Analysis and Research on the Reform of Graduation thesis (Design) Management Mode in Application-Oriented Universities

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Abstract: Graduation thesis (Design) is a very important practical teaching link in the training process of applied talents. It can comprehensively test the training effect of students' comprehensive quality and practical ability. It is an important index to evaluate the school running effect of Applied Undergraduate Colleges and the training quality of applied talents. It can also reflect the teaching management, the teaching staff, teaching style and study style of colleges and universities. Applicationoriented Undergraduate Colleges and universities generally have a short construction time and lack of various resources and conditions. The construction time of the training mode of application-oriented talents is not long, and there are many problems in the management of graduation thesis (Design). This paper mainly studies how to improve the training quality of application-oriented talents by reforming the graduation thesis (Design).

Keywords: Graduation Thesis (Design), Management System Reform, Training of Applied Talents

1. Introduction

The cultivation of applied talents is an important part of national higher education in the new era. It is one of the directions and objectives of higher education transformation and development under the new socio-economic situation. As an important teaching link in the training of applied talents, the graduation thesis (Design) plays a very important role in cultivating students' comprehensive practical ability. In the teaching management of graduation thesis (Design), application-oriented colleges and universities should be more quality-oriented, reform the management system and promote the improvement of quality.

2. Analysis of Graduation Thesis (Design) Management

2.1 Problems of Management System

Most Application-oriented Undergraduate Colleges and universities have been established or transformed for a short time, and the previous research-based management mode is still retained for the management of graduation thesis (Design). Most newly-built colleges and universities refer to the old university management mode, and the research - based management mode is also the main mode when formulating work management methods, which is inconsistent with the training of application-oriented talents [1]. The requirements of the management system for students' graduation thesis (Design) are rigid, and most of the practical exercises stay on the requirements, which can not give full play to the exercise of students' practical ability. Moreover, the implementation of the system in application-oriented undergraduate colleges is often a mere formality. To ensure the graduation rate of students, they can not be managed strictly according to the system, and the system needs to be improved.

2.2 Problems in the Management Process

2.2.1 Issues and Topic Selection

The structure of teachers in Application-oriented Undergraduate Colleges and universities is unreasonable, the number of teachers with high academic titles is small, the age is old, there are many teachers with medium and low academic titles, and the age is relatively young. Moreover, most

teachers work in colleges and universities after graduation, have no enterprise work experience, lack of understanding of production practice, insufficient level of solving practical problems, and relatively weak scientific research ability, the combination of the proposed graduation thesis (Design) topics with engineering practice and social practice is not high, and the proportion of topics that can be completed in practice is low. Application-oriented undergraduate students often compare to choose company to choose compelled to choose computer to choose compared to choose compass to choose combine to choose simple topics when choosing topics, are unwilling to choose slightly difficult topics, and are unwilling to spend too much time in the graduation thesis (Design) link.

2.2.2 Propose a Thesis and Expound Its Feasibility

The opening of graduation thesis (Design) is to let students understand the problem of "what to do, why and how to do". Students need to complete the topic summary, key technology, the feasibility analysis and the time arrangement under the guidance of teachers. Some colleges and universities also have the requirements of foreign language translation. The management norms of opening questions in colleges and universities are similar, but the management is formalized. Students can submit opening reports and other materials, but they do not think deeply about the topic "what to do, why and how to do", and even do not form a concept, which leads to the replacement of topics in the later stage. What's more, the paper finally becomes a big summary.

2.2.3 Writing, Evaluation and Defence of Graduation Thesis (Design)

The time of undergraduate graduation thesis (Design) was generally arranged in the last semester. Students have to spend a lot of energy on postgraduate entrance examination, public examination, job search and graduation practice, which leads to students' insufficient attention to the graduation thesis (Design) and limited energy. Moreover, students generally believe that if they find a job or enter the postgraduate (civil servant), the school will lower the standard, let students pass the examination of graduation thesis (Design). Students do not take their graduation thesis (Design) seriously, which will lead to insufficient time investment, patchwork when writing, the repetition rate exceeds the standard, and they do not modify it according to the requirements of teachers, hoping that the school will raise their hands. In addition, due to the weak practical and scientific research ability of some instructors, the guidance effect on students on practical topics is poor. At the same time, teachers have to undertake routine work such as teaching, management and scientific research, and their time and energy is limited, which leads to the low quality of graduation thesis (Design), imperfect works, and even students' inability to complete tasks or fail in grades.

