



# Research on the Reform and Practice of Furniture and Wood Processing Courses Under the Background of Mass Entrepreneurship and Entrepreneurship

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**Abstract:** Curriculum reform is a historical and inevitable choice to promote quality education. It is an extensive and in-depth educational innovation in the field of education in China. Building a democratic, scientific and open new basic education curriculum system is the requirement of quality education in China. The teaching reform and practice innovation research of furniture and wood processing courses in colleges and universities is not only to meet the needs of the international development of higher education, but also an important way to expand students' international vision, cultivate their awareness of international cooperation, and improve their innovation and entrepreneurship ability and employment competitiveness. Therefore, in order to further enhance the competitiveness of the training of furniture and wood processing professionals, closely combine the teaching content of the school with the production practice of enterprises, and carry out production and learning cooperation with relevant enterprises in the industry, this study explored the teaching reform models of courses such as furniture and furnishings, wood cutting principles and tools, furniture design and manufacturing, furniture structure and materials, respectively. Realize the transformation of talents from the traditional employment education mode to the innovation and entrepreneurship practice education mode, improve the adaptability of university output talents to social development under the new situation, expand students' international vision, cultivate international cooperation awareness, and improve innovation and entrepreneurship ability and employment competitiveness. At the same time, teacher training was held around the field of furniture design, and teacher training project research was carried out to further improve teachers' teaching practice and promote the construction of teachers.

**Keywords:** Furniture and Wood Processing, Curriculum Reform, Undergraduate, Graduate Student, Innovation and Entrepreneurship

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## 1. Introduction

Since the new century, China's higher education has gradually changed from elite education to mass education [1]. At the same time, in order to meet the needs of economic society for diversified talents, colleges and universities are also actively seeking effective ways to improve the quality and level of education, and exploring a new model of diversified innovative talent training. Curriculum reform is a historical and inevitable choice to promote quality education. It is an extensive and in-depth educational innovation in the

field of education in China [2-4]. Building a democratic, scientific and open new basic education curriculum system is the requirement of quality education in China [5-7]. The teaching reform and practice innovation research of furniture and wood processing courses in colleges and universities is not only to meet the needs of the international development of higher education, but also an important way to expand students' international vision, cultivate their awareness of international cooperation, and improve their innovation and entrepreneurship ability and employment competitiveness [8-10].

The course of furniture and furnishings is a required course for furniture and design majors and an important part of the professional curriculum system. According to the survey, each school has its own emphasis on the teaching content, but the basic teaching task of this course is to enable students to further develop the ability to engage in interior decoration design, create innovative living spaces in functional and aesthetic aspects, so that students can train basic design skills and broaden their horizons. The course of furniture and furnishings enables students to further understand the types, characteristics, techniques of furnishings art, as well as the application of space combination in the environment, art treatment and other issues. To master the characteristics and background of various styles of furniture so as to have a certain quality of design culture; Fully understand the important role of interior furnishings design in interior design, and cultivate the thinking habit of fully considering interior furnishings design in the process of interior design; Master the characteristics, design basis and artistic basis of interior furnishings design, as well as the significance and application of interior furnishings, improve the ability to appreciate and evaluate the art of furnishings, and be able to independently complete the selection and configuration of interior furnishings art design and furniture, laying a certain foundation for improving students' overall quality and professional skills and enhancing their professional ability [11-13].

The major of wood science and engineering under forestry engineering cultivates the basic theory and professional knowledge of wood processing, master the basic theoretical knowledge of wood processing equipment design, master the basic theoretical knowledge and basic skills of furniture modeling, structural design, manufacturing technology, understand the modern scientific and technological information in the fields related to wood science and engineering, and be able to apply it to wood and wood composite material processing, furniture manufacturing Senior engineering and technical personnel engaged in scientific research, process design, development and production technology management, enterprise management, etc. in enterprises, design or research institutes in the field of interior decoration engineering. Wood cutting principles and tools are a subject that studies the basic rules in the wood cutting process, the selection and use of standard tools, and the design principles and methods of non-standard tools. The course of wood cutting principles and tools is an important professional basic course in the course system of wood science and engineering. The practical teaching mainly focuses on the selection of tool materials and the design of tool structure [14].

