

The Research of Educational Model Based on Blended Learning Aiming to Develop Students' Core Competencies

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Abstract: In the era of globalized education and digital transformation, blended learning emerges as a vital strategy for innovative pedagogy and the cultivation of essential student competencies. The blended learning educational model can integrate online and offline teaching resources and focus on students' personalized development to foster their core competencies. This model is helpful to comprehensively enhance students' knowledge and skills, critical thinking abilities, teamwork spirit, and communication skills. Practical results demonstrate that this educational model can effectively stimulate students' interest in learning and enhance their learning outcomes, providing strong support for cultivating talents aligned with the needs of a future-oriented society.

Keywords: Blended Learning, Core Competencies, Educational Model

1. Introduction

In the field of education in the 21st century, blended learning has emerged as an innovative and effective teaching model. It combines the advantages of online and offline teaching, aiming to comprehensively enhance students' core competencies. Core competencies are not only about students' knowledge and skills but also encompass their emotional attitudes, values, and social skills [1]. This educational model emphasizes the central role of students while also optimizing the teaching process, thereby providing a broader learning space and richer learning resources for students.

2. Characteristics of the Educational Mode

Blended learning combining online and offline teaching resources and methods has some advantages such as flexibility, interactivity, and personalization. Blended learning can effectively cultivate students' core competencies, including self-directed learning ability, innovative thinking, critical thinking, and teamwork. Therefore, it can enhance their overall quality.

(1) Integrating Blended Learning with Core Competencies

This innovative educational model aims to improve students' overall skills and their capacity to tackle future challenges. The model emphasizes a blended approach to learning that combines online and offline processes, fostering students' ability for self-directed and lifelong learning. The program also emphasizes the development of students' core competencies, including critical thinking, innovation, and collaborative skills, while reinforcing ideological and political education within the study of professional knowledge. The fundamental structure of this model is depicted in Fig.1.

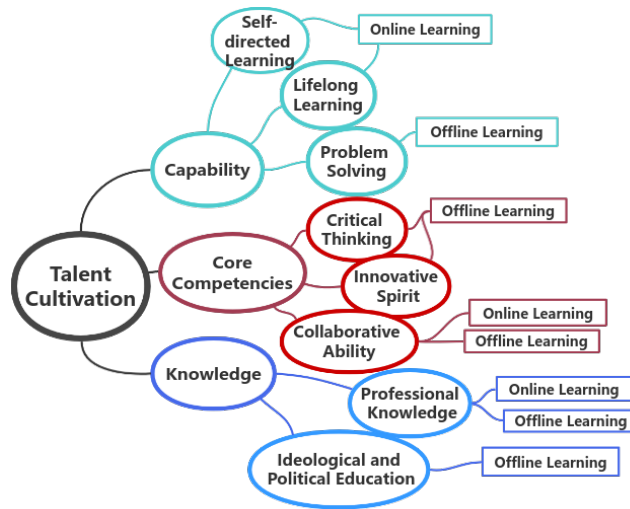


Figure 1: Core content of talent cultivation.

(2) Construction of the Teaching Theory-Guided Model

This model is a result of the "Intelligence + Education" development in the era of information technology, integrating traditional face-to-face teaching with digital instruction to offer students a more comprehensive and diverse learning experience. The construction theories can be explained by Bloom's Taxonomy of Educational Objectives, Constructivist Learning Theory, and Bloom's Mastery Learning Theory. Through this model, students can engage in self-directed learning using internet resources beyond traditional classroom instruction, enhancing their overall skills and knowledge. Offline teaching, through curriculum design and teaching activities, can consciously cultivate students' core competencies, thereby fostering more innovative talents for society.

(3) Redesigning and Implementing Online and Offline Educational Initiatives

Guided by educational and teaching theories and aligned with the innovative and intelligent leadership characteristics of the "Educational Informatization 2.0 Action Plan", the model integrates online and offline educational initiatives effectively. Each initiative is separately designed, constructed, and implemented with distinct assigned tasks, shown as Fig. 2.

