

The Level of Learning Interest and Sensory Integration Development of Children in Wushu Game Activities

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Abstract: Chinese martial arts have lasted for thousands of years and is an excellent cultural heritage of the Chinese nation, known as the "quintessence of China", "national treasure" and "national soul". To better inherit and carry forward this national spirit and culture, we should carry out the educational policy of "starting from an early age". According to the physiological and psychological characteristics of children, the author creates a set of theoretically effective games for children in accordance with the principles of scientific, educational and interesting, and then conducts experiments in kindergartens to let children contact and feel the charm of martial arts, and studies the influence of martial arts games on the development of children's interest in sports learning and sensory integration function. To verify whether there is a significant relationship between children's learning interest and sensory integration development in martial arts games. This has not only enriched the research on the cultivation of children's interest in sports learning and the development of children's sensory integration function, but also explored a new path to promote martial arts to kindergartens, which has certain theoretical and practical significance.

Keywords: Children; Wushu; Wushu Games; Learning Interest; Sensory Integration Ability.

1. Introduction

Chinese martial arts have a long history, is a national skill of the Chinese nation, is the Chinese nation's outstanding traditional culture and unique traditional sports. Its connotation is rich, extensive and profound, contains profound cultural connotation, attracting many lovers at home and abroad.

According to the different forms of movement, wushu can be divided into two categories: routine movement and offensive and defensive skills. The routine movement is a complete set of practice forms formed according to the change law of the contradictory movement of attack and defense, movement and static disease and deficiency, hard and soft, deficiency and reality, which mainly includes boxing, equipment, pair exercise and collective performance. Offensive and defensive skills are two people under certain conditions, according to certain rules of a form of confrontation practice.

Martial arts can not only strengthen the body, but also exercise willpower and mental strength. To stimulate the enthusiasm of young people to learn and participate in martial arts can not only cultivate patriotism and collectivism, but also promote the excellent traditional Chinese culture.

To show the basic technical movements and skills of martial arts in the form of games, its purpose is to improve the interest and practice, so as to achieve better teaching results. The purpose of the creation of children's martial arts games is to promote the all-round development of children's body and mind. The theoretical basis of children's martial arts games is based on children's game theory.

Interest is the psychological tendency of people to understand, explore and continuously pour positive emotions into things. Interest is an invisible psychological force. When we are interested in something or an activity, interest prompts us to double down on it, so "interest is the best teacher." It can improve the efficiency of the activity, give full play to the

ability, make the activity or behavior more stable and lasting, and increase people's happiness in the activity.

In the study of child psychology, it is believed that interest can also stimulate children's learning motivation, help children to explore in thought, emotion and will, and is the internal motivation to promote children's learning. However, children of different ages have different interests because of their physical and mental development laws and personality characteristics. The same thing, but the driving force is obviously different. For children in large classes, games are a form of activity that children like very much. They have been able to understand and follow the rules of the game, organize the game themselves, and determine the theme of the game themselves. Therefore, for children in this period, game teaching is easier for them to accept, and it is easier to achieve good results.

Learning interest also plays a role in promoting sports learning and sports practice. Some studies have shown that students' level of interest in sports is directly proportional to their intrinsic motivation to do physical exercise. The increase of interest level will enhance the motivation of students to exercise and enable them to face physical exercise with a positive attitude. At the same time experience the fun brought by sports activities, and gradually form the consciousness and habit of lifelong sports.

Sensory integration theory was first systematically proposed by Anna Jean Ayres, a doctor of clinical psychology at the University of Southern California in 1969. In 1970, in the advanced countries of Europe, America and Japan, the problem of children became more and more serious. After the joint research of hundreds of experts, in 1972, Dr. J. Ayres of the University of Southern California put forward the sensory integration theory based on the research of brain function. Sensory integration refers to the learning process in which the brain and the body coordinate with each other. It refers to the ability of the body to effectively use its own senses in the environment, obtain information from the

environment through different sensory pathways (vision, hearing, taste, smell, touch, vestibule and proprioception, etc.) and input it into the brain, and then the brain processes its information (including interpretation, comparison, enhancement, inhibition, connection and unification) and makes adaptive response. In short, sensory integration is a learning process in which the brain and body coordinate with each other. Without sensory integration, neither the brain nor the body can develop. Relevant studies in China show that 10-30% of children have different degrees of sensory integration disorders. The main cause of sensory integration disorder is lack of exercise. The behavior disorder caused by sensory integration deficiency: restlessness, inattention, clumsiness, serious shyness, etc., has been perplexing teachers and parents.