2.3 Problems in Quality Supervision and Evaluation System

Only pay attention to results evaluation. The graduation thesis (Design) link often lasts about two semesters and 24 weeks, with heavy writing and design tasks. Therefore, the result oriented evaluation is mainly used in the evaluation process, and there is contempt for the process evaluation. Generally, the main evaluation angle is reviewing and defense, focusing on the result evaluation, but the evaluation monitoring in the process of link development is a mere formality, it can not improve quality through monitoring and evaluation. Taking the 2020 graduation thesis (Design) of XX College as an example, a certain number of students changed the title on the eve of the defense, and even found that more than 10 titles were the same on the eve of the defense. The students changed the title and completed the writing within 3 weeks. The quality situation can be imagined, and it is useless to investigate the responsibility. The reason is that the topic audit and opening audit are not rigorous, and the lack of evaluation and monitoring affects students' graduation, and even leads to academic misconduct.

3. Self Evaluation is the Main Factor, and the Standard Implementation is not in Place

The graduation thesis (Design) quality evaluation system of Applied Undergraduate Colleges and universities is mainly led by the academic affairs office and Quality Evaluation Office of the school level monitoring department. The college level monitoring is mainly composed of the defense committee, the vice president of teaching, the director of the teaching and research office and the college Supervisor. The grass-roots monitoring mainly depends on the instructors and evaluation teachers. External evaluations such as off campus experts and scholars, representatives of industrial enterprises and social evaluation institutions are rarely introduced. The objectivity of the evaluation results is questionable. There are false high scores, low failure rates, and even all staff pass, but the

actual quality decreases. Students' scores are generally converted by the instructor's score, review teacher's score and defense score in proportion, while many teachers in the school will score according to human feelings, resulting in deviation among the scores and the quality of papers (Design) and insufficient credibility of evaluation conclusions.

3.1 Thoughts on the Reform of Graduation thesis (Design) Management

3.1.1 Do a Good Job in Top-Level Design and Establish an Effective System

As the main position for the cultivation of applied talents, the construction of graduation thesis (Design) management system must start from optimizing the top-level design, highlight the training of practical ability, promote the integration of graduation thesis (Design) with the actual situation of industrial enterprises, and adopt various forms of graduation thesis (Design) with the goal of cultivating applied talents, Construction of management system and workflow [2]. In particular, considering the graduation season of the eighth semester, students should be busy with graduation internship, the job search, postgraduate entrance examination and public examination. The school should set up a more reasonable and flexible arrangement of graduation thesis (Design) time from the system. Students' high-level competition, scientific research and social practice achievements can be used as the basis for graduation thesis (Design) assessment, and exemption or credit replacement can be given.

3.2 Strengthen Process Management, Strictly Controls Important Links and Gateways, and Improve the Management Efficiency

The undergraduate graduation thesis (Design) starts from preparation and goes through a series of links such as mobilization, the topic setting, topic selection, topic opening, mid-term inspection, review, defense, excellence evaluation and work exhibition. The time cycle is long. To ensure the quality of graduation thesis (Design), in addition to the specified actions of each link to ensure no deformation and distortion, we should also introduce modern information management means such as the management system, strengthen the utilization of resources inside and outside the school, and carry out comprehensive monitoring and management in all links. The details are as follows:

3.2.1 Standardize the Link from Topic Setting To Topic Opening, and Make Preparations before Writing

The stage from topic setting to topic selection is the initial stage of undergraduate graduation thesis (Design), and its importance is self - evident. Do a good job in the management from topic review to topic opening, so that students can clarify the nature and specific requirements of the topic, the task difficulty and weight, schedule, complete topic summary, and conduct topic opening defense, so as to effectively ensure the quality of the link and avoid frequent changes in topic selection in the later stage, repeated rewriting leads to a serious decline in the quality of graduation thesis (Design).

It is necessary to introduce forces outside the school, implement the double tutor system, and select industry enterprise experts as the second tutor on the basis of school tutors, so as to make full use of enterprise resources and obtain problems from production practice, and avoid the problem of insufficient practical experience of teachers in Applied Undergraduate Colleges and Universities [3]. In the examination stage, experts outside the school shall be organized to review the topic, check the topic twice, and check whether there are problems such as unclear task, too much or too little workload. Such topics can be released only after modification.

Doing a good job in the opening defense is an effective means to ensure students' in-depth understanding of the topic. Through the defense, the instructor can understand students' cognition of the topic, whether they have consulted the reference materials as required, and whether the arrangement of the topic writing outline is appropriate, and can urge students to complete the link requirements. At the same time, in order to give students more time to choose and think about the topic, it is more suitable to start the topic from the seventh semester. Students can reasonably arrange the time of graduation thesis (Design) according to their graduation arrangement. With the time guarantee, the quality of graduation thesis (Design) can be guaranteed.

