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## REVIEW OF INTEGRATING TAI CHI INTO ACADEMIC CURRICULUMS: IDENTIFYING ITS LIMITATIONS AND CHALLENGES IN IMPLEMENTATION

Darrin Sime Nkemeni<sup>i</sup>, Hao Hong

Wushu College, Henan University, People's Republic of China

#### **Abstract:**

This paper explores the declining interest in Tai Chi among younger demographics, identifying several core issues. The prevalent stereotype that associates Tai Chi primarily with the elderly diminishes its appeal to younger audiences, as its slow, meditative movements lack the excitement found in traditional martial arts. Furthermore, conventional teaching methods often prioritize rigid form and theory over interactive, engaging practices. In an age dominated by digital distractions, activities without immediate gratification struggle to attract attention, with many students gravitating towards high-energy sports that promise quick results. Innovative teaching strategies are essential to rejuvenating interest in Tai Chi. By integrating modern fitness trends, utilizing technology such as apps or virtual trainers, and emphasizing the mental health benefits of Tai Chi, its attractiveness can be significantly enhanced. Developing a dynamic curriculum that balances theoretical understanding with practical application while including interactive elements can deepen student engagement. Additionally, highlighting Tai Chi's versatility and real-world applications can pique interest, as can combating stereotypes through the promotion of young, charismatic practitioners on social media platforms. The proposed strategies aim to reposition Tai Chi as a relevant and appealing practice for today's youth, fostering a new generation of practitioners.

**Keywords:** Tai Chi; teaching methods; college; youth

#### 1. Introduction

Tai Chi, a traditional Chinese practice renowned for its health benefits and stress-relieving properties, has seen a rise in popularity among college and university students in recent years [1-6]. However, research has indicated several challenges in the

<sup>i</sup>Correspondence: email <u>simedarrin@yahoo.fr</u>

implementation of Tai Chi programs within educational settings. The current status of Tai Chi in China is concerning. While Japanese Karate and Kendo, alongside South Korean Taekwondo[7, 8], have gained substantial popularity, Tai Chi is struggling to remain relevant among the youth [9, 10]. This decline can largely be attributed to ineffective teaching methods that fail to communicate Tai Chi's rich cultural depth. Despite its inclusion in school curricula, Tai Chi education has become overly formalized and superficial, devoid of meaningful cultural context, which contributes to the marginalization of this practice [10, 11]. By addressing these challenges, educational institutions can reclaim Tai Chi's relevance and ensure its benefits are appreciated by future generations. The complexity and theoretical intricacy of Tai Chi movements often deter beginners, who find it hard to quickly grasp the techniques, leading to boredom and disinterest[9, 12]. This situation calls for innovative teaching methods to make Tai Chi instruction more effective and is a pressing issue for martial arts educators in colleges and universities. Sparking interest in Tai Chi is crucial as it enhances engagement, attention, and motivation among students. Currently, many college students display a lack of enthusiasm and energy in Tai Chi physical education classes. Participation rates are low and continue to decline annually. Additionally, the misconception that Tai Chi is only for the elderly further fuels resistance and disinterest among young students [9].

This review aims to analyze the challenges Tai Chi faces in retaining college student interest. The analysis was conducted on about 2499 university students. Universities play a critical role in cultural transmission, and college students are essential for the preservation and development of culture. Therefore, emphasizing the importance of enhancing Tai Chi culture among students is both a significant task and a goal. However, current outcomes are not encouraging, as many students show little interest in Tai Chi practice.

#### 2. Method

A comprehensive computerized search was conducted on the following databases: PubMed, Medline, and Web of Science, from 2010 to 2023. In addition, Google Scholar was also used to find articles related to this study in English only. The search terms used covered numerous variations and related phrases of Tai Chi, arranged in the following manner: (Tai Ji OR Tai Chi OR Tai Ji Quan OR Tai Chi Chuan OR Tai Chi Quan) AND university student OR college student) AND (Limitations OR Challenges OR Problems OR Teaching). Studies were considered eligible for this meta-analysis if they met the following criteria: 1) they investigated the issue of knee ailments in relation to Tai Chi; and 2) they included an intervention that specifically involved Tai Chi exercise training for the experimental group.

