

Construction of Quality Assurance System for Master's Dissertations Based on TQM

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Abstract

Master's dissertation is one of the key indexes to evaluate the quality of postgraduate education, and it is also an important part of graduate education. With the rapid expansion of the scale of postgraduate education in China, the problems such as the decline of graduate quality, the lack of educational resources and the absence of supervision and management have led to a downward trend in the overall quality of the master's dissertations. In this case, by introducing total quality management theory, the construction method of the quality assurance system for master's dissertations based on TQM is proposed. It provides detailed construction ideas from the aspects of all staff participating in quality management, establishing the whole quality control system and giving full play to the functions of the school.

Keywords

Dissertation, Quality assurance, Total quality management (TQM), Graduate education.

1. Introduction

In recent years, the scale of postgraduate education in our country entered the stable period from the rapid development period, according to statistics, the number of the national graduate admissions is 273 thousand in 2004, then rose steadily to 386 thousand in 2008. After expanding enrollment in 2009, the number of enrollment rapidly increased to 449 thousand, and reached a peak of 630 thousand in 2015. Subsequently, the number of admissions dropped in 2016, but still reached the size of 517 thousand people. Compared with 2004 and 2008, enrollment increased by 89.38% and 34.09% respectively, the enrollment scale basically entered a stable period. Contrary to the expansion of enrollment scale, due to the decline of the overall level of students and the imbalance of educational resources, the quality of postgraduate education has declined, which has aroused the attention of the state and society. Therefore, since 2014, the State Council, the Ministry of Education issued "The opinions on strengthening the construction of quality assurance and supervision system for degree and graduate education" and a series of strengthening the quality of degree and postgraduate education reform measures, it indicates that the focus of graduate education in China has shifted from positive scale to high quality [1]. Among the many indicators to evaluate the quality of graduate education, master's dissertation is an important basis for measuring graduate students' R & D ability, innovation ability and academic level, and has become a key indicator, which plays an irreplaceable role in the process of postgraduate training. Therefore, it is the most important to improve the quality of master's dissertation. In view of the problems existing in the master's dissertations, it is of great practical significance to construct an effective quality assurance system.

2. Analysis of the Quality of Master's Dissertations

As one of the key indexes of graduate students, master's dissertation is an important part of postgraduate education. Its quality is not only an important basis for graduate degree awarding, but also an important goal of graduate education. But with the rapid expansion of the enrollment scale of

graduate students, there are some problems, such as the decline of postgraduate quality, the lack of educational resources and the absence of supervision and management, which leads to the decline of master's dissertations quality. The problems can be attributed to the following aspects[2,3]:

- (i) Topic: The topic is obsolete, become a mere formality, lack of full investigation, lack of innovation, practicality and academic value is not high;
- (ii) Discuss: The theoretical foundation is poor, the foundation of the paper is unstable, the data preparation is insufficient, and the demonstration is weak;
- (iii) Writing: Content is vague, plagiarism, patchwork, and the structure is messy, logical thinking is confused;
- (iv) Format: The format is arbitrary and not standardized; the use of terms and symbols is not standard, and the literature quotation is not standard;
- (v) Achievements: The results are poor and less original. Most of them are simple, repetitive and innovative.

The reasons for the decline of the quality of the master's dissertation come from four aspects:

- (i) The quality of the students. The quality of graduate student source affects the graduate dissertation to some extent, high quality source of students is an important foundation to ensure paper quality. With the rapid expansion of graduate enrollment, the number of graduate students has increased, but the overall quality of students has declined, especially for some non key universities.
- (ii) The problem of educational resources. The imbalance of educational resources, the lack of funds for training, the unreasonable structure of teachers and so on, all directly affect the quality of master's dissertation.
- (iii) Management system problem. The school lacks scientific and reasonable postgraduate training and monitoring system. The whole process of master degree thesis lacks process control, supervision, management and assessment.
- (iv) Students' own problems. Some of the students did not devote themselves to learning, in the pursuit of utilitarian heart under the fast track, the writing of master's dissertation lacks the source of water, so it is necessary to use simple repetition, plagiarism and other means to complete.

