The Examination Reform Based on Information Orientation in Higher Education

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Abstract-With the national-scale development of information technology in institutions of higher learning, Examination management, an organic and important component of university teaching management, will face to its new opportunities as well as challenges.1. Objective：This paper introduces the brief history of universities' information technology development; analyzes the characteristics of current examination mode and the shortcomings of traditional tests; and then presents some ideas about university examination informationization.2.Methods ： This article uses the literature survey method to do a lot of research work on the development of higher education informatization, and based on this, this paper sums up the problems existing in the traditional examination method by using the experience summary method, and combines the characteristics of the current examination management and examination mode, and puts forward the feasibility of the reform of the examination management information. 3.Results ： Information on the examination and examination management mode to a certain extent to solve many problems caused by the traditional examination.4.Conclusion：The problems and suggestions in the paper are very valuable for the reform of college entrance examination.

Keywords-Higher education; test management; informationization; digital education; colleges and universities

In 1990s, information technology (short for IT) has been applied for the first time in Chinese educational system. And now by its internet network infrastructure system, digital environment, and information system design and integration, the Chinese education informationization is aiming at cloud computing and intelligentization. It is said that digitizing teaching management is one of the important parts of the construction of informationization of higher education, and test management informationization is naturally an inevitable way for developing examination administration and enhancing the teaching process management..

I. THE PROSPERITY OF HIGHER EDUCATION INFORMATIONIZATION INTRODUCTION

" Outline of the National Program for Long-and Medium-Term Scientific and Technological Development (2010-2020)" has been officially published in July, 2010, which puts forward definitely the general plan for developing education informationization and strategy for valuing information technology. And in August, 2011, the ministry of education has formed a leading group for IT construction, responsible mainly for regulating and organizing the construction of education informationization. The group has a subordinate office which is in charge of the general plan for all task and important decision related to education informationization. In 2015, the Ministry of Education launched the pilot program about digital education in January, and published "Education Informationization Strategy for the Next Decade" in March, pointing out that the digital higher education is the effective way to enhance the reform and innovation of higher education, requiring the comprehensive integration between information technology and higher education, and aiming at the modernization for educational contents and teaching methods, at the cultivation for creative talents, research teams and social services, at the overall development of Chinese culture and higher education. In May, the Ministry of Education also set up a team for coordinating the education informationization in different departments, and for harmonious promotion of the digital education, studying and working out those great issues. In September, the Ministry of Education hosted the first national digital education teleconference, and LiuYandong, the vice prime minister, stressed the construction for high quality education resources and for E-learning environment, the integration between information technology and education teaching, and the strategy for building a Learning-based Society and a Strong Human Resource Country. In 15, December, the Ministry of Education issued "The Notice on the First Batch of Pilot Schools for Education Informationization", officially approving 714 pilot schools for the first batch. And then the 12th Chinese Education Informationization Innovation and Development Forum was held in 20, December, in which the assistant minister, Duzhanyuan made a speech and requested that by 2015 in, "Three Pass" should be practically applied across the whole nation,--- Networking Every Single School, Resource-sharing Every Single Class, and E-learning for Every Single Person. And finally in 28, November, the national education resources public service platform was officially on line, marking the new era of national-scale digital education resources public service.

According to the national general plan on education informationization, colleges and universities take one after another their actual implementation scheme. And by 2010, the national colleges informationization has enter into the stage of digitization and intellectualization from network integration, has realized the education management

informationization, and has formed into a uniform information portal platform. And now almost all the colleges and universities of project 211 and 985 are realizing campus intellectualization, and other colleges has also realized the importance of education informationization.

While the flourishing development of higher education informationization, higher education is facing new challenges in the aspect of teaching concept transformation and traditional teaching management. And the digital test management in higher education will lead into many reforms in the respect of examination management, examination forms, examination content and examination evaluation

II. THE WEAKNESS OF TRADITIOANAL TEST PATTERN

A. Test form lacks diversity

Up to now, most colleges adopts the closed-book exam and written papers, and seldom employ the form of open-book, oral presentation and practical operation. While the closed-book exam embodies the test justice to some extent, it offers no chance for students to express their creative ideas, and go against the cultivation for students' creativities.In traditional closed book examination process, students are often in order to pass the exam taken rote learning method to deal with, and this should be through their own thinking to understand knowledge is ignored, especially some of the liberal arts curriculum, this problem is particularly prominent.

