

Under the Blended Teaching Mode based on OBE Concept in Undergraduate Universities in Shandong Province Research on the Development Strategy of Teacher's Teaching Ability

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Abstract: *With the advent of the digital age, the deep integration of cutting-edge technology and education continues to innovate, driving the transformation of teaching models. Compared with traditional teaching methods, blended teaching mode reshapes the entire process of education and teaching, and is of great significance in promoting educational fairness, improving educational quality, and building a high-quality education system. In response to the current situation of blended teaching mode with OBE concept among university teachers, how to effectively accelerate the development of teachers' teaching abilities in the digital era has become an important task in the field of higher education. Based on this, this article clarifies the specific connotation of the OBE concept blended teaching model, constructs a professional teaching ability system for university teachers, and proposes strategies to update education and teaching concepts in a timely manner, comprehensively optimize teaching design capabilities, actively improve information literacy of university teachers, and continuously improve training and incentive mechanisms. The aim is to promote university teachers to adapt to the development of the digital era and educational innovation and transformation.*

Keywords: OBE concept, Blended learning, Teaching abilities, Development strategies.

1. Introduction

The digitization of education, as a new field and track for China's education development, has great significance in shaping new driving forces and advantages for education development. With the introduction of policy documents such as the "Education Informatization 2.0 Action Plan" and "China Education Modernization 2035", the country continues to promote the strategic action of education digitization. At the 20th National Congress of the Communist Party of China, digital education was included in the report, which fully demonstrates the important position of digital education in achieving the great rejuvenation of the Chinese nation. Universities shoulder the important mission of talent cultivation, support and lead the implementation of national strategies, and should take the lead in coordinating and promoting the digitization of education.

The deep integration of new generation information technology and online and offline education is an important manifestation of educational digitization. Compared with traditional teaching, blended teaching has undergone disruptive changes in knowledge acquisition, teaching practice, and learning methods. Blended teaching is an important practice for higher education to move towards informatization and digitization. However, combined with the reality of Informa ionization teaching in many universities in Shandong Province, the transition from traditional teaching to blended teaching is full of many challenges. In the actual classroom teaching process, most teachers still focus on themselves and fail to implement the educational philosophy of results oriented and focusing on cultivating students' abilities. At the same time, university teachers lack their own information literacy, and there is still significant room for

improvement in digital course resource development, hybrid teaching design innovation, hybrid teaching organization and implementation, and teaching evaluation optimization. How to continuously improve the teaching ability of undergraduate university teachers in Shandong Province through the OBE concept blended teaching mode, achieve good teaching results, and ultimately achieve the ultimate goal of improving teaching quality and talent cultivation quality is an urgent and important topic that needs to be explored and studied.

2. A Hybrid Teaching Model Based on OBE Theory

2.1 The Teaching Philosophy of "Student-Centered"

The essence of higher education is to cultivate excellent talents for the construction of a modern and powerful country, and the problem of mismatch between social needs and the ability of universities to cultivate students is still very prominent at this stage. The key to solving this problem is to highlight the teaching philosophy of "student-centered and ability oriented". In the original teaching process, the teacher played the "protagonist" and students focused on learning from the teacher, resulting in a lack of enthusiasm among students, which seriously affected their innovation ability. Therefore, in the construction of the curriculum system, teachers should emphasize the matching relationship between the curriculum and students' abilities, design for a certain or multiple abilities that need to be achieved in learning outcomes, and continuously explore talent cultivation models centered on ability orientation. In the teaching process, teachers should highlight the dominant position of students, based on their learning situation and combined with their ability development goals, stimulate their internal potential,

and lay a foundation for their comprehensive development.

