

Report on the Implementation of Teaching based on Blended Teaching Mode - Taking the Course of “Fruit Tree Facility Cultivation” (Grapes) as an Example¹

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Abstract: Aiming at the report of teaching implementation of the course “Fruit Tree Facility Cultivation” (Grapes) in the College of Horticulture and Food of Guangdong Ecological Engineering Vocational College, we summarized and sorted out the content from the nature of the course, course nature, course content, teaching methods, teaching effectiveness and teaching innovation, and explored the report of teaching implementation of the course in the educational teaching reform of the College of Horticulture and Food of our university.

Keywords: Teaching design concept; Teaching design ideas; Teaching methods; Experiential teaching

In today's world, with the intensification of competition in the game of great powers and the great change that the world has not seen in a century, the key for China to win the advantage and initiative and achieve the great rejuvenation of the Chinese nation is in talents, and talents are heavily cultivated^[1]. In 2019, the State Council promulgated the "20 articles of vocational education" and the "1+X certificate" system pilot work. Through innovative practical teaching reform and implementation, we promote the transformation of practical teaching from "supply-driven" to "demand-driven" and promote the cultivation of applied innovative talents^[2], with the arrival of Internet+ and digital era, MOOC, SPOC, You College With the advent of the Internet+ and digital era, new teaching concepts, teaching methods, teaching designs and teaching forms such as MOOC, SPOC, UCS, flipped classroom, split classroom and virtual imitation are developing vigorously. Blended teaching precisely absorbs these emerging elements of information technology and combines the advantages of online teaching and traditional teaching through the deep integration of online and offline educational resources by modern information technology and education teaching. Blended teaching greatly promotes the teaching efficiency and schooling style of higher education institutions, stimulates students' enthusiasm and initiative in learning, and cultivates students' ability to think well and dare to innovate in learning. The interaction and feedback of students in the teaching process also improve the teaching ability of teachers. It meets the high standards and requirements for talents of today's development. It provides strong support for building a strong country of higher education and modernizing Chinese education by 2035^[3].

Hybrid teaching design, the role of modern information technology tools such as cloud computing, big data and artificial intelligence in education in vocational colleges and universities is receiving more and more attention. The digitalization of education and teaching has brought about a major change in teaching. The "blended teaching" is an innovative teaching model that combines the traditional classroom and the online teaching platform by using information technology, relying on the online platform, and continuing the development of the actual classroom in the virtual space of the network. Thus, blended teaching has become a hot model for curriculum reform in vocational colleges and universities, and is used as a model for vocational college classrooms. As blended teaching combines online learning and traditional teaching modes, guiding students to learn from online to offline and from shallow to deep levels, online teaching is an essential part of the teaching process^[4], and the

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whole teaching process should be student-centered. The blended teaching includes three basic elements of online resources, of-line activities and process assessment in the process of concrete development and implementation [5].

In summary, the opportunities brought by information technology should be fully utilized to form a lively classroom that can trigger multidimensional perceptions, stimulate and mobilize students' subjective initiative, and improve their learning efficiency by using online and offline hybrid teaching modes. At the same time to enhance the overall quality, including hands-on ability, presentation ability, hard-working spirit, innovation ability, competitive consciousness, craftsmanship, etc. This paper takes the actual "Fruit Tree Facility Cultivation" (grape) course implementation report as an example, combined with the higher vocational online and offline hybrid teaching design method, to discuss the nature of this course, course content, teaching methods, teaching effectiveness and other aspects, so as to provide reference for your future higher vocational course implementation report.

1. Nature of the course

This course is the core curriculum of the higher education class leisure agriculture operation and management professional horticulture technology course, is a mandatory course of work in the production of technical positions in facility agriculture. The course is based on theoretical knowledge of fruit tree production technology, combined with the application of practice, following the application of cutting-edge technology as the guiding ideology, the concept of innovation and entrepreneurship education, vocational standards, labor literacy and 1 + X certificate into the curriculum, to guide students to form a correct cognition, identity and practice of socialist core values. Cultivate moral, intellectual, physical, aesthetic and labor "five education" type talents, to create a close to production, service enterprises, service to society, professional skills of the professional core curriculum. The course has 64 hours, including 32 hours of theoretical lectures and 32 hours of experiments/practices.

2. Course Content

The course mainly focuses on the classification, variety identification and selection of Guangdong grape cultivation facilities; the cultivation mode of facility grapes; soil improvement of facility grapes; management of young vines in facility grapes; fertilization of facility grapes; winter pruning of facility grapes; early spring budding of facility grapes; shaping of facility grapes; management of inflorescence separation of facility grapes; flower and fruit preservation of facility grapes; fruit expansion management of facility grapes. The main focus of the course is to develop good professional ethics and professionalism. Students will master the basic professional theories, special practical skills and comprehensive vocational abilities necessary for grape production, management and service, and master modern grape production technology.

