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Implementation and Development of a Mid-term Assessment System for Postgraduate Students

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Abstract **Review Article**

The mid-term assessment of master's students plays a crucial role in the process of graduate education, aiming to strengthen the management and quality of graduate training. By conducting comprehensive assessments on the academic ability, practical skills, research achievements, and learning attitude of the graduate students periodically, not only can the shortcomings in their research be promptly identified and corrected, but also their overall development can be facilitated. Therefore, conducting effective mid-term assessments for graduate students is an essential means to ensure the quality of graduate education. This paper will thoroughly investigate the current issues in the mid-term assessment of graduate students and examine various aspects of establishing a mid-term assessment system, aiming to provide certain references and insights for graduate education.

Keywords: Mid-term Assessment; Graduate Student Training; Assessment Content

0. INTRODUCTION

Since 2013, a series of documents have been issued by the Ministry of Education, the National Development and Reform Commission, and the Ministry of Finance to facilitate graduate education reform in China. These documents include "Opinions on Deepening the Reform of Graduate Education," "Opinions on Improving the Investment Mechanism of Graduate Education," and "Opinions on Strengthening the Construction of Degree and Graduate Education Quality Assurance and Supervision System" [1]. The mid-term assessment of graduate students serves as a crucial element of quality control, playing a vital role in evaluating research progress. This assessment allows supervisors to gain insight into the research progress of graduate students, identify existing issues, and propose corresponding solutions to assist them in further comprehending and mastering the research content. Moreover, the mid-term assessment can enhance graduate students' academic thinking and research abilities and foster effective communication between students and their supervisors. Furthermore, it introduces a competitive mechanism for identifying exceptional talent. It motivates the majority of graduate students to strive for progress, resulting in improved overall quality of training outcomes. Ultimately, the mid-term assessment contributes to cultivating outstanding talents for the country. However, conducting a comprehensive evaluation that accurately reflects the level of graduate training entails a complex task that requires precise understanding, scientific design, coordinated arrangement, and reasonable evaluation.

1. PROBLEMS IN THE MID-TERM EVALUATION OF GRADUATE EDUCATION

In current graduate education, midterm assessment plays a pivotal role in evaluating students' learning and research abilities throughout their graduate studies. To ensure a more accurate reflection of graduate education level, various universities have been exploring alternative assessment criteria for midterm evaluations in recent years. However, despite some notable achievements, we have encountered several issues with the current midterm assessment of graduate students in practice. These issues include inadequate institutional framework, formalized assessment procedures, and unfair grading, which not only hinder students' learning and development but also have an adverse impact on the quality of higher education.

One major problem lies in the inadequate institutional framework of the current midterm assessment system for graduate students. A comprehensive and unified assessment regulation should incorporate mechanisms for eliminating students who are unsuitable for continuing their graduate studies, encompassing academic elimination, disciplinary elimination, and other forms. Unfortunately, many universities and training institutions lack such an elimination mechanism, which hampers their ability to guarantee the quality of education effectively. Consequently, the results of midterm assessments lack substantive significance and fail to sufficiently supervise, motivate, and select graduate students, thus negating the desired effects.

Additionally, while midterm assessment criteria generally encompass various aspects such as course performance, research achievements, ideological and political education, moral qualities, and physical and mental health, there are no clear standards for evaluating morality. Consequently, subjective scoring by the assessment committee becomes the primary basis for judgment, rendering it challenging to assess scores objectively.

Another issue pertains to the formalized assessment procedures for evaluating graduate students' performance. The conventional practice involves conducting a PowerPoint presentation lasting around 10-15 minutes, during which the assessment committee evaluates the midterm report and the presentation defense [2]. However, the assessment criteria are relatively lenient, resulting in no graduate students being deemed unqualified in midterm assessments, as all students have scored above 60. This lenient evaluation format fosters a perception among graduate students that the assessment is merely a formality, leading to a lackadaisical attitude. Combined with some students' inadequate emphasis on academic work, their research abilities may be insufficient, impeding progress. Furthermore, the role of graduate advisors in the midterm assessment process is crucial. However, due to the increasing number of graduate students and the mounting research pressure, advisors may need help to gain a comprehensive and objective understanding of each student. Consequently, this could compromise the fairness of grading in midterm assessments.

It is imperative to establish a scientifically designed and reasonable assessment system to address these numerous issues in the midterm assessment of graduate students. This system should transform assessment into a significant opportunity for enhancing and developing graduate students' capabilities.