Teachers' training in colleges and universities is not only to meet the needs of the international development of higher education, but also an important way to expand teachers' vision, cultivate the sense of cooperation, and improve teaching ability and level [15]. Furniture design and manufacturing, as well as furniture structure and materials, are the backbone courses of furniture and design majors,

and are also important components of the curriculum system of this major. This course will enable students to have a further understanding of the types, characteristics, techniques of furniture materials, as well as the application of space combination in the environment, art treatment and other issues. To master the characteristics and background of various styles of furniture so as to have a certain quality of design culture; Fully understand the important role of furniture in interior design, and cultivate the thinking habit of fully considering design in the furniture manufacturing process; Master the characteristics of design, design basis and art basis, as well as the significance and application of design, improve the ability of art appreciation and evaluation, and be able to independently complete the selection and configuration of furniture, laying a certain foundation for improving students' overall quality and professional skills and enhancing their professional abilities.

Therefore, in order to further enhance the competitiveness of the training of furniture and wood processing professionals, we will closely combine the school's teaching content with the enterprise's production practice, carry out production and learning cooperation with industry related enterprises, carry out teaching reform research on courses such as furniture and furnishings, wood cutting principles and tools, furniture design and manufacturing, and realize the transformation of talents from the traditional employment education mode to the innovation and entrepreneurship practice education mode, We will improve the ability of colleges and universities to export talents to adapt to social development in the new situation. At the same time, teacher training will be held around the field of furniture design to support colleges and universities to carry out research on the "double qualified" teacher training project. By combining college teachers who focus on theoretical research and enterprise technology and management experts who focus on practical experience, we will create a "double qualified" teacher team to cultivate application-oriented professionals, improve teachers' teaching practice, and promote the construction of the "double qualified" teacher team.

## **2. Teaching Reform of Furniture and Furnishing Course**

### **2.1. Reform Features of Furniture and Furnishing Course**

The study of furniture and furnishings course cannot be separated from practice, so it is in line with the requirements of the reform of furniture and furnishings course to carry out industry university cooperation with industry enterprises. Students can improve and enrich their comprehensive abilities through practical learning in line with their work. At the same time, it can transform the R&D tasks of enterprises into the form of topics, so that teaching and research can be skillfully combined, making teaching more targeted. In the teaching process, it can greatly improve the enthusiasm of students' design creativity, join hands, enable the

implementation of original design ideas, maximize the design potential of students, and form a virtuous circle in the whole system's learning.

## **2.2. Reform Objectives of Furniture and Furnishing Course**

In view of the problems existing in the teaching system of furniture and furnishings course, such as "vague teaching levels, unclear teaching positioning, aging textbooks, outdated teaching concepts, and lack of cultivation of students' practical ability", the reform and practice were carried out. The teaching content arrangement, teaching characteristics, teaching methods and means, curriculum construction and other aspects were discussed in detail to improve the teaching quality.

Cooperate with enterprises to carry out industry university cooperation education projects, actively communicate and exchange, and jointly build high-quality talents with both theory and practice and facing social needs, so as to achieve the goal of industry university cooperation, sharing results and mutual benefits.

## **2.3. Reform Content of Furniture and Furnishing Course**

Reform and practice the furniture and furnishings curriculum, emphasize the development of creative thinking, break through the mode of simple skill teaching, focus on cultivating students' creativity, and establish an education system aimed at cultivating creative art design talents. Develop students' creative thinking, reform teaching principles, teaching models, teaching methods and teaching strategies, and build a teaching system for the development of creative thinking.

The specific construction contents include: based on the major courses, the teaching content arrangement, teaching characteristics, teaching methods and means, curriculum construction and other aspects are discussed in detail, and the teaching system of creative thinking development is constructed to improve the teaching quality; Relying on the production base of the enterprise, comprehensive training on innovation and entrepreneurship skills will be carried out in an all-round way to increase the content of production practice and improve the innovation and entrepreneurship practice ability of undergraduates and postgraduates; Through continuous and effective running in with enterprises, on the basis of obtaining mutually recognized scientific research practice achievements, guide enterprises to systematically and gradually give the core parts of project production design tasks to schools, so that a relatively fixed professional teacher design team can be formed, teaching students in accordance with their aptitude, and improving teaching quality; Based on the above contents, the reform plan of the teaching system of furniture and furnishings course is proposed and put into practice, so that students have strong practical ability, design expression ability, etc., and the selection of teaching content is industry specific and post adaptive.

