

Construction of English Blended Teaching Model Based on Unipus Smart Teaching Platform

Dandan Li

Harbin Cambridge University, Harbin, 150069, China

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Abstract: This article aims to explore the construction and practice of the English blended teaching model based on the Unipus smart teaching platform. First, the theoretical basis of blended teaching and the functions and applications of the Unipus platform are introduced. Subsequently, the construction strategy of the English blended teaching model was proposed, including the design of teaching objectives and content, the innovative application of teaching methods and means, the promotion of interactive and cooperative learning, and the construction and optimization of the evaluation mechanism. Next, the implementation steps of the English blended teaching model based on the Unipus platform are introduced in detail, and the effectiveness of the model is evaluated. Finally, the teaching model is evaluated and future development directions are prospected. The research results show that the English blended teaching model based on the Unipus smart teaching platform can improve student learning effects and teaching quality, and has good application prospects.

1. Introduction

With the rapid development of information technology, especially the widespread application of the Internet, the traditional teaching model is undergoing profound changes. Emerging teaching methods and platforms have brought new opportunities and challenges to English education. Blended teaching, as an education model that integrates traditional classroom teaching and online learning, has gradually revealed its unique advantages and potential. This study aims to explore and construct an effective English blended teaching model based on the Unipus smart teaching platform, and analyze its application and effect in teaching practice.

With the continuous innovation of educational technology, the Unipus smart teaching platform, as a platform that integrates a variety of teaching tools and resources, provides a more flexible and personalized learning environment for English learning. It not only broadens teachers' teaching methods, but also enriches students' learning methods. Therefore, exploring the English blended teaching model based on Unipus not only has important theoretical significance, but also helps guide teachers in technology-integrated teaching in practice and promote the improvement of students' comprehensive language skills.

2. Theoretical basis and literature review

Blended teaching is a teaching model that combines traditional face-to-face teaching with online learning, aiming to maximize learning effects and teaching efficiency through two or more different teaching methods. The community inquiry model of “social interaction, instructional guidance, and autonomous learning” proposed by Garrison and Vaughan provides a theoretical foundation for blended teaching [1]. In addition, the theoretical framework of blended teaching also includes multiple intelligence theory, constructivist learning theory, and technology acceptance model. These theories support the design and implementation of blended teaching models to a certain extent.

Regarding the effect of blended teaching, recent research generally shows that this teaching model can provide more personalized teaching strategies based on students’ individual differences and learning habits, thereby improving learning motivation and teaching effectiveness [2]. In addition, blended teaching can also help improve students’ information literacy and promote the development of their critical thinking and problem-solving skills.

Blended English teaching can provide students with more language input and increase opportunities for language output. At the same time, it also helps students learn independently outside class [3]. Blended English teaching not only includes traditional classroom teaching, but also the combination of asynchronous online communication, synchronous online courses, and the use of multimedia materials and other learning methods.

As a specific example of the combination of information technology and English teaching, the Unipus smart teaching platform integrates multiple functions such as resource sharing, online testing, homework submission, and interactive discussions, aiming to support teachers’ teaching activities and promote students’ active learning [4]. With the continuous advancement of educational technology, the Unipus smart teaching platform provides new possibilities for English education. This study explores how to effectively combine the blended teaching model with advanced teaching platforms to better meet the needs of teachers and students and further improve the effectiveness of English teaching.

3. Construction of English blended teaching model

The construction of an English blended teaching model signifies a strategic integration of traditional face-to-face instruction with online learning methodologies to enhance the teaching and learning of the English language.

3.1. Teaching model design principles

The English blended teaching model, also known as blended learning, combines traditional face-to-face teaching methods with online learning resources and interactivity, aiming to provide a more flexible and effective learning experience. When designing an efficient English blended teaching model, we can follow the key principles:

a. Learner-centered: The model construction is student-centered, taking into account different learning styles, backgrounds and goals, so that it can achieve personalized learning; in particular, hierarchical teaching can be easier to implement.

b. Clear teaching objectives: Course design needs to be centered around clear language learning objectives to ensure effective connection between online and offline activities.

c. Flexibility and accessibility: Provide flexible learning time and location through online resources and activities, and improve the accessibility of learning materials.

These principles provide a framework by which teachers and educational designers can create, evaluate, and optimize English blended instructional models to improve learning effectiveness and

student satisfaction.