3. The Connotation of Total Quality Management

Total quality management (TQM) is a management approach, it takes quality as the center and full participation as the foundation, the aim is to achieve customer satisfaction and benefit all members and society of the organization and achieve long-term success, it represents the latest phase of quality management development. The original idea of TQM was proposed by Shewhart in 1920s. In 1961, American management expert Feigenbaum explicitly put forward the concept of TQM in the book "total quality management". Japan began to implement TQM in 1960s, and achieved fruitful results, and attracted worldwide attention. Since the late 1980s, TQM has been further expanded and deepened, and has gradually evolved from early total quality control (TQC) to total quality management. At present, TQM theory and technical methods have been widely used in various fields. TQM is a kind of pre control and comprehensive control system, its main feature is the "whole", it contains three meanings:

- (i) Horizontally, the management objects are comprehensive;
- (ii) Vertically, the scope of management is comprehensive;
- (iii) As far as the implementation is concerned, the personnel involved in the management are comprehensive.

Although TQM originated in the manufacturing field, it also has a very important guiding significance in the field of education. The United States was the first country to apply it to higher education, and Pennsylvania State University was a successful example of this [4]. In China, there are also some successful cases of applying TQM to higher education. For the postgraduate dissertation,

its quality is affected by various factors, these factors throughout the whole process of postgraduate training. The introduction of TQM theory into the process of graduate training will help to establish a comprehensive quality assurance system and improve the quality of master's dissertations.

4. Construction of Quality Assurance System for Dissertations based on TQM

The quality of master 's dissertation depends on the joint action of many factors, such as school, tutor student, etc.. These factors run through the whole process of the formation of master's degree thesis. Based on the idea of total quality management, this paper proposes a construction method of the quality assurance system of master's dissertation based on TQM in the following.

4.1 Establishment of Quality Management Mechanism with Full Participation in Dissertations

The process of the formation of master's dissertation involves not only the supervisor of the master, but also the management staff of the school which is engaged in the management of graduate education. How to form a good management mechanism, so that they can fulfill their duties, mutual cooperation, mutual supervision, is one of the key factors. According to the core idea of TQM, full responsibility system should be implemented.

In this process, the master tutor is the first responsible person, he has direct responsibility for the quality of master's degree thesis, and is also the main factor affecting the quality of thesis. Therefore, from the school level, we should strengthen the construction of the tutor team in a planned and targeted way, and take a variety of measures to promote the tutor to enhance the sense of responsibility and strengthen the guidance process. First of all, we should establish a flexible and diverse tutorial system, such as the use of dual tutorial system, mentor team collaboration system, etc., so as to make up the shortcomings of the tutor's knowledge, play the complementary advantages of the team. Secondly, it is necessary to make clear the responsibilities of tutors and strengthen the assessment of tutors. Many tutors are generally loose in graduate management, there are no fixed time and fixed pattern. Schools should make clear the responsibilities of tutors and be strict with them, and give full play to the enthusiasm and initiative of teachers, In order to ensure that the key steps were strictly, such as selection and proposal of paper topic, process check, paper review, pre defense and reply, etc.. The third is to strengthen the training of tutors. The tutor is also uneven, schools should carry out the tutor training meetings to explain the standardization and general requirements of the dissertations every year. At the same time, schools also should to guide how to avoid the problems in the process of writing thesis.

Other graduate education administrators should be clear about their responsibilities and perform duties of supervision, control, guarantee, management, assessment and evaluation, etc.. When the problems are found, they should be timely adjusted and resolved. The school should give full play to the management personnel's intelligence and ability, so as to form an efficient, coordinated and strict quality management mechanism, constantly improve and standardize the management system and process, and promote the overall quality of the master's dissertations.

4.2 Establishing the Whole Quality Control System of Master's Dissertations

The core idea of the whole process quality management of master's dissertations is to emphasize the service for graduate students, give priority to prevent problems and improve continuously.

(i) Topic selection control of the dissertation. Topic selection of dissertation determines the academic, innovative and practical of the thesis, has an important influence on the quality of the final paper. If school manages this link well, it can lay a good foundation for the follow-up process. The topic selection report is a way for the graduate students to analyze and demonstrate the background significance, research status, research methods, innovation and practicality of the thesis by referring to a large number of documents, and to solicit opinions extensively [5]. In order to ensure the effective control of this link, the graduate education management institutions should make clear plans, requirements, and conduct supervision and inspection. The tutor should set up a demonstrating team to demonstrate the feasibility innovation, scientific and normative of the topic, etc.. For the topic

report that does not meet the requirements, the tutor should put forward reasonable suggestions, and reexamine after being revised by the student.