3. Teaching Design

3.1 Design concept

According to the important instruction of President Xi Jinping, "Civics is the key course to implement the fundamental task of cultivating people with moral character", and to implement the spirit of the "three comprehensive education" and "three educational reforms" of the college, the course is designed in accordance with the following principles With the unification of "Facility Cultivation" (grapes) and moral, intellectual, physical, aesthetic, labor and political thinking, the five teaching contents are aligned with production, market, enterprise, industry and society; the five teaching resources are capitalized, the

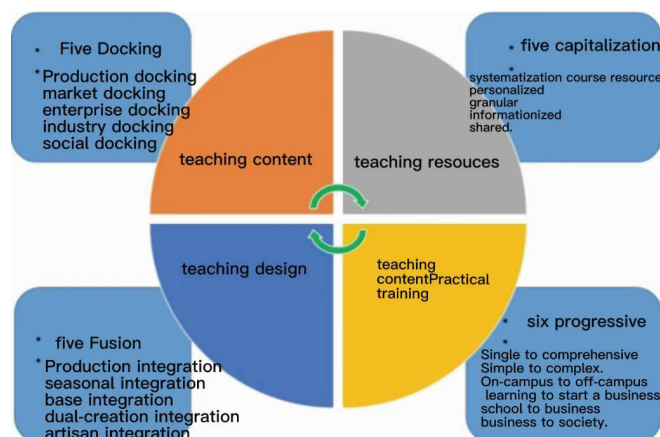


Figure 1 Course design concept

course resources are systematized, personalized, informatized and shared; the five teaching designs are integrated with production, seasonal, base, dual-creation and artisan; the six progressions of practical teaching mode are integrated with production, seasonal, base, dual-creation and artisan; and the six progressions of practical teaching mode are integrated with production, seasonal, base, dual-creation and artisan. The six progressions of teaching mode, from single to comprehensive, from simple to complex, from in-school to out-of-school, from learning to entrepreneurship, from school to enterprise, from enterprise to society. In order to achieve the students' hands-on ability, application ability and professionalism significantly improved. The final realization of the course "online, shared, high-quality" design concept.

3.2 Design concept

The "learning project" design is based on the job requirements, occupational standards and the law of vocational training, and the real work tasks of enterprises and the systematization of work processes are used to integrate the teaching content, number of hours, teaching methods and evaluation indexes. We follow the actual situation of agricultural enterprises, control the key points and difficulties, grasp the "theory and practice", focus on the "knowledge and skills" combing and connection, highlight the vocational ability and innovative application ability training, reflect the characteristics of the curriculum, and create a direct The core curriculum serves the production, enterprise, industry, local economy and national strategy of rural revitalization, and finally realizes the goal of training talents who can be competent in leisure agriculture production.

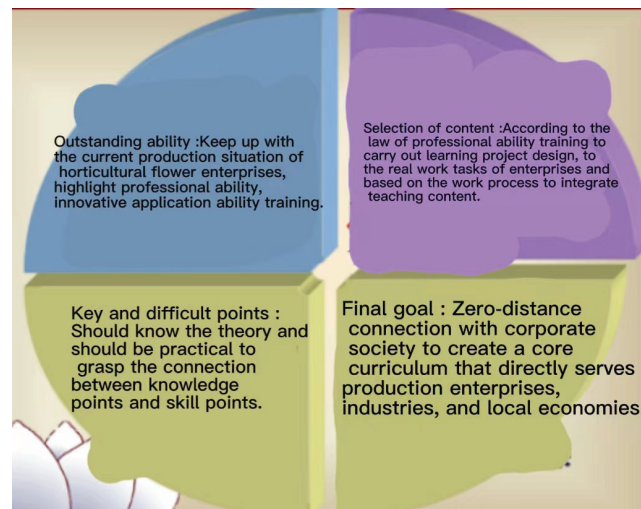


Figure 2 Curriculum design ideas

4. Effectiveness of teaching implementation

4.1 Teaching methods

(1) Flipped classroom teaching method: fully embodies the idea of student as the main body and teacher as the leading one. Part of the knowledge points, students raise questions through micro-classroom pre-study, teachers make answers and expand guidance, teach the necessary theoretical knowledge, focus on cultivating job vocational ability, focus on guiding students to discover problems by themselves, think consciously and inspire students to learn actively.

(2) Hybrid teaching method: realize all teaching resources "online construction, online display, online update, online use", and support online or offline mixed teaching, students use online learning platform for online learning. Students use the online learning platform for online learning, and use the courseware for classroom lectures offline, and use the course platform (video, micro-class, WeChat public number, etc.) for consolidation and improvement after class.

(3) Experiential teaching method: Each project sets up the corresponding practical training session, with hands-on demonstration by the teacher and hands-on operation by the students. After the students finish the operation in class, they have to continuously maintain the cultivated plants at a later stage. Taking students' experience as the starting point and the destination, mobilize students' subjective initiative, as well as their ability to analyze problems and solve them and their innovative ability.

4.2 Teaching means

(1) Multimedia teaching According to the strong intuitive characteristics of viticulture, the teachers of the course team designed the whole teaching process scientifically and made full use of the media function to show the pictures, viticulture facilities, and grape production process and methods in an intuitive and vivid way, which enriched the classroom content, expanded

the space of the classroom, saved a lot of time, and enhanced the students' perceptual understanding, and the teaching effect was much better than the traditional The teaching effect is much better than traditional teaching methods.

