthiness is the effective formulation of a perfect law on creditor's rights. In order to construct the urban credit system, we should pay full attention to the relevant principled issues, and conduct in-depth discussion and research to enhance the effectiveness and reliability of the law. In the national legal system, the position and role of credit principle should be clearly strengthened: firstly, the rights, obligations and responsibilities of civil parties should be clearly divided and supervised; secondly, the government intervention and local protection should be focused on to create a good market competition environment, fair and open competition and reduce speculative economic behavior. In order to promote the healthy and sustainable development of enterprises, efforts should be made to do a good job of market guidance. Finally, the judicial relief system should be established and perfected to enhance the transparency and openness of government policies and attract the participation of the masses. In addition, we should attach importance to and consolidate the basic position of the principle of honesty and trustworthiness and play an important role. From another point of view, relevant laws and regulations on property rights, claims and personality rights will be implemented. At the same time, it is necessary to quantify the evaluation standards and implementation standards as much as possible in order to strengthen the implementation of laws and regulations. It can not only clearly stipulate the rights, responsibilities and obligations of civil parties, but also reduce the government's participation in economic activities and political protection, reduce the adverse effects of non-market factors, avoid short-term economic activities, and support and standardize government management activities. At the same time, judicial remedy system and open and transparent legal decision-making can also increase the feasibility of legal provisions.

5.2. Strengthen the Construction of Credit Right

The key content of credit right legislation is embodied in the following aspects: firstly, establishing credit right through special legislation; secondly, maintaining the independence of credit right and forming new personality right. Individuals in society can drive their own rights and carry out market economic activities freely. Under the orderly economic market environment, we should build a more standardized and perfect market on the basis of honesty and trustworthiness. The term "credit right" appears in our country's legal system, which provides an effective basis for guaranteeing credit rights and interests. It is of great significance to adjust and summarize the relevant provisions of civil and commercial law appropriately, draft and summarize the definition of credit right in order to better formulate principled legal regulation, help to build the legal framework of credit system and meet the development needs of the times. The precondition for the state and enterprises to carry out trade is to enjoy the right of credit, consciously abide by the legal requirements, and exercise the right of credit according to law. The honest and trustworthy economic order has provided certain help for the development of market economy. Therefore, it is necessary for enterprises and individuals to attach importance to the construction of credit rights and form legal provisions in order to obtain economic benefits.

6. CONCLUDING REMARKS

From the above, it can be seen that building a good credit system of civil and commercial law is related to the long-term construction and development of the national economy. We should attach importance to the position and role of honest management in civil and commercial law, strengthen the construction of credit rights, form an effective credit system at the social and personal levels, create a good market competition environment, and provide guarantee for the development of national economic construction.

REFERENCES

[1]Zhang Xiwen, Thoughts on the Construction of Credit System in Civil and Commercial Law, Farmer's Staff, 2018, (04): 289.

[2]Zhao Yanjun, Reflections on the Construction of Credit System in Civil and Commercial Law, Legal

System and Society, 2018, (02): 64-65.
[3]Chi Zeren, A Brief Analysis on the Construction of Credit System in Civil and Commercial Law, Legal System and Society, 2017, (27): 14-15.
[4]Jiang Hao, Research on the Construction of Credit System in Civil and Commercial Law, Legal System and Society, 2013, (4).
[5]Zhao Jing, On the Construction of Credit System in Civil and Commercial Law, Legal System and Society, 2012, (10)

.

Exploration of Integration of Industry and Education Mode Innovation and Practice in Higher Vocational Education

Pingping Qiao
Henan Polytechnic Institute, Nanyang, Henan, 473000, China
Email: nyqp@qq.com

Abstract: Actively promoting the deep integration of production and education, innovating the mode of school-enterprise cooperation, and building the community of fate between schools and enterprises are the only way for higher vocational education in the future. This article mainly explores the innovation case of the integration of production and education in Henan Polytechnic Institute, which has a certain reference significance for other brotherhood colleges and universities in the integration of industry and education mode innovation and practice.

Keywords：Integration of Industry and Education; Mode Innovation; Cooperation

1. INTRODUCTION

The integration of industry and education is the basic strategy of vocational education, the inherent requirement of training high-quality talents for socialist modernization construction, and the key to running vocational education well. At present, China’s economy has shifted from a high-speed growth stage to a high-quality development stage. It is also in the stage of upgrading traditional industries and accelerating the layout of strategic emerging industries. New formats, new types and new posts are constantly emerging, which puts forward new demands for talents. Under the new situation, vocational education should grasp the pulse of industrial development, perceive the needs of enterprises for talents, promote the full integration of supply-side and demand-side structural elements of talent cultivation, promote in-depth cooperation between vocational colleges and enterprises in talent cultivation, technological innovation, employment and entrepreneurship, social services, cultural inheritance and other aspects, and build a Integration mode of industry and education in training talents to enhance the core competitiveness of industry[1].

2. ANALYSIS OF PROBLEMS IN THE CONSTRUCTION OF INTEGRATION MODE OF INDUSTRY AND EDUCATION IN HIGHER VOCATIONAL COLLEGES

2.1. Stable and long-term development mechanism has not been formed

At present, the integration of industry and education in higher vocational education mostly stays at the lower level of cooperation, such as short-term internship and employee recruitment. Colleges and enterprises have not formed a “community of interests”. The policy system of the integration of industry and education in higher vocational colleges is not clear, the integration of enterprises and higher vocational colleges can not reflect greater direct value interests, the social status of higher vocational colleges is embarrassing, and the social recognition of students trained by higher vocational colleges is not high. The government should focus on resolving the problems of dislocation between industry and vocational education, establish a “interest-related” enterprise participation mechanism, and improve the enthusiasm of enterprises to participate in the running of colleges and universities to achieve symbiotic beliefs between schools and enterprises [2].

