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Original Paper

Research on the Practical Teaching Model of E-commerce in Higher Vocational Education Based on OBE Principles—A Case Study of CK Vocational College

Juan Chen[1*] & Xingwang Wang[1]

[1] College of E-commerce Logistics, Sichuan University of Science and Technology, Chengdu, Sichuan 611745, China

[*] College of E-commerce Logistics, Sichuan University of Science and Technology, Chengdu, Sichuan 611745, China

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Abstract

To fundamentally enhance the internal construction of higher vocational colleges and improve the quality of talent cultivation has become an urgent issue to address. The key to enhancing the quality of talent cultivation lies in, based on a thorough consideration of the characteristics of higher vocational students, starting from the talent cultivation system, and focusing on the construction and reform of courses, teaching, and faculty. The OBE educational philosophy emphasizes a results-oriented approach to talent cultivation, centering on the student, stimulating learning enthusiasm, and promoting the internalization of students' knowledge, abilities, and values into their learning and career paths, reflecting a lifelong learning concept. This article, taking the characteristics of e-commerce majors in vocational colleges as an example, and using CK Vocational College as a case study, delves into the OBE educational philosophy and analyzes the issues faced by the college in the practical teaching of e-commerce majors in four aspects: the definition of learning outcomes, the implementation process of practical teaching, the construction of an evaluation system for practical teaching effects, and the career planning of students. Additionally, this article designs a practical teaching model for talent cultivation in the e-commerce major at CK Vocational College, covering the definition of learning outcomes, implementation paths, outcome assessment, and feedback optimization.

Keywords

OBE concept, Electronic commerce, Practical teaching

1. Introduction

The State Council's Decision on Accelerating the Development of Modern Vocational Education (hereinafter referred to as "the Decision") provides a detailed blueprint for the comprehensive advancement of modern vocational education. The Decision outlines the guiding principles, fundamental tenets, objectives, tasks, and implementation strategies for the development of modern vocational education over the coming period. It explicitly states the goal to establish by 2020 a modern vocational education system that is closely aligned with societal development needs, deeply integrated with industry, effectively connected between secondary and tertiary vocational education, and mutually integrated with general education, embodying the concept of lifelong learning, with Chinese characteristics, and meeting world standards. The National Vocational Education Reform Implementation Plan (referred to as "Vocational Education Twenty Articles") further emphasizes that "vocational education and general education are two different yet equally important types of education (National Vocational Education Reform Implementation Plan, 2019)." This statement not only underscores the nation's commitment to vocational education but also highlights the critical role of the modern vocational education system in supporting the economic structural adjustments of the country and driving the transformation from "Made in China" to "Created in China."

2. Core concepts and Research Status

2.1 Core Concept

(1) OBE Concept

The OBE concept, or Outcome-Based Education, is an educational philosophy centered on learning outcomes or results (Zhou et al., 2018). It explicitly focuses on and organizes every aspect of the educational process to ensure that students achieve the intended outcomes during their learning journey. This article, taking the e-commerce program at CK Vocational College as an example, explores the application of the OBE concept in the construction of a practical teaching model for e-commerce specialization. It designs a "four-step" practical teaching model for e-commerce talent development and further constructs the implementation path for practical teaching in e-commerce talent development, forming a closed-loop and sustainable mechanism of "defining outcomes, implementation path, outcome verification, and feedback optimization."

(2) Practical Teaching

Practical teaching, defined in contrast to theoretical teaching, includes virtual simulation training, experimental operations, internship placements, and social practices. Some scholars also consider practical teaching as an integrated teaching model or method, serving as a complement to theoretical teaching. This article, using the e-commerce program at CK Vocational College as an example, defines practical teaching as the integration of professional practical teaching into the four indicators designed under the OBE concept: "defining outcomes, implementation path, feedback on outcomes, and verification optimization." In defining outcomes, it reflects goals such as basic abilities, core

competencies, comprehensive skills, and self-value shaping. In the critical implementation path indicator, the initial outcome goals are further detailed into specific project elements of the practical teaching for talent development in this specialization. The third and fourth indicators involve the verification, feedback, and optimization of the first two indicators, aiming for continuous improvement of the entire indicator system.

