



Design of Smart Teaching Mode for College English Teaching Based on Intelligent Teaching Platform

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Abstract. The study firstly clarified the concept of Smart Teaching and Intelligent Teaching, and then analyzed the current application status of Intelligent Teaching in College English teaching through qualitative and quantitative research method. Questionnaires and semi-structured interviews were used to gather data and analyze the application method and teaching related issues brought by Intelligent Teaching Platforms. The results showed that the effective ways to integrate Intelligent Teaching methods into classroom teaching is still a great concern for college teachers. The application of Intelligent Teaching platforms to enable smart teaching is still a problem worth researching. Due to data analysis and some practical teaching problems, the Smart Teaching Mode for college English teaching based on Intelligent Teaching Platform is designed, which combines the Modular Approach and the Production Oriented Approach as theoretical foundation and uses Intelligent Teaching Platforms as effective tools to promote teaching efficiency. In this teaching mode, teacher fully utilizes the advantages of Intelligent Teaching Platforms e.g. Rain Classroom, Unipus, FIF, and iWrite, integrating them into the five teaching modules of listening, speaking, reading, writing, and translation respectively, so as to accomplish the unit output task and improve the teaching quality and efficiency.

Keywords: Smart Teaching, Intelligent Teaching, Modular Approach, Production Oriented Approach.

1 Introduction

With the development of artificial intelligence technology, both educational and learning methods are undergoing fundamental changes. College English, as a compulsory course of university education, is also being challenged by various intelligent teaching methods. More and more English teachers are using various Intelligent Teaching Platforms to improve the teaching efficiency, upgrade teaching environment and diversify teaching methods. However, the effectiveness of Intelligent Teaching Platform in college English education and its effective integration into the classroom teaching are still issues concerned by English teachers. Intelligent Teaching is an important means to promote Smart Teaching of college English education, however, how to effectively integrate it into Smart Teaching is still a problem worth studying.

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This study clearly clarifies the relationship between Smart Teaching and Intelligent Teaching. Survey questionnaires and semi-structured interviews are carried out to analyze the current application status and the integration problems of Intelligent Teaching Platforms in college English teaching. Due to the teaching problems, a Smart Teaching Mode for college English teaching is designed.

2 Smart Teaching and Intelligent Teaching

Intelligent Teaching refers to the new type of smart teaching method enabled by artificial intelligence technology. This teaching method is developed with the advancement of AI technology and receives its popularity among college teachers due to its time-saving and labor-saving characteristics, as well as its ease of use in blended learning mode. In recent years, researches on Intelligent Teaching in college English teaching have showed an increasing trend. From 2017 to 2023, CNKI published more than 70 related research papers, mainly involving the application of Intelligent Teaching Platform in college English teaching and its impact on college English teaching modes [1-5]. Among them, however, there are more qualitative researches but less quantitative researches, and the research on the relationship between Smart Teaching and Intelligent Teaching is still rare.

Smart Teaching is a hot topic in current teaching research. The concept of Smart Education refers to an effective integration of Intelligent Teaching in education. In 2008, IBM firstly introduced the concept of Smart Education and described the value and role of AI technologies in the future education. The Smart Education was officially proposed for the first time in the document of Education Informatization 2.0 Action Plan in 2018 in China. It identified the purpose of Smart Education is to comprehensively drive educational reform and promote high-quality development of education through modern scientific information technology [6].

The essence of smart education is to build an ecological learning environment that integrates AI technology through human-machine collaboration, allowing teachers to use smart pedagogy in smart AI environment to realize effective teaching [7]. The Intelligent Teaching and Smart Teaching are correlated and complementary to each other. It can be said that Intelligent Teaching is an important component and fundamental condition of Smart Teaching; Smart teaching is the ultimate goal and ideological guidance of Intelligent Teaching. The Smart Teaching Mode of College English teaching should be achieved through the proper use of Intelligent Teaching Platforms and the effective implementation of smart teaching design.