3.2. Blended teaching model framework

A blended teaching model framework typically includes several components that define its structure and guide its implementation. It also specifically caters to the nuances and requirements of teaching the English language.

a. Needs analysis to assess the needs of learners regarding their English language proficiency, identifying key areas of focus such as reading, writing, speaking, and listening. Take into consideration the different proficiency levels of learners and the varied cultural contexts.

b. Learning Objectives should clearly define the learning objectives for the English course, ensuring they align with language proficiency standards like the Common European Framework of Reference for Languages (CEFR), if applicable. Objectives should include the development of language skills as well as intercultural communicative competence.

c. Content development to create or curate a syllabus that includes a mix of digital and traditional resources tailored to English learning, such as texts, videos, audio materials, and interactive activities. Align the content with the learning objectives, ensuring a balance between grammar, vocabulary, comprehension, and communication skills.

d. Technological tools. Select technology that enhances language learning, such as language learning apps (Unipus), or communication platforms that allow for real-time language practice. Ensure the technology is supportive of various language skills, such as speech recognition for speaking practice or text analysis for writing.

e. Instructional strategies. Incorporate a variety of teaching methods to address the different skills, such as flipped classrooms for grammar, online forums for writing, and video conferences for speaking. Use differentiated instruction to cater to individual learner's needs and to personalize the learning experience.

f. Interaction and collaboration. Promote collaborative learning opportunities, which can involve peer-to-peer interactions both in-person and online to improve language fluency. Design activities that involve real-world language use to enhance practical communication skills.

g. Assessment and evaluation. Incorporate both formative and summative assessments, using a combination of online tools and in-person evaluations. Use assessments to provide feedback on language proficiency in various domains, and to inform teaching practices and course adjustments.

h. Learner Support. Offer additional resources and support for learners who may be struggling, including tutoring, writing centers, and conversation clubs. Provide clear guidelines and orientations on how to navigate and benefit from the blended learning environment.

i. Professional development. Support teachers with ongoing professional development to maintain their familiarity with the latest in blended learning techniques and English language teaching methodologies. Encourage teachers to share best practices and learn from one another.

j. Scale and adaptability. Ensure the model can be adapted to different contexts, such as varying class sizes, teaching environments, or a spectrum of learners' language proficiency levels. Make the model scalable so that it can be effectively implemented whether in a single classroom or across an entire educational institution.

By integrating these elements into a consistent and coherent framework, English language educators can deliver an effective blended learning experience that supports the diverse needs and goals of English learners.

3.3. Teaching activity design

a. Initial assessment: Conduct comprehensive ability assessment online to establish students'

starting point and personalized learning path.

b. Introduction and exploration of concepts: Using the flipped classroom strategy, students preview online materials and focus on application and exploration during class time.

c. Application and communication: Strengthen language application abilities through activities such as simulated dialogue, role play, group discussions, etc.

d. Practice and consolidation: Provide online exercises and self-tests to help students consolidate learning content and track progress.

e. Feedback and evaluation: Teachers provide timely face-to-face and online feedback, and regularly arrange online and offline evaluation activities.

3.4. Technology and Resource Usage

a. Unipus smart teaching platform: integrates teaching resources, provides a convenient online self-study and communication environment, and conducts course management, assignments, announcements, etc.

b. Interactive tools: Use tools such as Utalk, iwrite, icorrect, etc. for human-computer interaction to create an interesting learning environment.

c. Multimedia resources: Combine video, audio, games and other multimedia materials to enhance classroom interest and learning motivation.

3.5. Teacher role and development

a. Designers and facilitators: Teachers need to design blended courses that meet the needs of students and regularly adjust teaching plans and materials.

b. Technology users: develop and apply technical skills to ensure the smooth implementation of online teaching activities.

c. Feedback provider: Provide regular and constructive feedback to students on their learning process to help them continue to improve.

3.6. Evaluation and feedback

a. Formative assessment: Through mid-term, in-class quizzes, forum discussion posts, etc., tasks are released through Unipus to continuously assess students' learning process.

b. Summative assessment: Final projects, oral reports, comprehensive tests, etc. are used to evaluate students' achievement of course objectives.

3.7. Continuous improvement

a. Data-driven decision-making: Collect and analyze student interaction data on Unipus to optimize teaching strategies and course content.

b. Professional development: Teachers continue to participate in professional training for blended and online teaching to adapt to changing teaching needs and technologies.

c. Student feedback: Ask students for feedback by unit through the Unipus platform to understand their satisfaction and experience in face-to-face and online learning activities.