From 2016 to 2018, although the number of enterprises participating in the integration of industry and education in Henan Polytechnic Institute is still insufficient, especially the average number of cooperative enterprises in each major is not high (as shown in table1). However, from the analysis of the total growth rate of enterprises participating in the integration of industry and education, the growth rate is faster and the enterprises’ enthusiasm is higher. The prospects for enterprises to participate in the integration of industry and education in higher vocational education in Henan Province are optimistic, as in the Table 1 [3].

Table 1: The Quantity of Enterprise Participation in 2016-2018

	2016	2017	2018	Growth quantity	Growth rate
Total number of cooperative enterprises in Henan Polytechnic Institute	135	169	228	93	68.89%
the average number of cooperative enterprises in each major	2.7	3.38	4.56	1.86	68.89%

2.2. The ability of service enterprises needs to be improved

Serving local economic and social development is one of the orientations of Higher Vocational colleges, which should take the development road of combining production, teaching and research. Therefore, the social service ability of higher vocational colleges should reach a certain level to meet the needs of regional economic and social development. However, due to the short development of Higher Vocational education, the majority of higher vocational colleges are upgraded from secondary schools, and the heavy teaching task of teachers, etc., many factors lead to the social service ability of higher vocational colleges can not meet the needs of the development of enterprises. At the same time, there is blind academic comparison in the recruitment of teachers in Higher Vocational colleges, or excessive emphasis on practicality, ignoring the support of theoretical knowledge system and basic skills. Higher vocational colleges should focus on strengthening teachers' ability of scientific research and service in many aspects, such as collaborative education, social service, information technology application, etc. Emphasis should be laid on Introducing High-level Talents with high educational background from the production line to solve the problem of "two layers" of vocational education and industry [4-5].

2.3. Cooperation model needs further clarification

In reality, higher vocational colleges generally recognize the importance of integration of industry and education, and have a clear understanding of the internal problems that restrict the integration of industry and education. However, they lack rational thinking on the overall reform of integration of industry and education, top-level design of talent training mode, and the mode of school-enterprise cooperation has not been systematically combed fundamentally. Higher vocational colleges should make full investigation, grasp industrial demands, orientate personnel training specifications, construct interest balance mechanism, strengthen the main role of teachers in the integration of industry and education, innovate personnel training cooperation mode, and improve the quality of Higher Vocational education.

3. EXPLORATION AND PRACTICE OF INNOVATION OF INDUSTRY-EDUCATION INTEGRATION MODEL

3.1. Integration model of industry and education based on cooperative education

The mode of integration of industry and education based on collaborative education means that schools and enterprises jointly carry out industry research, introduce industry standards and enterprise post norms, jointly formulate talent training objectives and plans, introduce typical work tasks of enterprises, jointly construct curriculum system, introduce enterprise training resources, jointly build productive training bases or simulation training rooms. Introducing high-quality talents from enterprises, building a team of teachers, building effective mechanisms for school-enterprise cooperation and communication, student growth and evaluation of full-time and part-time teachers, focusing on solving the consistency between students' learning in school and their actual work. Higher vocational colleges should adopt such teaching modes as work-study alternation, integration of classroom and practice sites, in order to get through the last mile of vocational education reform, so as to cultivate excellent talents for enterprises, solve the problem of talent shortage in enterprises, and enhance the core competitiveness of enterprises.

The implementation of the "collaborative education" mode of integration of industry and education should flexibly respond to the industrial transformation and upgrading according to the industrial demand and the development trend of the demand for technical and skilled talents. Talents training should be integrated into the enterprise value chain, increase investment in hardware equipment, train professional teachers and increase teachers' practical experience. Emphasis should be placed on building a dual-teacher and multifunctional teaching team to improve the operation and management mechanism of school-enterprise cooperation.

In 2018, enterprises participate in the integration of industry and education in Henan Polytechnic Institute in a wide range of content, including participation in professional construction, curriculum construction, faculty building, construction of training bases inside and outside schools, student practice guidance, technology research and development and post practice (see Figure 1 below for specific cooperation content). Among them, the construction of training bases inside and outside schools and post practice are the highest proportion. More than 60% of the cooperative enterprises have participated in the above two contents.

