

# Research on the Training Mode of Higher Education of Assembled Construction Technology Talents under the Background of “New Engineering” Education

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**Abstract:** With the innovation and development of emerging industry technology, social and economic development puts forward higher standards for talent demand. Especially with the implementation of a series of national strategies such as “Made in China 2025”, talent training has become the top priority of higher education reform. Under the background of “new engineering” education, we must take students as the center, actively innovate the training mode, and pay attention to improving students’ humanistic quality. This paper first introduces the connotation of “new engineering” and assembled construction talents, introduces the demand for assembled construction technology talents under the background of “new engineering” education, and discusses how to innovate the training mode of assembled construction technology talents in higher education, and effectively cultivate and enhance the students’ innovation and practical application ability.

**Keywords:** New Engineering Education Background; Assembly Construction Technology; Higher Education; Training Mode

Under the background of “new engineering” education, it provides a new opportunity for the teaching reform and development of colleges and universities. Taking assembled construction technology talents as an example, under the background of new engineering education, teaching work should be carried out in close combination with the characteristics of new economy and specialty, and the cultivation mode with innovation and practice ability as the core is constructed, which not only ensures that students master the theoretical innovation and practical application ability, but also find the problems in our work.

## 1. The connotation of new engineering and assembled construction

### 1.1 Connotation of new engineering

“New engineering” is a natural system composed of a series of engineering undertakings, belonging to a whole concept. It is believed by the colleges and universities that in addition to the new engineering majors that they did not have before, it also includes the upgrading and transformation of traditional engineering based on new concepts such as informatization, intelligence and big data. “New engineering”, as a new form of engineering, based on the structure of disciplines and specialties, it adopts the new concept of “engineering education” to construct a new talent training mode. It not only significantly improves the teaching quality, but also innovates the engineering form in order to adapt to the development of new economy.

### 1.2 Assembled construction

The development of standardization of industrial production promotes the development of assembled constructions. Different from the traditional construction methods, assembled constructions adopt factory operation and field operation. Among them, the factory operation mainly refers to the unified production and synthesis of construction accessories, while the field operation mainly carries out the assembly and installation work.

Assembled construction represents the level of industrialization development of China’s architecture. With its development, the demand for professional talents in China is also increasing.

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## **2. The demand for assembly technicians under the background of new engineering education**

Under the background of “new engineering” education, colleges and universities need to re position personnel training based on their own advantages and regional economic advantages, devote themselves to training compound comprehensive “pushpin” talents with innovative spirit and professional quality, so as to use diversified knowledge structure to discover, think and solve problems in construction engineering across disciplines.

### **2.1 Innovative spirit and ability**

Under the background of “new engineering”, it is required that the colleges and universities should explore the practical solutions to the problems in the process of innovation and application. At the same time, students are required to have a strong observation and imagination, not only have a solid theoretical knowledge structure, but also have the practical application ability to apply what they have learned, with a good team spirit.

### **2.2 A broad vision**

Under the background of “new engineering”, assembled technical professionals are required to contact knowledge field more during university, pay attention to broaden the students’ vision, explore their interests and interests, so as to meet the increasingly fierce market environment needs.

### **2.3 Having the ability of lifelong learning**

Under the background of “new engineering” education, the change of technology development is much faster than any period in the past. Students of colleges and universities can not only seek solutions from the existing reserved knowledge, but also seek the cooperation and help of others according to the actual situation, so as to cultivate the lifelong learning ability of individuals, and meet the changing and developing needs of their careers.

In addition, colleges and universities pay attention to the cultivation of professional knowledge and skills of assembled technology talents, in order to improve students’ employability and livelihood skills, and help them to innovate and open up new fields.

## **3. How to innovate the training mode of assembled construction technology talents in higher education**

With the rapid development of China’s overall economy, people’s production practice is constantly innovative and improved. In modern industrial production, the advantages of assembled constructions are gradually concerned and valued. Combined with the characteristics of new economy and specialty, colleges and universities should innovate teaching mode, advocate heuristic and task driven teaching’s to improve students’ practical application ability and construction engineering innovation ability.