#### 2.1 Screening process

The screening process and data extraction were done in four parts, with the first step's basic screening criterion being the title and abstract. Second, research-related papers that

did not fall under this category were not included. Third, any search results that included Tai Chi alongside another sort of exercise (for example, yoga, qigong, etc.) were also removed. At a later time, full-text eligibility was implemented. Using a pre-piloted form, data from the selected studies were gathered. The obtained data comprised study design, sample size, and results.

#### 2.2 Data extraction

Potential papers were screened for inclusion. We retrieved potentially relevant studies and determined their eligibility. Discrepancies were resolved through consensus. The extracted information included the following categories: 1) Publication details, such as the last name of the first author and the year of publication; 2) Characteristics of the study participants, including sample size; 3) Details of the interventions, for example, type of intervention, and the effect on knee, and posture level.

#### 2.3 Quality assessment

The quality assessment was based on the Prisma technique [8]. The papers included in this study were critically analyzed. Classifications in the following areas were assigned based on perceived low value, ambiguity, or elevated risk of bias: the randomness of sequence generation, allocation concealment, blinding methods, instances of incomplete outcome data, potential for selective reporting of outcomes, and other sources of bias.

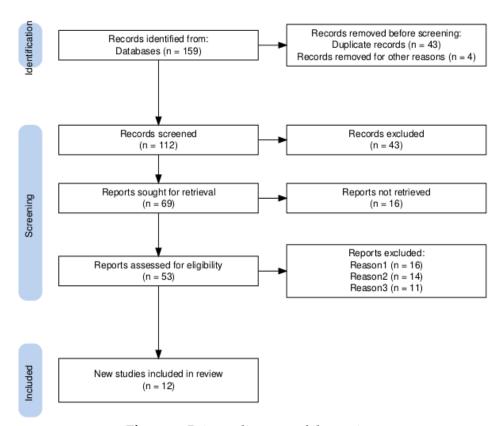


Figure 1: Prisma diagram of the review

Table 1: Tai Chi teaching methods, effectiveness, and student engagement outcomes

Author	Research Method	Form Of Tai Chi	Numbers of Student	Experimental Condition	Factors Affecting implantation	Result and Conclusion
Yang et al. 2015 [9]	Questionnaire before and after training class.	Tai Chi 24 Form	96	A1 = Teach move with no application A2 = Explain each move and application B1 = Individual practice B2 = Interaction group practice 6 to 8 students per group C1 = Watch media with background music C2 = Watch media with no background music	-Teaching method -Teaching approach	- A2 + B2 + C1 best combination A2 + B2, C1 and A2 + B2 + C2 was less more effective combination B1 + C2 and A1 + A2 + B2 + C2, A1, B1 and C1 worst teaching combination.
Luo et al. 2015 [13]	Literature review	Tai Chi 24 form		V V	- Lack of interest by students due to the psychological properties of college students. - Teachers' professional skills are limited. - Simplification of the teaching process	- Need to improve teaching contents - Enhance teachers' professional quality - Conduct teaching in accordance with the characteristics of Tai Chi - Give full play to students as the main body improving the teaching environment
Huang et al. 2017 [14]	Questionnaire survey on Beijing ordinary colleges.	- Tai Chi 24 form - Tai Chi 32 form	468		- 74.40% of the students feel the teaching content is boring 61.30% of the students are not enthusiastic	It does not attract students' attention, and the number of people willing to take Tai Chi exercises in the long term is quite limited.
Zhang et al. 2017	Questionnaire survey on Universities in Xinxiang City.		306	- Comity behavior training 92, 30% - Enhance students' aesthetic taste 130, 42% Guide students' ' - Health values 84, 28% Total 306 100	inappropriate teaching on the benefits of Tai Chi	- Encourage students to uncover issues related to values to enhance their awareness and understanding of traditional culture.  - Teaching Tai Chi culture greatly influences the personalities of contemporary college students.
Yang 2017 [11]	questionnaire survey			According to the survey, data show that Tai Chi teaching content dissatisfaction rate by students has reached 47.5%	- Tai Chi course is short learning and more difficult, - Outdated teaching method	Strengthen the professional level of teachers to improve the ability to teach.