2.2 Research Status

(1) Current Research on OBE Educational Philosophy and Model

In the study of OBE education models, the Northern Alberta Institute of Technology (NAIT) in Canada serves as a prime example. NAIT integrates the OBE philosophy into professional design and curriculum development, establishing a strategic framework centered around "outcomes" in four key steps (Michael et al., 2015). Similarly, countries such as Malaysia and the Philippines have successfully applied the OBE concept to curriculum instruction, emphasizing the need for schools to clearly "define learning outcomes" and conduct effective assessments. Since China's accession to the "Washington Accord," the OBE teaching philosophy has been widely advocated by numerous experts and scholars (Mou et al., 2015). In the field of higher vocational education, Professor Wang (2009) mentioned the OBE curriculum development philosophy in his summary of the "CDIO model of learning by doing" at Qingdao Vocational and Technical College. Subsequently, Liu (2020) introduced the employment guidance curriculum at Shijiazhuang Railway Vocational and Technical College based on the OBE talent cultivation model. Liu (2021) and others have also begun to explore the theory and practice of curriculum reform based on the OBE concept.

(2) Research on the Reform of Practical Teaching Methods

Zhang (2019) and colleagues constructed a practical teaching system that integrates the first classroom, supplemented by the second classroom, and enhanced by corporate participation to improve practical skills, forming a "three-in-one" system of the first classroom + second classroom + enterprise. Guo (2021) and others proposed a practical teaching system for applied undergraduate institutions, consisting of "one plan, two teams, three platforms, and four safeguards". Li (2022) analyzed the issues in the practical teaching of "geospatial data engineering" and designed methods for geospatial practical teaching by updating practical subjects, innovating practical methods, and strengthening practical outcomes. Zhou (2023) explored a practical teaching method that guides students to actively learn through project tasks in stages. This method integrates horizontal project research from enterprises into the teaching process through the "teach-learn-practice-create" approach, combining basic skills with mainstream technologies, theoretical knowledge with practical projects, and guidance from school and enterprise teachers with self-directed student learning.

3. The Pragmatic Challenge of E-commerce Specialty Practice Teaching in Higher Vocational Institutions

As the top-level design and strategic planning for vocational education in our country continue to

evolve, vocational education has transitioned from a phase of scale expansion to one focused on quality enhancement and the development of its intrinsic value. The development, implementation, and reform of practical courses have become critical in highlighting the essential characteristics of vocational education and optimizing talent cultivation models. However, the advancement of practical teaching methods and content reconstruction and upgrading in the context of deepening vocational education reforms still faces numerous issues and challenges. To address these key issues effectively and propose practical research implementation plans, this article examines the practical teaching in the e-commerce major at CK Vocational College, integrating the OBE (Outcome-Based Education) concept. It analyzes four dimensions: the definition of learning outcomes in practical teaching for professional talent cultivation, the implementation process of practical teaching, the construction of an evaluation system for practical teaching effectiveness, and career planning for vocational college students. The challenges faced include:

(1) Difficulties in defining the learning outcomes of practical teaching in e-commerce professional talent cultivation. The e-commerce industry evolves rapidly, with job roles and skill requirements constantly changing. Defining the outcomes of talent cultivation must keep pace with industry developments, posing a persistent challenge for new business-oriented talent cultivation, exemplified by the e-commerce major.

(2) Challenges in the depth of integration between industry and education and the tightness of curriculum content alignment with project production in the implementation of practical teaching. Classroom teaching is typically conducted in discrete sessions, characterized by discontinuity and short duration, whereas enterprise production is continuous and sustained. Controlling this implementation pathway is a focal point and a difficulty in this study.

(3) The construction of an evaluation system for practical teaching effectiveness faces issues due to the disconnect between schools and enterprises. The mutual recognition and exchange mechanisms for credits between schools and enterprises remain superficial, with poor actual implementation outcomes.

(4) The design of career planning for vocational college students, tailored to their academic performance, is lacking. Students commonly exhibit poor learning abilities, low motivation, and a lack of emotional goals for self-value formation. The current career planning for vocational education students largely follows traditional educational systems, failing to effectively promote self-value recognition and formation among vocational college students, and making it difficult to establish a lifelong learning ethos.

4. Vocational E-commerce Practice Teaching Model Based on OBE Concept

The OBE educational philosophy was initially applied to engineering education reform and has since achieved significant results in higher vocational education within China, particularly in the reform of engineering-related majors or courses. The e-commerce major, as an emerging business field in recent years, has also demonstrated remarkable achievements in talent cultivation models and curriculum

reform. This article takes the e-commerce major at CK Vocational College as an example, which is one of the key areas of school-enterprise cooperation. To enhance students' basic knowledge capabilities, core skills, and comprehensive abilities, this article actively promotes vocational education reform. Based on the OBE concept, a "four-step" practical teaching model for e-commerce talent cultivation has been designed, and a pathway for the implementation of practical teaching in e-commerce talent cultivation has been constructed. This model forms a closed-loop and sustainable mechanism that includes "defining outcomes, implementation pathways, testing outcomes, and feedback optimization," aiming to explore the modes and pathways for cultivating high-quality talents with strong practical skills and the ability to continuously adapt to future life.

