

Research on the Quality Evaluation System of Application-oriented Undergraduate Education Based on OBE Concept

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Abstract: OBE concept emphasizes student-centered, result-oriented and continuous improvement, which is highly compatible with the quality evaluation of application-oriented undergraduate education integration of production and education. Guided by OBE concept and integrated with PDCA cycle model, OBE concept is used to construct the quality evaluation system of application-oriented undergraduate education integration of production and education, and suggestions on how to apply it are put forward. It provides a way for the quality evaluation of the integration of production and education in applied undergraduate colleges.

Keywords: OBE concept; Integration of production and education; Educational quality evaluation

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Introduction:

Results-based Education (OBE) is a student-centered education model that aims at the growth and development of students. It emphasizes student learning outcomes rather than learning processes. OBE first appeared in the basic education reform in the United States and Australia^[1]. The origin of the integration of industry and education can be traced back to the 1980s, when the United States put forward the concept of “the combination of education and industry”, aiming to achieve the organic combination of education and industry by linking industry and educational institutions, in order to train talents to adapt to the development of modern industry. In China, the concept of integrating industry and education first appeared in 1995, when the Chinese government put forward the strategy of “integrating industry, university and research” to promote the transformation of scientific and technological achievements into productive forces by linking industry, academia and research institutions. It is a complicated problem to evaluate the educational quality of the integration of production and education and OBE, which needs to consider many factors. Under the talent training teaching mode integrating production and education, education quality evaluation should aim at the growth and development of students and pay attention to the cultivation of students’ core qualities, practical ability and career development ability^[2]. Therefore, the education quality evaluation of the integration of production and education and OBE should pay attention to the cultivation and evaluation of students’ practical ability.

1. Construction of quality evaluation system for integration of production and education in application-oriented undergraduate universities under the OBE concept

1.1 Planning for integration of production and education

(1) Resource input

We will make use of combined financing, fiscal incentive policies, and investment planning within the central budget to actively build training bases and innovation platforms for integrating industry and education. Use government investment, enterprise investment, bond financing and other portfolio investment and industrial fund support to attract enterprises and other social forces to participate in the integration of industry and education planning and construction. By means of entrusted training, cooperation and co-construction, enterprises and universities are attracted to jointly build industrial colleges.

(2) System construction

Application-oriented undergraduate colleges and universities should actively serve, deeply integrate regional and industrial development, and establish an educational evaluation system that reflects the integration of production and education development. We will establish a coordination mechanism for work, formulate a responsibility system for the integration of production and education, regulations on the operation mechanism for the integration of production and education, and a supervision and evaluation mechanism for the integration of production and education, and promote institutional innovation for the integration of production and education.

1.2 Implementation of integration of production and education

(1) Teaching staff

The establishment of enterprise-school cooperation personnel training model: First, cooperate with enterprises to build a “double teacher and double ability” training mechanism, and build a “double teacher and double ability” teacher incentive evaluation mechanism. The second is to attract senior technical personnel with strong theoretical knowledge and practical ability to provide professional practical guidance to the school to enhance students’ practical ability. The third is to adopt the way of temporary training to improve the comprehensive quality and practical ability of teachers, further broaden the scientific research vision and enrich the teaching experience.

(2) Personnel training

Introduce enterprise production and operation standards and environment into the teaching process, promote the connection between course content and technology development, teaching process and production process, and jointly build teaching materials that meet the needs of enterprises. Give full play to regional industrial advantages, through multi-subject education, build a new curriculum system that integrates the learning field with the main professional courses and practical courses. To build a large-scale experimental and training practice base that integrates the functions of production, teaching, research and development, innovation and entrepreneurship and integrates the production, learning, research and application [3].

1.3 Effect of integration of production and education

(1) Fusion atmosphere

The first is the integration of science and education, so that teaching and scientific research promote each other, guide students to join the scientific research team, participate in research projects, make students participate in scientific research become an effective form of teaching, and form an academic community with teachers. Second, cultural integration, the school should pay attention to the impact of corporate culture on students, so that students can understand corporate culture in advance and have a sense of identity for future jobs.

(2) Employment level

It is necessary to investigate the needs of national economic and social development, industrial development and personal development of students, and decide the number of students to train according to the needs of social development and enterprise needs. Taking the career and professional achievements that graduates can achieve in about five years after graduation as a measure of employment level, can examine the students monthly salary signed after graduation and the proportion of promotion in five years after graduation.

