

A Study on The Characteristics of Physical and Mental Development of Students in The Primary Education Stage and Countermeasures of Wushu Teaching

Yazhou Song¹, Mohamad Nizam Mohamed Shapie^{2*}

¹Department of Physical Education and Teaching, Hebei Finance University, Baoding Hebei, China

²Faculty of Sports Science and Recreation, Universiti Teknologi MARA (UiTM), Shah Alam, Selangor, Malaysia

*Corresponding Author: nizam7907@uitm.edu.my

Copyright©2025 by authors, all rights reserved. Authors agree that this article remains permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

Abstract

Studi Purpose As the future of the motherland and the hope of the nation, primary school students shoulder the historical mission and important task of realizing the great rejuvenation of the Chinese nation. The current stage of primary education has become an important position for the popularization and promotion of Chinese martial arts. At present, physical education teachers in primary schools do not know enough about the characteristics of students' physical and mental development, which leads to the inability of physical education teachers to carry out martial arts teaching scientifically and effectively. Therefore, this study mainly adopts the literature method to study the characteristics of physical function development and psychological development of primary school students, and reveals the influence of different physical function and psychological development characteristics on wushu teaching in primary school. Research shows that primary school students are at a critical stage of physiological and psychological development, and the development of bone, muscle, respiratory, cardiovascular and nervous systems is not mature. Teachers should consider these physiological characteristics when designing Wushu courses to avoid excessive load and ensure that students train in a safe environment. At the same time, the psychological development of primary school students is also in a stage of rapid change, with an intense curiosity and imitation ability. However, the attention and willpower are relatively weak. Therefore, the teaching method should focus on stimulating students' interest, cultivating good emotional expression and teamwork ability, and promoting the development of their memory, thinking and comprehensive quality through effective teaching design, so as to provide scientific and effective countermeasures for primary school physical education teachers to carry out martial arts teaching, so as to better popularize and promote Chinese martial arts in the primary education stage.

Keywords: Primary Education Stage; Students; Physical and Mental Development Characteristics, Wushu Teaching

1. Introduction

As the motherland's future and the nation's hope, primary school students shoulder the historical mission and essential task of realizing the great rejuvenation of the Chinese nation (Skowron-Markowska, 2021). Currently, China's primary school students are generally between

seven and 12 years old and are in the critical stage of physical and psychological development. In order to better inherit and develop Chinese Wushu culture, the characteristics and rules of physical and psychological development of primary school students should be considered when constructing the teaching mode of primary schools. Theeboom (2017) proposed the teaching thought and principle system of "education adapting to nature". Education should conform to the law of students' physical and psychological development and adapt to the ages and personality characteristics of students. Lau (2022) points out that Wushu education in schools should consider the physical and psychological characteristics of students and their individual needs and construct the teaching process of Wushu according to the physiological characteristics of students at each stage. Talaga (2022) mentioned that children must be taught on the premise of following the law of children's physical and psychological development so as to promote children's comprehensive, harmonious and healthy development to the greatest extent. Veits (2021) also put forward similar views in the research, pointing out that the laws of physiological and psychological development should be followed in Wushu teaching to avoid causing sports injury and psychological resistance. Schiff (2022) proposed that teachers should plan the teaching content according to students' psychological and physiological characteristics in the teaching process. To comprehensively improve students' health level, improve students' physical quality, and shape students' excellent personalities. Therefore, to better construct the teaching model, it is necessary to give a systematic overview of relevant studies in physical and psychological development.

2. Materials and Methods

Study on Skeletal Muscle Development of Primary School Students. In primary school, the body function of students' body organs is rapidly growing, which is also the prime period of physical fitness development (Schiff, 2019). Students' bone stress and muscle tensile function in this period are undeveloped, and the bones are prone to bending, deformation and other problems. According to this development characteristic, in the process of Wushu teaching, teachers should avoid students doing those intensity high load of Wushu activities, and at the same time, should not engage in strength exercises too early and should strengthen the flexibility, sensitivity and other physical exercises of primary school students (Priest, 2014). Svitych (2021) mentioned that primary education is children's most rapid growth and development, and

their height and weight are steadily increasing. Bone, muscles, and organs are also gradually maturing. In addition, their athletic ability and coordination have also been improved. However, students in primary school have not yet completed ossification and have less solid joints. Therefore, the excessive difficulty of movement should be avoided in Wushu teaching. In addition, with the improvement of the quality of life, the obesity rate of primary school students is also increasing year by year, so in the process of teaching Wushu, teachers should focus on the actual physical development of primary school students and set the content and exercise amount of Wushu suitable for this age. Parry (2019) mentioned that primary school students' bones have more cartilage tissue and organic matter, less inorganic salt, and their bones are elastic but relatively less firm.