4.1 Defining Outcome Modules

This module, as a core component under the Outcome-Based Education (OBE) philosophy, focuses on the clear delineation of student learning outcomes and flexibly allocates teaching resources and designs educational activities based on the needs of both teachers and students within this framework, embodying the "backward design" approach. Therefore, the design of the outcomes definition module is crucial, as it directly influences the direction of student development. To achieve comprehensive control over the practical teaching process in e-commerce, this paper constructs a primary evaluation indicator for the "defining outcomes module," as shown in Figure 1, which includes basic competency outcomes, core competency outcomes, and self-value shaping outcomes. The basic competency outcomes primarily involve the learning outcomes of foundational courses within the major, which students achieve by completing the required credits and passing internal assessments. The core competency outcomes are composed of credits from both in-school experiments and training courses and corporate internship credits. The in-school component is completed through practical scenarios set up in training labs and by faculty; the off-campus component involves corporate mentors assigning professional roles on e-commerce platforms, setting corresponding professional skill development goals, and designing practical teaching content aligned with these goals, categorized and transferred according to e-commerce practice scenarios and educational entities, to achieve off-campus core competency outcomes. Taking the e-commerce customer service role as an example, it involves joint theoretical and role-based task training by school faculty and platform mentors, as well as comprehensive real-project internship practices in e-commerce customer service by school faculty and corporate mentors. In the outcomes definition phase, it is also necessary for educational entities from both schools and businesses to abandon traditional notions and incorporate emotional teaching outcomes related to students' professional identity, self-value recognition, and self-value shaping.

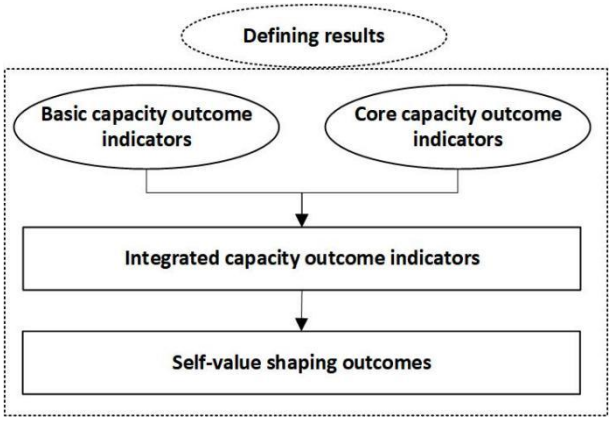

Figure 1. Defines the Results

4.2 Implementation Path

The implementation process of practical teaching in the cultivation of e-commerce professionals forms the core of the entire educational framework, directly supporting the top-level indicator of "defining outcomes" in the talent cultivation system, and also serves as the secondary indicator system directly referenced in the subsequent "assessing outcomes" step, as shown in Figure 2.