3.2.2 Guidance, Evaluation and Defense Are the Key Links

The first person responsible for the quality of undergraduate graduation thesis (Design) is the instructor. Teacher guidance is the key to whether students can complete it with high quality. After the topic is opened, the instructor should meet with students every week to communicate the work progress,

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pay attention to the students' writing progress in time, and strengthen guidance for students with more problems. At this stage, the college should provide some help to the instructors. For students who cannot stay in school for practice outside the school, they should cooperate with the strict requirements of the teachers and adopt various methods, such as the management system or instant messaging tools, to ensure that the students can complete the work as required.

Teachers' evaluation and reviewers' evaluation are the evaluation links to test whether the quality of students' graduation thesis (Design) meets the standard. The mode of each university in this link is basically the same. There are sufficient requirements for instructors and reviewers, and there are clear provisions on the evaluation standards. Strict evaluation is an important factor to ensure the quality. To improve the evaluation quality, first, we should strengthen the sense of responsibility of evaluation teachers, second, we should carry out interdisciplinary and inter college evaluation as much as possible, and third, we should blindly select some graduation theses (designs) and send them to off campus evaluation.

The defense link is the last pass of the graduation thesis (Design). Generally, 3-5 experts should be organized to publicly evaluate the quality of students' graduation thesis (Design) at the same time. If the requirements are not strict, it will lead to the decline of the quality of graduation thesis (Design), which is becoming more and more common in Colleges and universities. It is an effective means to employ other college experts and off campus experts to participate in the oral defense of the hospital, which can standardize the reduction of oral defense requirements due to human relations and other reasons, and ensure the quality of oral defense.

3.3 Improve the Quality Supervision System

In the process management of undergraduate graduation thesis (Design), in addition to standardized management, it is necessary to strengthen quality monitoring in key links. The university should play the role of teaching supervision, strengthen process monitoring in the topic setting, topic opening, mid-term inspection, evaluation and defense, and the quality evaluation department entrust sts in-school supervisors or off-campus experts to conduct random inspection, diagnose the problem at an early stage and feed it back to the management department for rectification. In particular, the introduction of off campus experts in such links as sampling and defense can further promote the implementation of the management system and promote all links to be carried out in accordance with the norms.

3.4 Guarantee Conditions

The task of undergraduate graduation thesis (Design) is heavy and long. To ensure the quality, in addition to strengthening management, doing a good job of condition guarantee is also the top priority. First, there are many problems in the structure of teachers in Application-oriented Undergraduate Colleges and universities, which has high requirements for the cultivation of students' practical ability. Therefore, it will be of great use to introduce industry and enterprise experts to participate in guidance and management. Colleges and universities should issue policies and explore the construction of a more perfect double tutor system [4]. Second, the graduation thesis (Design) of Application-oriented Undergraduate Colleges and universities should focus on practical topics. If students want to complete the practical work of practical topics, they need to purchase materials. Colleges and universities should do a good job in the budget of graduation thesis (Design) funds, simplify the reimbursement process, and enable students to have a targeted goal. Third, because of the actual situation, many students need to leave school in the process of graduation thesis (Design). The introduction of graduation thesis (Design) management system and the use of information means can effectively solve the communication problems between teachers and students in different time and space, and it is more convenient for the management Department to provide services and early warning according to the progress of graduation thesis (Design) at any time [5].

4. Practical Application

4.1 Build a more Perfect Undergraduate Thesis (Design) Management System

In order to comply with the pace of socialist modernization with Chinese characteristics and cultivate qualified successors who have modern literacy and can participate in the construction of a modern country, the state pays more attention to the quality of undergraduate talent training, and also puts

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forward new requirements for undergraduate higher education. A number of documents have been issued to clarify the requirements for undergraduate talent training and graduation thesis (Design), applied undergraduate colleges and universities shoulder the task of cultivating applied talents for the country. They need to quickly improve the undergraduate graduation thesis (Design) management system according to the requirements. In addition to improving the management and requirements of graduation thesis (Design) quality standards and repetition rate detection on the basis of the original management system, application-oriented universities should do a good job in the sampling inspection of graduation thesis (Design) in terms of quality control, and strengthen the supervision of graduation thesis (Design) writing, trading and other aspects.

