Research on Multimodal Teaching Strategies in English Major Teaching

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Abstract: *With the rapid development of information technology, the application of multimodal teaching strategies in English major teaching has attracted increasing attention. This paper systematically analyzes the research progress at home and abroad, explores the core theories of multimodal teaching strategies, proposes design principles, and summarizes their application effects in actual teaching. The study finds that multimodal teaching strategies not only enrich teaching content and enhance students' learning motivation but also effectively improve teaching effectiveness and students' language abilities. However, there are still some shortcomings and challenges in existing research, which need to be further optimized and innovated. This paper aims to provide a new perspective and method for the theoretical research and practical application of multimodal teaching strategies.*

Keywords: *multimodal teaching strategies, English major teaching, modal integration theory, cognitive load theory, motivation theory*

1. Introduction

Against the background of globalization and informatization, the research on teaching methods and strategies of English, as an internationally common language, continues to deepen. Traditional teaching methods mainly rely on the transmission of information in a single mode, such as text or oral explanation, which has become difficult to meet the learning needs of modern students. Multimodal teaching strategies, by integrating various modes such as language, images, sound, and action, provide students with a more diverse and interactive learning experience, becoming a hot topic in current educational research.

The application of multimodal teaching strategies in English major teaching is of great significance. Firstly, the diversity and interactivity of multimodal resources can stimulate students' interest in learning and enhance their motivation. Secondly, through the integration of multimodal resources, students' comprehensive language abilities, including listening, speaking, reading, and writing, can be improved. Additionally, multimodal teaching strategies can also promote the innovation of teaching methods and improve teaching quality. Therefore, studying the current application status, theoretical basis, and design principles of multimodal teaching strategies is of great theoretical and practical significance for improving the effectiveness of English major teaching.

2. Research on the Application Status of Multimodal Teaching Strategies in English Teaching in English Major

2.1 Research Progress at Home and Abroad

In recent years, the application of multimodal teaching strategies in English teaching has received widespread attention and in-depth research from domestic and foreign scholars. Internationally, especially in European and American countries, significant progress has been made in the application of multimodal teaching strategies in English teaching. For example, Jewitt (2008) proposed the concept of multimodal learning, emphasizing that the integration of various modes such as visual, auditory, and kinesthetic can improve students' learning effectiveness and engagement. Kress and Van Leeuwen (2001) also pointed out that multimodal teaching strategies can enhance students' understanding of language and culture by providing a more three-dimensional and vivid learning experience through images, videos, audios, and other forms of resources.[1]

In China, research and application of multimodal teaching strategies have gradually emerged. In

recent years, with the widespread application of information technology in the field of education, domestic scholars have begun to pay attention to the effective integration of multimodal resources in English teaching. Li Ming (2015) found that the use of multimodal teaching resources can significantly improve students' listening and speaking abilities and overall language proficiency. Zhang Hua (2017) verified through empirical research the positive effects of multimodal teaching strategies on improving students' reading comprehension and writing abilities. In addition, some universities have also begun to explore the practice of multimodal teaching strategies, such as enriching teaching methods and improving teaching effectiveness through virtual classrooms, online learning platforms, and other methods.

2.2 Shortcomings and Challenges in Existing Research

Although the application of multimodal teaching strategies in English teaching has made some progress, there are still some shortcomings and challenges in existing research and practice. Firstly, there are dual challenges of technology and funding in the development and integration of multimodal teaching resources. The production of multimodal resources requires professional technical support and equipment, which is a barrier for some schools with poor economic conditions. Moreover, the high development cost of high-quality multimodal resources limits their widespread application in teaching.

Secondly, the evaluation of the implementation effectiveness of multimodal teaching strategies is still not perfect. Existing research mainly focuses on theoretical exploration and small-scale experimental research, lacking large-scale and long-term empirical research to verify their effectiveness. The actual application effect of multimodal teaching strategies still needs to be verified through larger-scale and longer-term research.

Furthermore, the multimodal teaching abilities of teachers need to be improved. The effective implementation of multimodal teaching strategies requires teachers to have high information technology and instructional design abilities. However, many teachers lack training and support in this area, which affects the promotion and application of multimodal teaching strategies. Teachers still need more professional training and practical guidance in the selection, integration, and application of multimodal teaching resources.[2]

Finally, the application of multimodal teaching strategies also faces the issues of student acceptance and adaptability. Different students have different acceptance and adaptability to multimodal resources, and some students may not adapt to the multimodal learning mode, leading to poor learning outcomes. Therefore, in the design and implementation of multimodal teaching strategies, it is necessary to consider students' individual differences and provide diversified learning paths and resources to meet the learning needs of different students.

In summary, although the application of multimodal teaching strategies in English teaching shows broad prospects, there are still many challenges. Future research and practice need to make further efforts in resource development, effectiveness evaluation, teacher training, student adaptation, etc., to promote the in-depth application and development of multimodal teaching strategies in English major teaching.

