Study on Optimization Strategy of Examination Management Process of Vocational Education

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Abstract: In view of the problems of examination management in higher vocational colleges: aging serious, lack of experience, the system service level lags behind, the test environment is not perfect, imperfect management system, according to the theory of business process optimization, education measurement theory and the humanistic curriculum theory, we clear and definite the college exam attribute and design examination mode scientificly, we set up corresponding examination system, The curriculum examination system has been perfected and the management level of curriculum examination has been improved. Explore comprehensive evaluation mode, including process evaluation, final examination, application level and evaluation method of students' knowledge and ability. Adopt information method, simplify management process, improve efficiency, reduce error.

1. Introduction

The scale of vocational education in China is expanding year by year, and the examination management is becoming more and more complicated. There are problems such as aging system, lagging service level, imperfect examination environment and imperfect management system, which seriously affect the quality of vocational education. It is necessary to study the excellent theory of examination process, follow the rapid development of knowledge economy and information technology, and constantly improve and perfect the examination management mode.

The process reengineering theory is to analyze and design the work flow fundamentally and completely, and manage the change, optimization and replanning to pursue the performance. On the premise of scientific management thought, using some modern information management technology and applying the theory of business process reengineering in college examination management can further improve the performance of college teaching management.

There are many problems in examination management, including purpose, content and process. The current form of examination management is not scientific. Examination management is rigid, lack of scientific management system, low degree of standardization, lack of scientific education evaluation. However, the college curriculum examination is full of utilitarianism. Contrary to the goal of education. Hope to standardize course examination management [1,2]. Unified examination requirements, and the diversity of examinees contradiction, examination management organization and system is not perfect, weakened the power of examination management, resulting in cheating phenomenon can not be seriously dealt with. The examination management system lags behind the educational concept and examination concept of The Times [3,5]. The solutions to the problems in the examination mode of higher vocational colleges need to be improved, especially the process optimization.

This paper focuses on the examination management Process in colleges and universities, and combines the basic theory of Business Process Reengineering (BPR) with the examination

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management in colleges and universities, so as to improve the efficiency of the examination management in colleges and universities and provide a new idea for the theory and practice of the examination management in colleges and universities. Analyzes the existing puts forwards management model, in order to reveal the existing examination management mode, and puts forwards the insufficiency of management, combining the ideas of the business process reengineering in the enterprise starting from the function and purpose of examination management, summed up the overall process of examination system in colleges and universities, and combined with the examination management of the universities of foreign successful cases, using benchmarking analysis tool of technology, Based on Business Process Reengineering (BPR) and humanistic curriculum theory, this paper analyzes the problems existing in university examination management, deletes and optimizes those unnecessary processes, and explores the people-oriented examination mode. To improve the examination management of higher vocational colleges.

2. Examination Management Process Optimization Theory

2.1. Feasibility of Examination Management Process Optimization

The process reengineering theory is to analyze and design the work flow fundamentally and completely, and manage the change, optimization and replanning to pursue the performance.

Michael Hammer: Too many organizations are using new technologies to automate processes that don't work at all, rather than building different things based on new technologies. For example, instead of just building cars, use technology to "upgrade" horses with lighter horseshoes, thus making them faster. The former business process is thoroughly reengineered to improve the working efficiency of enterprises, and then enhance the comprehensive competitiveness and efficiency of enterprises.

With the continuous progress of society and the rapid development of knowledge economy and information technology, the scale of vocational education in China is expanding year by year, the new engineering of education service, the change of teaching content and way, and the management of examination affairs are also changing. On the premise of scientific management thought, using some modern information management technology and applying the theory of business process reengineering in college examination management can further improve the performance of college teaching management.

It is of great significance in both theoretical research and practical application to design the process reengineering of the examination management in colleges and universities by using the theory and method of business process reengineering and implementing and applying the reengineering process with the means of information technology.

2.2. Feasibility of Process Optimization

Colleges and universities have similar work pursuits and work contents with ordinary enterprises, so they can learn from the basic theories and methods of improving work efficiency adopted by ordinary enterprises, so it is particularly possible to achieve these goals by using process reengineering theory and information technology means.

UNESCO has pointed out that many new management procedures in industrial systems can be applied to practical education. Therefore, it is of great practical significance to apply the idea of business process reengineering to the education system of colleges and universities in order to put forward an efficient management process that is more suitable for the current situation of social development.