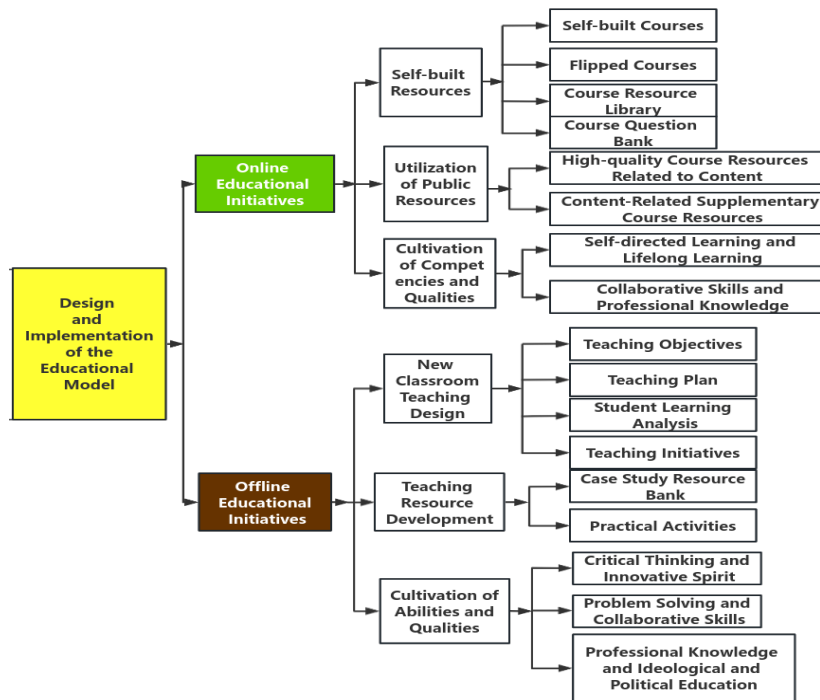


Figure 2: Design and implementation of the educational model.

3. Main Teaching Issues Addressed by the Educational Model

The educational model based on blended learning has significant advantages and potential in developing students' core competencies. The main teaching issues addressed by this model are as follows:

(1) Limitations of Traditional Teaching

Traditional classroom teaching often focuses solely on transmitting knowledge, neglecting the development of students' abilities. Blended learning can address this deficiency by promoting comprehensive skills through online self-directed learning and offline interactive discussion.

(2) Cultivation of Core Competencies

In the era of knowledge explosion, simply accumulating knowledge is no longer the sole goal of education. Cultivating core competencies such as critical thinking and an innovative spirit is more important. Through blended learning, teachers can guide students to engage in critical thinking and develop their comprehensive qualities.

(3) Personalized Student Development

Each student possesses unique characteristics and strengths. Blended learning can better meet the individualized needs of students. Students can select learning resources and methods that align with their interests and needs, thus maximizing their potential.

(4) Integration of Teaching Resources

Blended learning can effectively combine online and offline teaching resources, offering students a more comprehensive learning experience. It also promotes communication and collaboration among schools, enterprises, teachers, and students, thereby improving the quality of education.

In summary, the integration of blended learning and core competencies not only overcomes the limitations of traditional teaching but also more effectively caters to the individualized needs of students, nurturing their talents and comprehensive qualities. This is illustrated in Fig. 3.

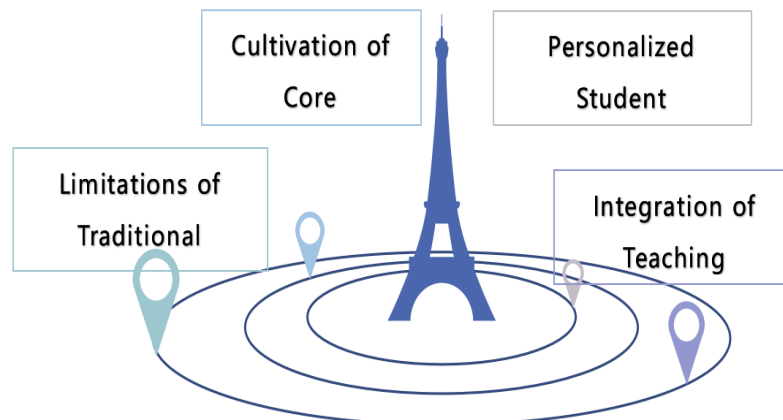


Figure 3: Main teaching issues addressed.