## **2.4. Reform Methods of Furniture and Furnishing Course**

The reform method adopts a variety of teaching methods, integrating teaching, learning and doing. In the teaching process, we selected the teaching content, taught students in accordance with their aptitude, adopted a variety of teaching methods, and integrated teaching, learning and doing to improve the interest, vitality and richness of the teaching content, so as to achieve interactive teaching between teachers and students, highlight the key points, emphasize and explain the difficulties, so that students can deepen their understanding.

Theory and practice education are integrated. Simulate a project case, let students systematically complete furniture design and interior furnishings layout, convert book knowledge into actual design concepts and ideas, fully realize the importance of combining theory with technology in practice, greatly increase students' perceptual knowledge, and cultivate students' ability to independently design furniture.

Carry out market research and practice. In the practice of furniture and furnishings, we need to know the market first. Through the market survey, students can understand the current domestic home furnishing industry development and market situation, improve their perception of the industry, deepen their understanding of furniture design, grasp the development trend of the discipline frontier, and expand their knowledge base.

We should carry out the comprehensive practice of innovation and entrepreneurship, make full use of the practice base of the enterprise, and guide students to go deep into the furniture production base to observe and learn. The teacher should explain the furniture production process on the spot, which is vivid and specific, and imparts students the real needs of the front line of the project and the most practical knowledge. Through this experiential learning, students' interest in learning professional knowledge and skills can be well stimulated.

## **3. Teaching Reform of Wood Cutting Principle and Cutting Tools Course**

### **3.1. Reform Features of Wood Cutting Principle and Cutting Tools Course**

Through the reform of teaching content, teaching methods, teaching practice and assessment, we will open a course based on the production practice of furniture industry, build a more scientific and reasonable teaching system of wood cutting principles and tools, and improve students' comprehensive ability and quality.

### **3.2. Reform Objectives of Wood Cutting Principle and Cutting Tools Course**

Focusing on students and aiming at cultivating the innovation and entrepreneurship ability of undergraduates and postgraduates, the course system of wood cutting principles and cutting tools for wood science and engineering

majors is reformed through in-depth analysis of practical teaching of wood science and engineering majors, research on content, methods, practice and evaluation, and so on, so as to improve the comprehensive ability and quality of students.

### **3.3. Reform Content of Wood Cutting Principle and Cutting Tools Course**

The curriculum reform focuses on the training needs of wood science and engineering professionals, optimizes the curriculum teaching design and enriches the teaching content; Adopt the teaching method with students as the core to promote students' subjective initiative; Strengthening practical teaching and improving the quality of talent training; Optimize the assessment and evaluation system, and improve the comprehensive ability and quality of undergraduate and graduate students majoring in wood science and engineering.

The specific construction contents include: building a wood cutting principle and tool course based on the main courses of wood science and engineering and the synchronous development of furniture processing and manufacturing industry, reforming teaching methods and contents, and establishing an assessment system; Cooperate with enterprises to carry out innovation and entrepreneurship practice training for undergraduates and postgraduates, and increase the practical teaching content of the course; Cooperate with enterprises to build demonstration courses, integrate the results into the course teaching content, and form complete and shareable course courseware materials.

### **3.4. Reform Methods of Wood Cutting Principle and Cutting Tools Course**

Driven by application, the course of wood cutting principles and tools, which combines theory with practice, is offered. Based on the main courses of wood science and engineering specialty, a curriculum system that is synchronized with the development of furniture processing and manufacturing industry is constructed, teaching methods and means are reformed, teaching practice content is increased, practical problems in the production of furniture enterprises are taken as the main teaching purpose of practice courses, students' perceptual knowledge and thinking ability are improved, and practical experience is accumulated.