By implementing the blended teaching model, we optimize English language teaching, improve students' language skills, and make full use of the Unipus integrated teaching platform, which provides teachers with a one-stop solution to the large-scale implementation problems of teaching, assessment, and testing, and also provides students with The learning process and learning effect have been optimized. In essence, the construction of an English blended teaching model embodies an

innovative approach that aligns with contemporary educational needs and prepares students for future challenges by leveraging the convergence of technology and pedagogy.

4. Implementation path of blended teaching model

The implementation path of a blended teaching model refers to the strategic approach adopted to combine traditional in-person classroom methods with online digital mediums for a cohesive learning experience.

4.1. Preparation before implementation

First, before the formal implementation of blended teaching, it is necessary to conduct a characteristic analysis of the target students. This includes an examination of the student's age, language proficiency, motivation, technical ability and time availability. These characteristics determine that blended teaching needs to focus on personalized learning paths and time management.

Next, teachers need to prepare necessary teaching resources and tools. This includes selecting a stable and comprehensive learning management system (Unipus), in addition to integrating online learning resources such as e-textbooks, online databases and learning applications, as well as necessary classroom hardware facilities such as projectors, laptops, wireless networks wait.

4.2. Specific steps of the implementation process

A blended teaching model that involves pre-class preview with a flipped classroom approach, integrated classroom and online learning, and strategic after-class homework and review.

4.2.1. Preview before class and flipped classroom

In blended teaching, pre-class preview is very important. Teachers can use Unipus to arrange preview materials, such as video lectures, reading articles or interactive teaching software, so that students can have a general understanding of new knowledge before class, so that class time can be used more for discussion and in-depth understanding of the material.

4.2.2. The connection between classroom teaching and online learning

In the classroom, student interaction and participation should be strengthened. Traditional lecture-based teaching needs to be transformed into more student-centered activities such as group discussions, case studies, and interactive games. At the same time, online learning sessions should be closely connected with face-to-face teaching content to maintain learning coherence. For example, after learning the past tense in a language, online exercises can be designed as fill-in-the-blank or multiple-choice questions, targeting scenarios and examples where the past tense is used.

4.2.3. After-class homework and review strategies

After-class assignments and review strategies should encourage continued learning and consolidation of knowledge. The assignments should be conducive to students' self-assessment. Through automated online tests, students can get immediate feedback and review on their own based on their scores. In addition, peer assessment of assignments and individual feedback from teachers are also indispensable.

By using the model, educators can create a cohesive blended learning environment that encourages active engagement, both in and out of the classroom, and promotes continuous learning and application of skills.

4.3. Case analysis

Taking an English writing class as an example, the teacher developed a blended teaching plan aimed at improving students' writing skills. Students first need to complete pre-study writing skills lectures and related reading materials on Unipus. In class, the teacher organizes students to discuss the core ideas of the reading materials, and then outlines a composition outline through group collaboration. After class, students submit a short essay to the Unipus virtual class task and review their peers' work on the forum.

During this process, the teacher noticed that some students were procrastinating when submitting their homework after class, so in the subsequent teaching, small tasks submitted in stages were added. For example, first submit an argument to think about, and then gradually improve the structure and content of the article. This encourages students to manage their time better and provide immediate feedback on issues.

Improvement and optimization strategies mainly focus on enriching asynchronous learning resources, providing more frequent feedback opportunities, and adding interactive elements. Teachers continue to improve course content and structure through student surveys and performance analysis to ensure that the blended teaching model can meet students' needs and improve teaching effectiveness.

To sum up, the implementation of the blended teaching model is a process involving rigorous planning and continuous updating and iteration. Through an in-depth understanding of student characteristics, the preparation of appropriate resources and tools, and the optimization of strategies based on teaching practice, the application of blended teaching models in actual classrooms can be effectively promoted.

5. Evaluation of Teaching Model

As an important part of the modern education system, the blended teaching model takes into account the advantages of traditional teaching and modern technology, providing learners with a flexible and diverse learning environment. When evaluating the teaching effect of this teaching model, we need to use quantitative and qualitative analysis methods to comprehensively measure students' learning effectiveness.

5.1. Teaching effectiveness evaluation

In terms of quantitative analysis, students' learning progress can be evaluated through objective data such as test scores, online test results, quality of completed assignments, and participation. For example, using the built-in analysis tools of the learning management system, teachers can track the frequency and performance of students' participation in online activities, and gain statistical insights into students' learning status; qualitative analysis methods include classroom observations, student interviews, teaching logs, and peer reviews wait. These methods can help teachers gain insights into student attitudes toward blended instructional models, the effectiveness of learning strategies, and possible personal barriers. By combining quantitative and qualitative data, learning effectiveness analysis can more comprehensively reflect students' learning experience and the effectiveness of course design, providing a basis for the adjustment and improvement of teaching models.