Meanwhile, muscle endurance is weak and has little protein and inorganic salts. Primary school students are in a critical period of growth and development, and their bones are relatively soft. Therefore, when conducting flexibility training, we should pay attention to the accuracy of the movements to avoid bone deformation. At the same time, Martinkova (2019) also mentioned that pupils' muscle support and muscle contraction ability are relatively weak. Therefore, teachers in the design of movements should only let pupils for a short time fixed static practice. Zhang (2021) mentioned that physical and psychological students are in a transition period of growth, musculoskeletal development is relatively weak, and their willpower is not strong. Xiwang (2020) believes primary school students have rapid physical development and a strong metabolism. Different organs and structures of the body have excellent development potential and plasticity.

Xiwang (2020) believes appropriate sports can promote healthy development of primary school students in all aspects. Parry (2019) mentioned that children enter the second peak of life development at 9, developing quickly. The development order of primary school students is the earliest head development, the first upper limbs, then the lower limbs, and then from the central axis to the surrounding development. The composition of the bone gradually changes, the calcareous composition gradually increases, and the colloid gradually decreases. Bone development is not hard enough in primary school education, and muscle development still be undeveloped (Schiff, 2019). Therefore, intense and strenuous exercise should not be practiced during the teaching of Wushu in primary schools, to prevent pupils from practice fracture, bone fractures or muscle pull.

3. Result and Discussion

Research on the Respiratory System Development of Primary School Students

In primary school education, students' respiratory muscles are relatively weak, with shallow breathing, less oxygen absorption force and small chest cavities, and their respiratory muscles quickly cause fatigue (Luo, 2022). Therefore, teachers should keep their students away from doing too much breath-holding, handstands and other actions in Wushu teaching. At the same time, the younger the age of primary school students, the breathing and body movements sometimes appear uncoordinated. Therefore,

teachers should guide primary school students in mastering the correct breathing methods to promote the development of respiratory organs. Guo (2020) believes that Wushu teaching in primary school education should follow the characteristics of students' respiratory system development to help promote students' physical health. Therefore, in Wushu teaching, teachers should pay special attention to the development characteristics of the respiratory system of primary school students to ensure that they can train safely and effectively when learning Wushu. Lake (2016) mentioned that primary school students' aerobic system is not as good as that of adults, undeveloped heart, and weak respiratory muscle strength, fast respiratory rate and low lung capacity. Therefore, the teaching process can not be high-intensity, large-load exercise. Otherwise, it will affect physical development, resulting in injuries. Donohue (2005) believes that the respiratory system of primary school students is relatively weak, and the strength and endurance of the respiratory muscles are also limited. Therefore, attention should be paid to controlling the breathing depth and frequency in Wushu teaching to avoid excessive breathing burden. For primary school students, simple and effective breathing skills can be used. Teachers should ensure that they can understand and correctly implement basic breathing methods while ensuring pupils can understand the coordination of movement and breathing to avoid disharmony in practice (Bicknell, 2021). In primary school Wushu teaching, we should follow the development characteristics of the respiratory system, properly control the movement difficulty and guide the correct breathing, and encourage the students to train safely and effectively to achieve the training objective of physical health.

Research on Cardiovascular System Development in Primary School Students

In primary education, students' heart, vascular, and blood systems are gradually maturing, but they are still in the early stages of development relative to adults. Jennings (2020) proposed that the absolute value of primary school students' output per stroke is less than that of college students. However, its relative value is similar to that of college students, which ensures the oxygen supply needed by the body's metabolism in the development process. This characteristic shows that the heart of primary school students can adapt to a short period of intense physical activities. In addition, primary school students should not do too many static exercises, muscle contraction will cause venous blood retention in venous blood vessels, resulting in reduced blood effort. There will be cerebral anaemia, myocardial anaemia and other phenomena. At the same time, in Wushu teaching, especially in intensive practice, there are two aspects need to pay attention to ensure the safe development of the cardiovascular system of primary school students (Cynarski, 2018). (1) It is necessary to do moderate aerobic training. Aerobic training is beneficial to the development of the cardiovascular system, but it needs to be ensured that the intensity of the training is moderate. Excessive aerobic exercise may cause an excessive burden on the cardiovascular system of primary school students. It is suggested that mild to moderate aerobic training be used in the Wushu teaching. Paying attention to the

intensity of the exercise, Wushu teaching may involve a certain intensity, including fast movement, jumping, and explosive movement. Teachers should ensure that the training intensity adapts to the physiological characteristics of primary school students and avoid excessive cardiovascular load. (2) It is necessary to have a step-by-step training plan. In Wushu teaching, it is essential to make a step-by-step training plan to develop the cardiovascular system of primary school students and gradually increase the training intensity and time to give the cardiovascular system enough time to adapt. In Wushu teaching, primary school students should follow the characteristics of cardiovascular system development to avoid excessive static practice, leading to brain anaemia, myocardial anaemia and other problems. Moderate aerobic training and progressive training programs help to ensure the safe development of the pupil's cardiovascular system in Wushu teaching.

