

# The Misdirection and Return of Graduate Course Teaching

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**Abstract:** Graduate course teaching plays an irreplaceable role in knowledge mastery, skill enhancement, and quality cultivation of graduate students. This paper addresses current issues in graduate course teaching, such as ambiguous objectives, formulaic content, formalistic operation, and oversimplified evaluation. It proposes corresponding solutions with the hope of steering graduate course teaching back to its original purpose and realizing its true significance.

**Keywords:** Graduate students; Courses; Misdirection; Return

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## 1. Introduction

Graduate training is a systematic project that includes multiple components such as course learning, literature review, and scientific research<sup>[1]</sup>. Course learning is the primary method for graduate students to acquire basic professional theories and systematic disciplinary knowledge<sup>[2]</sup>. Literature review facilitates innovation through self-study, while scientific research involves conducting academic investigations and experiencing innovation under the guidance of a mentor. Course teaching, as a fundamental element in cultivating research capabilities in graduate students, plays a crucial role in broadening their knowledge, shaping their thinking, and enhancing their research skills. With the expansion of China's postgraduate enrollment in 1999, the scale of China's postgraduate students is expanding rapidly<sup>[3]</sup>, and the teaching of postgraduate courses has also revealed many problems and contradictions, which is gradually departing from the goal of cultivating "high-precision and top-notch" professional and technical talents and the national implementation of innovation-driven strategy. Therefore, it is urgent to address the current issues in graduate course teaching to return to its original purpose and fulfill its intended role.

## 2. The origin of graduate course teaching

Courses are the core and basic units of talent training programs and teaching plans, directly affecting the

quality of talent cultivation and the level of academic institutions<sup>[4]</sup>. The definition of a course varies among researchers, and this is true for graduate courses as well. However, compared to basic education courses, graduate courses have distinct characteristics: they are highly specialized, forefront in content, exploratory in ability training, and complex in structure<sup>[5]</sup>.

### **2.1. The essence of graduate course teaching**

Graduate education is defined as “post-undergraduate education characterized mainly by research” and “high-level professional education”<sup>[6]</sup>. These are the essential attributes of graduate education. China’s Higher Education Law also stipulates that master’s degree students should “have the ability to engage in practical work and scientific research in their fields,” and doctoral students should “have the ability to independently conduct creative scientific research and practical work in their disciplines”<sup>[7]</sup>. As a fundamental part of training, graduate course teaching should emphasize its research nature, which should also become its essence. Scientific research must be based on professional knowledge. Only with a solid grasp of professional knowledge in their field can students construct a strong foundation for scientific research. Course teaching is the main channel for graduate students to master “basic theories” and “specialized knowledge.” However, its goals should not be limited to having students learn and master systematic theories and specialized knowledge. It should also highlight “research nature,” integrating teaching and research, focusing on fostering scientific thinking methods, mastering problem-solving approaches, and encouraging learning, researching, and creating. This approach aims to shift from passive reception to active inquiry and from pursuing knowledge to pursuing capabilities, ultimately achieving the goals of applying and creating knowledge.

### **2.2. The importance of graduate course teaching**

In a narrow sense, a course refers to each subject offered to students, also known as a disciplinary course. In a medium sense, it refers to teaching content, encompassing all forms of educational material, not just textbooks. In a broad sense, a course represents the totality of culture acquired by students from a school<sup>[8]</sup>. Hence, in its broadest sense, a course includes the entire process of learning. Graduate courses should also be seen in this broad sense, spanning the entire educational journey of a graduate student. The essence of graduate course teaching is to emphasize its research nature. However, the cultivation of research nature is not built on an abstract foundation but requires a solid base of extensive and in-depth professional knowledge. Strengthening graduate course teaching is a requirement of China’s graduate education model and a practical need, especially given the insufficient innovation capabilities. It is also a common trend in graduate education development abroad. In the United States, where graduate education is more advanced, there are strict requirements for course learning: doctoral students need to complete about 30 credits of course plans according to their research direction, including compulsory courses in their field and elective courses in related disciplines. Ivy League schools have even more stringent course requirements. It is evident that graduate course teaching plays a crucial role in subsequent scientific research, making effective course teaching particularly important.