2. ESTABLISHMENT OF MID-TERM EVALUATION SYSTEM FOR MASTER'S DEGREE STUDENTS

To address the issues existing in the mid-term assessment, the primary task is to establish a scientifically sound mid-term assessment system. Firstly, it is essential to clarify the purpose, content, and significance of the assessment and further refine and quantify the assessment indicators that are relatively vague, such as ideological and political, moral qualities, and physical and mental health. At the same time, it is necessary to strengthen the assessment team and rigorously control the assessment process to explore the construction and implementation of the mid-term assessment system. By doing so, the mid-term assessment can fully play its role in supervision, management, and enhancing the training quality. To ensure the standard progress of the thesis work, Mid-term Assessment Measures for the College of Life Science and Technology have been formulated based on the graduate training program of Heilongjiang Bayi Agricultural University

2.1 ASSESSMENT ORGANIZATION

The midterm assessment should be conducted under the auspices of a well-established assessment organization and stringent management measures. To accomplish this, assessment committees should be established at the college and disciplinary levels. The college assessment committee oversees the overall arrangements of graduate assessments and makes final determinations regarding assessment outcomes. On the other hand, the disciplinary assessment committee is responsible for evaluating the research progress and innovative capabilities of graduate students. Furthermore, to comprehensively evaluate graduate student performance, class assessment committees should be established to assess classmates' performance in terms of ideological and political standing, moral qualities, and physical and mental well-being.

2.2 ASSESSMENT ORGANIZATION

Establishing a comprehensive evaluation system can provide adequate guarantees for the comprehensive, objective, and scientific evaluation of graduate students' overall qualities, and promote the cultivation of high-quality talents. A complete evaluation system should consist of three parts: assessment items, assessment factors, and assessment scores. The assessment items can be seen as first-level indicators and further divided into more detailed second-level and third-level indicators as assessment factors [3]. A percentage-based scoring method should be adopted, and appropriate scores should be assigned by reasonably allocating weights to each level of indicator. Following the requirements of comprehensive development in morality, intelligence, physique, learning, and research, the assessment of graduate students should include moral education and physical and mental health conditions (20%), academic performance (30%), and research

progress and innovative abilities (50%), with a particular emphasis on research abilities.

2.2.1 MORAL EDUCATION AND PHYSICAL AND MENTAL HEALTH STATUS

Physical and mental health conditions are essential components of student moral education, and they have significant implications for formulating assessment and evaluation criteria. Moral education and physical and mental health mainly examine students' performance in ideological and moral qualities and their physical and psychological well-being. The performance of ideological and moral qualities mainly includes social ethics, collective consciousness, legal concepts, organizational discipline, social practices, public welfare activities, *etc*. Examples include honesty and trustworthiness, adherence to social ethics, solidarity and cooperation, conscious safeguarding of collective interests, compliance with rules and regulations, care for vulnerable groups, engaging in voluntary labor, participating in volunteer and social research activities, which can be manifested explicitly in personal awards and collective recognition, participation in public welfare activities, bonus points for student leaders, and other collective activities. At the same time, the indicator system should set corresponding deduction items for students who have received disciplinary actions such as criticism notes, demerits, and probation or have accumulated attendance below 60% for various activities during their school period. Physical and psychological well-being mainly includes participation in physical education courses, physical activities, mental state, and health conditions. Participating in physical education courses can enhance physical fitness, learn various sports skills, rules, and movement laws, and strengthen various aspects of physical fitness. At the same time, participating in physical activities can effectively release the accumulated stress from studying and help students maintain a good mental state. An excellent mental state contributes to improving physical fitness and psychological well-being, as appropriate physical exercise can improve the mental state, and a good mental state can promote the improvement of physical fitness, which can be manifested in active participation in sports competitions, good psychological health, caring for the collective, *etc*.

2.2.2 ACADEMIC PERFORMANCE

Academic performance mainly examines learning achievements and credit accumulation. In recent years, with the rapid development of higher education, the training of master's degree students has also received extensive attention. As an essential guarantee for the quality of graduate education, course learning plays a crucial role in training master's degree students. As we all know, in addition to conducting research projects, graduate students must complete various course learning, which covers professional courses and courses related to other disciplines. Course learning can help graduate students acquire professional knowledge and educate them on how to learn, think independently, and arrange their study plans rationally. At the same time, course learning can help graduate students break away from the state of single, passive learning, and enable them to obtain more comprehensive academic literacy and independent thinking ability to judge issues. Effective course design can help develop graduate students' research abilities, comprehensive abilities, management abilities, and other skills, enhance their basic knowledge, and remove obstacles to future research work. In addition, the quality of course learning can also play a solid foundation for the future development of graduate students. Therefore, a comprehensive assessment should be conducted on the grades and credit completion of various courses taken by graduate students since enrollment, including the total number and total credits of selected courses, the total number and total credits of completed courses, and whether any courses need to be retaken. It should also assess whether students from different majors and the same level of education have completed the corresponding make-up courses.