To establish an examination and evaluation system, an important part of the teaching process is the examination and evaluation of scores. In order to adapt to the optimization of the teaching system of wood cutting principles and cutting tools, the examination and evaluation system will be further optimized in structure. In the optimized examination and evaluation system, the proportion of scores will be reduced, the innovation and practice ability will be highlighted, and the examination and practice will run through the entire teaching process.

The reform of teaching methods with students was considered as the core. Case teaching and classroom discussion are added. Case teaching is mainly guided,

heuristic and student participation. With teachers as the main guide and students as the core, case analysis teaching is conducted on the methods of wood cutting. The teaching method of interactive discussion is adopted to enable students to actively analyze and think, find methods and answers, so as to improve their subjective initiative.

## **4. Training for Teachers of Furniture Design Courses**

### **4.1. Reform Features of Teacher Training**

Furniture courses cannot be separated from practice, so it is in line with the requirements of the reform of furniture courses to carry out industry university cooperation with enterprises. Teachers can improve and enrich their comprehensive abilities through practical learning in line with their work. At the same time, it can transform the R&D tasks of enterprises into the form of topics, so that teaching and research can be skillfully combined, making teaching more targeted. In the teaching process, it can better help to improve the technical and curriculum construction level of front-line teachers, maximize the potential of teachers, and form a virtuous circle in the whole system of teacher training.

### **4.2. Reform Objectives of Teacher Training**

For the field of furniture design and manufacturing, teachers should be trained in detail in terms of teaching content arrangement, teaching characteristics, teaching methods and means, curriculum construction and other aspects, so as to improve the teaching quality and professional level of teachers.

Cooperate with furniture enterprises to carry out industry university cooperation education projects, actively communicate and exchange, jointly cultivate excellent teachers, jointly cultivate high-quality talents with both theory and practice, and meet the needs of society, so as to achieve the goal of industry university cooperation, sharing results and common benefits.

### **4.3. Reform Content of Teacher Training**

We will combine college teachers who focus on theoretical research and enterprise technology and management experts who focus on practical experience to create a "double qualified" teaching team that trains application-oriented professionals, improve teachers' teaching practice and promote the construction of a double qualified teaching team.

The specific construction contents include: based on the main courses of furniture specialty, the teaching content arrangement, teaching characteristics, teaching methods and means, curriculum construction and other aspects are discussed in detail, and the teaching system of creative thinking development is constructed to improve the teaching quality; Fully carry out teacher training based on the production base of furniture enterprises, increase the content of production practice, and improve the production practice

ability of teachers; Through continuous and effective running in with enterprises, on the basis of obtaining mutually recognized scientific research practice achievements, guide enterprises to systematically and gradually give the core part of project production design tasks to schools, so that a relatively fixed professional teacher design team can be formed, teaching students in accordance with their aptitude and improving teaching quality.

#### 4.4. Reform Methods of Teacher Training

A variety of teaching methods were adopted to integrate teaching, learning and doing. In the process of teaching and training, select teaching content, teach students in accordance with their aptitude, adopt a variety of teaching methods, and integrate teaching, learning and doing to improve the interest, liveliness and richness of teaching content, achieve interactive teaching, highlight key points, emphasize and explain difficulties, and better deepen understanding.

Teachers are encouraged to go deep into grass-roots enterprises for technical guidance and transformation of scientific research achievements. Meanwhile, high-level technical talents in enterprises are also supported to enter the classroom, and production practice is integrated into the theoretical teaching process, so as to integrate theory with practice and integrate theory with practice.

Carry out comprehensive practical training. During the training period, we made full use of the practice and training base of the enterprise, led undergraduates and postgraduates to the furniture panel production base to observe and learn, and the teachers explained the panel production process on site, which was vivid and specific, and taught the students the real needs of the front line of the project and the most practical knowledge. Through this experiential learning, students' interest in learning professional knowledge and skills can be well stimulated.