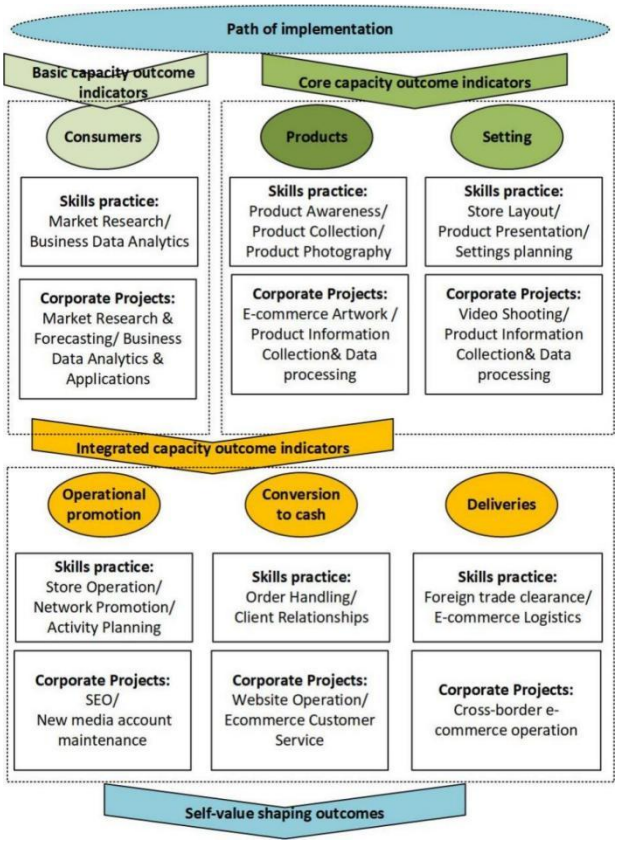

Figure 2. Practice Teaching Implementation Path

Within this practical teaching pathway, the e-commerce major is placed within the context of the internet business environment, integrating actual work projects of modern business enterprises to identify six key business elements: "users, products, scenarios, promotion operations, conversion monetization, and delivery." The practical teaching system for e-commerce professional training is reconstructed around these six elements, which is an effective way to achieve alignment between practice and production, teaching content and professional standards, technology and industry, and integration of academic credentials with social training. The specific implementation pathway is as follows:

(1) Matching the practical teaching project elements of e-commerce professional training with real work tasks, the project elements are categorized into "users, products, scenarios, operational promotion, conversion monetization, and delivery," which are integrated into practical teaching. Under each project element, further breakdown into skill practices and enterprise projects is conducted, incorporating both work tasks and workflows. This not only bridges the gap between current school training and the real needs of e-commerce enterprise positions but also ensures that students understand and can easily engage with the teaching process, effectively and comprehensively enhancing their job awareness and professional qualities.

(2) School teachers complete the theoretical foundation teaching of e-commerce major basic courses within the school environment, which is fully capable of handling the teaching resources and compact teaching time, laying a solid theoretical foundation for practical operations in enterprises. Additionally, practical teaching in the school's existing virtual simulation training rooms can be conducted by teachers creating virtual e-commerce operation scenarios to complete virtual simulation teaching, ensuring a smooth transition between theory and real project practice.

(3) By integrating project elements, teaching scenarios are further connected, with teachers organizing and enterprise mentors guiding students through specific enterprise practice projects.

(4) Taking the practical teaching of the core professional course "E-commerce Customer Service" as an example, the "four steps" of practical teaching are placed in the specific practical positions of e-commerce customer service, as shown in Figure 2-3. First, the professional practical teaching project elements are detailed into the e-commerce customer service module, specifically into pre-sales, in-sales, after-sales service, and assessment and performance. Second, the core competency outcome indicators and comprehensive competency outcome indicators designed based on the OBE (Outcome-Based Education) concept are set as the practical teaching competency goals for e-commerce customer service specific positions. Finally, by shaping students' core values, professional ethics, career planning, and lifelong learning concepts, the emotional indicators of self-value shaping outcomes are achieved.

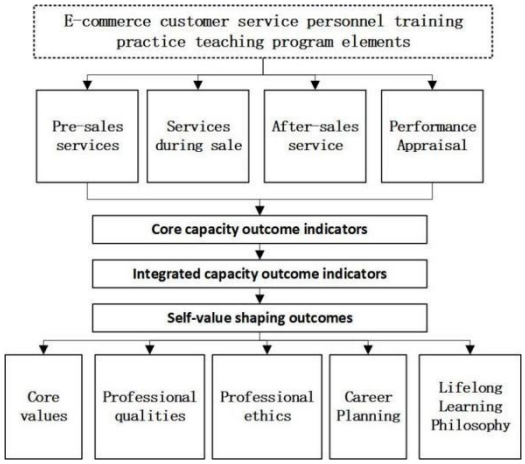

Figure 3. E-commerce Customer Service Practice Teaching Implementation Path

4.3 Inspection Result

The evaluation process described herein directly assesses the outcomes of talent cultivation, encompassing self-assessment, academic credit verification by institutions, and vocational skill credit verification by enterprises, as illustrated in Figure 4. This process aims to enhance the comprehensive quality of students in the discipline, assist them in constructing career plans that align with their professional paths, uncover their potential, and bolster their employability. Adhering to the Ministry of Education's advocacy of the "lifelong learning" concept, and in alignment with the new era's objectives for university student development—which emphasize both moral and intellectual qualities, as well as humanistic and physical-mental qualities—this evaluation segment has been designed based on the OBE (Outcome-Based Education) philosophy. Building upon the traditional verifications of practical credits in academic settings and project credits in corporate environments, this segment introduces an additional self-assessment module, intended to echo and evaluate the implementation effectiveness of self-value shaping in the previous two phases.

