

Study on the Connotation and Application of Multimodal Teaching Mode in Foreign Language Teaching

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Abstract: Amidst the rapid evolution of educational informationization, learning data, and teaching models are constantly updated and iterated. As a product of the information age, multimodal teaching is widely used in today's teaching practice. However, shortcomings still persist in multimodal teaching within foreign language education, requiring further enhancement and utilization. This study examines the impact and significance of educational informatization on multimodal teaching, aiming to propose reformative strategies. Delving into the essence and application of multimodal teaching in foreign language education opens up a wealth of possibilities for enhancing the learning experience and ensuring effective communication skills development. This research aims to summarize the practice of multimodal teaching in the field of foreign language education, shedding light on its impact on instructional innovation principles and the integration of foreign language education with information technology. Additionally, given the challenges in the application of multimodal teaching mode, this study puts forward some suggestions for reference. This research recommends bolstering the use of multimedia devices and online resources to drive reform and innovation in multimodal teaching practices, offering valuable insights for advancing education, especially in second language acquisition and information technology applications.

Keywords: Multimodal Teaching, Foreign Language Teaching, Teaching Mode, Educational Informatization

1. Introduction

Under the background of the continuous development of information technology, educational informatization is developing rapidly. The massive learning data generated by education informatization not only promotes the application and popularization of blended learning mode but also promotes the reform and innovation of teaching mode. In the field of foreign language teaching, how teachers process language information and guide students to obtain language information in the classroom shows diversified characteristics. The use of multimedia equipment and network resources such as micro classes, MOOCs, and SPOCs can make up for the limited teaching resources and the lag of information. At present, the research on multimodal teaching mode mainly focuses on empirical research, focusing on the practice of multimodal teaching mode in real classroom scenes. Few studies start from the multimodal theory itself and combine information technology to sort out the connotation and application of multimodal teaching mode in foreign language teaching and explore the future development direction of this mode. The purpose of this study is to illustrate the connotation

and application of multimodal teaching mode based on information technology in foreign language teaching, to help understand the internal mechanism and principle of teaching mode innovation, and to provide a reference for the integration of foreign language education and information technology. Besides, this study has positive significance for the development of second language acquisition teaching, the popularization of multimodal teaching mode, and the application of information technology in the teaching field.

2. The Definition and Theoretical Basis of Multimodal Teaching Mode

2.1. Definition of Multimodal Teaching

Multimodality refers to a teaching mode or learning mode in which multiple sensory channels are used to receive and transmit information in the process of teaching or learning. Through the participation of multiple senses, it can stimulate learners' interest and understanding ability more comprehensively, promote the absorption and memory of knowledge, and improve the learning effect. In the 1990s, Kress and Van Leeutheyn proposed the theory of multimodal discourse analysis based on constructivism, which attaches importance to the role of symbols such as images, colors, body behaviors, and emotions in the construction of language meaning [1].

Multimodal teaching mode means that in the teaching process, teachers present the teaching content through a variety of expressions, such as oral language, written language, images, animation, video, sound, etc. Through technical means, they comprehensively promote the cognition and learning effect of students. The connotation of this model mainly includes: information transmission being more intuitive and rich, the depth and breadth of learning content being more comprehensive, and the interaction between learners and learning content being more diversified. Multimodal teaching mode has a wide range of application fields, which can be applied to the teaching of various subjects, especially in the field of foreign language teaching. Through the use of multimedia equipment, students' interest and initiative can be better stimulated, and their learning effect and quality can be improved. The basic features of this model include: the teaching content is presented in a variety of ways, the learning process is more interactive, visual, auditory, and tactile, and other senses are stimulated, thus expanding the perceptual range of students, and enabling students to master the learning content in different dimensions.

