

Research on Teaching Design of Tai Chi Micro-class in Chinese Universities based on ADDIE

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Abstract: As a new way of education, micro-class teaching has been paid more and more attention and applied by more and more college educators. As a representative of Chinese martial arts, Tai Chi combines the dual characteristics of culture and sports, and is suitable for teaching through micro-classes. This study will use ADDIE model, combined with the characteristics of Tai Chi, systematically design the micro class teaching of Tai Chi in colleges and universities, in order to improve the teaching effect.

Keywords: ADDIE model; Micro-class teaching; Chinese universities; Tai Chi; Instructional design

1. Introduction

1.1 Research Background

As a representative of Chinese martial arts, Tai Chi enjoys a high reputation in the world. With the rapid development of modern society and the popularization of information technology, the teaching of martial arts faces some challenges. In this context, microclass teaching is a new type of education method of fusion information technology and teaching. Microclass teaching provides more flexible and convenient learning methods for students through short and simple teaching content, learning ways and personalized learning experiences at any time and place. It not only helps to improve learning efficiency, but also helps to cultivate students' self-learning ability and interest in learning. This paper aims to use the ADDIE model, design and develop a set of microcourses that are suitable for the teaching of Tai Chi in colleges and universities, and improve the students' enthusiasm and learning effect on Tai Chi.

1.2 Research Objectives

Based on ADDIE model, design and research the micro course suitable for Taijiquan teaching, in order to achieve five objectives: analysis, design, development, implementation, evaluation stage objectives.

1.3 Research Significance

Based on the ADDIE model, this paper focuses on Tai Chi teaching in Chinese universities and takes micro-courses as the teaching carrier to explore the combination of martial arts teaching and modern educational technology, which has important significance of inheriting and developing martial arts, optimizing teaching mode, improving learning efficiency, cultivating self-learning ability, promoting education informatization, providing reference for teaching reform and promoting cultural transmission.

2. Literature Review

2.1 Overview of the ADDIE model

ADDIE model is an instructional design model widely used in the field of education and training. It was developed by NASA in the 1970s to provide a systematic and circular approach to the design and development of educational curricula, training programs, or teaching activities. The ADDIE model consists of five main stages, each with its own unique tasks and objectives, thus forming a closed loop that enables the instructional design process to be continuously improved and optimized. The five stages of ADDIE model are: analysis stage, design stage, development stage, implementation stage and evaluation stage. The instructional design

team evaluates and analyzes the effectiveness of the instruction based on the data collected during the implementation phase and feedback from the learners. The advantage of ADDIE model lies in its systematic and circular nature, which can ensure that the instructional design process is comprehensive, scientific and flexible, and is widely used in teaching scenarios and instructional design methods.

2.2 Present situation of micro-class teaching development

Micro-class teaching is a kind of online teaching method which takes short and concise video as the main form and is characterized by convenience, quickness and personalization. It usually divides the content of a course into independent sections, each lesson has an independent teaching goal, and students can learn anytime and anywhere through the network platform. Micro-class teaching focuses on simplifying content, highlighting key points, emphasizing student participation and interaction, and improving learning effect through vivid audio-visual experience.

As an innovative teaching mode, micro-class teaching has made remarkable progress in the field of education. It provides students with more flexible and convenient learning methods, provides teachers with more teaching tools and methods, and brings new possibilities for the reform and promotion of education and teaching. The status quo is reflected in: high popularity and penetration rate; Education platform support is large; Strong personalized learning; Integrating traditional teaching; Improve the learning efficiency.

2.3 Present situation of Tai Chi teaching

Present situation of Tai Chi teaching: In some colleges and universities in China, Tai Chi teaching is still dominated by traditional face-to-face teaching. Teachers guide students to learn boxing, movements and other technical points on the spot. Traditional teaching may be limited by teaching space and time, which can not meet the learning needs of all students; Students' interest in Tai Chi is uneven, some students are interested in martial arts, willing to invest time in learning, some students are not very interested in this, the teaching effect is not satisfactory; In some colleges, Tai Chi teaching lacks rich teaching resources, including textbooks, teaching videos, etc., which limits the learning effect of students. Because of the different teaching level and teaching conditions, the teaching quality of Tai Chi is uneven.