Research on the Nervous System Development of Primary School Students

Neural activity of students in primary education is dominated by the first signal system and weaker by the second signal system (de OLIVEIRA, 2019). Therefore, in Wushu teaching, we should try to use intuitive and vivid teaching means, use more simple and vivid language to explain, and be close to the psychology of primary school students to organize teaching so that it is easier for them to understand the teaching content. The metabolism of nerve cells is vigorous, and fatigue is eliminated quickly, which makes it not easy to control their interest in Wushu teaching and playing tirelessly. Therefore, primary school Wushu teachers should actively guide students to conduct scientific and moderate exercises in teaching (Holt, 2023). Previous (2020) mentioned that the pupil's nervous system excitation process is dominant, the spirit is not concentrated and the students are lively and active. Therefore, in the design of the Wushu teaching curriculum, we should effectively combine the characteristics of pupils' nervous system development. Fujiwara (2019) believes that the cerebral nerve activity of children in the primary school education stage is stimulating. Teachers should grasp the characteristics of children's neural activities, try to adjust the excitement of students' brains when setting up teaching activities, and reasonably control students' brain inhibition activities so that students can maintain a good state of thinking in classroom learning (Kubala, 2019). Therefore, in the Wushu teaching process, primary school students' neurodevelopment characteristics and rules should be considered. (1) Coordination development is needed. The nervous system of primary school students is in the development stage, and the development of coordination and motor skills may need to be more mature. In Wushu teaching, it is necessary to focus on cultivating students' coordination and promoting the nervous system's development through basic movement and skill training. (2) Basic movements and skills training is needed. The nervous system of primary school students is still developing, so it is necessary to train fundamental movements and skills and gradually improve the difficulty. (3) Following the step-by-step principle and gradually increase the difficulty and complexity. In primary school Wushu teaching, we should follow the

characteristics of nervous system development, pay attention to basic movements, coordination and gradual progress, and promote primary school students to develop physical quality and Wushu skills in a positive and healthy environment.

Table 1. Related Research on the Physiological Development of Primary School Students

A	BDC	MDC	RSC	CSC
G				
7	The bones have great elasticity and incomplete ossification	Muscle endurance is weak and easily fatigued	Shallow breathing, rapid frequency	Low cardiac output, adapted to short-term activities
8	The ossification speed accelerates but is still not complete	Muscle endurance increases, with limited strength	Breathing gradually deepens, moderate frequency	Cardiac output increases, and endurance improves
9	Bone growth accelerates, and bone density increases	Muscle strength improves, and endurance continues to grow	The respiratory system is stable and adapted to long-term exercise	Cardiac output and endurance are further enhanced
10	Bone development is close to maturity	Muscle strength significantly improves, and coordination enhances	Respiratory function tends to be stable	Cardiovascular function is close to the adult level

Research on the Development of Curiosity and Attention among Primary School Students

Primary school education students are the foundation of life knowledge and learning ability critical period, pupils' psychological development is mainly through learning by accepting and mastering the knowledge internalized into their way of thinking, which causes the change of intelligence and emotion, further promotes the development of psychological positive (Kotarska, 2019). Dos Santos (2021), in the primary education stage, students are in the specific operation stage, in the cognitive children can use symbols for logical thinking, they can classification and digital processing, and the concept of time and space have made significant progress, the degree of self-centred presents a downward trend, began to pay more attention to all aspects of things, so the primary school education stage of students have strong curiosity, learning things quickly. Therefore, teachers should focus on cultivating pupils' interest in Wushu at this time and lay a foundation for the long-term practice of Wushu in the future. Chen Akehurst (2020) believes that primary school students have the characteristics of heavy curiosity and strong imitation ability. However, when primary school students practice more difficult Wushu movements, they may become wearier at learning. Therefore, teachers need to rationally arrange the teaching content when setting up the teaching content, so as to achieve the difficulty and ease of each other, the movement changes in an orderly manner, and regularly encourage the students to enhance the students' self-confidence in learning Wushu. Błach (2020) also believes that primary school students at this stage have strong imitation ability and imagination, intense curiosity, and a strong desire to learn new things. Sun (2021) mentioned that whether in life or study, primary school students are interested in new things around them and are good at