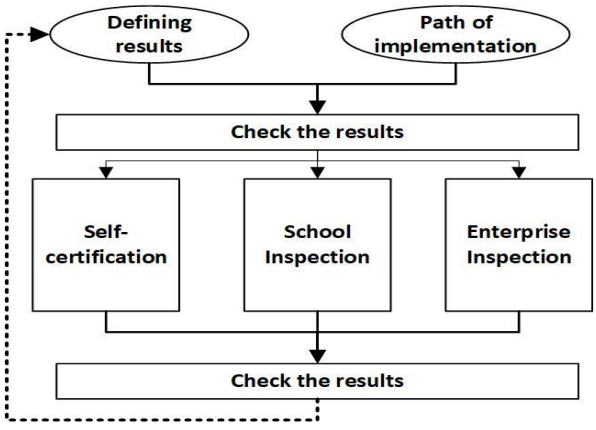

Figure 4. "Four steps" Practical Teaching Framework

4.4 Feedback Optimization

In the event that the established learning objectives are not achieved, a reverse trace back to the primary and secondary indicators should be conducted, followed by optimization adjustments. If the learning objectives are successfully met, the corresponding primary and secondary indicators must undergo iterative updates to construct a career planning framework that integrates the realization of self-worth with the concept of lifelong learning. The entire process, from "defining outcomes," "implementing pathways," "assessing outcomes" to "feedback and optimization," actually forms an evaluation index system that includes "self-assessment," "institutional assessment," and "corporate assessment." Among these, "defining outcomes" serves as the primary indicator, while the various practical projects within "implementing pathways" act as secondary indicators. This structure ensures that the evaluation system for talent cultivation outcomes is both comprehensive and specific, effectively preventing the issues of unrealized goals and theoretical rhetoric.

5. Conclusion

By advancing the reform of professional and curriculum practical teaching in the vocational education sector, the quality of education can be significantly enhanced, benefiting a greater number of students through the reformed educational model. The practical teaching model, methods, and content of e-commerce, constructed based on the Outcome-Based Education (OBE) philosophy, tightly integrate vocational education with lifelong education, cultivating talents that better meet market demands. This promotes the deep integration of industry and education and the effective alignment between production and academia. This article, taking the e-commerce specialty at CK Vocational College as an example, explores the reform and implementation of practical teaching. It constructs four key aspects: outcome definition, implementation path, outcome assessment, and feedback optimization, comprehensively integrating multiple levels such as teaching layout, content, scenarios, technology, and evaluation. Students' learning outcomes are clearly defined, the faculty for school-enterprise cooperative education is diversified, and the integration of positions and work processes is complete, effectively stimulating students' interest in learning and significantly improving learning outcomes, while also making vocational skills training more useful.

Acknowledgement

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References

Guo, Y., Tang, W., Mu, J. et al. (2021).Construction of Practical Teaching System in Applied Undergraduate Institutions. *China Vocational and Technical Education*, *11*, 56-60.

Li, K., Chen, L. Y., Jiang, B. C. et al. (2022). Research on Practical Teaching Methods for Geographic Spatial Data Engineering Courses. *Bulletin of Surveying and Mapping*, S1, 149-152.

Liu, L. X. (2021). Reflections on the Path of Practical Teaching in New Business at Higher Vocational Colleges. *China Vocational and Technical Education*, *767*(07), 93-96.

Liu, R. (2020). Application Research of Blended Learning Mode Based on OBE Concept. *Tianjin University of Technology and Education*.

Michael, H., & Heather, S. (2015). Blended Learning: Using Disruptive Innovation to Drive Educational Revolution. *Beijing: China Machine Press*, 33-35.

Mou, Z. S., & Dong, B. J. (2014). Exploration of Blended Learning Mode Based on MOOCs—Taking Coursera Platform as an Example. *Modern Educational Technology*, *24*(05), 73-80.

The State Council. (2019). has issued the "National Vocational Education Reform Implementation Plan" [EB/OL]. Retrieved from http://www.gov.cn/xinwen/2019-02/13/content_5365377.htm

Wang, C. Z. (2009). The Extension and Development of Higher Vocational Education Talent Training in "Real-world Coupling". *Journal of Qingdao Vocational and Technical College*, *22*(01), 1-6.

Zhang, Q. L., Zhou, Y., & Lu, Y. (2019). Construction and Implementation of a "Three-in-One" Hierarchical Practical Teaching System. *Experimental Technology and Management*, *36*(1), 33-36, 43.

Zhou, J., & Huang, X. H. (2018).A Study on the Reform of Engineering Education Talent Training Programs under the OBE Concept. *Journal of Inner Mongolia Normal University (Educational Science Edition)*, *31*(09), 13-18.

Zhou, Y. Y., Li, H. T., Shi, F. et al. (2023). Exploration of Active Practical Teaching Methods Guided by Project Phases. *Laboratory Research and Exploration*, *42*(07), 233-236+251.