3. Research Methodology

3.1 Research design

This study adopts a mixed research method, combining the characteristics of quantitative and qualitative research, as well as empirical and exploratory research, in order to comprehensively and deeply discuss the teaching design of Tai Chi micro-class in Chinese universities based on ADDIE.

3.2 Data collection and analysis methods

Data collection methods: quantitative data collection, designed for students questionnaire survey; Qualitative data were collected and semi-structured interviews were conducted with Tai Chi teachers who participated in micro-class teaching.

Data analysis method: quantitative data analysis, using SPSS statistical software for data processing and analysis; Qualitative data analysis, the use of content analysis methods, interviews and focus group discussions of audio or written material detailed paragraph-by-paragraph analysis.

Comprehensive data analysis: The analysis results of quantitative and qualitative data are integrated for cross-validation.

Interpretation and discussion of the results: The researcher will interpret the collected data and compare it with relevant literature to explore the advantages and limitations of micro-class teaching, analyze the effectiveness of teaching design, and propose improvement suggestions and future research directions.

4. Teaching design of Tai Chi micro-course in Chinese universities based on ADDIE

4.1 Analysis phase

4.1.1 Analysis of learners' needs

Learner needs analysis: Adopt the following methods: questionnaire. The questionnaire was designed for students to understand their interest in Tai Chi, understanding degree, learning motivation, and the content and form they want to learn. A group discussion. Organize group discussions of Tai Chi learners, listen to students' opinions and ideas, and understand their expectations and suggestions for micro-class teaching. Analysis of learner characteristics: Through observation and analysis of students' learning characteristics, including learning habits, learning styles, learning abilities, etc., to provide personalized basis for teaching design.

4.1.2 Demand analysis of teaching content

Teaching content demand analysis: In order to determine the content and learning objectives of Tai Chi micro-class teaching. Clear

teaching objectives, including technical objectives and cultural objectives, so that students can understand its cultural connotation and historical origin while learning Tai Chi. According to the degree and characteristics of learners, the technical points of Tai Chi are screened to ensure that the teaching content is concise and easy for students to understand and master. Consider introducing multimedia resources such as videos, pictures, animations, etc., to enrich the teaching content and provide an intuitive and vivid learning experience.

4.2 Design phase

4.2.1 Clear teaching objectives

The technical goal is the specific technical points and movements that students need to master, while the cultural goal is to let students understand the cultural value and historical origin of Tai Chi. Teaching objectives should be clear, specific and measurable in order to facilitate subsequent teaching evaluation. For example: technical goals. Students can correctly execute the basic movements and boxing methods of Tai Chi, such as basic techniques, boxing, leg, footwork, etc. Cultural goals. Students learn about the history and cultural inheritance of the birthplace of Tai Chi, and understand the important position of Tai Chi in Chinese martial arts.

4.2.2 Formulation of teaching plan

The teaching plan should reasonably arrange the learning time to ensure the smooth progress of teaching and teaching content. For example, the teaching content of Tai Chi micro-class is divided into independent sections, and each lesson focuses on explaining a specific boxing method or movement to ensure that students gradually master the skills. Arrange a certain amount of time for study and practice, so that students have enough time to digest and master the content.

4.3 Development phase

4.3.1 Teaching content organization and design

According to the teaching plan and teaching objectives, the teaching content is divided into independent subsections. Each section should be explained around a specific boxing or movement, and there is a clear logical structure in the whole course, so that students can learn gradually, from shallow to deep, and form a complete teaching section. For example, brief introduction of Tai Chi, explanation of basic techniques and legs of Tai Chi, explanation of basic steps and footwork of Tai Chi, learning of moves and combinations of Tai Chi, learning of Tai Chi sets, status and cultural significance of Tai Chi in Chinese martial arts.

4.3.2 Production and recording of teaching content

In the production of teaching content, multimedia resources, including video, pictures, audio, etc., are used to provide a vivid and intuitive teaching experience. When recording teaching videos, teachers should explain clearly and concisely, demonstrate technical movements, and ensure that students clearly understand and imitate.

4.3.3 Preparation of teaching materials

In addition to teaching videos, you can also prepare relevant teaching materials, such as PPT presentations, learning notes, Practice guidance et.,to assist students in their learning. These materials should be matched with instructional video content to help students better grasp the knowledge and skills they have learned.

