

# Research on the Teaching Reform of University Innovation Education Based on the Cultivation of “Core Literacy”

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**Abstract:** “Cultivation” education in engineering colleges, which is guided by “core literacy” cultivation, aims to cultivate high-quality “skills + management” innovative talents with core competitiveness. This article analyzes the practical and objective necessity of integrating “double innovation” education into the “core literacy” training of college students in engineering colleges and the importance of innovative and entrepreneurial consciousness to engineering college students, and how to integrate “double innovation” education in engineering colleges. The exploration of “core literacy” for engineering college students.

## 1. Introduction

The reform of higher education has continued for many years. The state has increased investment in the construction of university reform projects every year, and the appropriations for students enrolled by the provincial finances have been gradually realized, and the field of school-enterprise cooperation has also continued to expand. However, this series of inputs has not harvested the output of high-skilled talents, and the practice teaching reform in colleges and universities is in an imbalanced development situation, which has aroused the concern and discussion of all sectors of society and scholars. Zhu Zhengwei and others explored practical teaching from four aspects: perfecting the practical teaching system, revising the talent training plan, increasing the input of practical teaching funds, and building a practical teaching base; Zhang Li proposed ways to optimize college practical teaching and integrate classroom practical resources; Liu Fu From the perspective of teaching evaluation, Feng Yanfang has subdivided practical teaching concepts, class hours, channels, teachers, teaching effects and other indicators to conduct research; scholars have conducted research in four stages: basic practice, professional practice, comprehensive practice, and social practice. Our research has enriched the results of practical teaching reform. However, with the growth of the new economy, the shortage of applied-skilled talents has sharpened, and the vocational skills of college graduates have been unable to meet the requirements of job functions. At present, the reform of college practical teaching faces multiple difficulties.

## 2. The Necessity and Necessity of Integrating “Double Innovation” Education into the “Core Literacy” Training of Engineering College Students

“Core literacy” fosters “all-roundly developed people” as its core, and is comprehensively represented by the six qualities of humanities, scientific spirit, learning to learn, healthy living, responsibility, and practical innovation. All literacy are connected, supplemented, and promoted. To play a holistic role in different situations. It is the link between macro education concepts, training goals, and specific education and teaching practices. Through this link, it can be translated into specific requirements that are easy to understand for educators in education and teaching practice, clarify the necessary characters and key abilities that students should possess, and answer in-depth the fundamental question of “what to build and what to build”. Lead the curriculum reform and education model change. The fundamental goal of carrying out “double innovation” education is to promote the all-round development of college students, enhance the core social competitiveness of college students, promote employment with entrepreneurship, and promote the full employment of college graduates. It can be seen that it is a practical necessity and an objective necessity to

integrate the “double innovation” education into the “core literacy” training of engineering college students.

“Innovation is the soul of a nation's progress and the inexhaustible motive force for a country's prosperity.” Building an innovative country is China's current strategic goal. To achieve this goal and improve the level of science and technology, high-quality talents with solid basic knowledge and innovative spirit are indispensable. The current level of “core literacy” of college students determines to some extent whether college graduates face “employment” or “unemployed” when they leave the school. Carrying out “double innovation” education in engineering colleges can not only stimulate the subjective initiative and creativity of students, cultivate composite talents with a certain theoretical foundation and innovative spirit, but also take this as an opportunity to improve the education of university students' self-employment. The theoretical system to deepen the exploration of entrepreneurial practice paths, thereby improving the “core literacy” of engineering college students. It can be seen the integration of “double innovation” education into the “core literacy” training of engineering college students has practical necessity. The connotation of “double innovation” can be simply described as the spirit of innovation and entrepreneurial quality. Students in engineering colleges major in natural sciences and are affected by thinking patterns. Compared with students in liberal arts colleges, their entrepreneurial qualities, especially psychological qualities, entrepreneurial awareness, and entrepreneurial knowledge, are at a disadvantage. Carrying out “double innovation” education in engineering colleges can not only make up for this shortcoming, but also further stimulate the innovative spirit of engineering college students. These qualities are not only the objective manifestation of college students' “core literacy”, but also the objectiveness of university education today. development trend. Therefore, it is objectively necessary to integrate the “double innovation” education into the “core literacy” training of engineering college students.

### **3. Multiple Difficulties Facing Practical Teaching Reform in Colleges and Universities**

In a practical teaching environment, teachers undertake the planning, guidance, and acceptance of practical training programs. The main body of the classroom is turned into a student, and developing its ability to solve problems has become a teaching goal. In response to this, the teaching manager proposed that the practice teaching activities are completed independently by the students and the teachers are in a subordinate position. The workload of practical teaching cannot be equal to the workload of theoretical classrooms, which actually weakens the role of practical teaching in the management system. However, the preliminary preparation of the practice project consumes a lot of time and energy of the teachers. Its workload is not only underestimated by the school, but it is underestimated. Such a contrast seriously hurts the enthusiasm of the teachers for practical teaching and also increases the difficulty of teaching management. At present, due to defects in the management system, the lack of innovation in practical projects and the lax evaluation of practical teaching have become the shortcomings in the training of skilled personnel.

Affected by factors such as traditional education concepts, teaching environment, and teaching assessment indicators, most professional teachers have the phenomenon of “emphasizing theory and neglecting practice”. Although national education authorities continue to increase the training of “double-teacher” teachers through national training, provincial training, and industry training, while encouraging full-time and part-time teachers in schools to communicate with each other to improve their professional practice ability, short training or Recruitment of a retreat enterprise can not really improve the teachers' practical ability. Specifically, in the practice link of job skills training, teachers often cannot solve the students' on-site problems in time. This not only increases the pressure for teachers to guide their work, but also directly affects the effect of students' practice.