Examination management is one of the most important processes in university management. Many universities at home and abroad have used THE theory and method of BPR to optimize and improve some processes in universities, such as Massachusetts Institute of Technology, University of California Berkeley, Zhejiang University, Xi 'an Jiaotong University, etc., and have achieved good implementation effects. These successful experiences show that it is completely feasible to apply the idea of business process reengineering to the management of examination process in

3. The Problem of Examination Management Process

3.1. Cumbersome Operation Process

Colleges and universities the examination management process will involve the basic academic department teaching secretary, student and teacher of three levels, because the whole management process of dispersed in different departments, scatters on the process, make the examination information can't very well have been collected in one place, all departments have to is just a part of the whole process information, unable to see, And most of the office process adopts manual way, making the information processing process more complicated, resulting in the lag and occlusion of information transmission, and even often produce mistakes. The arrangement for make-up examination, delayed examination and so on is chaotic.

In the examination management, colleges and universities pay far less attention to the information feedback after the examination, which is also a widespread problem in colleges and universities in Our country. The current situation of education in colleges and universities in China is that if a student passes a course exam, he or she will get corresponding credits, that's all. If students pass the exam, they will no longer care about the problems they have not really understood in the exam, nor will they go to the teacher to solve the doubts in their hearts; It is also rare for teachers to call students together for further explanation and feedback on the results of examination analysis after the course. However, in the whole test management process, post-test feedback is actually a link for teachers to understand students' mastery of knowledge so as to better improve their teaching methods and benefit students the most. The impact of the lack of test information feedback process on the realization of the test management goal cannot be ignored.

3.2. Abbreviations and Acronyms

The examination mode of higher vocational colleges in China is single, and it is basically a closed-book examination, without corresponding practice, operation, skills and abilities as well as oral and defense tests. As a result, students' academic performance is usually determined by a single examination, ignoring comprehensive investigation and evaluation in many aspects. On the surface, this examination mode is simple, easy to operate, easy to manage, but the content of the examination is too single, almost all is the memory of some theoretical knowledge, for students' creative thinking, language expression ability, hands-on ability of the examination content is extremely lacking. This monotonous assessment method tends to affect students' thinking mode, is not conducive to the cultivation of students' innovation ability, inhibits students' learning initiative, and makes students' practical innovation ability and independent thinking and learning ability not better cultivated

3.3. Exam Arrangement Irregularities

For the examination of higher vocational colleges, almost all examination arrangements may be suspected of violations, including non-standard examination arrangements, examination leakage, etc., while higher vocational colleges lack of punishment for these problems. Leaking questions before the phenomenon of colleges and universities have existed in our country, especially in the liberal arts test, the test in the teacher will test paper to inform the students of the content of the test, the author reviewed the relevant test leaking questions some of the data and video, found leaking questions of teachers are mostly young teachers, for psychological reasons, worried that students failed the exam, so informed in advance of the content of the exam students. It can be seen that the lack of teachers' understanding of the exam leads to the wrong positioning of the exam, which further affects the students and makes them feel that the most important thing is to pass the exam. If they fail, they will not get their diploma. Therefore, in order to get the diploma smoothly, many students cheat in every way, and the school did not punish after the discovery, the main reason is because of the interest relationship between the school and the students, that is, the survival of the

school depends on the students, which makes the cheating problem of students in higher vocational colleges more serious.

3.4. College Examination Management Process Reengineering Design

Reengineering target positioning is extremely important, only to ensure accurate target positioning can the subsequent process be carried out smoothly. The fundamental goal of the process reengineering of college examination management system is to solve the problems of low efficiency and waste of resources. Specifically, based on the current college examination work content, the use of modern ways and means, combined with the actual situation of colleges and universities and available resources, to carry out a fundamental transformation of the existing work flow.

The reformed new process is described in standard documents and data description, so as to facilitate the process reengineering personnel to carry out the process reengineering according to the unified and accurate standardized requirements. After the process reengineering is completed, use instructions and operation guidance for the information-based office system implemented by the new process shall be formulated in accordance with the unified standards. User rights shall be clear, responsibilities shall be clear in the process of operation, and there shall be laws to follow and evidence to check.

The fundamental goal of process reengineering is to improve work efficiency and reduce waste of resources, and the basic principle should be strictly adhered to in the process of reengineering. Scientific and standardized management methods and data processing methods should be adopted in the process of reengineering. For example, software engineering theories can be used to implement and operate the information system.

4. Test Management Process Reengineering Method

4.1. Process Reengineering Design

Adoption of business process reengineering theory of college examination process reengineering, establishment of reengineering objectives and reengineering principle, on the whole, the process of reconstruction from the function module design, flow design, database entity graph design, system design, and system management and user layer from multiple aspects, such as emergency plan for the design of process reengineering. The design of the whole reengineering process fully reflects the application of information technology and modern management technology.

Reengineering goal: take examination management as the core part of the whole process. Concrete is based on the current content examination work, use modern ways and means, combining the actual situation and the available resources, a fundamental transformation of existing work process, design a set of new management processes for examination management, makes the examination management is normative and perfect institutional and make work more efficient and fast, It can better serve the teaching management work.