imitating. Burt (2023) believes that primary school students have a wide range of interests, active thinking, and strong imitation ability but short attention span. Therefore, according to the psychological development characteristics of primary school students, appropriate and scientific teaching methods, such as game teaching method, cooperative inquiry method, task-based teaching method, etc. Bickford (2020) also believes that primary school students have an intense curiosity and imitation ability, and teachers should take students' interest as the starting point to mobilize their interest in learning Wushu. Benesch (2020) states that primary school students' attention is unstable and unsustainable and closely related to interests, teachers should pay attention to the interests of pupils and use them in teaching so that their attention is not easily dispersed. Moore (2020) believes that primary education is a critical stage in the rise of life. Children are inquisitive and easy to distract themselves, etc. Teachers and parents should guide students correctly. In the teaching process, teachers should pay attention to edutainment, and sports games can be used in primary school Wushu teaching to arouse students' interest in learning. Dziubinski (2020) Through the investigation of the Fuyang primary school Wushu curriculum, students found that due to the particularity of age, pupils attention can not focus for a long time, which requires the adoption of rich and diversified teaching methods, constantly changing the teaching content, to attract the attention of primary school students. Lu (2024) also mentioned that primary school students' attention is relatively short, making it easy to get distracted. In Wushu teaching, exciting activities should attract their attention and enhance their interest in learning through moderate feedback and motivation. Therefore, under the development characteristics of pupils' curiosity and attention, Wushu teaching should simplify the teaching content, the intuitive image of teaching means, stimulate students' curiosity and interest, design enjoyable Wushu activities, make the student's attention not easy through moderate feedback and motivation, to cultivate the student's ability of autonomous learning and Wushu learning interest (Domper, 2022).

Research on the Emotion and Emotional Development of Primary School Students

With the continuous growth of the students in the primary school education stage, the student's emotions have also changed from a positive and active state to a more stable state, and their emotions have also become more profound. Although students in primary school education have been able to control their emotions towards things initially, there are still many unstable phenomena (Araújo, 2022). In Wushu teaching, students gradually learn how to express respect and gratitude in the learning process by emphasizing the unique cultural education of respect for teachers and etiquette norms. For example, at the beginning and end of each teaching, this sense of ritual enhances students' sense of discipline and cultivates their ability to respect others and self-discipline (Yang, 2020). These emotional education contents help students to handle interpersonal relationships in their daily lives better and enhance their emotional expression ability. In teaching, students must cooperate to complete actions or learn fair competition and mutual respect in

confrontation. These experiences can enhance students' team spirit and sense of collective honour and cultivate their positive attitude and emotional adjustment ability in the face of challenges (He, 2020). Therefore, according to the characteristics of emotional development, teachers should encourage and praise students in the organization of primary school students' Wushu teaching, make students' emotions high, avoid students' stiff scolding and criticism, create a lively Wushu teaching environment, improve the enthusiasm of primary school students sports. Through Wushu teaching, students can learn to stay calm and focused during high-intensity teaching and competitions. In Wushu competitions, students must stay calm in a high-tension atmosphere to play at the best level. This experience can help students better manage their emotions in the face of stress and setbacks in life (Ying, 2017). Many Wushu movements require students to take deep breaths during execution. This breathing adjustment contributes to the smooth completion of the movements and helps students calm down quickly when they are excited (Yue, 2018). Through long-term teaching, students can form good emotional regulation habits and improve their emotional control ability.

In general, the influence of Wushu teaching on the emotional development of primary school students is multifaceted. Through Wushu etiquette and team cooperation, students can learn to respect others and express feelings, which has played a positive role in their emotional development (Mellati, 2020). through high-intensity teaching and breathing adjustment, students can learn how to keep calm under pressure, improve emotional management ability, these skills not only help their performance in Wushu teaching, also have a positive impact on their daily life and learning. Students involved in Wushu teaching showed higher self-efficacy and emotional stability in emotional and emotional development (Gao, 2021). Hollinger (2016), through comparative research, found that primary school students who participated in Wushu teaching had significantly higher emotional control and emotional expression abilities than students who did not participate in Wushu teaching. The study also pointed out that Wushu teaching can further promote students' emotional and emotional healthy development by enhancing their self-esteem and self-confidence (Liang, 2021). In short, Wushu teaching positively promotes the emotional and emotional development of primary school students. In the process of primary school Wushu teaching, we should fully understand the characteristics of emotions, which helps the students to achieve better performance in the Wushu class practice and lays a solid foundation for the student's overall mental health development.