Carrying out corporate lecturers in class activities can help students achieve the connection between professional skills and professional abilities. Because practical classroom teaching can not only allow students to master the normal production processes of enterprises and exercise their general knowledge ability, but also to train students to use professional knowledge and analyze and handle business cases independently. Therefore, when selecting lecturers for enterprises, colleges

and universities choose employees with strong abilities. However, the school found in the cooperative teaching that, due to the lack of teaching experience, the lecturers in the enterprise lacked clear practical teaching goals, unreasonable organization of teaching content, and poor practical effects of student feedback. Therefore, how the school can help corporate lecturers improve their teaching ability and optimize the teaching effect of corporate lecturers in the classroom is also a difficult issue in the practice teaching reform.

#### **4. The Key Issues and Paths of “Double Innovation” Practice Teaching Reform**

The “double innovation” practice teaching reform is a reform of college practical teaching driven by the reform of “mass entrepreneurship and innovation by all people”, and it is also a comprehensive reform with characteristics of various specialties. The matters dealt with in the reform are not only complicated, but also related to each other. It is strong, so how to clarify the relationship between various issues and select key issues is the focus of this study. Clarify the various issues in the reform. This research believes that the “double innovation” practical teaching reform is a whole work with inherent logical relevance. This overall work can be divided into five working units with external logical independence: reform basis, market orientation, people-oriented, focus of education reform, and assessment and guarantee. Although these five work units are externally independent, in terms of the overall reform work, the work units are closely related.

Select key issues. “Double innovation” practice teaching reform has a lot of affairs and a large workload, and choosing the key among them and rationalizing the routine affairs is an important starting point to ensure the effectiveness of the reform. Therefore, this study conducts an analysis of the rules for the selection of key issues, and determines two basic points for the selection of key issues. The first is that the selected key issues should be at different stages of the “double innovation” practice teaching reform process, and linked through the reform the second is that these key issues should be able to solve the common problems of most professions. Based on the above two points, this study conducts a combinatorial analysis of the transaction set, and selects six key tasks: training objectives, talent diversion, knowledge ability optimization, teacher allocation, process multiple assessment, and classification output. The training goal is the starting point of transaction processing in the reform work. It determines what type of talents the university trains for society. At present, in order to meet the demand for human resources in the “double creation” society, universities have divided the target talents into innovative (including application innovation and skill innovation) and entrepreneurial types.

The first is institutional protection and open management. First of all, from the school management system, the seriousness and routine of the “double innovation” practical teaching work were clarified, so that all staff in the school realized the necessity of carrying out the “double innovation” practical teaching work. Only when they are unified in thought can they be unified in work and action. Secondly, from the teaching management system, the implementation of “double innovation” practice teaching work can be standardized. Only through strict classroom management, strict student management, and strict control of practical assessment can we guarantee the effectiveness of practical work. However, institutional safeguards must avoid rigidity and cannot become institutional constraints. The reform of “double innovation” practice teaching should be kept open in thought and action. Because “entrepreneurship and innovation” shows the process of dynamic creation from nothing to existence, from existence to excellence, not static or slow, therefore, the “double innovation” practice teaching reform should be managed with an open mind. Only by openly accepting all good visions can we inspire more wisdom and create a better future.

The second is synergy and crowdfunding. Students in the school have low original capital for entrepreneurship and innovation, low technological content in most projects, and serious conflicts in homogeneous products. Therefore, students have severe competition in low prices in their business activities. Excluding the cost of goods and logistics costs, the gross profit of the goods is less than 2 yuan, and coupled with the small amount of orders, it is difficult for many entrepreneurial students to stick to small profits. In this regard, the school should set up a team of entrepreneurial innovation incubation mentors. On the one hand, it hires corporate executives and technical directors as guest

professors to provide entrepreneurial lectures and practical counseling for entrepreneurial students; on the other hand, it organizes “double-skilled” teachers in the school to centrally diagnose the school Entrepreneurship team project, to analyze the cause of the problem of the project dilemma, and assist students to optimize the “entrepreneurship, innovation” project operation. In addition, for homogeneous and competitive goods in the school, business processes can be optimized, the internal resource consumption of business links can be reduced, and resource crowdfunding under the same goal can be integrated.

The third is to promote typical models and encourage excellence. Although “entrepreneurship and innovation” work has become an important part of practical teaching for college students, there are still very few students who can create outstanding results in the “double innovation” activity. In order to create a sustainable “double innovation” atmosphere, the school should regularly organize the “double innovation” appraisal and awards activities, openly and transparently select the outstanding individuals and organizations in the “double innovation” activity, encourage the award winning teams or individuals, and The school website or prominent place promotes the team or personal deeds, stimulates the enthusiasm of entrepreneurship and innovation of college students, develops the after-school life of college students, exercises the practical ability of college students, and finally turns the “double innovation” activity into a driving force for social development.

## 5. Conclusion

The in-depth promotion of “entrepreneurship and innovation” is not an overnight event. The success of the “double innovation” practice teaching reform depends on the long-term joint efforts of the designers and implementers of the university system. We should have reason to believe that in the whole society's concerted efforts to promote the “entrepreneurship and innovation” reform activities, colleges and universities will further cooperate with resources from all walks of life, continuously improve the education and teaching management system, adhere to the leading role of practical teaching, and optimize innovation and entrepreneurial performance. Credit management, to create an “innovation, entrepreneurship” talent growth environment, and to train the shortage of “double innovation” talents for the society.

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