4.2 Building a Team of Undergraduate Thesis (Design) Instructors

For application-oriented colleges and universities, the graduation thesis (Design) link must focus on the training of students' practical application ability, and let students realize the current specific industry development direction in the topic and guidance process, which puts forward higher requirements for graduation thesis (Design) instructors. How to cultivate and build a graduation thesis (Design) instructor team more suitable for the cultivation of applied talents mainly focuses on the following aspects. First, pay attention to the selection and training of graduation thesis (Design) instructors, select teachers with strong scientific research ability and enterprise work experience as instructors, strengthen the training of young teachers, and cultivate teachers' comprehensive application ability in the form of tutorial system and temporary post in enterprises. Second, strengthen school enterprise cooperation and collaborative education, select graduation thesis (Design) topics from the front line of industry enterprises, hire industry enterprise experts as second instructors, and introduce industry enterprise resources into colleges and universities. The third is to strengthen the feedback of scientific research on teaching. The scientific research department of the university should strengthen the scientific research ability.

4.3 Strengthen Student Mobilization and Training in Various Aspects

With the popularization of higher education, the comprehensive quality of college students continues to decline, especially for application-oriented colleges and universities, there is still a lot of gap between students' style of study and research universities. Students often have a mentality of wanting to do but unable to start or unwilling to do what should be done in the graduation thesis (Design) link, which requires the school to do a good job in student mobilization and training. First of all, schools, colleges, counselors and instructors must strengthen mobilization, convey the importance and necessity of graduation thesis (Design) to students, and stimulate students' endogenous motivation. Second, we should cultivate students' scientific research and writing ability in many aspects, hire experts inside and outside the school to offer some lectures or training for the graduation thesis (Design) writing, so as to help students clarify their ideas.

4.4 We will strengthen the Conditions and Funding for the Undergraduate Thesis (Design)

The graduation thesis (Design) of Application-oriented Colleges and universities should focus on the practical work of practical topics, and the topics should be combined with social practice and industrial enterprise background as much as possible, which requires the school to make great efforts in terms of funding and condition guarantee to meet the needs of students in subject accessories, research, text printing, data access, software application and other aspects, so as to ensure the high-quality completion of the topics.

4.5 Applying the Graduation Thesis (Design) Management System to Improve Process Management Quality

Graduation thesis (Design) process management is the key link. How to improve the process management level, in addition to improving the quality requirements of each link, the application of graduation thesis (Design) management system is a more effective means. The management system can intuitively display the work progress of the graduation thesis (Design), realize the whole process online guidance, and enable the school quality management department to effectively monitor and spot check the operation of each link of the graduation thesis (Design). Using the management system, it can more conveniently and quickly connect the off campus resources, better realize the off campus instructor's process guidance and industry enterprise expert process monitoring, and the students practicing outside

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can also connect with the instructor in the whole process through online. The application of management system can effectively improve the quality of graduation thesis (Design) management.

5. Conclusion

The fundamental purpose of the reform of graduation thesis (Design) management mode in applied universities is to improve the training quality of applied talents, better cultivate and exercise students' comprehensive practical ability, standardize the graduation thesis (Design) management through reform, and optimize and expand the process, form, content and quality monitoring, so as to meet the characteristics of different disciplines Different students' personalized development needs, so as to adapt to the characteristics of Application-oriented Undergraduate Colleges and universities, promote the teaching of undergraduate graduation thesis (Design), and give better play to the role of application-oriented talent training. This paper discusses the specific strategies for the reform of graduation thesis (Design) mode in Applied Undergraduate Colleges and universities, and puts forward some measures to improve the quality of graduation thesis (Design) and cultivate the application innovation and practical ability of undergraduates by optimizing the graduation thesis (Design) objectives, topic selection, guidance, and process management and evaluation criteria.

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References

[1] Han Yuzhi Problems and Reform Countermeasures in undergraduate graduation thesis [J] China higher education research, 2000 (09): 78-79

[2] Qiao Jun, Meng Qingling Some thoughts on improving the quality of undergraduate graduation thesis [J] Educational exploration, 2011 (09): 46-47

[3] Shi Huan, Zhao Yuan, Zhang Lili, Yang Yufang, Wang Baiyan, Guo Jing Thoughts on the current situation of graduation project management of mechanical specialty in Applied Undergraduate Colleges [J] Internal combustion engines and accessories, 2019 (18): 266-267

[4] Luo Qi Analysis on the current situation and Countermeasures of graduation thesis (Design) management in newly-built Application-oriented Universities -- Taking Fujian Jiangxia University as an example [J] Journal of Taiyuan City Vocational and technical college, 2019 (01): 118-120

[5] He. Thoughts and Practices on Improving the Quality of Graduation Design in Applied Undergraduate Colleges[C]// Proceedings of the 2019 5th International Conference on Social Science and Higher Education (ICSSHE 2019). 2019.