

New Trends in Modern Technology and Traditional Martial Arts Teaching

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Abstract: With the rapid development of modern technology, traditional martial arts teaching is undergoing an unprecedented transformation and innovation. The author explores the new trends and impacts of modern technology in martial arts teaching. Firstly, modern technology has injected new teaching methods and tools into martial arts teaching, such as virtual reality technology, intelligent devices, and online learning platforms, greatly enriching teaching methods and content. Secondly, through high-speed camera technology and intelligent analysis systems, students and teachers can more accurately analyze and improve technical actions, enhancing teaching effectiveness and learning outcomes. In addition, modern technology has also promoted the personalized and interactive development of martial arts teaching, better meeting the learning needs and interests of students through personalized learning paths and real-time feedback. Overall, the application of modern technology has not only improved the efficiency and quality of martial arts teaching, but also injected new vitality and possibilities into the inheritance and development of traditional martial arts.

1. Introduction

In today's rapidly developing technological era, modern technology is increasingly profoundly influencing all aspects of traditional martial arts teaching. Traditional martial arts, as a rich cultural heritage and an important means of physical and mental cultivation, have undergone over a thousand years of inheritance and development, and are now standing at the forefront of technological innovation. With the rapid development of artificial intelligence, virtual reality and Internet technology, traditional Wushu teaching is undergoing an unprecedented transformation ^[1].

During the Republic of China period, such as the Jingwu Sports Club, Ma Liang's New Chinese Martial Arts, and the Central Chinese Martial Arts Museum, each explored and constructed a framework for modern martial arts education, and made corresponding improvements. With the establishment of the People's Republic of China and the guidance of new educational concepts and theories, martial arts began to enter school classrooms, gradually establishing its own disciplinary system and moving towards preliminary modernization. However, the road to modernization is not always smooth sailing. Especially in today's globalized world, the dominant Western sports culture has posed new challenges and pressures to martial arts education. In this context, the construction of a new system for martial arts education is particularly urgent and important. When building a new system, we must keep in mind the concept that "the modernization of any culture is the

modernization of its own traditions; any modern culture is full of its own traditions." This means that the construction of the new system is not about starting from scratch, but rather about revising and improving the previous education system. This is not only a basic principle and concept, but also a fundamental attitude we should hold towards the martial arts education system. Therefore, the construction of a new system for martial arts education in the process of modernization is not only a continuation and innovation of the past, but also a response to contemporary needs and global challenges. It requires innovation in technology, theory, and educational methods, while respecting tradition, to continue the development of martial arts in contemporary society, and to provide a way for a wider group to cultivate their physical and mental well-being and inherit cultural values ^[2-3].

2. The necessity of incorporating modern technology into traditional martial arts teaching

2.1 Beneficial for improving teaching effectiveness

In today's educational environment, especially for the post-90s generation who grew up in the digital age, they have a strong curiosity and pursuit for the integration of traditional culture and modern technology. The teaching of martial arts in universities faces a dual challenge between innovation and inheritance. In order to better meet the internal needs of this group, we must combine the essence of traditional Chinese martial arts with modern technological means. Through this approach, we can use the latest information technology to stimulate students' interest and enthusiasm for learning while maintaining traditional charm. By utilizing multimedia technology and virtual reality (VR), an immersive learning environment for martial arts can be created, allowing students to experience the charm of martial arts more intuitively and vividly. In addition, smart wearable devices can be introduced to monitor students' learning progress in real time, and to understand their learning preferences and potential difficulties through big data analysis, thereby providing personalized learning plans. In the teaching process, teachers can use the advanced Internet platform to broadcast martial arts courses, so that students thousands of miles away can also participate in the process of remote interaction. Meanwhile, the application can record the action data of each student and generate personalized guidance through algorithms to help them overcome technical barriers or improve their skill levels. These technological auxiliary tools not only increase the fun of learning, but also make the learning process visual and quantifiable, greatly improving teaching efficiency ^[4].

2.2 Helps accelerate internal teaching reform in physical education

With the rapid progress of the times, the pace of reform has never stopped. In this wave of reform, taking the teaching of traditional Chinese martial arts as an important breakthrough and striving to promote the integration and innovation between physical education teaching and other disciplines is undoubtedly a commendable attempt. Through this approach, we can not only promote traditional culture, but also inject new vitality into the physical education system and open up a unique path of teaching reform. Such exploration and practice will undoubtedly provide new ideas for the reform of the sports system, bring profound impacts, and make us full of expectations for the future development of sports education ^[5].