Research on Memory and Willpower Development of Primary School Students

With the continuous accumulation of knowledge in the primary school education stage, the student's memory of knowledge also gradually changes from an unconscious to a conscious transition. New pupils are more inclined to have unconscious memory, which dominates the initial contact stage of knowledge (Jiao, 2021). By second grade, unconscious memory is comparable to conscious memory. However, by the third grade, primary school students gradually adapted better to conscious memory,

and the memory effect improved rapidly. Since the fourth grade, primary school students began to show the advantages of conscious memory, conscious memory gradually occupied the dominant position, and to the fifth and sixth-grade primary school students, intentional memory tends to mature, and the development speed of memory gradually slowed down. Therefore, in primary school Wushu teaching, according to the characteristics of primary school students' memory, the teaching methods should be optimized to promote better the comprehensive development of students' cognitive and memory ability. Alvares (2023) mentioned that because of the characteristics of pupils' memory development, teachers should pay attention to the series of old and new knowledge, introduce the review of related old knowledge in the study of new knowledge, and then deepen and deepen students' understanding and application of new knowledge. Knowledge that is difficult to understand can be skillfully memorized by guiding students to explore various patterns. Therefore, in the teaching of Wushu, attention should be paid to the series of old and new knowledge, and students should be guided to explore the rules and remember the movements that are difficult to understand and master (Wang, 2020). Huang (2022) believes that the characteristics of primary school students' memory development change from unintentional, mechanical and concrete image memory to intentional, meaningful and abstract memory development. Shikun (2021) proposed that children's nervous systems are not well developed, so most younger children's memories are unconscious memories, not clear about what happened in the memory, and may be confused by outside intervention or suggestion. Therefore, in Wushu teaching, the teaching content should be simplified to make the teaching content manageable. (1) Repetition and consolidation is necessary, through repeated practice and consolidation, to help primary school students remember Wushu movements and skills better and establish a stable memory path. (2) Provide association is a good method. Use vivid and interesting associations to help students memorize, linking Wushu movements to things or images familiar to students and improving the associative nature of memory. (3) Segment teaching, which means decomposing complex Wushu movements into small parts, gradually teaching, and helping students to remember and understand better. (4) Create situations is to create exciting situations in teaching, let students learn in a happy atmosphere, and help to improve the memory of information. In general, under the characteristics of primary school students' memory development, Wushu teaching should pay attention to simplifying the teaching content, repeating and consolidating, providing association, segmented teaching and creating situations to optimize students' memory and theory of Wushu knowledge.

According to the characteristics of the development of willpower, primary school students' self-control is not strong, and their willpower and self-consciousness are poor. Teaching teachers should urge students to pay more attention to observation. Engstrom (2016) believes that the psychological pressure ability of primary school students is weak, so in the teaching process, teachers should give more praise and encouragement rather than

criticism and correction. Lederman (2020) believes that students in primary school education are not fully formed due to their complete physical and mental development and personality and have strong plasticity. Lu (2021), teachers should not only focus on pupils' mental health but also realize the integration of intelligence development education and personality counselling education, cultivate students' interest in learning, and build a positive psychological suggestion to cultivate pupils' strong will emotion, have strong team spirit, social adaptability, promote the healthy growth of pupil body and mind. Therefore, in teaching Wushu, we should stimulate the interest and enthusiasm of primary school students, create a positive learning atmosphere, and attract students' interest and enthusiasm to stimulate their love and investment in Wushu. (1) It is necessary to cultivate team cooperation. Wushu training can promote cooperation and communication among students, cultivate team spirit, and enhance collective cohesion. (2) Pay attention to emotional expression is needed. Teachers can encourage students to express emotion through Wushu, cultivate students' emotional management ability, and promote the healthy development of emotion. (3) Cultivate self-discipline and sense of responsibility is also necessary, teachers should guide students to establish a sense of self-discipline and responsibility, and cultivate the unremitting quality through Wushu training. (4) Advocate a positive attitude means encourage students to keep a positive attitude when they face challenges, and cultivate the courage and perseverance to deal with difficulties. In short, under the characteristics of primary school students' emotion and willpower, Wushu teaching should pay attention to stimulating students' interest, cultivating teamwork, paying attention to emotional expression, cultivating self-discipline and responsibility, advocating positive attitude, promoting students' physical and mental healthy growth, establish positive learning experience, and cultivate good character and will quality.

