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# Research on the Construction of Practical Teaching System of Architecture in Applied Colleges and Universities

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**Abstract:** Practical teaching is an important part of talent cultivation in applied colleges and universities, which is the key to cultivate high-quality applied talents and also has important practical significance to improve the effect of education and teaching in colleges and universities. Only through engineering practice can students really form good architectural thinking and accumulate more architectural professional experience and skills. However, from the perspective of teaching and talent training of architecture majors, there are many problems, which need to further explore the construction countermeasures of practical teaching system, in order to comprehensively improve students' innovation and practical ability, and realize the significant improvement of professional teaching effect.

**Keywords:** applied college; architecture profession; practical teaching system; construction

Practice is the only standard to test the truth, especially for architecture majors in colleges and universities, engineering practice is an important part of their teaching links, and only good practice teaching can help students accumulate more experience and ability. However, from the development of practical teaching in architecture majors, there are still many shortcomings in it, which affects the competitiveness of engineering talents to a large extent. With the promulgation of the research and practice of "New Engineering", it provides a new opportunity for the construction and reform of the practical teaching system of architecture majors in applied colleges and universities. Only by building a comprehensive and systematic practical teaching system of architecture majors can the practical teaching system be improved and the sustainable development of architecture majors in applied colleges and universities be better promoted. .

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## 1.Characteristics of architecture majors in applied colleges and universities

Nowadays, the number of domestic colleges and universities specializing in architecture has successfully exceeded 250. With the progress and development of the construction field, the development of architecture majors in colleges and universities has also attracted high attention and concern, and based on the reform of local market, how to build an efficient practical teaching system has become an important issue in the development of architecture majors in applied colleges and universities. The major of architecture in applied colleges and universities is a comprehensive discipline, which involves engineering, sociology, art and natural science, etc. Therefore, the major also integrates technology, application and practice, and the main teaching purpose of the major is to cultivate more architectural talents with practical ability. Especially in the background of the concept of applied talents, the architecture majors in colleges and universities should actively strengthen the

exploration and practice of practical teaching system, only in this way can the innovation of practical teaching be realized and more applied technical talents be provided for social development (Zhou & Yao, 2021).

## 2.The importance of the construction of practical teaching system of architecture majors in applied colleges and universities

In order to ensure the construction of efficient practical teaching system for architecture majors in colleges and universities, colleges and universities should investigate and understand the current situation of the market and the current situation of the practical teaching system, and make use of field survey and enterprise communication to grasp the current quality status of students in architecture majors. However, from the current situation of talent cultivation and teaching and research in colleges and universities, there are more deficiencies (Yan, 2019), mainly in the following aspects: first, in the teaching of architecture in colleges and universities, most students have been confined to the school in professional learning, and have not actively participated in the society or enterprises for practice and learning, which leads to more deficiencies in comprehensive quality, and their own practical ability cultivation is also affected. Secondly, the connection between theory and practice courses is insufficient, and there is even an obvious disconnection between the two, especially in the teaching mode and practice content, such as a single teaching mode and backward teaching content, which makes it difficult to better highlight the frontier level of the profession and cannot better meet the professional development needs of students; thirdly, there is a lack of high-level off-campus practice bases, and Thirdly, there is a lack of high-level off-campus practice bases, and the existing practice education bases also have the problem of low utilization rate.

Combining with the current situation of architecture professional talents cultivation in colleges and universities and the actual demand for talents in the construction industry, to better meet the demand for professional talents in the construction industry, it is necessary to actively explore an effective architecture professional practice teaching system, so as to cultivate more high-quality architecture professionals for social development (Li & Chen, 2021).

## 3.The composition of the practical teaching system of architecture majors in colleges and universities

In view of the need of cultivating applied talents and the current situation of cultivating talents of architecture majors in colleges and universities, in order to ensure that graduates can better adapt to job requirements, colleges and universities need to continuously strengthen the modules of practical teaching of architecture majors, and at the same time improve the plan of talent cultivation, and gradually establish a practical teaching system which focuses on students' overall professional development, so as to truly realize the effective construction of practical teaching system (Qu & Liu, 2018).

### 3.1Rational construction of application-oriented curriculum system

Nowadays, with the rapid development of social economy and the progress of industrial technology, the reform of professional courses in colleges and universities is officially on the agenda. In order to realize the effective construction of the practical teaching system of architecture in applied colleges and universities, we can integrate the professional basic courses and experimental and practical courses, so as to strengthen the cultivation of students' professional ability and innovative and entrepreneurial ability (Sun et al., 2018). In the process of constructing an application-oriented curriculum system, we should devote ourselves to building a practical curriculum system based on general education, with architectural design as the core and supported by architectural theory and technology.

### 3.2 Strengthen design teaching and cultivate high quality applied talents

Combining with the characteristics and needs of architecture majors in colleges and universities and the development needs of modern construction industry, design courses and practical training can be carried out throughout the whole process of practical teaching, for example, "Introduction to Engineering" and "Pictorial Geometry and Architectural Drawing" can be actively carried out in the professional basic courses; "Architectural Design" can be added to the professional design courses. Next in the practical courses also need to continue to guide students to master the use of software such as architectural construction drawing drafting to ensure that students can better adapt to the work environment and become a new force in the development of society. By strengthening the design courses, not only can we better improve the satisfaction of employers on the effect of talent training, but also the students' professional development potential and competitiveness have been well developed and enhanced.