					- Lack of interest in teachers - The teachers lack knowledge on how to teach traditional Tai Chi and blindly teaching	
Wang et al. 2017				According to the survey data show the cognitive level is not that high, and their participation is not enough, and the positivity to it is not so active.	Lack of Interest	The wide and deep spread of Tai Chi will help their physical and mental healthy
Chen <i>et al.</i> 2023 [16]	Quantitative data were collected via an online survey	Tai Chi of different styles	737	Participants were non-learners, current learners, quitters, and retainers	- Individual (personal) - Environmental (settings) factors	Varied Tai Chi experience has a significant impact on perceptions of Tai Chi's miscellaneous values as well as the level of satisfaction with its health outcomes.
Jiang et al. 2023 [17]	Randomly assigned to the control or experimental condition	Experiment to investigate the pedagogical content knowledge (PCK)	332	Performance and pedagogic adjustment Teacher PCK and student Tai Chi (TC) changed after a professional development workshop (PDW)	Changes in student performance in tai chi pedagogical content	- The percentage of the teacher's pedagogical tasks showed an increase from 21% in the control groups to 94% in the experimental groups.  - Task modification alignment significantly increased in the experimental groups, from 21% to 94%, compared to the control groups.  - Enhanced knowledge and skills can improve teachers' PCK behavior, leading to better student performance in TCs. These findings could support future recommendations for knowledge and skill training programs for physical education teachers.
Wang et al. 2023 [18]	Used literature, observation, expert interview, logical analysis			Impact of interaction, communication, and influence among class students on Tai Chi classes and movement participation. Factors that affect how students behave and express themselves in the Tai Chi classroom	- Social interaction between students in Tai Chi class - Goals and interactive games	Teachers should be aware of social stratification and students' access to rights within their classes and actively work to create a fair and equitable physical education environment. By fostering student participation and collaboration and valuing each student's contributions, teachers can promote inclusivity.  Educators are encouraged to establish clear goals and assessment criteria that reflect the sociological dynamics of the class. These should emphasize martial virtues and values, helping students develop necessary Tai Chi skills and knowledge. Additionally, this approach aims to enhance students' overall physical fitness, social skills, and sense of national heritage and pride.

Lei <i>et al</i> . 2010 [19]	Quantitative data were collected via an online survey.				- Teaching method - Teaching approach - Lack of interest	Strengthen the professional level of teachers to improve their ability to teach Tai Chi.
Fang et al. 2019 [20]	Used literature, observation, expert interview, logical analysis			Tai Chi teaching in colleges and universities is facing some crises	- The teaching effect has not reached the expected level of promoting Tai Chi colleges - It fails in to promote Tai Chi health benefits between students.	Strengthen the professional level of teachers to improve their ability to teach Tai Chi and its health benefits.
Sang et al. 2012 [21]	SRHMS health rating scale, SCL-90 symptoms self- assessment scale and tests on form	1	20	Specific Tai Chi prescription to the experimental group is better than the control group on physical quality, function, relations, self-confidence, overcoming depression, and anxiety.	Course adaptation	Suggestions to reform Tai Chi exercise courses in colleges and universities.
Wang et al. 2023	Questionnaire which consists of 15 items	3	325	STCC is a 5-week course for teaching both theoretical knowledge and practical skill	The attitude of students towards Tai Chi	More than three-fourths of students showed a neutral attitude toward Tai Chi, one-fifth of students had a negative attitude toward Tai Chi, and less than 10% of participants held a positive attitude toward Tai Chi.