(ii) Research control of dissertations. Tutors should guide, track and check the whole course of dissertation research. They should carefully examine and refine the research goal, technical scheme and research method of the thesis, and graduate students must communicate with instructors in various ways. It is necessary for instructors to meet regularly with graduate students to correct the deviation in time.

(iii) Examination management of dissertations. The management department should establish a process check and interim inspection regulations. This requires graduate students to maintain good learning habits in the course of research, and to record the research progress in detail for the purpose of checking and writing master's theses. Non periodical examination can prompt postgraduates to not relax their study in their research papers. The mid-term examination is to master graduate thesis writing progress and bottlenecks or difficulties in the thesis writing process, also in order to grasp whether the students in accordance with schedule, technical line to carry out the work, if management departments find out the problem, they should take remedial measures decisively[6].

(iv) The control of paper examination. The paper's examination includes review, duplicate rate examination, preliminary reply, formal reply and so on. The evaluation of papers can be carried out through the form of combining internal review with external review, where blind evaluation system should be adopted in external evaluation. Duplicate rate check is a means to prevent students from plagiarizing and copying the academic misconduct of others. It is necessary to check the duplicate rate of each paper, and also limit the students to revise the papers after checking the repetition rate. If the paper is revised too much, the duplicate rate should be checked again, and the supervisor should strictly check it in the process. The preliminary reply is a comprehensive pre examination method , it should be carried out according to the requirements of formal reply, can not be a mere formality or not carried out. For the unqualified papers in the preliminary reply, specific amendments should be put forward, those very poor papers should be postponed for reply. Formal reply is the final key to grasp the quality of dissertations, and the respondent team should be composed of school and off campus experts. The respondent group should not only objectively evaluate the innovation and overall quality of the dissertation, but also propose the revision proposal, give the quantitative score or grade, and finally give the decision whether to achieve the graduation and the master's degree conditions.

4.3 Giving Full Play to the Role of the School in Improving the Quality of Dissertations

As the main unit of master's degree training, school should provide guarantee condition for the quality improvement of master's dissertations.

(i) Strengthen the entrance control of graduate students. Good student source has a direct relationship with school brand reputation, style of study and school spirit. In order to attract excellent students. In the process of graduate entrance selection, the school to do a comprehensive measure and classification evaluation, enroll excellent students.

(ii) Strengthen the construction of academic degree points, set up a leading group and a steering committee for graduate education. Schools should increase investment in academic degrees to improve training conditions, innovative environment and built practice base, try to provide excellent learning environment and conditions for graduate students. The leading group and the steering committee of the graduate education should actively explore the relevant guarantee measures for the quality of dissertations, and play their leading responsibility.

(iii) Formulating positive policies for personnel training and introduction. The key to the quality of graduate education is the talent. Schools should formulate relevant preferential policies, encourage the cultivation and introduction of talents, constantly enrich the ranks of supervisors and administrators, improve the overall quality of personnel, and provide talents guarantee for the quality improvement of dissertations.

(iv) Establish a positive and effective incentive mechanism and elimination regulations. Establish reward and appraisal regulations for outstanding master thesis and excellent teachers, incentives should be given, such as scholarships, grants, various awards from the spiritual and material aspects. School should form an incentive mechanism and competition mechanism, and give full play to the enthusiasm and potential of students and mentors, so as to effectively promote the quality of thesis. At the same time, the elimination mechanism should be implemented, and the ineffective tutors should be eliminated.

(v) Establishing a scientific evaluation system for master's dissertations. First of all, it is necessary to analyze various factors affecting the quality of master's degree thesis, determine key control points, design evaluation index system, quantify the indicators at all levels, and be able to reflect the true state of the master's dissertations scientifically and objectively. Secondly, we should establish a periodical quality analysis system of master's dissertations, and constantly improve and perfect the evaluation index system through the problem summary and feedback.

5. Conclusion

According to the present situation of the quality of master dissertations, this paper proposed a construction method of the quality assurance system of master's dissertations based on TQM, its suggestions include three aspects: (i) Establishing quality management mechanism with full participation in dissertations; (ii) Establishing the whole quality control system of master's dissertations; (iii) Giving full play to the role of the school in improving the quality of master's dissertations. The quality of graduate thesis is an important manifestation of the quality of graduate education. Only by establishing a scientific, reasonable and effective guarantee system, the quality of master's thesis can be improved continuously, thus promoting the overall improvement of the quality of graduate education in china.

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