(2) On-site teaching Make full use of the on-campus training base and the off-campus training base established in cooperation with many enterprises to teach the classroom content on site, trying to get rid of the empty, dull and didactic teaching, so that students can increase their perceptual understanding, enhance their understanding of theoretical knowledge, better cultivate their vocational skills and reflect work process-oriented teaching.

(3) Task-driven teaching The school teaching process and the enterprise production process are closely integrated, the curriculum unit design is based on enterprise job tasks and work processes, the teaching content is constructed based on actual jobs and work situations, and the teaching process is implemented in group practice with specific work projects as the carrier to improve the students' ability to analyze and solve problems and innovation.

(4) Interactive teaching In the teaching process, teachers guide students in the development of professional habits, organization and cooperation skills, adaptability and professional quality training, focusing on teaching and learning interaction, interaction, mutual exchange, communication, inspiration and supplementation between teachers and students. The classroom allows students to engage in activities such as elaborating insights, summarizing central content, and designing homework problems. Each student was carefully prepared in terms of mental adjustment, comprehensive application of knowledge, and language expression in order to present themselves well. Despite the low level at the beginning, the students gained something that even a high level teacher would not be able to do. This kind of activity, in which students and teachers exchange roles, strongly promotes the free development of students' personalities and the improvement of their overall quality, and also maximizes the release of potential, and establishes a good relationship between teachers and students on an equal footing and teaching each other.

Productive practical training with school-enterprise cooperation Cooperation is reached with many enterprises outside the school for productive practical training of flowers and trees, so that students can directly experience the corporate atmosphere, learn the corporate culture, and train various skills such as soil, fertilizer and water management, shaping and pruning, pest control, sales and application in the actual production of enterprises. And combined with the third year of the top-up internship, students participate in the operation of the enterprise as employees of the enterprise and integrate into the professional role in advance.

Innovative application skills package teaching Innovative application skills package is developed in response to the knowledge, skills and professionalism of the course. It follows the pulse of flower industry development and integrates the latest and optimal technology into the curriculum teaching, which is the fastest and most directly reflected in the quality of horticulture technology professional personnel training, and is also the most in-depth way of industry-education integration, school-enterprise cooperation and engineering integration, which generates significant social benefits.

5. Teaching Innovation

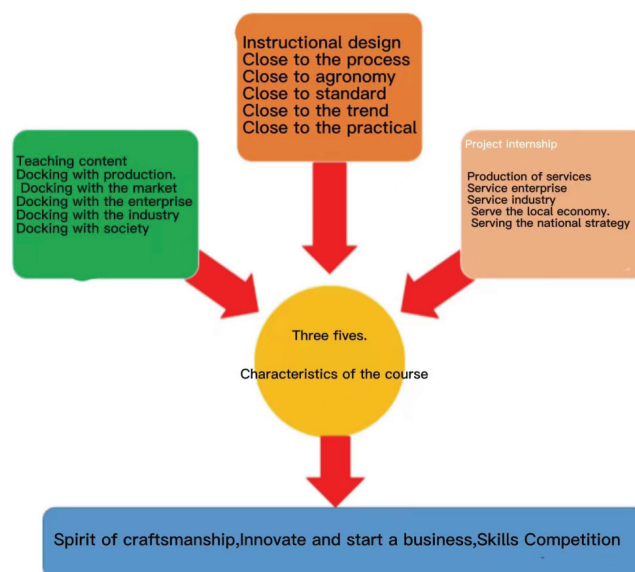


Figure 3 Teaching Innovation

The construction of the "Facility Cultivation" (grape) course reflects three 5 characteristics, according to the characteristics of grape growth and agricultural characteristics, according to "close to the process, close to the agronomy, close to the standard, close to the trend, close to the practical" (five close) for teaching design. Students participate in the production line of the enterprise as employees, and train their professional skills in the real working environment, and connect the curriculum with production, market, enterprise, industry and society (the five connections). Realize course-practical training-cultivate craftsmanship; course-product-embody innovation and entrepreneurship; course-skill certificate-skill competition. The final semester is connected with the course of "On-job Practice" to realize service to production, service to enterprises, service to industry, service to local economy and service to national strategy (construction of Guangdong-Hong Kong-Macao Bay Area) (five services).

6. Conclusion

According to the requirements of the "three teaching reforms" and "1+X" certificate pilot, the curriculum and teaching content are optimized, teaching organization and implementation are coordinated, teaching methods and approaches are deepened, and the adaptability and relevance of talent cultivation are improved. In the actual teaching process found that the field-based teaching process, students' hands-on skills, need systematic training, and through a certain period of time to exercise the accumulation of skills into production. Task-driven teaching process in the school teaching process and the enterprise production process based on the job and work situation to build the teaching content is still some differences, need to properly adjust the teaching content to achieve a seamless connection. Although the students have a strong interest in learning and high motivation in practice, there is still a big gap between the results of practical operation and the requirements of craftsmanship, which is recommended to reflect on the practical training report after the students' practical training and further improve their skills. Through the combination of practical training report and practical operation, the hands-on ability can be quickly improved.

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