2.3 Beneficial for the dissemination of China's soft power

Martial arts, as a treasure of traditional Chinese culture and a symbol of national spirit, carry profound historical heritage and rich cultural connotations. It is not only an indispensable and important part of the daily life of the Chinese people, but also an external manifestation of the

wisdom and strength of the Chinese nation. Since ancient times, martial arts have been renowned worldwide for their unique charm, attracting the attention of countless martial arts enthusiasts and admirers. With the continuous advancement of globalization, martial arts have gradually become a bridge connecting different cultures, attracting widespread attention and heated discussions worldwide. However, due to the limitations of historical dissemination methods, in order for martial arts to achieve faster development and popularization in modern society, innovation and reform must be carried out. Especially in the field of higher education, integrating martial arts into the education system, updating teaching content, innovating teaching methods, and promoting teaching resources, injecting new vitality into the inheritance and development of martial arts, undoubtedly has extremely important practical significance. Currently, many universities in countries and regions have begun to actively explore how to incorporate martial arts courses into formal teaching plans, aiming to cultivate students' comprehensive qualities and also build platforms for international exchange and cooperation in martial arts. This interdisciplinary and cross-border academic research and practical activity plays an undeniable role in promoting the healthy development of martial arts on a global scale and enhancing the influence of Chinese culture. Therefore, whether from the perspective of promoting cultural diversity or enhancing national confidence and international competitiveness, the education and promotion of martial arts should be highly valued ^[6].

3. The Application of Modern Technology in Martial Arts Teaching

3.1 Help learn to analyze and learn.

From the current teaching content, the main focus is on routines such as Wubu Quan and Tongzi Quan, as well as basic training. Before formally learning martial arts movements, one must first master the basic skills. The basic step types include lunge, horse stance, crouching stance, empty stance, and resting stance; There are fists, palms, hooks, etc. on the hands. Basic training includes forward kicking, side kicking, bouncing and punching, flying feet, swinging and connecting, all of which are combined to form a set of martial arts. For students, actions should be concise and clear in order to better understand and practice. At the beginning of formal training, play some instructional action videos first, which can form vivid ideas in the students' minds and give them an intuitive and correct understanding; Using video editing technology, the entire action is divided into independent actions, and each fixed action is designed in the form of a GIF animation, allowing parents to freely choose some imitation exercises according to their preferences after class to help them grasp the direction of the technique more quickly. By providing initial training to students, they have developed certain thinking patterns and proficient training. On this basis, standard movements are displayed through multimedia all-in-one machines, allowing students to compare themselves, thereby improving their abilities and leaving a deeper impression on themselves. In the era of the internet, under the guidance and guidance of parents, students can engage in self-directed learning in their spare time ^[7].

3.2 Help Self Correction

Under the guidance of modern technology, the teaching methods and learning effectiveness of martial arts education have been significantly improved. Students can learn and preview by watching the routine videos provided by the martial arts center. This approach not only enables them to familiarize themselves with the routine content in advance, but also enables them to learn the routine more accurately and reasonably through self reflection and correction. For national team athletes, they use high-speed cameras for repeated practice and observe and analyze their

shortcomings through video playback. This technology not only helps them identify and correct technical issues, but also improves the efficiency and results of training. In primary education, although using high-speed cameras may not be practical, devices such as mobile phones and DVs can be used to record each student's mistakes and shortcomings in practice. This recording method enables students to have a clear understanding of their own problems and actively correct them to meet the requirements. The practice of martial arts is different from ordinary sports. It not only requires speed, strength, and endurance, but also requires students to have a certain sense of rhythm and technical accuracy. The application of modern technology provides more tools and methods for martial arts education, helping students and athletes make greater progress and achievements in learning and training ^[8].

3.3 Stimulate learning interest and improve learning efficiency.

The improvement of learning interest is a key factor in improving learning effectiveness, which can stimulate students' initiative and make learning a pleasure rather than a burden. Whether it is physical education classes or classes outside of language and mathematics, relying solely on a single and boring teaching mode to impart knowledge often fails to stimulate students' interest, especially in martial arts classes. If only relying on demonstration and imitation, students' interest may gradually lose. The diverse teaching modes of modern technology can change this situation. For example, by playing movies with a strong sense of justice, such as "The Grandmaster", to attract the attention of students and stimulate their curiosity. On this basis, conducting teaching can more efficiently improve learning outcomes. In addition, martial arts teaching can not only use teaching videos for explanation, but also play videos of martial arts competitions as learning rewards for students, thereby mobilizing their learning enthusiasm. Through these methods, students can not only learn in a relaxed and enjoyable atmosphere, but also gain a deeper understanding and mastery of martial arts skills, thereby improving the effectiveness and quality of learning. This innovative teaching method not only makes students more engaged in learning, but also promotes their comprehensive development and improvement of learning motivation.