### **3.1 Taking the student as the center, changing the teaching idea actively**

Under the background of “new engineering” education, the innovation of the training mode of assembled construction technology talents is the deepening reform of education and teaching, which helps to change the concept of talent cultivation, taking students as the core and respecting their individuality, actively introduce and learn foreign advanced talent training mode, and choose the teaching methods that students are interested in. The teaching form is no longer limited to classroom or courseware, and teachers can use rich body language to inspire students, to guide them to actively participate in learning.

The assembled construction technology talents trained by the concept of “new engineering” serve the emerging technologies and industries, and carry out the discipline construction around the Internet industrialization, industrial intelligence and integration. It follows the development characteristics of emerging industrial technology, innovates the traditional education mode, and changes teaching thinking and concept, so as to promote the innovative development of traditional engineering education, and adopt open teaching mode to cultivate their ability of independent thinking and stimulate learning initiative. The variety of questioning methods can be integrated into teaching to create a strong atmosphere of the classroom environment for students.

### **3.2 Enriching teaching content**

Under the background of “new engineering” education, it is the educational problem to construct and perfect the training mode of assembled construction technology talents. In addition to the knowledge of teaching materials, we should pay

attention to the application of new technology and new machines to ensure that school education keeps pace with the times. In this regard, the teaching content should be supplemented according to the actual situation of the enterprise development. The school should organize teachers and students to actively visit and inspect the assembled construction enterprises. The teachers should take photos or understand the machinery and facilities of the assembled construction in the field practice, or discuss new construction procedures with the enterprise personnel, so as to achieve the synchronization of the teaching content and the actual development.

### 3.3 Optimizing the mode of personnel training, cultivating students' innovative ability

In the background of "new engineering" education, due to the increasing emphasis on students' innovative ability, the traditional teaching mode is no longer applicable. It is necessary to innovate and reform the teaching mode, adopt heuristic and task driven teaching methods, and cultivate students' professional innovation ability with "discipline oriented". Colleges and universities should take assembled education as a reference, innovate design talent training mode, actively introduce international excellent engineering education concept, so as to constantly optimize the talent training mode of colleges and universities in China, learn from and use the experimental platform and practice base to open up learning space, not only to cultivate students' professional theoretical knowledge, but also to cultivate their practical application ability.

### 3.4 Perfecting the teaching system, promoting the full combination of theory and practice

Under the background of "new engineering" education, the key to the training of assembly technology talents is to improve the teaching system, strengthen the combination of professional theoretical knowledge and engineering technology practice, and build a three-dimensional training system of university education and enterprise engineering. The theoretical teaching system not only covers the professional application course group, but also strengthens and expands the course content to help broaden students' knowledge horizon and promote the application of applied technology in actual production.

In addition, we should strengthen the construction of engineering training platform and entrepreneurship platform, provide appropriate scenes for each course drill, and introduce the education mode of school enterprise cooperation into teaching, in order to truly face the needs of enterprise practice and application innovation, and no longer take the written examination as the only standard to assess and evaluate students, but comprehensively investigate the students' comprehensive abilities such as theory, innovation, practice and team cooperation.

## 4. Conclusion

Under the background of "new engineering" education, the reform of the teaching mode of assembled technology talents needs to establish a new concept from the aspect of training, so as to cultivate innovative engineering talents meeting the needs of emerging technology and industrial development. This paper first introduces the connotation of "new engineering" and assembled construction technology, points out the needs of assembled construction talents under the background of reform, and based on this, puts forward corresponding reform countermeasures for talent training mode of colleges and universities. By changing teaching concept, the construction of practical application platform will be strengthened, and students' innovative application ability can be improved, in order to meet the needs of talents in the field of assembled construction under the background of new engineering education.

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