4. Methods to Address Teaching Issues in the Educational Model

To accomplish the objective of enhancing students' core competencies, we conducted an analysis of the learning situation and teaching challenges in the context of the modern era. Drawing on the blended learning approach, we developed and implemented solutions to address existing teaching issues under theoretical guidance in the following aspects.

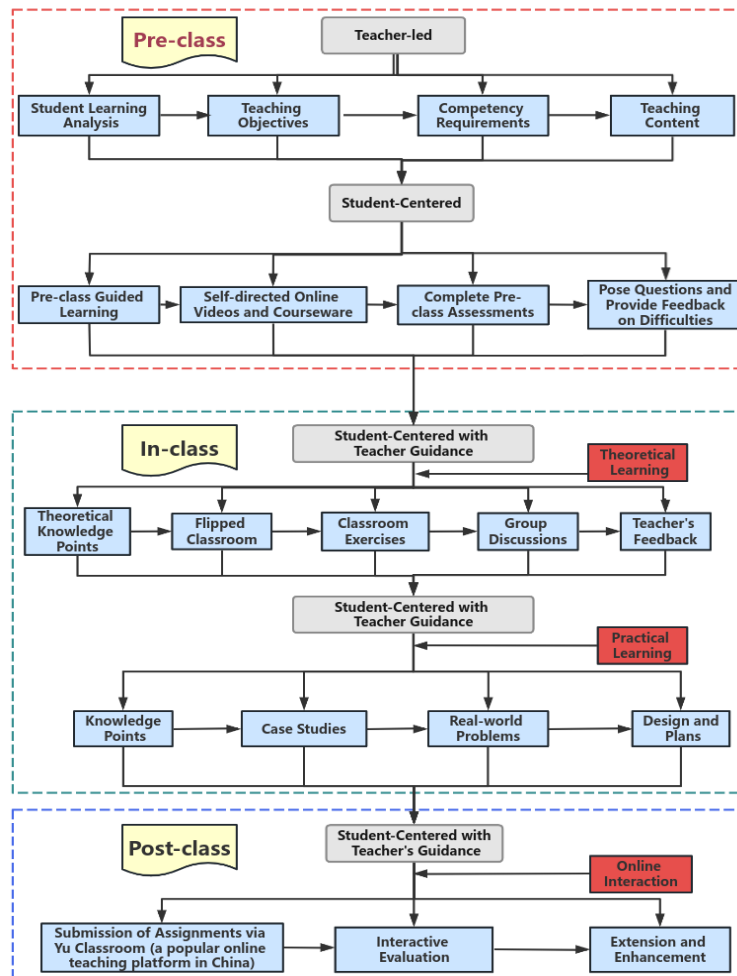


Figure 4: Design and implementation of blended learning processes.

(1) Redesigning the Teaching Processes to Overcome the Limitations of Traditional Teaching

Blended learning and flipped classrooms play a crucial role in transforming students' learning objectives from low-level to high-level learning. In this process, low-level learning tasks are completed through online learning before class, allowing students to grasp key points easily. On the other hand, high-level learning tasks are accomplished through problem discussions, practical sessions, and homework after class [2]. Based on constructivist theory, the three stages of pre-class, in-class, and post-class have been redesigned, with distinct teaching strategies implemented for each stage, as shown in Fig. 4. The resource sharing and student-centered inquiry of blended learning are highly compatible with the constructivist "learner-centered" philosophy [3]. Before class, teachers assign online tasks for students to self-study and build a foundation using videos and course resources. During class, teachers utilize the flipped classroom approach to setup problem scenarios and tasks, guiding students to explore, think, discuss, and solve problems. After class, teachers assign practical tasks to help students apply knowledge, guiding them to extend their learning.