## **3. The misdirection in graduate course teaching**

Regarded as the “Father of Modern Curriculum Theory” and “Father of Contemporary Educational Evaluation,” the famous American educator and curriculum theory expert Ralph Tyler proposed the renowned “Tyler Rationale” in the 1930s<sup>[9]</sup>. He believed that the development of any curriculum and teaching plan must answer four fundamental questions: defining educational objectives, selecting educational experiences, organizing these experiences, and evaluating the educational plan. This principle provides a golden template for exploring

curricula. Reflecting on our current graduate education based on the “Tyler Rationale,” it is not hard to notice issues like the vagueness of course objectives, the formulaic nature of the content, the formalistic operation of courses, and the oversimplification in evaluation. Such an approach to course teaching leads us into a vicious cycle, moving away from its essence and ultimately hindering the cultivation of talented individuals with research and innovation capabilities.

### **3.1. The vagueness of course objectives**

Graduate education, aimed at cultivating societal elites, should focus on the quality of talent development. The “National Medium and Long-Term Educational Reform and Development Plan (2010–2020)” explicitly stated that enhancing quality is the core task of higher education development <sup>[10]</sup>. However, in recent years, the number of scientific research outcomes and the number of master’s and doctoral degree programs have become major metrics for universities’ prestige, leading to a gradual blurring in understanding the essence and core mission of graduate education. This has resulted in the neglect of the importance of graduate course teaching. Mentors have shifted their focus more towards scientific research projects, overlooking their primary duty of teaching and educating. Under such circumstances, course teaching becomes an insignificant part of the process, which is detrimental to the sustainable development of graduate students.

Traditionally, Chinese higher education institutions award degrees based on secondary disciplines, and the graduate curriculum system is also constructed around this. The current course objectives overly emphasize the professionalism of individual disciplines, leading to a neglect of foundational courses and a lack of interdisciplinary knowledge in specialized courses. This over-specialization, while beneficial for deep research, results in a narrow knowledge base and poor adaptability among graduate students. Vague course objectives can adversely affect the long-term development of graduates.

### **3.2. The formulaic nature of course content**

Graduate courses should exhibit characteristics like high permeability, research orientation, professionalism, sophistication, and dynamism. However, in practice, they often extend undergraduate education without reflecting these advanced, refined, and dynamic aspects. Students are supposed to undertake deep, cutting-edge theoretical research in their fields under the guidance of their mentors, laying a solid foundation for future scientific research. In reality, some instructors use the same PowerPoint presentations for both undergraduate and graduate teaching, leading to a serious formularization of course content. Assignments remain unchanged over the years, failing to keep pace with developments in the field and falling out of touch with academic frontiers. Some mentors, engrossed in their research fields, lack knowledge in related areas, making their teaching particularly challenging. As students at this stage already possess a certain level of cognitive ability and can clearly discern what kind of knowledge they need, such content severely dampens their desire to learn and does not contribute much to their future scientific research.

The selection of graduate course content is often based on the training plan set at the time of admission, mainly divided into public basic courses, professional compulsory courses, and professional elective courses <sup>[11]</sup>. These courses tend to have relative stability in their structure. Despite changing times and evolving training plans, the offered courses remain unchanged, revealing a situation where courses are designed more according to the instructors’ research areas than the broader needs of the discipline.

### **3.3. The formalistic operation of courses**

The operation of graduate courses has become the biggest issue in graduate course teaching. With the increasing number of graduate students in recent years, some schools have even seen a ratio of 1:1 between new

undergraduate and graduate students, making graduate education far from elite-focused. The increase in student numbers means that traditional classroom teaching methods, including “spoon-feeding” approaches, are still used in graduate education, misleading students into thinking they are still in an undergraduate environment.

Moreover, some small-class teaching adopts the internationally recognized seminar model. Seminars include topic overviews and discussions, the former helping students grasp the course’s relevant knowledge and the latter involving discussions organized by the instructor around the topic <sup>[12]</sup>. While this teaching method has been proven beneficial for fostering independent thinking, quick summarization, and clear expression in graduate students, it is often just a formality in practice, resembling a multi-player beach ball game where the ball is passed from one person to another. Such a formalistic approach severely affects the quality of course teaching.

### **3.4. The oversimplification of course evaluation**

The evaluation of graduate courses is the most critical process in the entire course teaching cycle. Currently, the main method of evaluating graduate course teaching in universities is through submitting course papers. During the undergraduate stage, some corresponding course exams are required, but at the graduate level, submission of a course-related paper suffices. Clearly, this paper-based evaluation method does not focus on the course implementation process. Most students only need to hastily compile a paper related to the course content a few weeks before submission. Those who score high are considered to have high research capabilities, but this assessment is questionable. Such an evaluation method shifts students’ focus increasingly towards papers, neglecting the course itself and, by extension, the teaching, thus forgetting the original intent of graduate education. This leads to a misunderstanding of research as merely producing papers, equating papers with capability, which is a distorted view not conducive to the long-term development of graduate students.