3. Core Theories of Multimodal Teaching Strategies in English Major Teaching

3.1 Modality Integration Theory

Modality Integration Theory is one of the core theories of multimodal teaching strategies. This theory emphasizes that through effectively integrating different modes (such as text, images, audio, video, etc.) in the teaching process, the effectiveness of information transmission and students' understanding can be enhanced. Modality Integration Theory believes that different modes have different expressive advantages and functions. Through the synergistic effect of multimodal teaching, the shortcomings of a single mode can be compensated for, providing a more comprehensive and multidimensional learning experience.[3]

In English major teaching, the application of Modality Integration Theory is reflected in several aspects. For example, teachers can combine text explanations, image examples, audio playback, and video demonstrations in classroom teaching to help students better understand and memorize language knowledge. Images and videos can provide intuitive visual stimuli to help students understand abstract language concepts; audio resources can provide authentic speech input to help students improve their listening and speaking abilities. Moreover, through interactive multimedia courseware, students can actively construct knowledge under multisensory stimulation, thereby improving learning effectiveness.

3.2 Cognitive Load Theory

Cognitive Load Theory is an important theoretical basis for the design of multimodal teaching strategies. This theory, proposed by Sweller (1988), suggests that cognitive load in the learning process can be categorized into intrinsic cognitive load, extraneous cognitive load, and germane cognitive load. Intrinsic cognitive load is related to the complexity of learning content, extraneous cognitive load is related to instructional design and resource presentation, and germane cognitive load is related to learners' active processing and understanding of information.

In multimodal teaching strategies, controlling cognitive load is key to improving teaching effectiveness. Through the integration of multimodal resources, external cognitive load can be effectively reduced, and germane cognitive load can be increased. For example, in English listening teaching, teachers can use subtitles and images to assist in reducing students' understanding burden of listening materials, enabling them to focus more on processing and understanding language information. Similarly, in reading teaching, combining text with images can help students better understand the text content, reducing the cognitive burden caused by pure text materials.

3.3 Motivation Theory

Motivation Theory is an important theoretical basis for multimodal teaching strategies. Learning motivation refers to the internal driving force that drives students to engage in learning activities, directly affecting learning behavior and learning outcomes. Multimodal teaching strategies can effectively stimulate and maintain students' learning motivation through diversified teaching resources and interactive methods.[4]

According to Self-Determination Theory, learning motivation can be divided into intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to students' interest and satisfaction in learning content itself, while extrinsic motivation refers to learning motivation caused by external rewards or pressures. In multimodal teaching, through rich multimodal resources and interactive designs, intrinsic motivation of students can be enhanced. For example, by using vivid images, videos, and audios, the interestingness and attractiveness of learning content can be increased, making students feel happy and satisfied during the learning process. In addition, through interactive methods such as online quizzes, discussion forums, and virtual experiments, students' sense of participation and achievement can be increased, thereby enhancing their learning motivation.

Motivation Theory also emphasizes the role of goal setting and feedback mechanisms in stimulating learning motivation. In multimodal teaching strategies, teachers can help students establish learning confidence and maintain learning motivation through clear learning goals and timely feedback. For example, by presenting multimodal resources in stages and assigning tasks, students can gradually achieve learning goals. Through online quizzes and homework feedback, students can understand their learning progress and shortcomings in a timely manner, gaining a sense of achievement and motivation for improvement.

In conclusion, Modality Integration Theory, Cognitive Load Theory, and Motivation Theory provide important theoretical foundations for the design and implementation of multimodal teaching strategies. By integrating different modal resources reasonably, optimizing teaching content and presentation methods, and stimulating and maintaining students' learning motivation, the effectiveness of English major teaching and students' comprehensive language abilities can be effectively improved.

4. Design Principles of Multimodal Teaching Strategies in English Major Teaching

4.1 Principle of Instructional Objectives

The principle of instructional objectives is the core of designing multimodal teaching strategies. This principle emphasizes that the design and application of multimodal resources should closely align with instructional objectives to ensure the effectiveness and relevance of teaching activities. In English major teaching, instructional objectives typically include mastery of language knowledge, improvement of language skills, and enhancement of cultural understanding. Therefore, the design of multimodal teaching resources must serve these objectives, ensuring that each teaching segment has a clear objective orientation.[5]

Firstly, the principle of instructional objectives requires teachers to specify the specific objectives of

each teaching segment when designing multimodal teaching strategies, and select corresponding multimodal resources. For example, when teaching grammar, a combination of text explanations, graphical presentations, and video demonstrations can be used to help students understand and apply grammar rules. In cultivating listening and speaking abilities, audio and video resources can be used to provide authentic speech input and situational dialogues to enhance students' listening and speaking skills. Additionally, teachers should use interactive multimedia courseware to enable students to engage in deeper knowledge construction and practice with the assistance of multimodal resources.