(2) Construction of Core Competencies for College Students.

The core competencies of college students are centered around "student development" , "student learning" and "learning outcomes" . These competencies aim to develop students' abilities to construct knowledge, think critically and innovatively, and adapt to unpredictable situations. Building on the foundation of blended learning, students' core competencies are developed through a combination of online and offline teaching environments, as illustrated in Fig. 5.

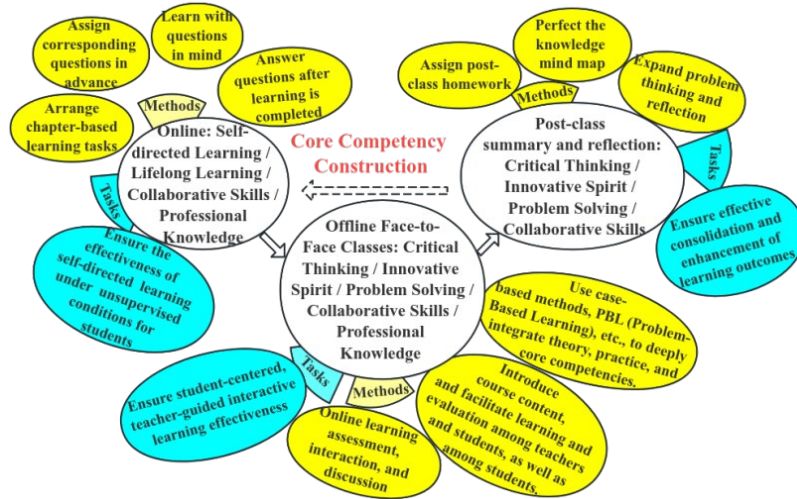


Figure 5: Construction of core competencies.

(3) Meeting Individualized Student Development

Blended learning, stimulates students' interest and enthusiasm for learning through flexible teaching strategies and diverse methods. It also fosters their self-directed learning, collaborative learning, and innovative abilities, providing robust support for their overall development. Firstly, teachers can guide students in developing personalized learning plans based on their individual characteristics and needs, offering customized learning resources and guidance. Students can autonomously choose learning content, methods, and pace according to their learning needs and interests. They can flexibly arrange their study time and location, and choose suitable learning methods. Secondly, teachers can utilize online platforms and digital teaching resources to conduct a variety of teaching activities, such as online discussions, group collaborations, and inquiry-based learning. These activities can stimulate students' interest and enthusiasm, fostering their self-directed, collaborative, and innovative learning abilities. Finally, teachers can utilize in-person classroom interactions to pay attention to students' individual difference and emotional needs, engaging in thorough communication and guidance. Teachers can promptly identify issues and shortcomings through student feedback and performance, allowing them to offer specific guidance and support. Furthermore, teachers can foster students' communication and social skills through classroom interactions and group discussions. The pathways for individual student individual development are illustrated as Fig. 6.

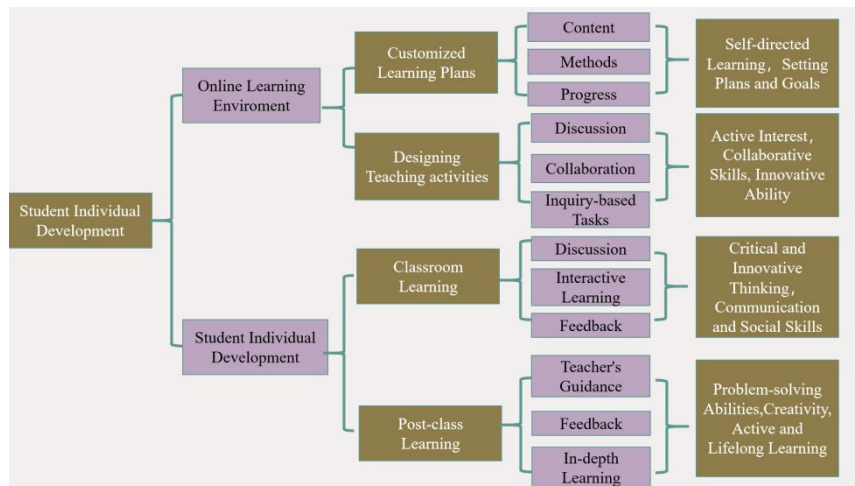


Figure 6: Pathways for student individual development.