2.2 Integrating Modern Information Technology into Education and Teaching

With the advent of the digital age, technologies such as big data, AI, the Internet of Things, and 5G have been popularized and applied, and the digitization of education has been continuously promoted, resulting in a fundamental transformation in the form of education. The transformation of educational forms is mainly reflected in the construction of digital resources and the transformation of educational models. The breadth and quantity of high-quality online education and teaching resources are no longer the same as before. The large-scale integration of teaching resources provides students with technical support that can be learned everywhere, anytime, and independently chosen. Since the launch and implementation of the Education Digitalization Strategy Action, China has built the world's largest education and teaching resource library [1], gradually constructing and launching a series of open courses, and achieving widespread dissemination of excellent teaching resources in universities. The transformation of teaching mode is reflected in the blended teaching form, achieving personalized learning. Teachers develop teaching plans and plans based on course construction and ability goals, guiding students to learn independently with ability as the guide, and each student can have a suitable learning path.

3. Teacher's Professional Teaching Ability

With the continuous development of digital technology and the deepening of education and teaching reform, changes in teaching models have put forward higher requirements for the ability and level of the teaching staff. It is urgent to further explore and leverage the role of teachers in the integration of digital technology and education. The Central Committee of the Communist Party of China and the State Council issued the "Opinions on Comprehensively Deepening the Reform of Teacher Team Construction in the New Era", which pointed out that teachers should actively adapt to new technological changes such as informatization and artificial intelligence, and actively and effectively carry out education and teaching. Based on the OBE concept of blended teaching mode, teachers should continuously improve their abilities in organizing teaching, influencing transmission, student management, teaching innovation, and other aspects during the teaching process.

3.1 Evaluation System for Opening up and Development to the Outside World

Teachers are the key to promoting the OBE concept blended teaching model. No matter how good an information-based learning platform is, teachers need to control it; No matter how good digital resources and curriculum construction are, teachers need to develop them; The exploration of a new blended teaching model requires teachers to summarize, summarize, and innovate. Therefore, the improvement of teachers' teaching professional abilities, ensuring that they use new teaching concepts to reform classroom teaching, transform teaching methods, and improve educational effectiveness, has become an important task in the

construction of the teaching team in universities in the new era. In 2022, the Ministry of Education developed and released a digital literacy standard for teachers to enhance their awareness, ability, and responsibility to optimize, innovate, and transform educational and teaching activities using digital technology. Based on this standard, as well as the current research status of OBE based hybrid teaching in the domestic university education field, this paper combines teachers' professional ability with the new talent training model under the condition of "Internet plus" in the post epidemic period to build a teacher professional ability system under the hybrid teaching model.

Table 1: The Professional Ability System of Blended Teaching Teachers under the OBE Concept

Primary indicators	Secondary indicators
Blended teaching awareness	Blended teaching cognition、Blended teaching willingness
Information Technology Knowledge and Skills	Knowledge of information technology、Information technology skills
Application of blended learning	Course Design and Development、Blended instructional design、Implementation of blended learning、Teaching evaluation
Professional development	Blended teaching mode learning and training
Innovation induction	Research on the Innovation of Hybrid Teaching Mode、Summary and induction of blended teaching mode

3.2 Explanation of Indicators for Teacher Professional Competence System

The awareness of blended teaching is the basic awareness that university teachers should possess in carrying out educational and teaching work at the current stage, including two secondary indicators: blended teaching cognition and blended teaching willingness. Blended teaching cognition refers to the understanding by university teachers of the important position of blended teaching mode in the national strategy of educational digitization and teaching innovation reform, and the recognition of the positive role of digital technology in promoting blended teaching mode. The willingness to engage in blended learning refers to the willingness of university teachers to engage in self-directed learning and use information technology platforms for teaching reform. They are willing to carry out blended learning and innovate teaching models in the process of practical teaching.

Information technology knowledge and skills are a solid foundation for teachers to achieve deep integration of modern technology and education and teaching, including two secondary indicators: information technology knowledge and information technology skills. Knowledge of information technology requires university teachers to understand the concepts and basic principles of relevant information technology, and possess basic information technology knowledge. For example, understanding the characteristics and specific application scenarios of information technologies such as big data, cloud computing, AI, and virtual simulation. Information technology skills require university teachers to be

able to choose appropriate technology platforms, equipment, and software during the process of blended learning, and to proficiently use these platforms, equipment, and software to carry out teaching activities.