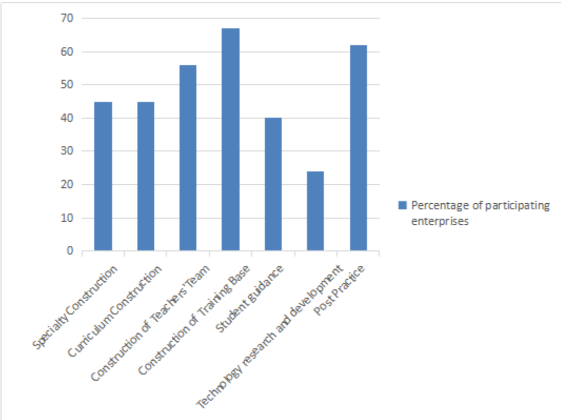


Figure 1. Contents of enterprise participation in 2018

The major of air crew in our school grasps the demands of enterprises, selects enterprises with strong sense of responsibility, and develops a dual-subject deep education model. The formulation of training objectives is closely in line with the development needs of the aviation industry and the requirements of enterprises for recruiting personnel. Both sides re-orientate the training objectives and personnel training programs of air crew specialty. At the same time, enterprises incorporate personnel training into the development goals of enterprises. Jointly promulgated the professional recruitment and enterprise employment integration enrollment system, the implementation of joint enrollment, increase enterprise interview links. Through the integration of high-quality resources of schools and enterprises, such as the allocation of training centers in aviation simulation cabin for students, senior teachers in enterprises, aviation bases, etc., to increase the development of students in the process of hardware and software construction. Enterprise experts and professional teachers build a platform for communication and cooperation, through interactive dialogue, mutual appointment, discussion and exchange, consensus. Schools and enterprises take “craftsman spirit” as their soul, cultivate students’ aviation personnel to study and innovate their skills, work actively and efficiently, and constantly surpass their own value of professional spirit.

At present, Jingdong Industry and Education Training Center, which is the integration project of industry and education in Henan vocational education, has been established in our school. The faculty of Economics and Management of our school is working out a special talent training program for students majoring in E-commerce who enter the Jingdong Industry-Education Integration Training Center to combine work with study, improving the curriculum system, and forming a talent training mode of Industry-Education integration and collaborative education.

3.2. Integration model of industry and education based on production projects

The mode of integration of industry and education based on production projects refers to the construction of shared training bases by schools and enterprises, referring to the standard process of construction, in which professional teachers participate in the design and implementation of specific projects of enterprises, and incorporate R&D products into the teaching process, and students participate in the development and implementation of sub-projects of teachers, so as to cultivate students’ abilities of professional skills, professional accomplishments and comprehensive qualities. It strengthens the comprehensive strength of teachers, realizes the docking of specialty and industry, school and enterprise, curriculum content and product development, teaching process and production process, teachers and project managers, students and enterprise employees.

The implementation of “production project” mode of industry and education should focus on regional economic structure and industrial development, take leading enterprises or key enterprises as the object, take school counterpart specialty as the breakthrough point, ensure the feasibility, stability and coherence of teaching projects, combine school hardware equipment, students’ learning characteristics and teachers’ conditions, and carefully organize teachers and students in accordance with enterprise requirements. Successful completion of production projects. At the same time, teachers are selected to study in enterprises, skilled in the process and standards of products, and project managers are assigned to schools to guide the whole process. Qualified students are assigned to different enterprises to practice in batches, which further strengthens students’ ability to produce independently. The curriculum should meet the technological process and technical requirements of enterprise products. Enterprise products can be divided into several sub-projects to organize and implement, and the role of production projects in the teaching process should be taken into account.

The school and the enterprise jointly set up the production and teaching integration base of animation production technology producer service industry. Both schools and enterprises set up a mixed team of teachers composed of full-time teachers and enterprise technicians to provide regional information technology services and carry out personnel training and training. Six animation production technology studios have been set up. Each studio is composed of a full-time teacher, an enterprise engineer and 10 students. It jointly completes the production of film and television, advertisement production, theme entertainment, game development, building visualization application, industrial simulation, agricultural intelligence, ring projection, tourism and other digital media projects, creating direct economic benefits. The two sides jointly develop a crowd sourcing platform for digital media, undertake projects through the platform, share interests according to the company’s joint-stock system, and form a school-enterprise stakeholder and fate community of “school-enterprise co-construction and co-management, responsibility and risk sharing, resource and benefit sharing”.

3.3. Integration model of industry and education based on innovation and entrepreneurship

The integration mode of industry and education with innovation and entrepreneurship as the carrier refers to the operation platform of entrepreneurship colleges, incubators or innovation and entrepreneurship alliances, the construction of innovation and entrepreneurship curriculum system, the development of a series of practical projects, the creation of high-quality tutors as the starting point, the credit exchange system, professional and curriculum construction management methods as the guarantee, the development of school-led, students-led, enterprises and finance. Institutions, venture capital institutions and entrepreneurship mentors participate in teaching activities to stimulate students’ potential for innovation and entrepreneurship, and cultivate talents that are compatible with society and consistent with the expectations of enterprise development.

The implementation of the integration mode of “innovation and entrepreneurship” between industry and education should integrate the spirit of the era of innovation and Entrepreneurship such as “mass entrepreneurship, mass innovation” and “professional undertaking”, carry out high-quality teaching of general courses and curriculum modules, pay attention to the cultivation of students’ entrepreneurial awareness and ability, and promote innovative entrepreneurship practice oriented by cultivating students’ abilities through practical platforms such as incubators and entrepreneurship colleges. System construction.

Combining with the orientation of running a school, service orientation and the requirement of innovation and entrepreneurship education, the school has worked out three-level training objectives, core competencies and competence indicators for schools, secondary colleges and specialties with industries and enterprises, and integrated the key elements of innovation and entrepreneurship education into the whole process of personnel training. Relying on the entrepreneurship college, we should explore the innovative entrepreneurship education system of school-enterprise cooperation and co-management; initiate the establishment of “Henan Higher Vocational College Innovation and Entrepreneurship Alliance”, explore the new mode of innovative entrepreneurship education in cooperation between banks, enterprises, schools and cooperatives; give full play to the leading role of enterprises and improve the investment and financing service system of Establish the professional direction of embedded innovation and entrepreneurship, set up an embedded “entrepreneurial elite class” of innovation and entrepreneurship education, construct an innovation and entrepreneurship curriculum system for all students “basic guidance, practice introduction, professional guidance”, and set up compulsory courses and elective courses of innovation and entrepreneurship. Fifty-six courses should be taught in a bundled way to expand students’ innovative and entrepreneurial abilities.