(4) Building Rich Teaching Resources.

To deliver high-quality instruction, courses must have an abundant supply of teaching resources, including course materials, case studies, and software. These resources can assist students in gaining a better understanding of the course content and enhancing their learning outcomes. The processes of creating teaching resources involves the following steps: (1) Developing a plan for teaching resources.

This plan should outline the type, quantity, and usage schedule of resources to ensure their sufficiency and regularly updated; (2) Utilize a variety of media resources. In addition to traditional text-based materials, incorporate videos, audio, animations, and other multimedia formats to present course content, thereby enhancing students' interest in learning; (3) Collect and organize high-quality resources. Gather and organize high-quality teaching materials through internet searches, academic conferences, teacher exchanges, etc., and categorize them systematically; (4) Engage students in resource generation. Teachers should encourage students to contribute to the development of course materials by facilitating group discussions and project creation, empowering students to create their own learning resources; (5) Continuously update and optimize resources. Keep updating and optimizing teaching resources to align with the changes in course content and teaching needs. This ensures that the resources remain relevant and targeted, and also involves continuous exploration and innovation of methods and approaches for building teaching resources. The steps for creating teaching resources are illustrated in Fig. 7.

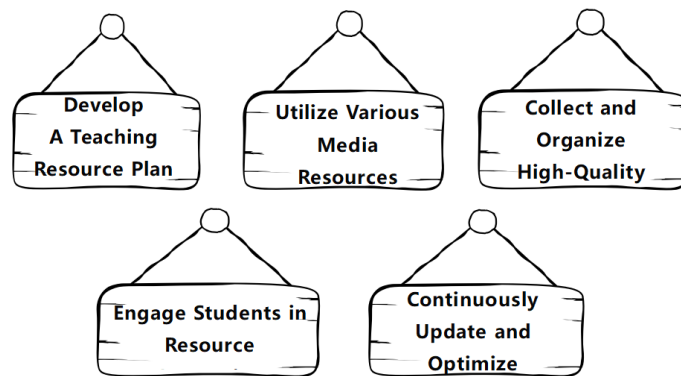


Figure 7: Measures for teaching resource development.

5. Innovation Points of the Educational Model

The educational model is based on blended learning, aiming at developing students' core competencies. It primarily exhibits its innovation in the following aspects:

(1) Integration of Online and Offline Resources

Traditional educational models often focus solely on offline teaching, whereas blended learning integrates online and offline resources, enriching and diversifying the teaching process. This model not only offers a wider range of learning resources but also meets students' individualized learning needs through online education.

(2) Cultivation of Core Competencies

Blended learning emphasizes the central role of students in developing their core competencies, including self-directed learning, lifelong learning habits, critical thinking, innovative thinking, teamwork, and social skills through guided self-learning and inquiry. These competencies are crucial for students' lifelong development.

(3) Promotion of Teacher Role Transformation

In blended learning, the role of teachers shifts from being traditional knowledge transmitters to becoming guides and facilitators in the students' learning process. This transformation helps teachers better fulfill their guiding roles and assist students in developing their fundamental skills.

(4) Diversified Assessment Methods

Blended learning utilizes a variety of assessment methods, emphasizing not only students' knowledge acquisition but also their skill development and emotional attitudes. This comprehensive assessment approach more accurately reflects the development of students' fundamental skills.

(5) Personalized Learning Experience

Blended learning combines online and offline learning to provide a personalized learning experience. Students have the freedom to select learning methods and resources that align with their individual needs and styles, which fosters the development of their core competencies.

6. Conclusions

Through continuous practice and improvement, we believe that this educational model will better serve the comprehensive development of students and cultivate more outstanding talents with an innovative spirit and practical abilities. In the future, we will continue to enhance the research and implementation of blended learning, fostering innovation and advancement in education.

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