The application of blended teaching reflects the comprehensive ability of teachers to carry out blended teaching activities, which is the core content of teachers' professional abilities, including four secondary indicators: curriculum design and development, blended teaching design, blended teaching implementation, and teaching evaluation. In the blended teaching mode, curriculum design and development are the planning, integration, and redesign of various aspects of the entire curriculum system construction. Blended teaching design is an important part of the blended teaching process, mainly referring to the design of information-based teaching activities and the creation of blended learning environments. The implementation of blended teaching requires teachers to be able to use information technology resources to support the orderly development of teaching activities, and to use information technology resources to comprehensively regulate and optimize teaching processes. The improvement of teaching quality and learning experience all rely on this process. Teaching evaluation refers to the evaluation method that combines process assessment and course completion assessment of teaching and learning before, during, and after class throughout the entire teaching process, to improve the course evaluation mechanism and optimize academic assessment methods.

Professional development refers to the continuous development of teachers' teaching abilities through the use of information technology and digital resources, which is a blended learning and training model. Professional development ability requires university teachers to be able to utilize information technology and digital resources to carry out continuous learning of professional knowledge, teaching methods, teaching models, teaching management, and other knowledge based on personal development and subject professional needs. In addition, university teachers can actively participate in training, such as participating in mixed teaching mode seminars, experience sharing organized by renowned teacher studios, classroom observation, and other activities.

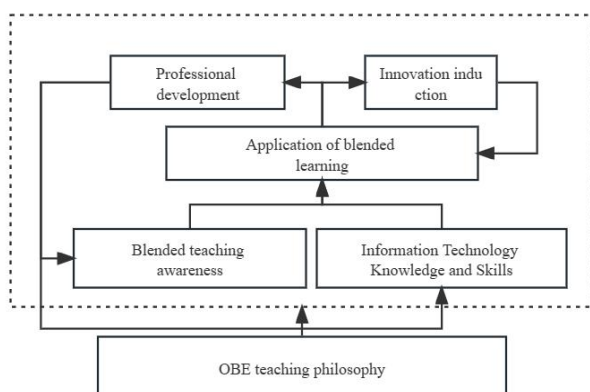


Figure 1: Professional Ability Structure of University Teachers in Blended Teaching under the OBE Concept

Innovation induction, including innovative research on blended teaching models and summary and induction of

blended teaching models. Innovative research on blended teaching models requires university teachers to be able to explore problem-solving methods and conduct relevant research on key issues in blended teaching models. The summary and induction of blended teaching mode requires university teachers to be able to summarize and summarize the innovative points of teaching mode and the key points of promoting students' learning in specific teaching activities. Innovation induction is an important guarantee for promoting the sustainable development of blended teaching mode, and is the driving force for promoting teachers' self-improvement and professional ability development.

4. Strategies for Improving the Teaching Ability of College Teachers

University teachers are an important force in promoting the development of national education and cultivating high-level talents in the new era. Cultivating a high-quality, professional, and innovative teaching team is the fundamental work of university construction. At present, China is in a critical period of digital transformation in education, and information technology is gradually reshaping the entire process of education and teaching. Information literacy has become an essential key literacy for teachers' teaching abilities. Improving the mixed teaching ability of university teachers in multiple dimensions is conducive to cultivating generations of innovative talents through continuous educational innovation. Improving teachers' professional abilities in blended learning is not achieved overnight, but requires their own knowledge, skills, concepts, attitudes, and other factors to collaborate with the external policy environment [3].