4. CONCLUSION

It is the only way for higher vocational education to actively promote the deep integration of industry and education, innovate the mode of school-enterprise cooperation, and construct the mode of double-subject cultivation of talents in the future. To break through the bottleneck of the development of integration of industry and education, we should continue to deepen the reform of “releasing control clothes”, introduce incentive policies at the provincial and municipal levels, further implement the autonomy of universities, build an effective communication platform for school-enterprise alliance cooperation, highlight the training of full-time teachers’ service ability, balance the distribution mechanism of interests in school-enterprise cooperation, and gradually form the fate community of schools and enterprises.

ACKNOWLEDGMENT

This paper is supported by the Foundation Project that Henan Education Departmen:2017 Henan Province Higher Education Teaching Reform Research and Practice Project and Research on the Cooperative Education Mode of Industry-Education Integration in Henan Higher Vocational Education (Project No: 2017SJGLX565)

REFERENCES

[1]The State Council. Circular on the Issuance of the 13th Five-Year Plan for the Development of National Education (Guofa [2017] 4] [Z]. 2017-1-20).

[2]Yang Fan. Deepening the Integration of Industry and Education, Accelerating the Construction of Modern Vocational Education System. China Vocational and Technical Education, 2014(21).

Liu Yuanyuan, Park Xuetao. Establishment and Research of Vocational Education Policy Support System Based on Integration of Industry and Education. Vocational Education Forum, 2015(22): 70-74.

[3]Lu Kebin, Li Jianguo, Huang Junjie. Research on the Coordination Mechanism of the Link between National Vocational Standards and the Curriculum System of Colleges and Universities. Vocational Education Research, 2016, 11(9): 12.

[4]Tan Hailin, Wang Jishan. Practice of Integration of Industry and Education in Talents Training Mode under the Background of “School Factory” Vocational and Technical Education, 2015(29): 8-11.

[5]Luo Guilong, Zhang Yu and Zhang Jinhong. Talking about how to realize the process of vocational education and teaching Effective docking of production processes. Educational theory and practice, 2015(21).

How to Strengthen the Safety Production Management of Chemical Enterprises

Xiangjun Zhang
School of Management, Shanghai University, Shanghai, China
E-mail: 38964930@qq.com

Abstract: With rapid economic growth and accelerating pace of urbanization construction, people not only pay more attention to their creature comforts, but also pursue better air quality and green life. In recent years, gas explosion, pesticide leakage, toxic gas leakage and other serious chemical safety accidents have occurred frequently. These chemical safety accidents have brought significant economic loss to chemical enterprise. Through analyzing current status of safety production in chemical industry, the paper emphasizes the importance of safety production management in chemical industry. Finally, from personnel training, management, operation and other aspects, the concrete measures are put forward to strengthen the safety production management of chemical enterprise.
Keywords: Chemical enterprise; Safety production management

1. INTRODUCTION

With the quick development of science and technology, the competition between manufacturing enterprises has being more of fierce. When striving to seek for the highest interest of enterprise, the executive suite of these enterprises usually incline to ignore the safety production management. Among all enterprises, the safety production management of chemical enterprise is more important. Recently, gas explosion, pesticide leakage, toxic gas leakage and other major chemical safety accidents have occurred frequently because the safety production management is not done well. These chemical safety accidents usually result in extensive river pollution, air pollution, casualties and other serious consequences, which brings heavy property loss to chemical enterprise. How to strengthen safety production management of chemical enterprise and reduce unnecessary accidents becomes the emphasis of the paper[1].

2. THE CURRENT SITUATION OF SAFETY PRODUCTION WORK

For the past few years, with rapid development of science and technology and continuous improvement of urbanization construction, the production equipment of chemical enterprise has being develop in the direction of large scale and complexity. However, with more attention to their own economic interest, these chemical enterprises neglect safety production management, which leads to frequent occurrence of safety incidents in chemical industry. According to national chemical accident analysis report, there are more than 150 chemical accidents in China. There were 97 chemical accidents and 157 dead in 2015. By 2016, there were 226 chemical accidents caused by safety management errors of chemical enterprises in China, and the death toll reached 234. By the end of 2018, there were 176 chemical accidents nationwide, killed223 people. According related data, the environment pollution and economic losses chemical accidents caused are serious. The occurrence of chemical safety accident has attracted great attention of Safe Production Supervision and Administration. How to take measures to ensure safety production management of chemical enterprise and reduce chemical safety accident have already became important matter which the each chemical enterprise, even whole country should pay more attention[2].

3. THE IMPORTANCE OF SAFETY PRODUCTION MANAGEMENT IN CHEMICAL ENTERPRISE

Safety production management plays significant role in the operation of chemical enterprise. Concretely, safety production management exists in the whole process of chemical production. The safety of chemical enterprises involves the personal safety of employees and the property safety of enterprises. Once the safety production management is not well controlled, the consequences will be very severe. Thus, safety production management has gradually become the most important part in the process of production. Compared with other industries, chemical industry has many unsafe factors in production, storage and transport. Especially, the possibility of inflammability, explosion and corrosiveness is very large in the process of production. Therefore, it is essential for reducing unnecessary economic losses that the chemical enterprise strengthens the safety production management and avoids the occurrence of safety accidents[3].

