

# Research on the Path to Improve The Quality of Undergraduate Theses in Application-oriented Universities

Yujie Lai

Xi 'an Aeronautical University, China

## Abstract

Undergraduate graduation thesis is an important practical teaching link of undergraduate education and teaching, and an important content of application-oriented colleges and universities to achieve the goal of talent training. Graduation thesis is not only a summary and deepening of students' professional learning in college, but also a comprehensive inspection of the teaching quality of applied colleges and universities. It is of great practical significance to study the quality evaluation of applied college graduates' theses. From the two aspects of students' application ability and school training quality, this paper puts forward a way to improve the evaluation index system of applied undergraduate thesis quality.

## Keywords

Thesis quality, Statistics, Promotion path.

## 1. Introduction

High-quality development is the only way to realize the modernization of higher education, leading high-quality development with new development concepts and speeding up the modernization of higher education are inevitable requirements for comprehensively building a modern socialist country. In November 2020, the National Conference on the Construction of New Liberal Arts officially issued the Declaration on the Construction of New Liberal Arts, forming a consensus among universities to "accelerate the innovative development of liberal arts education".

The Department of Higher Education of the Ministry of Education clearly stated in the "four new" construction as "new liberal arts", which is a new discipline that breaks through the traditional liberal arts thinking and promotes the cross-disciplinary integration. The fundamental goal of the construction of "new liberal arts" is to improve the quality of personnel training in the professional field and train new forces of philosophy and social sciences to adapt to the development of The Times. Statistics teaching of economics and management major is facing new opportunities and challenges. The fundamental goal of the current undergraduate statistics course teaching reform is to cultivate compound talents with data literacy, proficient in data analysis tools and solid professional knowledge, so as to meet the requirements of the construction of "new liberal arts" and realize the training goal of compound liberal arts talents. On January 7, 2021, the Ministry of Education launched the pilot work of undergraduate graduation thesis sampling. For universities with serious problems in the sampling results, the allocation of educational resources such as undergraduate education and teaching evaluation, first-class undergraduate major construction, undergraduate major certification and professional construction funds investment will also be affected. Therefore, the release of random inspection signals forces colleges and universities to improve the quality of talent training, which helps to improve the seriousness, attention and quality awareness of students and schools on undergraduate graduation papers. Random inspection can reflect the basic academic situation of undergraduates in school, but also can expose the weak link in the process of talent training. Undergraduate graduation thesis sampling focuses on the significance of topic

selection, writing arrangement, logical construction, professional ability and academic norms and other "qualified" inspection. The focus of the investigation includes both basic academic norms and basic academic accomplishment of undergraduates. Through this carrier, the paper examines the professional accumulation, thinking mode, scientific research ability and overall quality of college students formed in the undergraduate study. The preliminary idea of the statistics teaching reform oriented on improving the quality of undergraduate graduation thesis is to combine the statistics course with the graduation thesis of undergraduate students majoring in economics and management, rebuild the statistics curriculum system, and involve the whole process of statistics theory and practice in the writing process of undergraduate graduation thesis. By virtue of the advantages of statistics courses, we can achieve the purpose of improving the quality of undergraduate graduation papers in economics and management majors.

Undergraduate graduation thesis is an important practical teaching link in undergraduate education and teaching, and an important content for application-oriented colleges to achieve the goal of talent training. Graduation thesis is not only a summary and deepening of the students' professional learning in college, but also a comprehensive inspection of the teaching quality of application-oriented colleges and universities. The quality of the thesis not only reflects the students' mastery of professional knowledge, the cultivation of scientific research thinking and the application of writing skills, but also reflects the quality and level of school education and teaching.

## 2. Research Review

The research on graduation thesis quality evaluation system and improvement path is also an important issue on graduation thesis quality improvement in recent years. A large number of scholars have continuously improved and enriched the methods of graduation thesis evaluation system through different directions and means, in order to make the existing evaluation methods more scientific and more applicable.