4.1 Timely Update Educational and Teaching Concepts

The blended teaching mode should always highlight the dominant position of students, and change the original cramming teaching mode through deep interaction between teachers, students, and students offline and online. Encourage students to step out of the dull and rigid original teaching atmosphere, actively participate in interactive discussions, and promote teaching reform. Throughout the entire teaching process, teachers are responsible for organizing and guiding the teaching content, answering and assisting questions, utilizing methods such as situational teaching, group discussion, and exploratory learning to fully unleash students' initiative, enthusiasm, and innovation, and achieve the teaching goal of students mastering the knowledge they have learned. Strengthen ability orientation, reasonably increase the difficulty of teaching knowledge, exercise students' ability to solve complex problems and teamwork, promote students' comprehensive development, and improve the quality of course teaching.

4.2 Comprehensive Optimization of Teaching Design Ability

Before class, the teacher carefully designs a learning task list based on the course progress, knowledge structure, and students' learning situation, and students engage in autonomous learning by combining the task list. In the process of self-directed learning, students are encouraged to engage in exploratory learning and provide online feedback on the

problems encountered during the learning process. In class, the teacher analyzes the students' self-learning and mastery of knowledge points based on the pre class test results, determines the key and difficult content of this class, and focuses on teaching. Answer students' online questions during the teaching process and fully interact with them. Set up group discussion sessions to encourage students to actively participate in interactive discussions, engage in discussion and exchange, and exercise their pioneering thinking. After class, assign homework in a targeted and hierarchical manner, and propose knowledge advancement requirements for students who have spare time, helping each student become a better self.

4.3 Actively Improving the Information Literacy of University Teachers

The information literacy of teachers is the core element of implementing blended teaching. The internal driving force of information literacy and the practical ability to apply information technology to teaching activities of university teachers directly affect the quality and level of Informationization in university education and teaching work. University teachers should establish a lifelong learning awareness, actively learn new technologies and methods, and continuously improve their ability to apply blended teaching models through literature reading, teaching observation, conference communication, and business discussions in teaching and research departments. Strengthen the hybrid teaching practice, apply the smart classroom of "Internet plus Education" platform, explore the establishment of a new Internet based teaching model, and promote the formation of a new normal of information-based teaching of "being able to use, commonly used, and fun to use".

4.4 Continuously Improving the Training Incentive Mechanism

Strengthen the training related to the blended teaching mode for teachers. Teachers' teaching work is no longer a simple superposition of technology and teaching methods, but a fusion innovation of technology and teaching for more complex learning environments [4]. As the basic unit for organizing teaching activities in universities, the teaching and research department of the college can select experienced teachers to form a blended teaching team. Through pilot projects, we aim to regularly exchange teaching experiences and insights, effectively improving the overall teaching ability of the teaching and research department, especially the teaching ability of young teachers in applying the blended teaching model. The academic affairs department and other teaching management departments of the school can regularly strengthen communication with universities with good practice of blended teaching mode, learn from their teaching experience, and improve teaching level through teaching collaboration and other methods. Encourage teachers to actively participate in competitions such as the Teaching Innovation Competition for University Teachers and the Teaching Competition for Young University Teachers, and continuously enhance the teaching ability of teachers in our school under the mixed teaching mode by promoting learning and teaching through competitions.

5. Conclusion

Digitalization of education is an important foundation for building an educational powerhouse. Since the implementation of the Education Digitalization Strategy Action, China has continuously explored application scenarios such as the Internet and education teaching, big data and education governance, artificial intelligence education, and virtual simulation teaching, providing new paths for education modernization. Nowadays, blended teaching based on the OBE concept has shown good teaching results after being practiced in many universities. Teachers in universities should deeply understand the significant significance of educational digitization for building a strong education country, continuously enrich the connotation of educational digitization, vigorously practice and innovate hybrid teaching models, integrate into the new era with a proactive attitude, and provide support for building a socialist modernized country.

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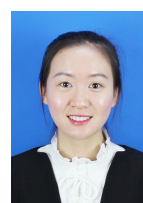
Conflicts of Interest

The authors declare that there is no conflict of interest.

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