Implementing Tai Chi in college and university settings has proven to be a challenging task, as evidenced by the findings of different studies. Luo *et al.* (2015) [11, 13] delved into the specific challenges surrounding the Tai Chi 24 form, pointing out various factors that contribute to student disengagement. These include psychological barriers, the expertise of the teachers, and the simplicity of the teaching methods. In order to address these issues, the researchers recommended improving teaching materials, enhancing teacher professionalism, aligning teaching methods with Tai Chi principles, empowering students, and optimizing the learning environment. Similarly, Yang *et al.* (2017) [11] conducted a survey that revealed a dissatisfaction rate of 47.5% among students with the current Tai Chi curriculum. Students cited lengthy and unclear explanations of moves, outdated teaching approaches, and teachers' limited knowledge of traditional Tai Chi as key reasons for their discontent.

Furthermore, Wang *et al.* (2017) [15] highlighted the link between low cognitive engagement in Tai Chi learners and poor participation and ineffective learning strategies. This ultimately results in minimal practice among students. Despite this initial lack of interest, the researchers emphasized the importance of widespread and comprehensive Tai Chi instruction for both physical and mental well-being. Ineffective teaching methods has resulted the decline of Tai Chi impart in colleges. In the study conducted by Lei *et al.* (2010) [19] using an online survey to evaluate teaching approaches in Tai Chi, with a focus on student interest. The results indicated a lack of engagement among students, highlighting a critical issue in Tai Chi education.

Similarly, Fang *et al.* (2019) [20] also examined the teaching practices in colleges and universities through a combination of literature reviews, observations, expert interviews, and logical analysis. The study found that the current methods of teaching Tai Chi have not been successful in promoting health among students, suggesting a crisis in Tai Chi education. In another study, Yang (2017) [11] emphasized the importance of enhancing teachers' professional levels to improve their Tai Chi instruction. This research underscores the significance of investing in teacher training and development to enhance the quality of instruction in Tai Chi classes. Furthermore, Wang *et al.* (2023) [18] explored the impact of interaction, communication, and influence among students in Tai Chi classes on their participation and movement. Through a combination of literature review, observations, expert interviews, and logical analysis, the study highlighted the importance of social interaction and interactive games in creating a positive learning environment for students.

Restructuring the teaching method for Tai Chi courses in colleges and universities is crucial for enhancing students' learning experiences and maximizing the health benefits of this ancient practice. Research conducted by Chen *et al.* (2023) [16] and Yang *et al.* (2015) [9] has highlighted the importance of considering both personal and environmental factors in designing effective Tai Chi programs. By understanding the diverse experiences and preferences of Tai Chi learners, educators can tailor their teaching approach to meet the needs of various student populations.

Furthermore, studies like that of Jiang *et al.* (2023) [17] have underscored the significance of Pedagogical Content Knowledge (PCK) in improving teacher effectiveness and student performance in Tai Chi classes. Professional development workshops and targeted training programs for physical education teachers can enhance their knowledge and skills, ultimately benefiting students' learning outcomes. By investing in teacher training and development, institutions can create a more supportive and enriching learning environment for Tai Chi learners.

Additionally, research by Sang *et al.* (2012) [20] has demonstrated the positive impact of tailored exercise prescriptions on students' physical and mental well-being. By individualizing Tai Chi courses to meet the specific needs of students, educators can maximize the health benefits of this practice and promote overall wellness. This personalized approach to teaching Tai Chi can lead to improved physical quality, function, self-confidence, and mental health among students.