Gong Feng (2014) first constructed the quality evaluation index system of science and engineering graduation thesis, used analytic hierarchy process (AHP) to evaluate and analyze the quality of science and engineering graduation thesis, comprehensively and systematically rebuilt the quality evaluation system of science and engineering graduation thesis, and analyzed the weight characteristics of the quality evaluation index system of science and engineering graduation thesis. Further, it puts forward the strategy of improving the quality of science and engineering graduation thesis[1].

Qi Yanbo (2015) studied the construction of quality evaluation criteria for undergraduate graduation thesis in medical colleges based on Delphi method, and determined the quality evaluation criteria for undergraduate graduation thesis sampling after two rounds of expert consultation. Combined with the positive coefficient of the two rounds of consulting experts, the expert coordination coefficient was finally determined to be 0.402. To construct the quality evaluation criteria of undergraduate thesis in medical colleges, the evaluation criteria include 4 first-level indexes and 13 second-level indexes[2].

Wang Jie (2015) briefly describes the importance of undergraduate dissertation, expounds the importance of reference for undergraduate graduation thesis, and summarizes the existing problems in reference writing and supervision and management of graduation thesis. The quantitative results of the standardization and citation quality of the sample dissertation were analyzed in detail through experiments, and the research and practice were carried out from the two aspects of the standardization and citation quality evaluation of the references. The normativity of the description was tested based on template matching method, the citation quality was tested by grey correlation analysis method, and software tools were compiled to

achieve automatic evaluation. It provides the basis, method and tool for strengthening the quality of undergraduate dissertation[3].

Zhang Yanhong (2016) studied the quality evaluation system of undergraduate graduation design (thesis). By comparing a variety of graduation design quality evaluation methods, the analytic hierarchy process is finally selected to calculate the weight of quality evaluation indicators, and the traditional method and fuzzy comprehensive evaluation method are combined to calculate students' scores. A set of graduation design quality evaluation system is designed in detail, and the rationality and operability of the evaluation system are proved by examples[4].

Zhu Yahui (2018) proposed an extension cloud model-based undergraduate thesis quality evaluation model to solve the problems of fuzziness and randomness of the boundary information of grade division in graduation thesis quality evaluation. The extension cloud model-based undergraduate thesis quality evaluation model It has the advantages that matter-element theory can integrate quantitative and qualitative analysis and cloud model can deal with double uncertainty[5].

Xun Xuelin (2019) proposed a graduation thesis quality evaluation system based on Chinese abstracts and keywords. This paper uses jieba library, an important third-party Chinese word segmentation function database in Python programming language, to conduct word frequency statistics on the Chinese abstract and body part of the graduation thesis. According to the 10 most frequently appeared words and their occurrence times in the output article, the keywords in the Chinese abstract part of the graduation thesis are compared, and the evaluation system standards are formulated. Evaluate the quality of graduation thesis. Finding the frequency of keywords in the thesis is an important reflection of the quality of the graduation thesis[6].

Long Tengting (2020) evaluated the quality of graduation thesis of fire engineering major based on PDCA, and achieved the spiraling development of graduation thesis quality through the continuous cycle[7].

Lai Yujie (2021) analyzed the research hotspots and trends of undergraduate thesis quality evaluation based on the scientific knowledge map. Based on the literature related to the quality evaluation of undergraduate theses collected by CNKI from 2000 to 2020, this study uses knowledge graph and bibliometric methods to sort out the current research status of domestic scholars on the quality evaluation of undergraduate theses, summarizes the research hotspots and development trends, and provides the evolution context and reference for the future research direction of subsequent scholars in this field[8].