2.2. Theoretical Basis of Multimodal Teaching Mode

Multimodal teaching mode is a teaching mode based on multiple sensory channels, which provides rich learning resources and diversified learning experience through the simultaneous use of visual, auditory, tactile, movement and other sensory channels. The theoretical basis of this teaching model can be traced back to multiple intelligences theory, brain science and cognitive psychology. The theory of multiple intelligences proposes multiple types of intelligence and holds that human beings have different talents and potentials in different areas of intelligence. The multimodal teaching mode applies this theory to teaching, activates learners' various intelligences through various sensory channels, and provides learning resources and activities suitable for different types of intelligence [2].

Brain science research has shown that the brain is a highly connected and interactive system, and different sensory inputs can activate different regions in the brain and promote information processing and memory formation. The multimodal teaching model makes full use of various sensory channels, which can better stimulate learners' brain activity, and promote information processing and memory consolidation.

The research of cognitive psychology also supports the scientificity and reliability of the multimodal teaching model. Studies have shown that attention and memory can be improved by using multiple sensory channels simultaneously when receiving information. Multimodal teaching mode

provides a variety of learning environments through a variety of sensory stimulation in teaching, which is helpful to stimulate the enthusiasm and initiative of learners and improve the learning effect.

3. Systematic Multimodal Teaching Mode

3.1. Application of Multimodal Teaching Model in Foreign Language Teaching

The multimodal teaching mode had important application value in foreign language teaching. Especially, in the field of English teaching, multimodal English teaching became a widely used teaching method. The basic framework of multimodal English teaching covered three aspects: teaching resources, teaching methods, and teaching evaluation. However, this research not only focused on the research of teaching but also paid attention to the changes of students' language learning input methods and output results under the multimodal teaching mode, to promote the continuous updating and development of the teaching mode. In recent years, the development of a multimodal teaching model in the field of foreign language teaching in China could be divided into three aspects: multimodal teaching for teachers, multimodal learning for students, and multimodal assessment system [3].

The Multimodality of Teaching. Firstly, the multimodality of teacher teaching is mainly manifested in the diversification of teaching resources, the diversification of teaching methods and the diversification of teaching evaluation. In terms of teaching resources, teachers pay more attention to curriculum design and content selection, for example, they optimize the course structure and design English-intensive reading courses at different stages, such as low, middle, and high levels, according to students' differences and learning needs. In terms of teaching methods, teachers make full use of a variety of non-verbal symbols, such as body language, pictures, charts, videos, audio, and network resources, to help students perceive language more vividly. Additionally, instead of teacher-student interaction, they put more stress on student-student interaction, what is more, they apply the latest technology and network means, such as online teaching platforms such as English online self-learning Center, MOOCs and Learning Channel, to integrate teaching resources and strengthen the interaction between students and the environment, so as to improve teaching effectiveness. In terms of teaching evaluation, they should pay attention to the establishment of a diversified evaluation system, including not only the traditional teacher evaluation and examination evaluation but also consider introducing innovative ways such as student-teacher interaction evaluation, learning process monitoring form, and learning result feedback form.

At present, several empirical studies have shown that multimodal teaching plays a positive role in the cultivation of multicultural literacy of college students in China. The multi-modal teaching method not only broadens students' learning scope and channels to acquire knowledge, promotes the dynamic information exchange between people, but also helps to cultivate students' self-learning awareness and improve the depth of language learning [4].

The Multimodality of Learning. Secondly, students learn multimodality mainly through classroom learning and independent learning. In terms of classroom learning, teachers can guide students to conduct group discussions, situational dialogue, mock debates and short play performances and other activities to improve students' practical language application ability. Through these activities, students can output language in a variety of ways, thereby improving their language practical application ability. In terms of independent learning, students should consciously make use of information technology and rich network resources for independent learning. They can learn independently through online language learning platforms such as Duolingo, 100 Words Chopping and BBC English Listening. Besides, students can further expand, consolidate and summarize classroom knowledge through peer evaluation and independent reflection, to improve the efficiency and results of language learning.