B. Test content lacks innovation.

Examination is supposed to not only inspect students' learning about professional knowledge, but also test students' ability to settle problem with their professional knowledge application. Traditional test contents mostly focus on teaching materials, learning notes and the given key and difficult points. While the tests take mostly the forms of filling blanks, multiple choice, and counting, which are all objective test item emphasizing the subjects' memory abilities. As a result, the students in general focus on reciting what they have learned, and seldom take a second thought for the learning, which goes against with the cultivation and development for students' creativities.

C. Test result lacks reference value

According to the traditional test, quite a few teachers and students consider examinations as a part of teaching process. In other words, by the tests, teachers want just to complete the teaching tasks by the tests, while students asks only for the scores. By the influence of the concept—teaching for test, and learning for test, many teachers have underplayed their supervising role in teaching activities, and students haven't full-played their dominant role in learning, and it turns out that all the examinations are becoming a mere formality. In addition, most tests to higher education courses are gathered together after the courses completion, which enabled teachers to have insight into their students' learning and to improve their teaching accordingly..

III. THE CHARACTERISTICS FOR TEST MANAGEMENT

Nowadays, the higher education in China has developed into a stage of Mass Education: the number of students increases greatly, and multi-campus education is more popular than ever. Under the circumstances, it becomes more and more and more difficult to test arrangements, personnel assignment, papers marking, papers filing and quality monitoring.

A. The tall order for higher education test management regulation

The education administration is currently in colleges and universities in charge of the test management, namely national examinations and the course examinations in colleges. National examinations consists of College English Test, National Computer Rank Examination and so on, and equipped with definite and strict test regulations claiming for highly qualified personnel and fully specified procedures. On the other hand, the course examinations in colleges are in the reality of too much test subjects, frequent test time, arduous invigilation, and the collision between test time and test spots. Therefore, it is urgent to make out a serious of comprehensive and practical test management system.

B. Periodic nature university examination management

The talent training program of higher education has made a clear plan for each teaching link of personnel training. Therefore, all the teaching management work including the examinations should corresponds to the periodic regularity. In order to conform to the characteristics of the university management, the national examinations organized by the university of also have a certain degree of periodicity. For example, the national College English Tests are held twice a year, respectively, in June and in the middle of December, and the Computer Grade Examinations are arranged at the end of each March and September. This periodic regularity is the favorable condition for the realization of the examination management information.

C. Heavy workload of university examination management

Examination affairs work is the organization and management of the whole process of the examination, including room setting, release of invigilating arrangement, examination training, and examination paper management etc. According to the statistics, the national College English Test holds the largest participation number. Take the author's university as an example, every year there are over 10000 participants as shown in Figure 1, which causes a big challenge to the organization of examination. If the informationization of examination is realized, there will be more efficient and standardized management for examination.
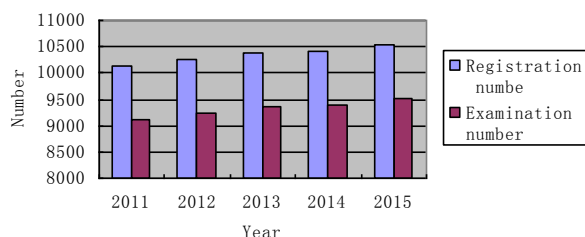
Figure 1. 2011-2015 College English test statistics

IV. EXPLORATION ON THE MANAGEMENT MODE OF INFORMATION EXAMINATION

Based on the above analysis of the examination and management work, the implementation of information construction projects in the university examination management, is not only a useful exploration to solve the problem in the new situation but also an essential way to improve the teaching quality and management level of colleges and universities. Through the information construction of the examination management, firstly, it can further improve the efficiency and reduce the workload of teachers and administrators. At the same time, it also provides a new way for the reform of the teaching reform thus promote further improvement of teaching quality.

A. Informationization of examination organization and management

With the help of computer's powerful data processing capabilities, through database and modular design concept, we can achieve the following functions as establishing and perfecting the examination management information system, implementing test matches, realizing the function of automatic arrangement, generating and printing report and so on. Through computer network, it connects the school monitoring center and time-to-time monitoring the examination room thus can easily find the sudden cases in the examination room and make the problem get a proper solution in the first time.

B. Informationization of examination content and form

Traditional examinations generally use paper-printed form, which causes a lot of trouble in packaging, scoring and archiving etc. Non paper examination has already been used in some of the university's courses. Take the author's university as an example; courses like English, metalworking practice, computer etc have put the non-paper examination into practice. Through information technology we can establish the curriculum assessment information platform thus in some process focused courses, teacher-student interaction, participation in the discussion, submitting papers and so on will become more feasible. With the further development of information construction in Colleges and universities, non-paper examination will become a development direction in the future.