## 5. Summary

Through the above reforms, the reform plans for the courses of furniture and furnishings, wood cutting principles and tools, furniture design and manufacturing, and furniture structure and materials have been put forward respectively. The curriculum content has been reformed, the curriculum resource library has been built, the teacher training meeting has been held, the teacher training methods and experience have been summarized, and the "double qualified" teacher team building activities have been carried out. At the same time, the students were guided to actively participate in the production practice of the enterprise, to jointly carry out the construction of demonstration courses with enterprise teachers, to incorporate the construction results into the classroom teaching content, to form a complete course courseware and guide teaching. The reform results will benefit the undergraduates and postgraduates of relevant majors in colleges and universities as well as enterprises. At the same time, we will comprehensively sort out and summarize the teaching reform experience obtained, and

share the curriculum resources free of charge, so that the teaching results will gradually spread and radiate to the reform and innovation and entrepreneurship practice of the cultivation mode of undergraduates and postgraduates of relevant disciplines in domestic colleges and universities, benefiting thousands of students every year. Future work will focus on promotion of the achievements obtained from this reform study.

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## References

- [1] Mao A, Yu X. Y, Lu F. D, Yuan Y. F, Li Q. Research on the Reform of Personnel Training Mode for Forest Related Majors by Foreign Exchange Programs. *Education Teaching Forum*, 2019, 43: 103-105.
- [2] Zhang S. X, Wang Y. W, Liu X. L, Wang H. L. Cultivating Entrepreneurial Talents of Sericulture under the Guidance of Specialty Expansion. *China Agricultural Education*, 2011, 5: 82-85.
- [3] Li Q, Yang L. C, Yu X. Y, Lu F. D, Sang Y. L, Yuan Y. F, Mao A. Study on the Bilingual Teaching Reform of Adhesive and Coating Course under the Background of Cooperation Program. *Education Teaching Forum*, 2019, 50: 124-125.
- [4] Yan Y. Teaching Research on Higher Vocational Pre-School Education of Professional Art Course Based on Innovation and Entrepreneurship Education. *Creative Education*, 2015, 5: 12-14.
- [5] Yao Y. Q. Innovation and Promotion of College Students' Entrepreneurship in China. *Journal of China Institute of Industrial Relations*, 2020, 34 (2): 19-26.
- [6] Xu X. H, Huang D. Q, Xiao H. X. On the Employment Satisfaction of College Students from the Perspective of "Mass Entrepreneurship and Innovation" Education. *Education and Vocation*, 2020, 17: 67-72.
- [7] Ma J. D, Wang F. A Comparative Study on the Undergraduates' Innovation & Entrepreneurship Education in Britain and in China. *Journal of Lanzhou Jiaotong University*, 2020, 39 (2): 147-151.
- [8] Zhang Y, Wang S. M, Wang X. Research on the Path of Cultivating College Students' Innovation and Entrepreneurship. *Value Engineering*, 2020, 39 (10): 278-279.
- [9] Liu C. H, Li X. H, Li G, Yue Q. R, Ren Y. G. Practice and Exploration of the Undergraduate Innovation and Entrepreneurship Training Program. *Research and Exploration in Laboratory*, 2014, 33 (5): 163-166.

- [10] Hou J. J, Yang W, Chen C. Design and implementation of innovation and entrepreneurship competition management system. *Electronic Test*, 2021, 20: 80-81.
- [11] Wu X. X. Research on the Teaching Path of Furniture Design under the Background of "Curriculum Ideological and Political". *Journal of Hubei Open Vocational College*, 2022, 17: 169-170.
- [12] Zhu Y. F. Exploration on Ideological and Political Construction of "Furniture Design" Course for Art Majors in Higher Vocational Colleges. *Modern Vocational Education*, 2021, 28: 74-75.
- [13] Zhong G. M, Li Y. B, Xie W. Application of case teaching method in the teaching of furniture modeling design. *Industrial Design*, 2022, 7: 38-40.
- [14] Guo X. L, Xiao L. Teaching Reform and Practice of Wood Cutting Principle and Tool Course. *University Education*, 2021, 4: 49-51.
- [15] Li Y. B, Zhong G. M. Research on the application of project teaching in the course of furniture modeling design. *Industrial Design*, 2022, 1: 51-53.