1.4 Evaluation of the integration of production and education

The evaluation of the integration of industry and education is mainly reflected in the recognition degree of industry, education and society for the integration of industry and education: First, industry recognition degree: the purpose of the integration of industry and education is to combine education with practice and provide talents meeting the market demand for the industry [4]. Second, educational recognition: whether universities can fully understand the needs of the industry and flexibly adjust the curriculum and teaching methods, and whether they can successfully train graduates who meet the requirements of the industry is also the key to measure educational recognition; The third is social recognition: In the process of integration of production and education, students can master knowledge and skills through practice, and can better adapt to the needs of social work.

2. Application Suggestions

2.1 The operating mechanism shall be clear and reasonable

Based on the OBE concept, the quality evaluation system of the integration of production and education in applied undergraduate

colleges is mainly composed of three core closed loops: off-campus, on-campus and in-class. The off-campus cycle is mainly based on the feedback of employers, graduates and third-party evaluation reports to continuously improve the training objectives and graduation requirements; The internal cycle mainly carries out teaching quality monitoring of teaching links through teaching quality assessment departments, educational administration departments, school and college supervision groups, and continuously improves training objectives, graduation requirements, curriculum system, etc., according to feedback from students and teachers. The in-class cycle is mainly made by teachers to continuously improve teaching activities by interacting with students and collecting feedback from students.

2.2 Personnel training should be innovative and developed

The talent training under the OBE concept should be student-centered, pay attention to the cultivation of students' practical ability and innovation ability, and also pay attention to the cultivation of students' professional quality and social responsibility. First of all, the curriculum should be student-centered, pay attention to practice and application, and focus on cultivating students' innovative ability and professional quality. Secondly, the teaching method should pay attention to interactive teaching and practical teaching, and cultivate students' teamwork spirit and leadership ability. Finally, the evaluation method focuses on students' practical ability and innovation ability, and focuses on students' professional quality and social responsibility [5].

2.3 School-enterprise collaboration needs to improve resources

First, enterprises should actively participate in the curriculum and teaching, providing students with practical opportunities and case studies; Second, schools should establish close cooperative relations with enterprises to jointly develop talent training plans and evaluation standards; Third, schools should provide students with internship opportunities, so that students can learn knowledge and skills in practice; Fourth, schools should provide students with career planning guidance to help them understand their career development direction.

2.4 The effect evaluation shall be continuous and effective

Evaluation indicators should be unified. The evaluation mechanism needs to ensure clear standards and unified indicators, which can compare and evaluate different integration practices of production and education. At the same time, the evaluation indicators also need to be subdivided and adjusted according to different models and practices of production-education integration. Finally, the success of the integration of production and education should be reflected through the practical effect.

Conclusion:

To build a quality evaluation system for the integration of production and education in application-oriented undergraduate colleges and universities based on the OBE concept, the student-centered talent cultivation goal should be rationally planned. In the implementation process, enterprises, schools, teachers, students and other stakeholders should participate in the whole process, make full use of results-oriented, constantly evaluate and feedback the process, and use the off-campus, on-campus and in-class feedback operation mechanism. The quality evaluation index of the integration of production and education in applied undergraduate colleges and universities should be continuously improved to ensure the effective operation and continuous improvement of the teaching quality system of applied undergraduate colleges and universities.

References:

- [1] Wang Yan. Reform of Practice teaching system of Tourism Management specialty under the concept of OBE [J]. Journal of Xichang University (Natural Science Edition), 2012,36(04):118-123.
- [2] Han Zhihong. Evolution of college Employment System and Thoughts on College students' Employment under the New Situation [J]. Journal of Guangdong Normal University of Technology,2010,31(02):110-113.
- [3] Zhao Haiyan, Yu LAN. Research on Talents Training of Industry-Education integration for Finance and Accounting majors in Applied undergraduate colleges under the background of New Business [J]. Journal of Lingnan Normal University, 2002,43(02):80-88.
- [4] Chang Yuan, Rong Chu. Construction of Self-evaluation system of education Quality for Master of Accounting based on OBE Education concept [J]. China Metallurgical Education,2022(03):71-74.
- [5] ZHANG Tingting, Zhao Rudder, Huang Jin et al. Construction and implementation of Undergraduate Teaching Quality Assurance and Continuous Improvement System [J]. Journal of Electrical and Electronic Teaching,2017,39(05):5-8. (in Chinese)

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