Multimodal Evaluation System. Thirdly, the multimodal assessment system emphasizes the comprehensive assessment of students' learning ability, which is no longer limited to the traditional form of examination paper. The multimodal assessment system combines a variety of assessment methods, such as classroom presentations, learning videos, oral English debate and other forms. In foreign countries, some scholars have built multimodal learning data analysis software based on multimodal theory. In China, some scholars have studied the multimodal learning analysis mechanism based on mixed learning mode to measure learners' multimodal learning data such as EEG, ECG, and body movements. The study found that with technical support, learners' learning processes can be evaluated comprehensively, and the feedback data obtained can also be used to improve teacher teaching [5]. This provides a more comprehensive and effective means for teaching and assessment, thus promoting the further development of a multimodal teaching model in foreign language teaching

3.2. The Role of Information Technology in the Application of Multimodal Foreign Language Teaching

According to the Teaching Requirements for College English Courses formulated by the Ministry of Education in 2007, all colleges and universities are required to fully utilize modern information technology, adopt an English teaching model based on computers and classrooms, and improve the traditional teaching model based solely on teacher instruction and textbook learning. Guided by these curriculum requirements, the influence of information technology on foreign language instruction is steadily deepening, facilitating English teaching and learning to transcend temporal and spatial limitations to a certain extent, and progressing toward individualization, flexibility, and diversification [6]. This study elaborates on the impact of information technology on foreign language instruction from the following three aspects.

Online Teaching Platforms and Language Learning Applications. The advancement of information technology has shifted the teaching platform from physical podiums to screens. In recent years, the emergence and utilization of online teaching platforms such as Google Classroom, Coursera, MOOC, micro-classes, and smart classrooms, alongside language learning applications like Duolingo, Baicqi, and Yellow River, reflect a profound integration of instructional modes and information technology. These platforms and applications not only offer flexible and personalized learning options but also utilize multimedia technology to enhance the learning process, breaking through temporal and spatial constraints, and enabling learners to access the latest learning resources anytime, anywhere, thereby enhancing learning efficiency and expanding learning channels.

Application of Multimedia Technology in Classroom Instruction. The application of multimedia technology in instruction encompasses various tools such as electronic whiteboards, projections, audio, animations, and PowerPoint presentations. Multimodal PowerPoint presentations seamlessly integrate static resources like images, icons, and text with dynamic resources such as audio and video, providing students with a more vivid, engaging, and personalized learning experience. This integration of auditory elements enhances comprehension, improves learning efficiency, and fosters students' comprehensive language application abilities.

4. Challenges and Suggestions

In the realm of education, the implementation of multimodal teaching faces various obstacles that necessitate careful consideration and strategic solutions. These challenges can impede the seamless integration of teaching and learning processes, thereby limiting the effectiveness of this innovative approach. Moreover, misconceptions regarding information technology and the misconception that multimedia equates to multimodal instruction can hinder the full realization of its benefits. This

research will delve deeper into the impediments encountered in multimodal teaching and explore viable recommendations to overcome them.

4.1. Integration Gap between Teaching and Learning

One of the primary hurdles in multimodal teaching lies in the disjointed connection between teaching methodologies and learning modalities. Despite the multifaceted nature of multimodal instruction, it often fails to align with students' preferred learning styles and patterns [7]. Consequently, students may not fully engage with the diverse instructional materials, leading to suboptimal learning outcomes. This disconnect underscores the importance of bridging the gap between pedagogical approaches and learners' receptivity.

To address this challenge, educators must adopt a more cohesive and student-centric approach to curriculum design and delivery. By tailoring instructional strategies to accommodate various learning preferences, instructors can enhance students' receptiveness to multimodal instruction. Moreover, fostering a collaborative learning environment where students actively participate in the selection and utilization of multimodal resources can bolster engagement and efficacy.

Furthermore, integrating reflective practices into the teaching process enables educators to assess the effectiveness of multimodal techniques and adjust their methodologies accordingly [8]. Through ongoing evaluation and refinement, educators can mitigate the integration gap between teaching and learning, fostering a more harmonious educational experience.