3 Research Method

This study uses surveys and semi-structured interviews to analyze the current application status of Intelligent Teaching Platforms, including application approaches and shortcomings of Intelligent Teaching Platforms in college English teaching. 50 teachers from 9 universities with different age groups answered the questionnaires. A total

of 50 questionnaires were distributed and 50 valid ones were collected, with an effective rate of 100%. The study mainly answers the following questions:

What kinds of Intelligence Teaching Platforms are used in college English teaching?

What are the main application methods of Intelligence Teaching Platforms in college English teaching? What are their advantages and disadvantages?

How are the Intelligence Teaching Platforms used in the teaching of English listening, speaking, reading, writing, and translation respectively? And what are teachers' opinions and suggestions about their effectiveness in teaching?

4 Data analysis

According to the survey, college English teachers have widely used various Intelligence Teaching Platforms to carry out college English teaching. The most commonly used Intelligence Teaching Platforms ranging from most to least are in following order: Rain Classroom, Unipus, FIF Oral English Training Platform, iWrite, BAICIZHAN, Chinese Universities MOOC network and Baidu online translation etc. These platforms are mainly used to assign and assess pre-class homework, check and record students' classroom performance, as well as assign after class homework.

In semi-structured interviews, teachers explained the reasons for their preference of Intelligent Teaching Platforms. Firstly, teachers can use the Intelligent Teaching Platforms to assign and check pre-class homework, upload rich teaching resources, and monitor the students' pre-class performance; secondly, teachers can use Intelligent Teaching Platforms to create more interesting classroom activities, assign classroom exercises at any time, and check students' learning effectiveness; thirdly, after class, teachers can assign and check homework through an Intelligent Teaching Platforms, and they can grade students' homework at any fragmented time, which is convenient, time-saving, and labor-saving.

On the other hand, 76.19% of teachers complained that using Intelligent Teaching Platforms increased the burden of teaching preparation; 47.62% of teachers considered that the use of Intelligent Teaching Platforms for classroom teaching is not as practical as traditional teaching, for the former cannot provide more teaching content and useful teaching methods effectively in class; 28.57% of teachers believe that using Intelligent Teaching Platforms will waste valuable classroom teaching time. The main reason for these application problems is that teachers did not have an overall picture about how to use Intelligent Teaching Platforms properly, timely, reasonably, and flexibly in classroom teaching.

The survey shows that about half of the teachers have already used various Intelligent Teaching Platforms to teach English listening, speaking, reading, writing, and translation respectively. A small number of teachers do not use Intelligent Teaching Platforms at all in their teaching. Most teachers agree to the point that it is the teacher who designs and controls the teaching procedure and contributes to smart design of the class, but not the Intelligent Teaching Platforms which only plays an assistant role. The proper application and integration of Intelligent Teaching Platforms in class-

room teaching are issues that teachers need to study in the long term. Therefore, exploring the suitable ways to apply Intelligent Teaching Platforms in classroom teaching is of great necessity currently. The Smart Teaching Mode should involve both the smart teaching design from the teachers and the smart application of intelligent tools.

5 Design of Smart Teaching Mode for College English Teaching based on Intelligent Teaching Platform

Based on survey analysis, this study designs the Smart Teaching Mode for college English teaching based on Intelligent Teaching Platform. The purpose is to effectively utilize Intelligent Teaching Platforms to facilitate the smart college English teaching mode and improve classroom teaching quality and efficiency.

5.1 Definition

The Smart Teaching Mode for College English Teaching based on Intelligent Teaching Platform refers to the proper use of various Intelligent Teaching Platforms in teaching process to enable the smart design of college English teaching mode. It covers two essential aspects: the smart use of Intelligent Teaching Platforms and the smart classroom teaching design.

5.2 Theoretical Background of the Smart Classroom Teaching Mode Design

Modular Approach is the theoretical foundation to build the Smart Teaching Mode. Modular Teaching is a teaching model developed by the International Labour Organization in the early 1970s, with skill training as its core. It was first used in vocational colleges to complete the “task module” of a certain job position. With Modular Approach, the teaching content can be divided into some self-contained learning segments, called Modules, based on text book chapters or certain teaching purpose. Each Module builds on the previous skills, knowledge and capabilities to progress learners toward threshold concepts or goal [8]. Modular teaching helps teachers get a clear teaching purpose at a time of teaching and simplifies the teaching process. It has the advantages of portable classroom management, efficient skill training and strong operability.