4. The Implantation Strategy of Technological Teaching Methods in Martial Arts Teaching

4.1 Staged implantation of different technological means

In the preparation stage before teaching, we can use modern technology to improve the efficiency and quality of teaching. Firstly, using the grouping method of online learning groups, a reasonable learning group is formed based on the Nine Personality Theory. Secondly, teachers create teaching materials in the form of micro videos or dynamic PPTs, send them to students in advance, and use online check-in and other methods to ensure that students complete the scheduled learning tasks. The problems encountered by students during the self-learning process can be evaluated and discussed by other group members in the form of images shared within the group, as a pre assessment for pre class learning. In the implementation stage of teaching, we can introduce advanced naked eye 3D technology to fully display the technical movements of martial arts teaching in a 360 ° manner, thereby enhancing students' attention and participation. Teachers can personally demonstrate and record short videos for future use, while using fun app evaluation software for real-time evaluation. The teacher's evaluation score is weighted against the software's score to quantitatively evaluate the teaching effectiveness of each lesson. Exciting teaching moments and teaching difficulties can be uploaded to the shared space for students to review and learn. In the consolidation stage after teaching, we can use modern technology to create short video clips that attract students' attention for group communication and interaction. Teachers use

advanced backend evaluation software to intelligently calculate and summarize all classroom grades, create dynamic curve changes, and visually display students' learning progress and classroom performance. Finally, teachers should fully utilize the advantages of the internet and mobile internet to spread teaching effectiveness to a wider range of learning groups, achieving maximum utilization of educational resources and maximizing dissemination effects. These measures can not only improve teaching effectiveness and learning experience, but also promote the comprehensive development of students and the improvement of their learning abilities in the modern technological environment ^[9].

4.2 Utilize various forces to achieve technological development

In the process of promoting the modernization of martial arts education, we can adopt the following strategies to fully utilize the advantages of modern technology and social resources: first, strengthen cooperation with social technology enterprises. With the rapid development of high-tech enterprises, their software, intelligent devices, and network platforms have become ideal practical platforms for martial arts education. Universities can collaborate deeply with these enterprises to explore and develop innovative technologies and tools suitable for martial arts teaching, thereby providing new opportunities and possibilities for teaching. Secondly, teachers should strengthen interdisciplinary communication and cooperation. Universities have the conditions to integrate disciplines such as computer science, art and design with martial arts education for interdisciplinary docking and cooperation. Through joint research, innovative projects, and other activities, we aim to achieve interaction and sharing among different disciplines, further expanding the innovative space and practical application of martial arts education. The third is to stimulate the innovative ability and initiative of martial arts teachers, which is crucial for improving teaching quality and student learning interest. Teachers can actively participate in technology exhibitions, equipment exhibitions, and other activities in society, engage in more communication and interaction with young student groups, and continuously enrich their knowledge reserves and teaching perspectives. Through these participation, teachers can gain a deep understanding of the latest technological development trends, explore and introduce more innovative concepts and practical methods suitable for martial arts teaching. In summary, through deep cooperation with technology enterprises, interdisciplinary communication and cooperation, and active exploration by teachers themselves, the modernization process of martial arts education can be effectively promoted, providing students with richer and more effective learning experiences and teaching resources. These strategies not only contribute to improving the quality of teaching, but also lay a solid foundation for the sustainable development of martial arts education in modern society ^[10].

5. Conclusion

With the continuous development of society, modern technology has gradually been applied to the teaching of various disciplines. For martial arts teaching, the advantage of modern technology is that it can not only make up for the shortcomings of traditional martial arts teaching methods, but also fully mobilize the enthusiasm of students and enhance the attractiveness of classroom teaching. However, it is worth noting that when applying information technology methods to martial arts teaching, it is necessary to handle the relationship between the two and fully leverage the advantages of modern technology teaching, in order to ensure the improvement of martial arts classroom teaching efficiency. Specifically, the application strategies of modern technology in martial arts teaching in universities mainly include presenting the key and difficult points of martial arts teaching through the intuitive use of modern technology, stimulating students' attention through the interesting use of modern technology, optimizing martial arts classroom teaching through the

comprehensive use of modern technology, and breaking through the limitations of time and space through the intelligence of modern technology.

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