Research on the Imagination and Thinking Development of Primary School Students

In primary school education, students experience a process from simple imitation to gradual abstraction in imagination and thinking development (Zhou, 2020). Initially, imagination mainly depends on intuitive reproduction and figurative thinking, and understanding abstract concepts could be more apparent. With the growth of age, primary school students gradually develop a more precise and more complete cognition, forming a more abstract way of thinking. In this process, their thinking gradually changes from concrete logical thinking to abstract logical thinking, and they begin to have the ability to independent learning and constantly enhance their desire and curiosity for knowledge. Wilson (2024) believes that the development of primary school students' thinking is characterized by the transition from concrete images to abstract logical thinking. Similarly, Liu (2024) mentioned that students' logical thinking has developed rapidly at this stage, with its main form ranging from concrete images to abstract logical thinking. Therefore, Wushu teaching content and procedures in primary school should be manageable or appropriately simplified. Lu (2019) believes that the thinking development of primary school students has a high plasticity, and the cultivation of

abstract thinking needs to be closely combined with perceptual experience. Meng (2023) believes that at the age of 6-12, children's brains are more active and willing to understand and accept all kinds of new things actively. Teachers should thoroughly combine the characteristics of the psychological development of primary school students, improve the teaching plan, change the traditional teaching mode and teaching content, innovate teaching methods, and creatively use movies, multimedia and other forms to stimulate students' interest in learning Wushu and realize happy teaching. According to the characteristics of primary school students' imagination and thinking development, the teaching content should be simple and straightforward to avoid being too abstract and complex so pupils can easily understand Wushu movements (Sun, 2019). (1) Using enlightening teaching methods to guide students in cultivating their active and abstract thinking ability through problem-solving and independent inquiry. (2) Association and situation creation use students' rich imagination, and through association and situation creation, Wushu movements become more vivid and exciting and stimulate students' interest in learning. (3) Pay attention to students' perceptual experience and combine it with students' perceptual experience to make the abstract concept more practical and significant and promote students' deep understanding of Wushu. (4) Timely feedback and incentive: Provide timely positive feedback and incentives, encourage students to continue progressing in Wushu teaching, and enhance students' learning enthusiasm. In general, by following the imagination and thinking development characteristics of primary school students, the teaching content and methods should be constructed in Wushu teaching to improve the learning effect of Wushu and stimulate students' strong interest in Wushu.

Table 2. Related Research on the Psychological Development of Primary School Students

Auth or	Title	RP	RM	RO	RC
Kotar ska, 2019	Cognitive development and curiosity in children	Research on the development of curiosity and attention in primary school students	on Quest ionnai re surve y	Secon d-grade primary school students	Primary school students have strong curiosity but are easily distracted
Araújo Reze Alvar es, 2022	Emotional and social skills through Wushu	Research on the emotional development of primary school students	Exper imental metho d	Prima ry school students and parents	The emotions of primary school students are volatile and need active guidance
Jiao, 2021	Memory and cognitive ability improvement in school-aged children	Research on the development of memory and willpower in primary school students	Interv iew metho d	Prima ry school students	Memory gradually changes from unconscious to conscious
Zhou, 2020	Development of imagination and abstract thinking in elementary education	Research on the development of imagination and thinking in primary school students	Quest ionnai re surve y and interv iew	Prima ry school students	Rich imagination, gradually transitioning to abstract thinking

4. Conclusion

Research shows that primary school students are at a critical stage of physiological and psychological development, and the development of bone, muscle, respiratory, cardiovascular and nervous systems is not mature. Teachers should consider these physiological characteristics when designing Wushu courses to avoid excessive load and ensure that students train in a safe environment. At the same time, the psychological development of primary school students is also in a stage of rapid change, with an intense curiosity and imitation ability. However, the attention and willpower are relatively weak. Therefore, teaching methods should focus on stimulating students' interest, cultivating good emotional expression and teamwork ability, and promoting the development of their memory, thinking and comprehensive quality through effective teaching design. Through comprehensive understanding and combining these physical and mental development characteristics, Wushu teaching can improve students' technical ability and promote their all-round physical fitness, psychological quality, and ethic development, laying a solid foundation for students' growth and future development.