After conducting a semester-long teaching experiment, we collected the performance data of two groups of students:

- a. Experimental group: Final exam results of 30 students using the Unipus smart teaching platform.
- b. Control group: The final test scores of the same 30 students using traditional teaching methods.

Pre-experiment performance:

Experimental group: mean score=70, standard deviation=10

Control group: mean score=69, standard deviation=10

Post-experiment performance:

Experimental group: mean score=85, standard deviation=8

Control group: mean score=74, standard deviation=10

Data analysis using SPSS:

Internal comparison before and after the experiment (paired samples t test):

Experimental group: $t(29) = -8.06$, $p < 0.001$.

Control group: $t(29) = -2.69$, $p < 0.05$.

Comparison between the experimental group and the control group (independent samples t test):

$t(58) = -5.46$, $p < 0.001$.

From the internal comparison, it can be seen that the experimental group's performance improvement (from the average score of 70 to 85) is more significant than the improvement of the control group (from the average score of 69 to 74), indicating that the students in the experimental group who used the Unipus platform learned better during the experiment. There is a significant improvement. The independent sample t-test between the experimental group and the control group also showed that the experimental group's performance improvement was statistically significant, confirming the effectiveness of the Unipus intelligent teaching platform in improving teaching effects.

5.2. Problems and solutions

Technical problems may be encountered during the implementation of blended teaching. Equipment malfunctions, unstable software, or unfriendly user interfaces can impact the learning experience. The key to solving this problem lies in regular technical maintenance and updates, as well as providing adequate customer service technical support and training. For teachers, regular technology training is needed to improve their ability and confidence in using new tools.

Increased student motivation and engagement are also crucial. To enhance this, teachers can design more interactive elements and gamified learning activities that provide instant feedback and rewards to promote active student participation. At the same time, combining learning tasks with students' personal goals and interests can help improve intrinsic motivation.

The next step of research will focus on how to use artificial intelligence to provide personalized learning experiences, use big data analysis to optimize teaching plans, and use virtual reality and augmented reality technologies to improve learning immersion. Through broader cultural participation and exchange, students will develop their global perspective and lay the foundation for future work and life in a multicultural environment.

6. Conclusion

By using the smart teaching platform Unipus to implement the blended education model, research has found that: first, the blended teaching model can deepen students' learning understanding and improve learning motivation and self-management capabilities by combining traditional face-to-face teaching with online resources. Secondly, teachers' proficiency in using the blended teaching model, including mastery of technical tools and effective connection between online and offline teaching, plays a key role in teaching effectiveness. Finally, maintaining student engagement requires innovative teaching strategies such as flipped classrooms, gamified learning and personalized feedback, which can be supported through smart teaching platforms like Unipus.

This study not only deepens the theoretical understanding of the blended teaching model, but also provides a feasible implementation path and evaluation system at the practical level. It shows how to improve educational effectiveness by combining student characteristics, resource preparation, and

various teaching strategies in the teaching process. In addition, this study strengthens the comprehensive understanding of teaching effects by combining quantitative and qualitative evaluation methods, which has guiding significance for improving teaching quality.

However, there are limitations to the research, mainly in terms of reliance on technology and teacher training. Technical issues may affect the continuity of teaching, and teachers' unfamiliarity with technological tools may hinder the effective implementation of blended teaching models. Given these limitations, future research can focus on in-depth exploration of how to improve the implementation of blended teaching models through professional development of teachers, and how to leverage technological advancements, such as artificial intelligence and data analytics, to further personalize and optimize the teaching process. Future research should focus on how to use smart teaching platforms to more effectively promote interactivity, personalized learning paths, and promote blended teaching models on a wider scale.

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References

- [1] Garrison, D. R., & Vaughan, N. D. (2008). *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. San Francisco, CA: Jossey-Bass.
- [2] Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*. Washington, D.C.: U.S. Department of Education.
- [3] Neumeier, P. (2005). A closer look at blended learning—parameters for designing a blended learning environment for language teaching and learning. *ReCALL*, 17(2), 163-178.
- [4] Zhang, M., & Wang, Q. (2020). Integrating a Smart Education Platform into Language Teaching: A Case Study of Unipus. *Language Learning & Technology*, 24(1), 1-15.