The fundamental goal of process reengineering is to improve work efficiency and reduce waste of resources, and the basic principle should be strictly adhered to in the process of reengineering. Scientific and standardized management methods and data processing methods should be adopted in the process of reengineering. For example, software engineering theories can be used to implement and operate the information system.

Information technology is an important method and means of examination management process reengineering, information technology rapid development, in today's society to brought subverts the traditional change at all levels and industry, information technology on the basis of the modern communication, network and database technology, summarize all the elements will be the research object to the database, using the technology, can greatly improve the efficiency of all kinds of behavior, To promote the progress of human society to provide great technical support.

4.2. Optimize the Course Examination Mode

Higher vocational education is an independent education system, which is obviously different from ordinary higher education in career planning and curriculum system. It is beneficial for higher vocational education to realize the optimization of curriculum examination function to carry out relevant examination activities according to the running rules of curriculum examination mode.

The basic purpose of the examination standard of higher vocational colleges in China is to train high-quality talents through education. The examination itself has the function of normative guidance and evaluation, which can guide students' learning direction and evaluate students' learning ability. The standardized guidance function of examination can provide teaching basis for teaching workers, and the evaluation function enables teaching workers to understand the advantages and disadvantages of their own teaching, so as to improve teaching methods and improve teaching quality and better serve students. This is the goal of examination in colleges and universities.

4.3. Test Content and Format

The educational model of vocational colleges in Our country is basically an integration of examination and teaching, which has no promoting effect on students' learning. The intension of test proposition must be enlarged, the electronic test bank should be established, and the mode of separation of teaching and examination should be implemented. Can achieve this goal through the implementation of three-level examination management system, the specific operation is: by the school department in charge of teaching unified deployment, each department of teaching management department to supervise and urge, each teaching and research office to the teaching syllabus as the basis for the development of examination syllabus, so as to establish each course of electronic test question bank. The questions in the question bank should follow the following principles: the difficulty, validity and reliability of the test paper, the principle of combining knowledge, the integrity of the test paper and the independence of the test paper. In the process of establishing the question bank, we must determine the question proposition according to these three principles.

Through establishing the corresponding electronic examination question bank, it can prevent the teacher from missing the question before the examination, which is beneficial to finish the teaching task in advance. On the one hand, it improves the effectiveness of teaching, on the other hand, it puts an end to cheating in exams. This paper evaluates and analyzes the scientificity of examination papers by analyzing the results of students' examination, and adjusts the question bank to meet the needs of teaching reform. This can solve the problem of teachers setting questions will.

4.4. Feedback on Test Information

The ultimate goal of higher vocational college examination is to monitor students' learning situation through curriculum examination. Examinations can help teachers understand students' learning, facilitate teachers to help students, and improve teachers' teaching methods. In addition, it can also help students understand their own shortcomings in learning, so that students can realize their own level, so that students make up for their shortcomings. The feedback function of examination is undoubtedly important for the teaching of higher vocational colleges, which can improve the efficiency of teaching and guide the direction of students' learning and teachers' teaching.

Taking the examination as the only means to evaluate students' ability is not conducive to students' learning, but will restrict the development of students' thinking ability, so that students focus all their attention on the examination, only pay attention to the results of the examination, and ignore the role of the examination. The examination is regarded as the ultimate goal of study and the final destination of study. Therefore, it is necessary to establish a new concept of examination, based on the analysis of various characteristics of examination, choose the most suitable examination mode for students, in order to play the benign function of examination, guide students to study, independent thinking and put forward new questions, inspire students thinking, as an expert

said:"Exams are designed to expand students' intellectual thinking and test their quality. Why not let students bring books into the exam room?"

The feedback function of examination is important to identify problems and guide the direction of students' learning and teachers' teaching.

4.5. Examination and Evaluation Reinforce Each Other

In the examination activities of higher vocational colleges, examination mainly focuses on the concluding evaluation of students, while educational evaluation focuses on value orientation and social value standard orientation, which are two different concepts. As mentioned above, examination is an intelligence test, while educational evaluation is aimed at the comprehensive development of students, specifically referring to the ability, skills and knowledge of students. It is a comprehensive evaluation of students, including physical health, interests and hobbies, ideological and moral character, psychological quality and other comprehensive factors. Examinations are quantitative evaluations of students, focusing only on results, while educational evaluations focus on process. Examination is only a part of evaluation, but it is an indispensable part. Due to the historical reasons of our country, the only measure for me to evaluate students is the exam. Therefore, we can use the evaluation method to improve the examination mode and use the test data to launch the evaluation of students, which is the best combination point of the examination reform of higher vocational colleges in our country.