## **4. The return of graduate course teaching**

In response to the current issues in graduate course teaching, we must remember the essence of graduate course teaching and adhere to its research-oriented origins. Based on this understanding, efforts should be made in the following areas.

### **4.1. Clarifying goal-oriented objectives and updating educational concepts**

To cultivate high-level talents with innovative and research capabilities, it is imperative to clarify the goal-oriented objectives of course teaching. It should be recognized that the quality of graduate training is the true measure of a school’s competitiveness. Equal emphasis should be placed on teaching and research. Under this philosophy, the status of course teaching should be continually elevated, enabling students to thoroughly understand and master knowledge in specific fields, and laying a solid foundation for higher-level scientific research in the future.

The teaching process should not only focus on professional knowledge but also general education courses. Newman believed that knowledge is a whole, and the more it focused on specialized knowledge, the less free it becomes. He said, “The improvement of any craft requires dedicated study in that field. However, despite the advancement this focus brings to the craft, the individual focused on it recedes” <sup>[13]</sup>. To better serve graduate students and society, courses should not only concentrate on professional training but also on developing other qualities, teaching students to face future challenges. This might become the most valuable treasure given to them by their graduate courses.

## **4.2. Enriching course content and optimizing course system**

In actual teaching, instructors should constantly pay attention to the cutting-edge knowledge in their fields, guiding students to a deeper understanding of their specialties. They should also focus on teaching methodologies. It is better to teach someone to fish rather than just giving them a fish, and research methods in the field are particularly important. In the teaching process, instructors should continuously integrate training in research methods while teaching disciplinary theories. Teaching research methods, training in research thinking, and cultivating research capabilities will become an inexhaustible driving force in students' research journeys.

For the existing course system, it is necessary to enhance the adaptability of basic theoretical courses, continuously creating and integrating innovative courses. These courses are the best remedy for an unpredictable era. Also, attention should be paid to the balance between different courses, increasing the proportion of elective courses, allowing graduate students real freedom to perfect their knowledge structure and improve their comprehensive qualities and abilities.

## **4.3. Innovating operational methods and cultivating innovative capabilities**

Graduate course teaching should continually break away from “herding-style individual self-study” and “undergraduate-style group indoctrination”<sup>[14]</sup>, moving from “learning” to “researching.” The seminar format used in foreign graduate course teaching can be adapted, not just in form, but also by tailoring it to the discipline's characteristics to serve our current graduate course teaching needs. In the course implementation process, the exploratory, research-oriented, and autonomous nature of seminars should be fully utilized. Instructors can clarify the course system before class, explain basic theories, and provide learning outlines. In class, every student can be required to speak and discuss, forcing them to read extensively, enhancing their ability to research literature, think independently, and identify problems.

Attention should be paid to perfecting the knowledge system of graduate students in class and focusing on the formation of capabilities outside the classroom. Graduate courses should still emphasize practical scientific research, possibly under the direct guidance of mentors. Science and engineering graduate students can engage in research activities in relevant laboratories, while liberal arts graduate students can also engage in research practices suitable for their fields under the guidance of mentors. Such practical operations bridge knowledge and practice, making course teaching more efficient in serving research and better reflecting the essence of course teaching.

## **4.4. Reforming evaluation mechanisms and building a diverse system**

The traditional examination-centered teaching evaluation mechanism cannot motivate students' learning enthusiasm and becomes a constraint on the healthy development of course teaching<sup>[15]</sup>. Therefore, universities should continuously reform their evaluation mechanisms. The evaluation of students' course learning outcomes often depends on the course papers they submit after learning, without appropriate supervision and evaluation mechanisms for the teaching process and effectiveness. A diverse evaluation system should be established.

Furthermore, teachers' evaluation of students should not be based solely on the submitted course papers and the results of teaching quality surveys. Teachers' evaluation of students' course learning should focus on their learning and research processes, shifting from “result evaluation” to “process evaluation.” This will better observe whether students have truly learned professional knowledge in the course and whether this knowledge can be transformed into nourishment for future research<sup>[16]</sup>. For the course itself, a corresponding evaluation system should be established: a virtuous cycle formed by peer evaluation, student evaluation, and social evaluation will be beneficial for cultivating excellent talents with innovative capabilities, meeting disciplinary development, and promoting social progress.

## 5. Conclusion

Graduate education, in essence, is about cultivating researchers. The research-oriented nature of graduate course teaching presents a series of difficulties and challenges. Regardless of how times change and society develops, we should grasp the essence of graduate course teaching, develop courses “aimed at the past, present, and future,” overcome current difficulties, meet real challenges, and achieve sustainable development in the future.

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