Restructuring educational approaches to teaching Tai Chi in colleges and universities is crucial in addressing the lack of enthusiasm and engagement among students towards this traditional practice. As highlighted by Huang et al. (2017) [14], many students in Beijing colleges found the teaching content of Tai Chi courses to be boring, leading to low levels of enthusiasm. This calls for a re-evaluation of the current teaching methods and the implementation of a more engaging and stimulating approach to imparting Tai Chi knowledge to students. Integrating Tai Chi culture in education, as emphasized by Zhang et al. (2017) [10], can play a significant role in enhancing personality traits and stimulating interest in traditional culture among students. The study revealed that Tai Chi has a positive impact on comity behavior, aesthetic taste, and health values, suggesting the potential benefits of incorporating Tai Chi culture into the educational curriculum. By infusing Tai Chi teachings with cultural elements, students can develop a deeper appreciation for the practice and its significance in Chinese heritage. Equally, Wang et al. (2023) [6] conducted a study involving 325 students participating in a 5-week Tai Chi course designed to teach theoretical knowledge and practical skills. The results of the study revealed that most students had a neutral attitude towards Tai Chi, with a significant percentage holding a negative view towards the practice. Only a small percentage of students had a positive attitude towards Tai Chi, indicating a need for restructuring the way Tai Chi is taught and perceived by students. In light of these findings, it is evident that a restructuring in the educational approach to teaching Tai Chi is necessary to improve student engagement and interest in this traditional practice. By incorporating innovative and culturally relevant teaching methods, educators can inspire students to develop a deeper understanding and appreciation for Tai Chi. Moreover, by highlighting the physical, mental, and spiritual benefits of Tai Chi, students may be more inclined to participate actively in Tai Chi courses and embrace this ancient art form as part of their educational experience.

#### 3. Discursion

Examining the root causes of this disinterest reveals a multifaceted issue. Firstly, the stereotypical view of Tai Chi as an activity suited only for the elderly limits its appeal among younger people. The slow movements and meditative aspects, while beneficial for health and mindfulness, lack the excitement and immediate sense of accomplishment that other martial arts offer. Secondly, the educational approach to teaching Tai Chi is often rigid and unengaging. Traditional methods may focus too heavily on form and theory without providing context or interactive elements that could capture students' attention. Additionally, modern lifestyles and the digital age have created distractions that compete for students' time and interest. Physical activities that do not offer immediate visible rewards or thrills struggle to maintain relevance. Many students prefer high-energy, fast-paced sports or workouts that provide quicker physical results or adrenaline rushes. To revitalize Tai Chi among young people, a shift in teaching methodology is crucial. Integrating Tai Chi with modern fitness trends, incorporating technology like apps or virtual trainers, and highlighting its benefits for mental health and stress relief could make it more attractive. Creating a more dynamic and engaging curriculum that balances theory and practice, and includes interactive and fun elements, can foster a deeper connection with students. Demonstrating Tai Chi's versatility and its application in real-life scenarios or other physical activities might also boost interest. Additionally, combating stereotypes by showcasing young, charismatic practitioners and promoting Tai Chi through social media can alter its image.

#### 4. Conclusion

In summary, the studies collectively reveal challenges in Tai Chi education, such as lack of student interest and insufficient teaching effectiveness, but also highlight the potential benefits of Tai Chi in promoting physical and mental health, suggesting a need for more engaging and effective teaching strategies. these studies suggest a need for improved teaching methodologies, better teacher training, and a deeper understanding of the diverse experiences and needs of Tai Chi learners to enhance participation, satisfaction, and health outcomes. One possible solution could be to incorporate interactive and dynamic teaching methods that engage students more effectively. For instance, using digital platforms to teach Tai Chi could make the learning process more interactive and engaging. Additionally, highlighting the physical and mental health benefits of Tai Chi might help shift perceptions and make the practice more attractive to the younger demographic.

Ultimately, a comprehensive review and overhaul of current Tai Chi education strategies are needed to enhance student engagement and interest. This transformation requires collaboration between martial arts educators, cultural experts, and academic institutions to develop innovative, contextually rich, and engaging Tai Chi programs that resonate with young people. By doing so, this ancient art form can thrive and continue to

offer its profound benefits to all generations. Future research can explore additional teaching methods and strategies for incorporating Tai Chi into the curriculum.

#### Conflict of Interest Statement

The authors declare no conflicts of interest.

#### About the Author(s)

**Sime Nkemeni Darrin**, Wushu College of Henan University, People's Republic of China. Research interests in Sport Health, Sport education and Biotechnique.

ORCID: orcid.org/0000-0003-4268-8846

Email: darrin@henu.edu.cn

**Hong Hao**, Professor, Supervisor and Dean of Wushu College of Henan University, People's Republic of China.

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