The production-oriented approach (POA) was proposed by Professor Qiufang Wen and her team in 2015 in China, and has been developing into a popular teaching model to improve English teachers’ classroom teaching in the country [9]. With POA Approach, the teaching process starts with language output and ends with language output, and language input being the scaffold that facilitates output. To be specific, the whole class starts with a language output task, which is accomplished after achieving multiple small output tasks set by teachers intentionally. Language input teaching functions as a scaffold throughout the entire teaching process, continuously facilitating the achievement of language output tasks. Hence the output tasks in POA

are similar to the teaching modules in Modular Approach, and integrating the two approaches in English teaching can simplify and improve teaching efficiency.

5.3 Smart Teaching Mode for College English Teaching based on Intelligent Teaching Platform

The Smart Teaching Mode for College English Teaching based on Intelligent Teaching Platform is designed with the combination of smart teaching approach and Intelligent teaching methods. The combination of Modular Approach and POA are applied compatibly in Smart Teaching Mode of College English class (see Fig. 1). In each unit teaching, the teacher starts with a unit output task, which is designed based on unit topic. The Five Modules: Reading Module, Writing Module, Vocabulary Module, Translation Module, and Listening and Speaking Module, are divided and function as five small tasks assistant to achieve the unit output task. Each module is set to build on the previous skills, knowledge and capabilities to progress learners toward new task challenge. It can be seen that the five small tasks cover five basic English skills: listening, speaking, reading, writing, and translation, which are essential to cultivate students' comprehensive language ability and proficiency.

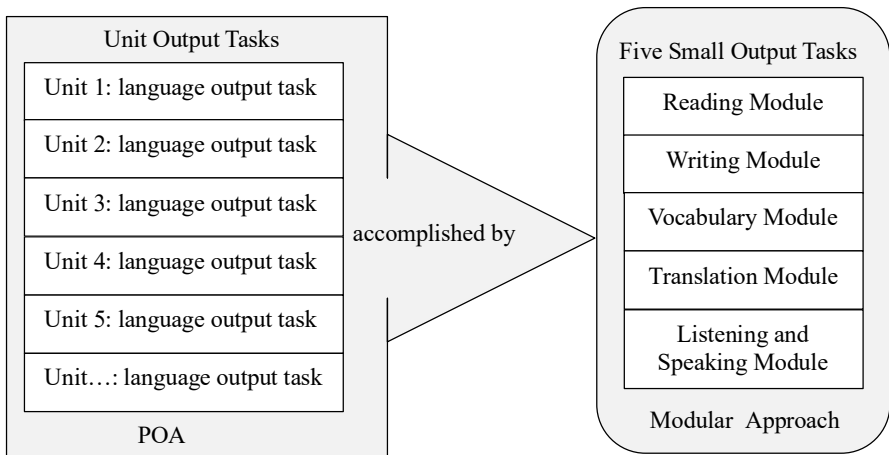


Fig. 1. Smart Teaching Mode based on Modular Approach and POA

Table 1 shows how Intelligent Teaching Platforms are applied in the designed Smart Teaching Mode. Four Intelligent Teaching Platforms are used e.g. Rain Classroom, Unipus, iWrite, and FIF in order to achieve the teaching of Five Modules, namely Reading Module, Writing Module, Vocabulary Module, Translation Module, and Listening and Speaking Module. During the teaching process, the Rain Classroom is mainly used to assign pre-class, in class, and after class homework so as to trigger effective interactive teaching between teacher and students helping to achieve five Teaching Modules. Before and after class, Rain Classroom is mainly used to assign subjective homework for the Reading Module and Translation Module but in class it

is often used as a tool to assign objective exercises due to its real-time and AI analysis function. Unipus is specially designed for English teaching in China, and hence more objective homework can be assigned and assessed easily by it. Teachers mainly use it to analyze students' study performance in Vocabulary Module and Listening and Speaking Module, which also help teachers determine the key points and difficult points in classroom teaching. iWrite and FIF are used respectively for Listening and Speaking Module and Writing Module. These two platforms are mainly used after class to assign and assess students' oral and writing homework. It can be seen that reasonably utilize each Intelligent Teaching Platform and put them into proper Teaching Modules contribute to a scientific, reasonable and effective construction of Smart Teaching Mode.