4. THE CONCRETE MEASURES TO STRENGTHEN SAFETY PRODUCTION MANAGEMENTINCLUDETHE FOLLOWINGS:

4.1. Reinforce personnel training

To guarantee the chemical safety production, the top priority is to raise security awareness and working skills of chemical workers through special training. In the actual operation process of chemical production, the operators on the basic production line have fully mastered all the details of safety work. If they ignore some details in the production, it will have effect on the entire production process. Furthermore, lacking of the systematic training ofenterprise safety production management and theoretical knowledge of operation safety, the grass-roots staff of chemical enterprises often doesn’t recognize the specific detail of production safety. As a consequence, it is vital to enhance the training of safety production. The enterprise can raise the awareness of safety production of basic operators by organizing training for employees, which can avoid chemical safety accident caused by the lack of awareness of safety production. Furthermore, it is necessary to build a culture of enterprise safety production through various publicity forms, so that the employees can deeply recognize the importance of safety production[4].

4.2. Improve the safety awareness of administrator

The safety awareness of administrator also is essential in the safety management of chemical enterprises. Designing and outfitting safety operating system for chemical industry is controlled by administrator’s safety concept. Compared with other employees, the safety awareness of administrator should be stronger and more comprehensive in the process of enterprise production management. On one hand, the actual work of operators should be supervised, which will be beneficial to make safety concept integrate into safety production management; on the other hand, in the inspection, the inspectors should check out the potential safety problems in production operation in time and provide necessary guidance to the junior staff.

4.3. Strengthen safety management

The safety management of chemical enterprises can be carried out from the following two aspects. One is to strengthen the management of enterprise responsible person. In this materialistic society, many responsible persons of chemical enterprises are preoccupied with seeking the maximum benefit of production development. They do not pay attention to enterprise safety production management or reduce input cost in safety production management, which results in incomplete enterprise safety production management and the lack of safety system, and brings major safety risks to enterprises. In order to put an end to this phenomenon, the relevant government departments should strengthen the supervision and administration of the safety production of chemical enterprises. The responsible persons of chemical enterprises who fail to carry out safe production in accordance with state regulations shall be severely criticized and their production shall be reformed or stopped in line with relevant laws. The other is to strengthen the management of junior employees. Because of lacking sense of duty, they may be not strictly to observe the safety work regulation. Once there is a safety problem, they trend to pass the buck to each other, which may bring out safety risks to enterprise production. Thus, it is necessary to strengthen the management to the junior operators and intensify the safety education. To be specific, we should strictly implement the responsibility system for production safety, and formulate corresponding reward and punishment measures. For those who do not operate in strict accordance with safety regulations, we should take disciplinary action accordingly.

4.4. To strictly control safe operation

Based on reviewing the related data, it is found that the improper operation is responsible for many chemical safety accidents in the actual production process of chemical enterprise. Safety work maintenance should be strictly in line with the safety standards to monitor and manage various indicators. However, due to the tight time, heavy task, many cross-operations, large workload and many inspection details during the maintenance process, many operators will not strictly follow the normal procedures for safety production inspection of chemical enterprises. Therefore, in the process of safety production management of chemical enterprises, it is necessary to strictly control the each link of safety production operation and attach importance to each safety maintenance work.

5. CONCLUSION

The safety production of chemical enterprises affects the scientific development of enterprises and the lives of employeesand social harmony. Chemical enterprises should strictly control their safety production management in the production process. From personnel training, safety management, safe operation and other aspects, theresponsibility system should be earnestly implemented to ensure the smooth operation of chemical production management. In the future development of enterprises, safety production management should become the first priority in the production process of chemical enterprises, so as to strictly eliminate the possibility of chemical safety incidents.

REFERENCES

[1]Liu Wenpeng. Some problems of safe production in coal chemical industry. Silicon Valley, 2010(1): 217-217.

[2]Li Feng. Strengthen the supervision and management of hazardous chemicals to realize the essential safety of production process. China petroleum and chemical standards and quality, 2004, 24(5): 82-83.

[3]XieQuanan. Safety and environmental protection of coal chemical industry. Beijing, Chemical Industry Press, 2010.

[4]Yang Jiagui. Discussion on safety production management of Yunnan coal chemical group. Mining safety and environmental protection, 2009, 36(1): 233-235.