4.4 Implementation Phase

4.4.1 Teaching preparation

Before implementing micro-class teaching, teachers need to make full preparation for teaching. Including: familiar with the teaching content, teaching equipment inspection, student list preparation.

4.4.2 Teaching implementation

In the process of teaching implementation, teachers should conduct teaching in an orderly manner according to the teaching plan and the organizational structure of the teaching content. Attention should be paid to introducing teaching content, playing teaching videos, interactive teaching and answering questions.

4.5 Assessment Phase

4.5.1 Evaluation of teaching effect

Teaching effect evaluation is the evaluation of students' learning results, which is an important index to measure the success of teaching. The methods of evaluating teaching effect include: comparison of student achievement, statistics of learning achievement and collection of feedback.

4.5.2 Teaching quality assessment

Teaching quality assessment is an assessment of the teaching process, which focuses on the quality of teaching strategies, teaching content and teaching methods. The methods of evaluating teaching quality include observation record and teaching reflection.

5. Case studies and discussions

5.1 Case Introduction

The physical education major of Henan University is chosen as the research object. The school has opened a Tai Chi course. Under the traditional teaching mode, students train collectively in class, and the level and interest of learners vary greatly, resulting in uneven teaching results. In order to improve the teaching quality and students' learning enthusiasm, the school decided to try the micro-class teaching mode, adopted the teaching design method based on the ADDIE model, developed the teaching content of Tai Chi micro-class, and implemented micro-class teaching in the classroom.

5.2 Implementation process of teaching design

Teaching design process is divided into: analysis stage. The instructional design team analyzed the needs of learners, content and teaching environment. The design phase. According to the results of the analysis stage, the teaching design team made clear the teaching objectives and teaching strategies. The development phase. The teaching design team began to make the teaching content of Tai Chi micro class. The implementation phase. The teaching design team introduced Tai Chi micro-class teaching content into the classroom and implemented micro-class teaching. The evaluation phase. The instructional design team evaluates the effectiveness and quality of instruction.

5.3 Evaluation and analysis of teaching effect

The evaluation of teaching effect is divided into: comparison of learning achievement, statistics of learning achievement, feedback of students, and record of teaching observation. Through the above evaluation methods, the teaching design team can fully understand the teaching effect and teaching quality. Based on the evaluation results, the teaching design team summarized the successful teaching experience, found the existing problems in teaching, and provided improvement directions and suggestions for the future teaching design and implementation.

6. Conclusion and outlook

6.1 Conclusion

Based on ADDIE model, this study explores the teaching design of Tai Chi micro-class in Chinese universities based on ADDIE. Through the demand analysis of the analysis stage, the teaching objectives and teaching strategies are clarified. In the design stage, the teaching plan is made, and the appropriate teaching methods and media are selected. In the development stage, the teaching content of Tai Chi micro-class was made, including teaching video, PPT presentation and study notes; In the implementation stage, the micro-class teaching was implemented in the college classroom, and the feedback and teaching observation records of the students were collected. Finally, the teaching effect is evaluated and analyzed in the evaluation stage. Through the evaluation of teaching effect, it is found that the teaching design of Tai Chi micro-class based on ADDIE in Chinese universities has achieved remarkable results. Students' academic performance is obviously improved, their learning enthusiasm and participation are higher, and students' feedback on micro-class teaching is also more positive.

6.2 Outlook

In the future, the teaching design of Tai Chi micro-class in Chinese universities based on ADDIE can be further optimized. First of all, the teaching content can be optimized and improved based on the feedback of students, and more practice guidance and learning auxiliary materials can be provided to meet the learning needs of different students. Secondly, it can further improve the teaching plan, plan and control the learning progress to ensure the smooth progress of the teaching process. In addition, more interactive teaching methods can be adopted to increase the interaction and participation between students and teachers, and improve the teaching effect and learning experience. In addition to optimizing the teaching design, we can further explore the application of Tai Chi micro-class teaching in other fields. Micro-class teaching is flexible and convenient, which can be applied to the teaching of other subjects, expand the application scope of micro-class teaching, and promote the innovation and reform of college education and teaching mode.

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