Examination mode must be reformed, must reform of our country's higher vocational education evaluation ideas and methods, pay attention to the students' ability, potential and learning ability evaluation, using the test data as auxiliary resources, reduce the test constraints, optimization of the test model, adopt the method of test education evaluation to evaluate the students.

4.6. Diversified Examination Methods

The examination mode mainly consists of the examination form and the examination content which directly affect the examination result. The examination content of higher vocational colleges in China is mainly composed of three aspects, the first is basic skills and basic knowledge; Second, the ability to analyze and solve problems independently; The third is to test students' ability of innovation and inquiry. Therefore, examination mode needs reform in higher vocational colleges, the single test mode to diversification mode, can according to the different requirements of different classes, different test ways, such as case analysis, classroom discussion, paper writing, operating practice, half open book, comparative economics, methods of decoiling, understand the students' comprehensive information from all directions. For students' performance evaluation, can be divided into three modules, specifically refers to the inquiry and innovation module, application module, basic module, and combined with the actual situation, determine the percentage of each module in the total performance evaluation, in order to fully reflect the students' learning ability, innovation ability and intelligence level.

4.7. Test Content Innovative

The content of the examination should be innovated so as to highlight the examination of students' innovation ability and meet the requirements of thinking innovation and subject development. According to this, the rote memorization part of the test content can be appropriately reduced to reflect the foundation and comprehensiveness of knowledge and increase the operation of students

Skills, expression, judgment, understanding, analysis, etc.In addition, practical questions and comprehensive questions should be arranged appropriately in order to guide students to study critically and comprehensively, so that students with different learning abilities can achieve good results in the exam, so as to stimulate students' positive thinking confidence and desire to answer questions. Show students' expertise and innovation ability, the ability to analyze problems and solve problems with knowledge, so that the content of the test is no longer a mechanical memory process and the reproduction of basic knowledge.

The related construction of the administrative standards of the examination also lags behind the

development of the examination management activities, and does not constitute a perfect institutional system. As many college exam regulations, only on the rules and regulations of the behavior of students examination, focuses on students should follow the rule and obligations that and must abide by the system, therefore, must now set up and test related laws and regulations, to standardize the corresponding examination, give students rights and the corresponding examination standards, So that students can safeguard their rights and dignity in the examination,

4.8. Learning Advanced Experience

Many foreign universities have independent decision-making power to decide what kind of curriculum examination mode their schools take. In China, schools should make their own curriculum examination mode suitable for their own situation. We can improve the curriculum examination mode of higher vocational schools in China from two aspects:

The examination content will be students of the subject curriculum examination content detailed introduction to students, clear students' learning objectives, and the evaluation of students is supervised by students, there are principles, standards, requirements, but also open and fair. Drawing lessons from the examination mode of Lincoln University and combining with the specific situation of the school, the corresponding proportion of curriculum examination content is formulated. Students' usual homework accounts for 10% of the total score, their usual exam score accounts for 20%, their attendance and participation in teaching activities account for 10%, and their thesis defense account for 50%. Students' attendance and participation in class discussion activities account for 10% of the students' grade. The course examination model of Lincoln University has been well applied for many years.

5. Conclusion

Reengineering implementation and effect evaluation, in the implementation of the examination process after reengineering, clear difficulties in the process of reengineering, the adoption of reasonable implementation method is the key to success.

At present, the reform and construction of curriculum examination mode in higher vocational colleges is a huge systematic project, which must have the cooperation of relevant departments and relevant groups in order to achieve this goal.

The generalization and systematic innovation of curriculum examination in higher vocational colleges: to increase the education of curriculum examination, to perfect the system construction of curriculum examination in higher vocational colleges, and to give full play to the functional attributes of curriculum examination itself.

Compared with ordinary colleges and universities, higher vocational education has essential differences in career planning and curriculum system. The teaching methods and methods of higher vocational education, as well as students' evaluation and orientation, all form a system of their own.

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References

- [1] Fazhong Xie. Innovative Talent Training and College Curriculum examination reform [J]. Journal of Hefei University of Technology (Social Science Edition), 2010 (2):23.
- [2] Lijuan Lin. Study on the Current Situation of Course Assessment in Ordinary Universities -- A Case study of Jimei University [D]. Xiamen University, 2013:11.
- [3] Zhongcheng Zhang. Review and Analysis on the Status quo of Examination Mode in Higher

Vocational Colleges and Countermeasures.[J] Examination Weekly. 2017 (07).

- [4] Yuwei Shi. H. Research on test Management Process Reengineering in Universities [D]. Harbin Institute of Technology, 2015-09-01.
- [5] Xiaodan Zhai. Analysis and Countermeasure Research on The Problem of Higher Vocational Students Cheating in Exams.[D] Liaoning Normal University. 2013 (03).