REFERENCES

- Skowron-Markowska, S., & Nowakowska, M. (2021). Chinese destinations related to Wushu tourism from the UNESCO perspective. *Sustainability*, 13(14), 7581.
- Theeboom, M., Zhu, D., & Vertonghen, J. (2017). 'Wushu belongs to the world'. But the gold goes to China...: the international development of the Chinese Wushu. *International Review for the Sociology of Sport*, 52(1), 3-23.
- Lau, K. Y. (2022). Chinese Wushu. *Hong Kong History: Themes in Global Perspective*, 241-260.
- Talaga, M. (2022). 'Have the highest righteous fencer in your mind's eye': medieval martial ethic as a conceptual repository for just war theory. *Wushu Studies*, 12, 8-18.
- Veit, W., & Browning, H. (2021). Ethics of mixed Wushu. In *The Philosophy of Mixed Wushu* (pp. 134-149). Routledge.
- Schiff, N. T. (2022, November). Ethical Values in The Martial Art of Pencak Silat. In *IPEC* (Vol. 1, No. 1, pp. 233-237).
- Chapa, J. O. (2018). The Martial Virtues: A Role Ethic for Soldiers? *Social Theory and Practice*, 179-198.
- Priest, G., & Young, D. (Eds.). (2014). *Philosophy and the Wushu: Engagement*. Routledge.
- Svitych, A. (2021). Northeast Asian modern Wushu: an embodied synthesis of virtue ethics and deontology. *The International Journal of the History of Sport*, 38(7), 751-767.
- Parry, J., & Wagner, M. (2019). The contribution of Wushu to moral development. *Ido Movement for Culture. Journal of Wushu Anthropology*, 19(1), 1-8.

- Martinkova, I., Parry, J., & Vágner, M. (2019). The contribution of Wushu to moral development. *Ido Movement for Culture*, 19(1).
- Zhang, G., & Leng, X. (2021). The evolution of the concept of "martialism" in axis age and its historical influence on Chinese Wushu. *Nanotechnology for Environmental Engineering*, 6, 1-7.
- Xiwang, T. E. N. G., & Yucheng, G. U. O. (2020). From Intellectual Fighting to Force Fighting: A Field Investigation of Fighting Yangko under the Etiquette Constraints. *Journal of Shanghai University of Sport*, 44(3), 73-83.
- Luo, D., & Rodloytuk, P. (2022). The etiquette ethics of the architectural art of the Forbidden City. *Res Militaris*, 12(6), 1885-1897.
- Guo, R., & Han, J. (2020, August). Research on the course of "Naval Diplomatic Etiquette". In *2020 4th International Seminar on Education, Management and Social Sciences (ISEMSS 2020)* (pp. 960-963). Atlantis Press.
- Lake, R. J. (2016). 'Guys don't whale away at the women': Etiquette and gender relations in contemporary mixed-doubles tennis. *Sport in Society*, 19(8-9), 1214-1233.
- Bicknell, J. (2021). Aesthetics of the Wushu. *Philosophy Compass*, 16(7), e12738.
- Jennings, G. (2020). Wushu under the COVID-19 lockdown: The pragmatics of creative pedagogy. *Sociología del Deporte*, 1(2), 13-24.
- Cynarski, W. (2018). Ideological conditioning of Wushu training. *Physical Activity Review*, (6), 14-21.
- Oliveira, M. A., Lopes, J. C., Sonoda-Nunes, R. J., & Figueiredo, A. (2019). The sportivization process of a martial art: The karate. *Revista de Artes Marciales Asiáticas*, 14(2s), 59-60.
- Holt, J. (2023). Physical philosophy: Wushu as embodied wisdom. *Philosophies*, 8(1), 14.
- Fujiwara, H., Ueno, T., Yoshimura, S., Kobayashi, K., Miyagi, T., Oishi, N., & Murai, T. (2019). Wushu "Kendo" and the motivation network during attention processing: An fMRI study. *Frontiers in Human Neuroscience*, 13, 170.
- Kubala, K., Cynarski, W. J., & Świder, P. (2019). Three trips in one plane: Wushu and combat sports conferences in Muju, Osaka, and St. Petersburg. *Physical Activity Review*, 7, 114-124.
- Kotarska, K., Nowak, L., Szark-Eckardt, M., & Nowak, M. (2019). Selected healthy behaviors and quality of life in people who practice combat sports and Wushu. *International Journal of Environmental Research and Public Health*, 16(5), 875.
- Dos Santos, L. M. (2021, April). The motivation and reasons behind taking distance-based Taekwondo Wushu lessons: Social cognitive career perspectives from parents. In *CSEU* (1) (pp. 262-269).
- Akehrst, E., Southcott, J., & Lambert, K. (2020). Kick start—Wushu as a non-traditional school sport: An Australian case study of Taekwondo for Years 7–12 students. *Curriculum Studies in Health and Physical Education*, 11(1), 83-98.
- Burt, L., Riley, N., & Eather, N. (2023). Current and preservice teachers' views and beliefs regarding Wushu and the inclusion of Wushu in Australian school settings: A cross-sectional study. *Health Science Reports*, 6(6), e1351.
- Bickford, S. H. (2020). Wushu leadership. *Wushu Studies*, 108.
- Benesch, O. (2020). Olympic samurai: Japanese Wushu between sports and self-cultivation. *Sport in History*, 40(3), 328-355.
- Moore, B., Dudley, D., & Woodcock, S. (2020). The effect of Wushu training on mental health outcomes: A systematic review and meta-analysis. *Journal of Bodywork and Movement Therapies*, 24(4), 402-412.
- Domper, K. K. (2022). The epistemological space of problem–solution dualities, unity of knowing, unity of science and diversity in knowledge. In *The Theory of Problem-Solution Dualities and Polarities* (pp. 107-141). Springer International Publishing.
- Araújo de Rezende Alvares, L. M., & de Sá Freire, P. (2022). Transdisciplinarity: The search for the unity of scientific and technological knowledge. *RDBCI: Revista Digital de Biblioteconomia e Ciência da Informação*, 20.
- Yang, C., Huan, S., & Yang, Y. (2020). A practical teaching mode for colleges supported by artificial intelligence. *International Journal of Emerging Technologies in Learning*, 15(17), 195-206.
- He, J. (2020). Research and practice of flipped classroom teaching mode based on guidance case. *Education and Information Technologies*, 25(4), 2337-2352.
- Ying, Y. (2017). Application of flipped classroom teaching mode based on MOOC in modern educational technology teaching. *Journal of Computational and Theoretical Nanoscience*, 14(2), 1075-1078.
- Mellati, M., & Khademi, M. (2020). MOOC-based educational program and interaction in distance education: long life mode of teaching. *Interactive Learning Environments*, 28(8), 1022-1035.
- Gao, R. (2021). The vocabulary teaching mode based on the theory of constructivism. *Theory and Practice in Language Studies*, 11(4), 442-446.
- Hollinger, D. A. (2016). The unity of knowledge and the diversity of knowers: Science as an agent of cultural integration in the United States between the two world wars. In *Pursuing the Unity of Science* (pp. 207-222). Routledge.
- Liang, X., Haiping, L., Liu, J., & Lin, L. (2021). Reform of English interactive teaching mode based on cloud computing artificial intelligence—a practice analysis. *Journal of Intelligent & Fuzzy Systems*, 40(2), 3617-3629.
- Alvares, L. M. A. D. R., & Freire, P. D. S. (2023). Transdisciplinarity: The search for the unity of scientific and technological knowledge. *RDBCI: Revista Digital de Biblioteconomia e Ciência da Informação*, 20, e022016.
- Wang, Y. (2020). A study on college English high-efficiency class based on blended teaching mode of