4.2. Confusion Between Information Technology and Media Technology

Another prevalent challenge in multimodal teaching stems from the pervasive confusion between multimedia and multimodal technologies. While multimedia encompasses the use of various forms of media, including text, audio, and video, multimodal instruction extends beyond mere content delivery to encompass diverse modes of communication and expression [9]. Failure to discern this distinction may lead to the erroneous assumption that incorporating multimedia elements suffices for implementing a multimodal teaching approach.

To overcome this challenge, educators must undergo targeted training and professional development initiatives to enhance their technological proficiency and pedagogical understanding. By fostering a nuanced comprehension of multimodal instruction, educators can leverage information technology more effectively to create immersive and interactive learning experiences.

Furthermore, educational institutions should prioritize the integration of comprehensive multimedia resources and multimodal platforms into their curricula. This entails investing in advanced technological infrastructure and providing educators with access to cutting-edge tools and resources. Additionally, fostering interdisciplinary collaboration among educators, instructional designers, and technology specialists can facilitate the seamless integration of multimodal teaching practices into educational settings.

Amidst the challenges inherent in multimodal teaching, several strategic recommendations can optimize its effectiveness and maximize learning outcomes. These recommendations encompass both pedagogical and technological dimensions, emphasizing the importance of holistic approaches to instructional design and delivery.

Central to the advancement of multimodal teaching is the establishment of integrated virtual classrooms that facilitate autonomous learning. By leveraging digital platforms and interactive technologies, educators can create immersive learning environments where students actively engage with diverse modalities of instruction. Through the integration of multimedia resources, collaborative tools, and interactive assessments, virtual classrooms empower students to assume greater ownership of their learning journey. Furthermore, personalized learning pathways tailored to individual needs

and preferences enable students to cultivate independent learning skills and foster a deeper understanding of course material.

Moreover, the seamless integration of information technology into the teaching process enables educators to adapt their instructional methodologies to accommodate diverse learning styles and preferences. By embracing innovative pedagogical approaches such as flipped classrooms and blended learning models, educators can optimize student engagement and foster deeper levels of comprehension. Additionally, ongoing professional development initiatives aimed at enhancing educators' technological proficiency and pedagogical expertise are essential for ensuring the successful implementation of multimodal teaching practices.

In conclusion, while multimodal teaching presents numerous advantages for enhancing learning outcomes and fostering student engagement, it also poses significant challenges that require careful consideration and strategic intervention. By addressing the integration gap between teaching and learning, dispelling misconceptions surrounding information technology, and implementing targeted recommendations for effective implementation, educators can harness the full potential of multimodal teaching to cultivate dynamic and inclusive learning environments [10]. Through collaborative efforts and ongoing innovation, the transformative power of multimodal instruction can be harnessed to empower students and facilitate their academic success in the digital age [11].

5. Conclusion

The multimodal teaching model has been widely applied and studied in the field of education in China. The research shows that the multimodal teaching model has significant contributions in improving students' learning interests, promoting knowledge memory and understanding, and improving intercultural communication ability. At the same time, the research also found that in multimodal teaching, teachers can better individualize the design of teaching programs according to the different needs and interests of students. The application of multimodal teaching in China mainly focuses on classroom design and teaching practice. With the development of information technology and the continuous update of educational resources, multimodal teaching will develop in the direction of strengthening personalized learning experience, the application of augmented reality and virtual reality technology, strengthening the support of artificial intelligence and big data, and interdisciplinary integration and resource sharing. Multimodal teaching will show a more diversified and dynamic development trend. However, multimodal teaching still faces a series of shortcomings to be solved in the process of development. For example, the application of information technology is not comprehensive enough, and the learning environment of learners is not scientific enough.

In short, the development of a multimodal teaching model is a major trend of educational reform. In the future, foreign language teaching will be more integrated with information technology to achieve multi-modal transformation and development. They should continue to explore its advantages, challenges and application methods to achieve the purpose of better education and training students.

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