Secondly, the principle of instructional objectives also requires teachers to focus on the organic integration and coherence between resources, avoiding redundant and ineffective information presentation. Through systematic design, each mode of resource should support and complement each other in achieving instructional objectives, thus improving teaching effectiveness. For example, in a teaching unit, background knowledge can be introduced through text and images, real-world applications can be demonstrated through audio and video, and interactive courseware can be used for practice and consolidation, forming a complete teaching cycle. In this way, students can understand the teaching content from multiple perspectives and consolidate and internalize what they have learned through various forms of practice.

4.2 Principle of Learner-Centeredness

The principle of learner-centeredness is an important guiding principle for the design of multimodal teaching strategies. This principle emphasizes that when designing and applying multimodal resources, the needs, characteristics, and learning styles of students should be fully considered to provide personalized and adaptive learning experiences. Students in English major teaching have different backgrounds and learning needs, so the design of multimodal teaching resources should reflect respect and attention to individual differences among students.[6]

Firstly, the principle of learner-centeredness requires teachers to conduct detailed analysis of learning needs when designing multimodal teaching strategies, understanding students' interests, abilities, and learning goals. For example, collecting data on students' learning habits and preferences through surveys, interviews, and learning records can serve as a reference for designing multimodal resources. Based on different student needs, diverse learning paths and resource choices should be provided to meet the learning needs of different students. For visual learners, teachers can provide more images and videos; for auditory learners, more audio explanations and dialogue practices can be provided.

Secondly, the principle of learner-centeredness also emphasizes the personalization and autonomy of the learning process. Multimodal teaching resources should have flexible adaptability, allowing students to autonomously select and use resources according to their own learning pace and rhythm. For example, by providing graded learning content and tasks through online learning platforms, students can choose suitable learning materials and activities based on their ability levels. Moreover, by providing personalized learning suggestions and feedback through intelligent recommendation systems, students can develop and adjust their learning plans to improve learning effectiveness. Additionally, teachers should encourage students to actively reflect and self-assess during the learning process, cultivating their ability for autonomous learning and awareness of lifelong learning.

4.3 Principle of Interactivity and Participation

The principle of interactivity and participation is key to the design of multimodal teaching strategies. This principle emphasizes that the design of multimodal resources should focus on interactivity and participation, enhancing students' sense of participation and motivation for learning through rich interactive designs. In English major teaching, interactivity and participation are particularly important for enhancing students' language application abilities and learning enthusiasm.

Firstly, the principle of interactivity requires that multimodal teaching resources should have good interactivity, promoting communication and interaction between teachers and students, as well as among students through various interactive forms. For example, through interactive videos, online quizzes, and virtual experiments, students can actively construct and apply knowledge under multisensory stimulation. At the same time, teachers can use tools such as online discussion forums and real-time feedback systems to understand students' learning situations in real time, providing targeted guidance and support. For example, teachers can use real-time voting tools in class to collect immediate feedback from students and adjust teaching content and pace based on the feedback to improve the flexibility and adaptability of teaching.

Secondly, the principle of participation emphasizes enhancing students' sense of participation and learning motivation through the design of multimodal resources. For example, through contextualized learning activities such as role-playing, situational dialogues, and simulation exercises, students can practice and apply language in real language contexts, enhancing language skills and confidence. Additionally, through gamified design such as point systems and competition activities, students' learning interests and competitive awareness can be stimulated, enhancing the fun and challenge of learning. Teachers can also organize group cooperative tasks to encourage students to learn from and support each other, cultivating teamwork skills and social communication skills.

In conclusion, the principles of instructional objectives, learner-centeredness, and interactivity and participation are important guiding principles for the design of multimodal teaching strategies. By following these principles, teachers can design and apply more effective and adaptive multimodal teaching resources, enhancing the effectiveness of English major teaching and students' comprehensive language abilities. This not only helps achieve instructional objectives but also cultivates students' ability for autonomous learning and awareness of lifelong learning, laying a solid foundation for their future development.

5. Conclusion

This study, through a systematic investigation of the application status, core theories, and design principles of multimodal teaching strategies in English major teaching, reveals the important value of multimodal teaching strategies in improving teaching effectiveness and student language abilities. The research found that multimodal teaching strategies can effectively stimulate students' learning motivation, enhance learning effectiveness, and promote the development of students' comprehensive language abilities. However, there are still some shortcomings in the current research in terms of strategy design, implementation, and evaluation, such as insufficient technical support, high resource development costs, and inadequate teacher training.

Future research should focus on the following directions: First, further improve the theoretical basis of multimodal teaching strategies, conduct in-depth research on the synergistic effects of different modes and the best integration methods. Second, strengthen the practical research of multimodal teaching strategies, verify their effectiveness through empirical research, and optimize strategy design. Third, explore more diverse application scenarios of multimodal resources to promote their widespread application in different educational fields. Fourth, increase training and support for teachers to improve their ability and level in using multimodal teaching strategies. Through continuous innovation and improvement, multimodal teaching strategies will bring greater development and breakthroughs to English major teaching.

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