- flipped classroom. *Theory and Practice in Language Studies*, 10(9), 1066-1071.
- Huang, X. (2022). Apt performance as unity of knowledge and action. In Ernest Sosa *Encountering Chinese Philosophy: A Cross-Cultural Approach to Virtue Epistemology* (p. 87).
- Shikun, H. U. A. N. G. (2021). A new interpretation of Wang Yangming's "Unity of Knowledge and Action"—Analysis based on the perspective of the existence of the continuity of mind and matter. *Journal of Hebei University (Philosophy and Social Science)*, 46(3), 18.
- Engstrom, S. (2016). Self-consciousness and the unity of knowledge. *International Yearbook of German Idealism*, 11, 25-48.
- Lederman, H. (2020). The introspective model of genuine knowledge and the unity of knowledge and action.
- Lu, Y. (2021). Wang Yangming's theory of the unity of knowledge and action revisited: An investigation from the perspective of moral emotion. In *Confucianism and Phenomenology* (pp. 185-202). Brill.
- Zhou, T., Huang, S., Cheng, J., & Xiao, Y. (2020). The distance teaching practice of combined mode of massive open online course micro-video for interns in emergency department during the COVID-19 epidemic period. *Telemedicine and e-Health*, 26(5), 584-588.
- Wilson, T. (2024). Battle testing the "Unity of Knowledge and Action". *Dao*, 1-12.
- Liu, D., & Guo, C. (2024). Exploring the role of traditional Wushu in enhancing physical fitness and health management. *Revista Multidisciplinar de las Ciencias del Deporte*, 24(94).
- Lu, Y. (2019). Wang Yangming's theory of the unity of knowledge and action revisited. *Philosophy East and West*, 69(1), 197-214.
- Meng, Q. (2023). On the principle of "unity of knowledge and action" in ideological and political education in universities in the new era. *Transactions on Social Science, Education and Humanities Research*, 2, 410-416.
- Sun, H. (2019). A SPOC teaching mode of college English translation based on "Rain Classroom". *International Journal of Emerging Technologies in Learning*, 14(17), 182-193.