Comparison of Zhejiang Zither Music and Shandong Zither Music—Take Lofty Mountains and Flowing Water as the Example

*Min yu, Xiong yu**
Music Major 2016, Teacher Education College of Quzhou University, Quzhou, Zhejiang Province, China, 324000

Abstract: Zither music has an ultimately long history in China, during wich different zither schools have evolved. Two types of zither music *Lofty Mountains and Flowing Water* in Zhejiang Province and Shandong Province are compared to further analyze these two zither schools, in which traits, causes to these traits, similarities and difference between them will be probed into.
Keywords: *Lofty Mountains and Flowing Water*; Zither School; Zither; Traits; Similarities and Difference; Comparative Study

1. INTRODUCTION

The story of "meeting the bosom friend with lofty mountains and flowing water" is known to each and every Chinese. The story could be traced back to the record as early as in Liezi·Tangwen. *Lofty Mountains and Flowing Water* is a kind of Chinese ancient zither music, which is ranked as the top ten zither music of China. It is said that once Boya, a zither player in Pre-Qin Period, was playing his zither in wild land. When the woodman Zhong Ziqi got to understand that his music was to describe "magnificant mountains" and "soaring rivers", Boya was stunned and said "Isn't it nice that your mind is the same as mine?" However, after Zhong Ziqi died, Boya was devastated that he broke his zither and claimed that he would never play the zither again. The concept of *Lofty Mountains and Flowing Water* is usually used to describe a bosom friend or a confidant as well as applied to describe ingenious music. The music is then divided into two sections *Lofty Mountains and Flowing Water*. Zither music also has the same music named as *Lofty Mountains and Flowing Water*. Although it is based on the story of "meeting the bosom friend with lofty mountains and flowing water", different forms of performance exist in different schools. In fact, different schools of zither re-interpret the Guqin song *Lofty Mountains and Flowing Water* in the form of zither performance, which forms a sharp contrast to a certain extent. The essay mainly focuses on discussion about the Zhejiang version and the Shandong version of *Lofty Mountains and Flowing Water*.

2. ZITHER MUSIC LOFTY MOUNTAINS AND FLOWING WATER

As a piece of zither music, *Lofty Mountains and Flowing Water* has three versions that individually belong to Henan zither school, Shandong zither school and Zhejiang zither school. Although they are all named as *Lofty Mountains and Flowing Water*, theme of the music cuts down the description of "meeting bosom friend" and mainly concentrates on the description of lofty mountains and flowing rivers to give expression to the glorious scenery of motherland and endows a kind of majestic sense of feeling to nature.

2.1. *Lofty Mountains and Flowing Water* of Zhengjiang Province

The version of *Lofty Mountains and Flowing Water* of Zhejiang Province is one of the masterpieces of Zhejiang zither school. Based on a flute song in the Buddhist waterway ceremony, it was adapted and created by Mr. Wang Sunzhi. The music was initially merely welcomed in southern Zhejiang. In 1925, with Mr. Wang Sunzhi's moving to Shanghai, it was spread to traditional stringed and woodwind instruments in the south of the Yangtze River. It was rearranged by Mr. Wang Sunzhi later on. Because of Mr. Wang Sunzhi's unremitting pursuit and the efforts of a generation, Zhejiang zither School has become a rising star of all the major zither schools in China. Mr. Wang Sunzhi has paid a lot of effort for this [1].

The whole muisc consists of *Lofty Mountains* and *Flowing Water* these two sections.

To begin with, it presents an elegant and soothing slow version. In the first half, the magnificent momentum of the mountain is depicted with two octave belts separated by a slippery "great twisting" and a thick and graceful tone. The player could apply the bass with his or her middle or ring finger according to the conditions of his or her hands, while the other two tenors can be played with using the liantuo method by his or her thumb fingers. Then the speed could be a little bit faster, the music is gradually flowing, the crisp sound of the piano gives people a lively and vigorous feeling, the alternation of high and low sounds is like the rippling water in the lofty mountains flowing around the mountains happily, there is water in the mountains, there are mountains in the water.

As for the latter section, Iwhile pressing and sliding the string, a large number of techniques for scraping up and down are adopted continuously. It shows different forms of flowing water: streams trickling, gushing, surging, all of which manifests a vivid picture. The zither music ends up with a clear and transparent overtone, which is able to immerse people into the scene for a long time. The artistic conception of the music, under the collision of emotions and imaginary pictures in people's brain, produces an unspeakable and beautiful realm, which is really of twists and turns, and can never be forgotten for a long time.

2.2. *Lofty Mountains and Flowing Water* of Shandong Province

The version of *Lofty Mountains and Flowing Water* of Zhejiang Province is composed of four minor pieces, they are *Taste for the Zither*, *Wind Waving Green Bamboos*, *Small Tinkling Bells at Night*, and *Style of Books*. In the 1950s, the headline of *Lofty Mountains and Flowing Water* was added and circulated throughout the country. The meaning of the headline has nothing to do with the content of the minor tunes, but the original subheadings are very consistent with the content of the music. In terms of concrete content, *Wind Waving Green Bamboos*, *Small Tinkling Bells at Night*, and *Style of Books* are all works of chanting objects, while *Taste for the Zither* is related to the story of Boya and Zhongzishi in historical legends. Although these four pieces have some internal relations, they will not affect any of them in solo form [2].

In terms of *Taste for the Zither*, simple and clear right-hand progressive interval and left-hand sliding tone are used to simulate the classical and elegant sound of zither. The neutral and smooth tone reveals traits of charm and elegance of Boya zither.

As for *Wind Waving Green Bamboos*, the right hand uses the unique Shandong Zheng School's "mixed finger movement" playing method and the fast "split support" technique. The left hand uses the tremolo to embellish the melody, and frequently plays the minor second interval. Music is lively and relaxing, dynamic and static, such as the crisp and lively sound of pearls of different sizes falling down on the jade plate, which vividly depicts the posture of the gentle breeze and the swaying bamboo.

Then, *Small Tinkling Bells at Night*, mainly utilizes techniques of "collusion" and "mixed finger movement". The main melody is entirely played by the middle finger, while the thumb is constantly playing "mixed tone" simulating the rubell in the second half of the melody interval. The thumb scraping in the treble area is interesting, and the music vividly depicts the sound of the rustle bells in a quiet night.