Table 1. Smart use of Intelligent Teaching Platforms in Smart Teaching Mode

Teaching process	Intelligent Platforms	Smart use of Intelligent Teaching Platforms
Pre-class	Rain Classroom	assigning unit output Task and subjective homework in Reading Module and Translation Module
	Unipus	assigning objective homework in Vocabulary Module and Listening and Speaking Module
In class	Unipus	determining the key points and difficult points in Vocabulary Module and Listening and Speaking Module
	Rain Classroom	facilitating classroom interactive teaching and promoting the teaching efficiency for all of the Five Modules
After class	Unipus	assigning and grading objective listening homework in Listening and Speaking Module
	iWrite	assigning and grading writing assignments in Writing Module
	Rain Classroom	assigning subjective homework in Translation Module
	FIF	assigning and grading oral exercises in Listening and Speaking Module

6 Conclusion

The survey in the study has found that college English teachers have widely used various Intelligent Teaching Platforms such as Rain Classroom, Unipus, FIF and iWrite etc. in daily teaching. Most Teaching Platforms are used to assign and assess pre-class homework, record students' classroom performance and assign and grade after class homework. However, teachers generally agreed that how to effectively integrate Intelligent Teaching Platform in college English teaching so as to achieve Smart Teaching is still a problem that needs to be studied. Based on this, this study designs a Smart Teaching Mode for college English teaching based on Intelligent Teaching Platform, which employs Modular Approach and POA as theoretical foundation and integrates Intelligent Teaching Platforms as teaching tools. During the teaching process, teachers make use of the advantages of Rain Classroom, Unipus, FIF and iWrite, integrating them into five Teaching Modules of listening, speaking,

reading, writing, and translation, so as to effectively achieving unit output task and the subordinate small tasks designed based on Modular and POA theory. This Smart Teaching Mode has undergone one semester of teaching practice and has received positive feedback from teachers and students. The future research will focus on the application of Intelligent Teaching Platforms in each Teaching Module and its teaching effectiveness.

References

1. Shao C. M. (2023). Research on College English Teaching Practice under the Background of Artificial Intelligence. *Journal of Heilongjiang Institute of Teacher Development*, 42: 64-66.
2. Tang M., L Y. Y. & Wang Y. N. (2023). Construction and Practice of Blended Teaching Model for College English under the Background of Artificial Intelligence - Taking General English I-1 as an Example. *Educational Information Technology*, 6: 46-50.
3. Zhu M. L. (2023). The Application of Artificial Intelligence in Blended Learning of College English Teaching. *Course Teaching*, 4: 33-36.
4. Bai F. (2021). A Study on the Advantages and Paths of College English Teaching Reform from the Perspective of Artificial Intelligence. *Computer Knowledge and Technology*, 17: 101-102.
5. Wang G. & He J. (2021). Construction and Teaching Effect of English Writing Teaching Mode Based on Intelligent Platform. *The Science Education Article Collects*, 535: 187-189.
6. Chen L. & Xu L. (2021). Research on the Development Strategy of Education Informatization 2.0 in the New Era. *China Educational Technology*, 408: 96-101, 127.
7. Zhu Z. T. (2014) Leading the Innovative Development of Education Informatization with Smart Education. *China Education Info*, 9: 4-8
8. Lei W. Y. (2023). A Study on the Modular Teaching Mode of College English under the Background of New Liberal Arts Education. *Gansu Education Research*, 31:32-35.
9. Wen, Q. F. (2015). Developing the theoretical system of production-oriented approach in language teaching. *Foreign Language Teaching and Research*, 4: 547-558.

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