## 4.The effective countermeasures for the construction of practical teaching system of architecture in applied colleges and universities

### 4.1 Strengthen the collaboration between school, government and enterprise, and participate in practical teaching together

The theory of "triple helix theory" is an in-depth study of the relationship between university, industry and government, and advocates that the three should fully play the role of each subject during the development of collaborative innovation, and this theory is also applicable to the construction of the practice teaching system of architecture. By building an open and dynamic triple helix collaborative system, the development needs of collaborative innovation in talent cultivation can be better met. In the interaction mechanism, the functions of enterprises, schools and governments should be brought into play as much as possible in order to create a new collaborative education mechanism.

In the interaction mechanism, the government plays the role of a guide, so the government should play its role to build a good platform to support the cooperation between schools and enterprises. For example, the government can give full play to policy guidance, tax concessions and other means to stimulate the enthusiasm of enterprises to participate, and also provide enough financial support for the cooperation between universities and industries. In the whole practical teaching, colleges and universities are the main implementer and executor, and also the main body of talent cultivation, so they play the role of the leading person, for which colleges and universities should further sort out the goal of talent cultivation, and also need to sort out the relationship between each element. And enterprises are also very important in school-enterprise cooperation and belong to the acceptance of cooperation. With the help of talent cultivation platform, enterprises can get more high-quality professional talents to improve their own technical innovation ability comprehensively.

### 4.2Realize the combination of scientific evaluation and incentive mechanism

All along, there has been an obvious problem of de-engineering in China in engineering education evaluation index system in general, but due to many teachers' own lack of sufficient engineering practice background, the effect of engineering practice teaching has also been seriously affected. Evaluation is the driving mechanism of talent cultivation, and in the construction of architecture professional practice teaching system, the evaluation system is the core of the evaluation of architecture professional practice teaching effect. Only by making good use of the evaluation effect can we better adjust the practice teaching objectives of colleges and universities, and then continuously improve the teaching content and teaching plan, so as to ensure that the practice teaching work can be promoted steadily. In this regard, in order to build an effective architecture professional practice teaching system, it is necessary to focus on strengthening the full combination of evaluation and incentive, based on which a diversified evaluation system is formulated and reasonable incentive measures are used to guide and

encourage students to actively participate in practical projects and scientific research innovation, so that students' practical ability and professionalism can be scientifically and comprehensively evaluated in a more comprehensive way.

**4.3 Strengthen the monitoring of professional teaching quality in all aspects**

In order to improve the quality and efficiency of professional practice teaching of architecture in colleges and universities in all aspects, in addition to formulating a scientific and reasonable practice teaching system, it is also necessary to create a perfect practice teaching guarantee mechanism and reasonably set up the links of system quality measurement, teaching information collection, teaching quality supervision, quality information feedback and quality improvement to strengthen the supervision and control of teaching quality in all aspects (Zhuang et al., 2021). At the same time, during the monitoring of teaching quality, it is necessary to ensure that the objectives of practical teaching can better meet the goals of talent cultivation in applied colleges and universities; the contents of practical teaching also need to better meet the frontier of the development of the times; the methods of practical teaching should ensure to meet the core development needs of students' profession; and the mode of practical teaching should also ensure to better meet the needs of industrial development. Only when the above contents are satisfied at the same time can the effective structure of practical teaching system be realized and the quality and effect of talent cultivation can be achieved by a qualitative leap and improvement.

**4.4 Full integration of practice base and practical teaching system**

In order to realize the effective construction of practical teaching system, colleges and universities should also take the on-campus practical training centers as the bases of practical teaching, so as to ensure that they can provide more realistic learning scenes for students' professional learning, so as to realize the effective transformation from classroom teaching to on-site practical teaching (Tian, 2015). At the same time, it is also necessary to actively create off-campus practical teaching bases, to continuously eye the on-site practical teaching on campus to the practical teaching outside the classroom, and to truly realize the full integration of practical teaching inside and outside the school. In addition, in the form of teaching participation, it is also necessary to combine the practice base with the practice teaching system in all aspects, and at the same time, universities also need to actively strengthen the contact and collaboration with enterprises to ensure that students have more opportunities to participate in the construction units for visits and learning, and of course, they can also actively establish joint training institutions to really improve the practice teaching level of architecture majors (Yu, 2019).

## 5. Conclusion

In a word, for architecture majors in applied colleges and universities, cultivating applied talents is an important part of their education and teaching, for which colleges and universities must take cultivating applied talents as the basic starting point of professional teaching and talents, and at the same time, from the concept of sustainable development, actively build a scientific and perfect practical teaching system to better ensure that the cultivation of talents can better adapt to the development of the construction industry, and ensure that it can provide a better teaching environment for In order to better ensure that the cultivation of talents can better meet the development of the construction industry and cultivate more high-quality applied talents for the progress and development of the construction field, and thus promote the improvement of the quality of professional practice education of architecture in colleges and universities.

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**Conflict of Interest**

The authors declare that they have no conflicts of interest to this work.

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