And last but not the least, *Style of Books*, its melody is based on Shandong dialect. It mainly uses the playing skills of "wiping" the index finger and "holding" the thumb. Through the changes of progressive and minor intervals, the same degree sounds produced by the two-degree and three-degree sliding sound combined with the adjacent strings are continuous, which simulates the melodious tone of the ancients when they read poetry and books, which is vivid and full of charm.

3. COMPARISON BETWEEN THE ZHEJIANG VERSION OF *LOFTY MOUNTAINS AND FLOEING WATER* AND THE SHANDONG VERSION OF *LOFTY MOUNTAINS AND FLOWING WATER*

3.1. Playing Techniques of Right Hand

3.1.1. Shandong Version

Shandong Province is in Northern China. It has a vast territory, simple folk customs and very bold personality, thus creating a rugged and vigorous northern music. Zither music of Shandong also has similar traits. In the performance of Guzheng, Shandong Zheng School often plays with the "support" and "split" of the right thumb in order to highlight the main melody. As for Shandong zither school, thumb is the main part of performance, and the main melody is usually played by thumb. The speed of thumb varies with the change of music when it touches the strings. Regardless of the speed, the thumb always sticks to the strings with great strength and stability, and then plays with the index finger and the middle finger at the same time [3] .

In the *Wind Waving Green Bamboos* section of Lofty Mountains and Flowing Water in Shandong version, the cooperation of "supporting", "splitting" and "wiping" has been used. When the traditional Shandong Zheng is playing remote finger, it needs to use the thumb joint of the right hand to play "splitting" and "supporting" continuously and quickly, and use it to show the granularity of light and bright as big pearls and small pearls falling on the jade plate. It is referred to the following Figure 1.

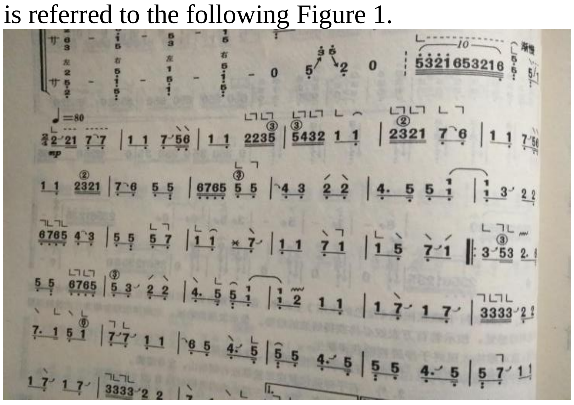


Figure 1 Shandong zheng music

In addition, the mixed finger movement is widely used in Shandong Zheng music. That is, the thumb is used as a continuous support, with uniform strength and gentle speed, often appearing at the beginning or strong beat of the music, sometimes as part of the rhythm of the melody. It is generally known as "the big hook", with the middle finger as the melody, thumb playing flower finger to fill the rhythm, which is one of the representative techniques of Shandong Zheng School. In general, the fixed finger movement is often used as decorative sounds, which does not occupy the pitch value or rhythm. However, in the *Wind Waving Green Bamboos* section of Lofty Mountains and Flowing Water in Shandong version, the mixed finger movement not only occupies the complete rhythm and sound value, but also sometimes the strong beat at the beginning of the sentence as the main part of the melody [4]. It is referred to the following Figure 2.

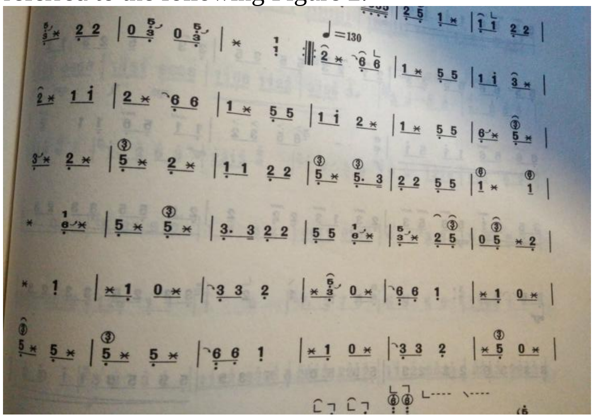


Figure 2 Shandong zheng music

Compared with the importance of thumb, the function of index finger and middle finger in Shandong zither School is mainly to play by the thumb. In the performance of Shandong zither School, the middle finger and thumb are often used to play eight degrees at the same time as a big pinch to strengthen the melody sound, but not independently into music. Or use the order of the forefinger and thumb of the middle finger as “hook” and "support" to play the tone within octave or octave, which can change the timbre and enrich the content of the melody. Because the thumb is used more, and the middle finger is playing with the thumb, so the function is second only to the thumb. The index finger is used less, most of which are to play with the thumb.

3.1.2. Zhejiang Version

Lofty Mountains and Flowing Water of Zhejiang zither school is mainly composed of clear bullets and ends with a large pinch. It can be seen that the coordination of thumb and middle finger is dominant. It is complemented by the left hand's sliding tone, which presents a form of coping address at the beginning and the end [5] .

The movement of remote finger is also one of the most important fingering methods in Zhejiang zither school. Unlike the “splitting” and “supporting” of Shandong zither school, the remote finger of Zhejiang zither school is based on the wrist as the axis, which drives the arm to swing repeatedly. The density of remote finger is high, and the long swing can constitute a melody. It is referred to the following Figure 3.