C. Informationization of examination assessment

In the course of teaching, with the help of information technology, teachers can carry out different forms of examination or investigation according to the teaching plans such as the mid-term test, question discussion, and the investigation of the teaching situation and so on. As a result, the teachers to solve the problems found in the teaching process immediately. Simultaneously, the problems the students found in the learning process can get the timely guidance of teachers. After the examination of the course, the system can automatically carry on the statistical analysis to the test result and form the curriculum evaluation report based on which the teacher may carry out the teaching reform.

V. IMPROVE THE EXAMINATION MANAGEMENT SYSTEM

A. The establishment of scientific evaluation system

On the basis of thorough investigation and study, we study and use the results of modern pedagogy, psychology, research and planning and evaluation system, establish the evaluation criteria for the quality of various types of examination questions, and provide objective, scientific and fair guarantee for improving the quality of the course examination. According to the characteristics of the course content, we have carried on many levels and many credit evaluation to the students. The test results of a course can be made in various ways, including the theory, skills, oral, homework, practice, design, etc.. Part of the course we have tried the network test, to achieve the man-machine dialogue, not time, not fixed point of modern management means. At the same time, according to the requirements of knowledge, ability and quality, the examination proposition is analyzed and detailed, and the method of teaching and learning is determined according to these characteristics. Examination content reflects the students' basic theory and basic skills of the master, reflecting their analysis and solving the problem of the comprehensive use of capacity, is no longer a simple classroom teaching content. Examination, we emphasize more students to provide exploring opportunities, encourage students to think independently and maverick, consciously cultivate students innovation consciousness and ability, comprehensive test and evaluation of the students' knowledge, ability and quality.

B. Establish and improve the examination results evaluation and feedback mechanism

On the examination results to be combined with the comprehensive evaluation of the course summary and evaluation, and gradually increase the proportion of the total score in the general assessment, the implementation of percentile system, grading system and the combination of comprehensive evaluation method. At the same time, the test results analysis, summary of teaching experience, found that the problem in time to correct, the establishment of effective feedback channels and communication mechanism.

C. Strengthen examination management

To improve the construction of curriculum syllabus, the full implementation of teaching and examination of the separation. Strengthen the construction of all kinds of questions, especially public class, key professional backbone courses and some skills of the library construction work. To strengthen examination

management, and constantly improve the system of exam management, focus on the proposition, printing, invigilation and marking, evaluation aspects of the work, kaofengkaoji serious, serious examination of the justness and standard.

VI. PROBLEMS NEEDING ATTENTION IN THE PROCESS OF REFORM

A. Correct test purpose

Examination is an important means of teaching evaluation, not the goal. The basic task of the examination is to test the students' basic theory, the level of knowledge, and find the problems in teaching, to test the students' learning effect, and urge students to learn. The purpose is to examine the teaching effect, improve teaching, improve teaching quality, strengthen students' knowledge, improve ability and quality. Therefore, we should be good at using various examination methods to monitor and monitor the quality of teaching, and guide the teaching behavior, and urge the students to study hard, and guide students to pay more attention to the cultivation of knowledge accumulation ability and innovation spirit.

B. Enrich the way of examination

The test can be used in written, oral, design, paper, the actual operation and open book, closed volume in a variety of ways, each kind of examination method have their respective advantages and disadvantages. We stress the reform of the exam, but we must not ignore the role of the closed book examination; we use the oral exam, but we must not neglect the role of the written examination. According to the characteristics of the curriculum, teaching content and teaching object and the use of different test methods.

C. Various types of questions

Item design flexibility, less some only in one way, only one answer to the question, some comprehensive thinking questions, analyzing questions and applied questions. Design of exam questions, should make every student to solve every problem has a knowledge of the deep understanding, analysis, comparison, mastery of the process, training students' multi thinking. To provide students with the opportunity to explore and possibility, encourage students to think independently, new in order to be different. Pay attention to intellectual development, to avoid the chance of the exam, the exam work into teaching innovation, play a good foundation, training ability, the development of the right track.

VII. CONCLUSION

University examination management is an important part of the teaching management work. In the background of the reform of higher education informationization, the informationization of examination management appears to be more important. Promoting the construction of the examination management informationization, not only can improve the efficiency and quality of the examination management, make up for the shortcomings of the traditional examination mode, but also can provide information exchange platform for teachers and students, and promote teachers to actively carry out teaching reform and thus further improve teaching quality.

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