Comprehensive analysis, most scholars still stay in the traditional evaluation and analysis methods such as AHP (analytic hierarchy Process), Delphi (Delphi method) or grey correlation analysis method in the relevant research of graduation thesis quality evaluation, and do not improve the theoretical methods but carry out more specific analysis around a certain major or a certain discipline; Occasionally, some scholars use updated computer technology to study the evaluation of graduation thesis quality, but the research methods are too complicated or too professional, and it is not realistic to implement these methods in most universities. Therefore, from the new perspective of high-quality development of the "14th Five-Year Plan", this study is committed to comprehensively examining the relevant factors affecting the quality of graduation theses on the basis of comprehensive consideration of the characteristics of different disciplines and specialties, and putting forward a more scientific and reasonable path to improve the quality of graduation theses[9].

### 3. Existing Problem

In order to improve the quality of graduation thesis, some scholars have proposed to set up relevant graduation thesis writing courses, or choose the form of lectures, according to the form

of special topics, or combine with the cutting-edge lecture courses of the professional interspersed lectures. Although the selection methods of each university are different, there is no significant effect.

In-depth investigation of the undergraduate graduation thesis itself, such as the topic of the thesis is large and vague, lack of theoretical significance, practical significance and innovative significance; The research method is single, and the professional knowledge and ability can not be integrated into the paper; The discussion is textbook, comprehensive, lack of depth, less literature reading, literature review quality is low; Lack of field investigation, lack of data support, fall into qualitative analysis, easy to plagiarize; Lack of relevant theoretical basis, superficial discussion and so on, these fundamental problems can not be solved by giving students four or five months time.

Therefore, on the basis of the existing problems in the teaching process of statistics at the present stage, reform the statistics course, so that it can gradually guide students into the state of discipline research and find the method of discipline research, then the quality problem of undergraduate graduation thesis that has been troubling us for a long time will be solved.

## 4. Lifting Path

Undergraduate graduation thesis and ordinary course learning are not separated from each other. The cultivation of undergraduate research ability and writing ability can be achieved by adding professional investigation report module to the statistics curriculum system, and targeted cultivation of students' research ability and writing ability, so as to achieve the purpose of improving the quality of economic management undergraduate graduation thesis.

The preliminary idea of the statistics teaching reform oriented on improving the quality of undergraduate graduation thesis is to combine the statistics course with the graduation thesis of undergraduate students majoring in economics and management, rebuild the statistics curriculum system, and involve the whole process of statistics theory and practice in the writing process of undergraduate graduation thesis. By virtue of the advantages of statistics courses, we can achieve the purpose of improving the quality of undergraduate graduation papers in economics and management majors.

### 4.1. Teaching method improvement

By adding statistical practice modules to the statistics curriculum system, students can have a certain understanding of common statistical software and be familiar with the analysis methods commonly used in undergraduate graduation papers of economics and management, which not only expands the direction of students' topic selection, but also saves the time and energy of self-learning statistical software and analysis methods. Through the statistics course, students are required to master the most basic SPSS software and Eviews software and the realization of general statistical methods. Expand students' ability to analyze problems, so that students can be more confident and complete the thesis with high quality.

### 4.2. Curriculum assessment method reform

At the beginning of the course, the general task is assigned to the students, it is clear that the students should complete the task and let the students learn with the mentality of solving problems. While enhancing the interest in learning statistics, with the deepening of the content of the statistics course, the students are urged to constantly complete and enrich the investigation report from statistical design, statistical investigation, statistical sorting to statistical analysis. Guide students to use more effective and scientific methods to research problems and elaborate ideas.

### 4.3. Accumulate teaching materials

In the statistics curriculum system, the module of excellent graduation thesis case teaching is added, and the problems that can be solved by statistical methods in the field of professional academic research are deeply discussed in combination with students' professional courses and professional characteristics, so as to expand students' knowledge range, expand students' cognition of statistical analysis methods, and complete the transition from theory to application. Through the construction of excellent graduation thesis case teaching module and professional investigation report writing module, the scope of students' topic selection is expanded, so that students can enter the writing process of professional academic papers and reports in advance, improve students' ability to collect data and analyze problems, accumulate writing experience in the course, and improve the quality of economics and management undergraduate graduation papers.

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