3.1.3. Comparison

In terms of the performance of Shandong zither school, thumb plays a decisive role, and it is mostly used on strong beat. Therefore, the performance skills of thumb has become one of the important symbols to measure the performance level of Shandong zither school, and also fully reflects the boldness and atmosphere of Shandong local music.

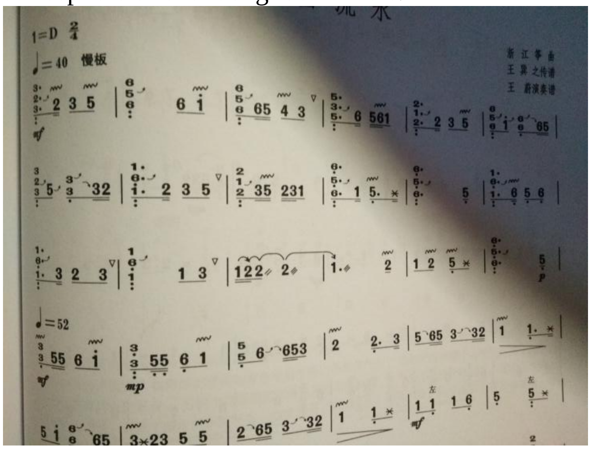


Figure 3 Zhejiang zheng music

During the zither performance of Zhejiang zither school, the middle finger plays a larger role. It sometimes is used as an important finger method to play the main melody, while the thumb and index finger mostly play with the middle finger for four points, appear in the weak beat, playing a soft and crisp tone. The application of wrist remote finger is paid high attention at the same time, which reflects the beautiful and gentle music style of Zhengqu in Zhejiang Province.

3.2. PLAYING TECHNIQUES OF LEFT HAND

3.2.1. Shandong Zither School

Traditional Shandong zither tremolo is widely used. It pays great attention to tremolo and glide, and uses tremor to embody Shandong's bold and bright music style. It is referred to the following Picture 1.

3.2.2. Zhejinag Zither School

Zhejiang zither school is influenced by dialect. Zither music mostly uses upper, lower and backsliding tones to achieve the desired effect of music [6]. It is referred to the following Picture 3.

3.2.3. Comparison

Between Zhejiang zither school and Shandong zither school, the left hand’s chanting, sliding, pressing and trembling all play an important role. The difference is that the traditional Shandong zither music is mostly composed of glide and tremolo, which corresponds to the rugged atmosphere of Shandong music style. In Zhejiang zither school, because of the diversity of dialectal tones, there are many kinds of playing techniques, such as backsliding, which are very flexible and changeable, and conform to the delicate and euphemistic music style of Zhejiang area.

Shandong zither school is influenced by folk music in the northern region. Zither music is composed of seven tones and four or two beats in rhythm, which makes the expression happy and relaxed. In terms of *Lofty Mountains and Flowing Water,* these seven tones are used in Shandong zither music to express its admiration of the motherland's great rivers and mountains [7]. (Figure 1 could be referred)

Lofty Mountains and Flowing Water of Zhejiang zither school is played with a couple of octaves, mainly in three, five and six tones, in which traditional pentatonic scale is extended upward or downward according to the interval relationship that the style is more gentle and beautiful, depicting beautiful mountains and rivers [8].

4. CONCLUSION

In this essay, different versions of *Lofty Mountains and Flowing Water* in Zhejiang zither school and Shandong zither school are taken as the breakthrough point, through comparative analysis of playing skills, the differences between the two are sorted out. The differences between Shandong zither school and Zhejiang zither school are influenced by dialect culture and people's living environment [9]. Shandong zither school is located in the north, with vast territory and simple humanities so that the composition of zither music has regular and direct structure and relatively large fluctuations in melody. Zhejiang zither school is located in southern China. The mild living environment in Zhejiang Province results to the people living there delicate, gentle and delicate. Therefore, as for the music of zither, the fact that it is presented progressively and its melody being processed more delicately results to be implicit and elegant in style and trait [10].

REFERENCES

[1]Wang Sunzhi, Origin and Development of Zither, Wen Baobao, March 15, 1962.

[2]Wu Guodong, Chinese Folk Music, Shanghai Music Publishing House, 1997.

[3]Zhou Geng, Zither Music, People’s Music Publishing House, 1999.

[4]Qian Rong, The Soul of Music in Ancient China—Chinese Music Culture, World Knowledge Publishing House.

[5]Wang Gangqiang, Zither Xinyun. Shanghai Music Publishing House, 2006.

[6]Zhou Zhenhe You Rujie, Dialect and Chinese Culture, Shanghai People's Publishing House, 2006.

[7]Shanghai Zither Fair. Chinese Zither Grade Examination Music Collection [Upper] [Lower], Shanghai Music Publishing House, 2012.

[8]Long Xiaoyan, A comparative study of Shandong Zither School and Zhejiang Zither School: Taking Alpine Running Water as an example, Anhui University, 2015.

[9]Han Jing, Traditional Zither Music “Alpine Running Water”--A Comparison of Performance Styles between Zhejiang School and Shandong School, Folk Art and Literature, 2013.

[10]Wang Nina, A Study on the Significance of Zhejiang Zither Music Alpine Running Water (Adapted Edition), Wuhan Conservatory of Music, 2008.