2.2.3 RESEARCH PROGRESS AND INNOVATIVE CAPACITY

Graduate students are essential in higher education. They not only need to master solid disciplinary knowledge but also possess excellent scientific research abilities [4]. Scientific research ability is essential for graduate students' growth and a criterion for evaluating their comprehensive abilities. The scientific research and innovation ability of graduate students are relatively subjective concepts. However, from the education and training perspective, graduate students must have specific scientific research and innovation ability. Graduate students' scientific research ability includes professional knowledge, research methods, experimental skills, innovative thinking, reading ability, writing ability, teamwork, and other aspects. Researchers need to improve their innovation ability through continuous research and innovation. Therefore, the assessment and evaluation of scientific research and innovation ability have become important indicators of scientific research. The assessment of scientific research progress and innovation ability mainly examines the mastery of knowledge in the discipline and field, research progress in papers, scientific research and innovation abilities, and publication of articles. It is also the most critical aspect of evaluation. It can be reflected explicitly in the understanding of literature and research topics, the research progress of the thesis, and the publication of papers by graduate students.

2.3 ASSESSMENT RESULTS

The effectiveness of the competition and incentive mechanism in the midterm assessment is ultimately reflected in handling the assessment results. A benign assessment and evaluation mechanism should not only actively encourage and commend outstanding graduate students, but also play a role in urging and pushing average and below-average graduate students

and ensure that most graduate students pass while allowing outstanding graduate students to receive their deserved rewards and recognition, thus avoiding the problem of excessively pursuing degree attainment at the expense of graduate student quality. According to the assessment system for the midterm evaluation of master's students, the assessment conclusion is divided into four levels based on the score: excellent (90 and above), good (80-90), pass (60-80), and fail (60 and below). Graduate students who pass the assessment can proceed to the next stage of graduate education, while those who fail the assessment can be re-assessed within six months. If they fail, they will be eliminated or transferred to a different program and considered withdrawn or graduated.

3. IMPLEMENTATION EFFECT OF MID-TERM ASSESSMENT

To examine the effectiveness of the mid-term assessment evaluation criteria and further understand the outcomes of the reform of the mid-term assessment system for graduate students, a satisfaction questionnaire survey was conducted [5]. The survey was conducted anonymously, with the overall perception of graduate students participating in the assessment as the evaluation criterion. Four aspects were considered: organizational implementation, assessment process, assessment content, and assessment outcomes. A feedback section was also included for students to provide additional comments and suggestions, as shown in Table 1. The survey participants rated the contents on a scale of 1 to 5 based on their level of satisfaction, where 5 represented "satisfaction", 4 represented "moderate satisfaction", 3 represented "basic satisfaction", 2 represented "dissatisfaction", and 1 represented "extreme dissatisfaction". The survey was conducted through anonymous random sampling, with 48 questionnaires distributed and 42 valid responses collected, resulting in a response rate of 87.5%. The final survey results are presented in Table 1. The survey indicates that implementing the mid-term assessment system in the College has achieved positive results, with the reform efforts being largely successful. However, it also reveals areas that need further improvement.

Table 1: Mid-term assessment of the implementation effect of the satisfaction survey

Contents	Scoring items	Satisfaction survey	Satisfaction scores
Organization and implementation	Faculty, subject, and class assessment panels strictly follow the documented requirements	30 respondents expressed satisfaction, while 8 indicated moderate satisfaction. Additionally, 2 participants reported basic satisfaction, while 2 expressed dissatisfaction with the issues.	4.57
Assessment process	The evaluation process possesses characteristics of fairness, equity, and transparency.	29 respondents expressed satisfaction, while 5 indicated moderate satisfaction. 4 participants reported basic satisfaction, 2 individuals expressed dissatisfaction, while 2 expressed extreme dissatisfaction with the issues.	4.36
Assessment contents	The evaluation indicator system for the midterm assessment is reasonable and comprehensive, with content that can reflect the current situation of scientific research and learning.	33 respondents expressed satisfaction, while 5 indicated moderate satisfaction. 2 participants reported basic satisfaction, while 2 expressed dissatisfaction with the issues.	4.64
Assessment results	The midterm assessment evaluation mechanism has stimulated learning enthusiasm and proactivity, and its effectiveness in promoting future scientific research progress is substantial.	31 respondents expressed satisfaction, while 4 indicated moderate satisfaction. 3 participants reported basic satisfaction, 2 individuals expressed dissatisfaction, while 2 expressed extreme dissatisfaction with the issues	4.42

4. CONCLUSION

The mid-term assessment plays a crucial role in evaluating and guiding the process of postgraduate thesis writing. The mid-term assessment is an essential component throughout the entire postgraduate education and training. It is crucial for postgraduate students to fully realize the significance of the mid-term assessment, recognize its role, and strive to enhance their research capabilities. Additionally, to ensure the quality of postgraduate education, reforms, and innovations are needed in terms of content and ideas. Establishing a corresponding assessment mechanism and forming dedicated organizational structures responsible for this task is necessary, clearly defining the responsibilities of the university, college, discipline, and supervisors. The mid-term assessment can be effectively implemented through these measures, and its essential role in screening, motivating, and ensuring the quality of postgraduate education can be fully realized. However, there are still numerous challenges in the current context

of mid-term assessment work, such as how to set assessment indicators more effectively and regulate the assessment process more comprehensively, requiring further research and exploration.

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