1.1. Statement of the Problem

The purpose of this study is to determine the effects of Wushu game activities on children's learning interest and sensory integration development. The findings of this study will serve as basis for an intervention plan.

Specifically, this study sought to answer the following questions:

1. What is the level of children's learning interest in Wushu game activities in relation to:

- 1.1 Teachers Motivation
- 1.2 Self Interest of Students

2. What is the level of children's sensory integration development in Wushu game activities in terms of:

- 2.1 Vestibular Function
- 2.2 Tactile Defense Function
- 2.3 Proprioceptive Function

3. Is there a significant relationship between children's learning interest and children's sensory integration development in Wushu game activities?

4. What are the problems encountered in optimization strategies in children's Wushu game teaching?

5. What intervention plan can be proposed based on the findings of the study?

1.2. Research Hypotheses

Combined with the purpose of this study and the problems found in the literature review, the following research hypotheses are put forward:

Ho1: In martial arts game activities, children's learning interest has been improved, and their sensory integration function has also been improved.

Ho2: In Wushu game activities, children's learning interest has no significant correlation with sensory integration development. (There is no significant relationship between children's learning interest and children's sensory integration development in Wushu game activities.).

1.3. Significance of the Study

This study benefits the following people in all aspects:

Children-Respondents

Enrich their activities in kindergartens, make children feel happy in Wushu Games, improve children's preliminary understanding of Wushu and cultivate children's interest in Wushu, enhance children's physical and mental health, improve the development level of sensory integration ability, and cultivate lifelong sports awareness.

Wushu Coaches

Coaches play a vital role in the personal and sports

development of athletes. They can learn from the results of this study and have a deeper understanding of how to teach and train children in Wushu more scientifically and reasonably.

School Administrator

Guided by the results of this study, they create a better learning and living environment for children, provide better sports venues and facilities, and provide better conditions and opportunities for children's all-round development.

Parents

They know more clearly the changes of children's physical quality, mental health, behavior habits and moral quality, and can adopt more targeted strategies to avoid detours in future training.

Researcher

It can provide reference data and materials for their research in children's game teaching, Wushu game creation, children's all-round development and so on.

Future Researchers

If future researchers want to replicate this study to other target respondents and use other variables, this study will serve as their guide.

1.4. Theoretical Framework

1.4.1. Theoretical Basis of Sensory Integration

Sensory integration theory was systematically put forward by Dr. A. Jean Ayres, a clinical psychologist at the University of Southern California in 1972. Its theoretical basis is as follows:

1.The human central nervous system is plastic

Dr. Ayers once described: "the brain, especially the young brain, is malleable. This potential enables people to interact with the environment, so as to improve the ability of neural integration. If individuals do not give full play to this potential in a critical period, it will affect the best development of the brain and the development of the whole ability. Finding and intervening in young age can increase the opportunities for normal development of individuals." Later researchers proved that brain plasticity runs through people's childhood and even life.

2.Sensory integration is evolving

The development of each sensory integration stage is not only improving relevant abilities, but also laying the foundation for the next more complex stage. When sensory integration disorders occur, normal development is interrupted. The intervention of sensory integration training is to make up for sensory stimulation as soon as possible, so as to promote the continuity of neural pathway development.

3.The function of the brain is unified

The brain plays its role as a whole, and all brain regions complement each other in the process of development. The high-level integration function comes from and depends on the integration of low-level structure and sensory motor experience. If the sensory motor experience of low-level areas (subcortical tissue) is insufficient, resulting in the immature development of low-level brain areas, the development of high-level areas will also be limited.

4.Human adaptive interaction to the environment is crucial to sensory integration

Adaptive interaction refers to that individuals obtain new information from the environment and constantly change the environment. This effect can improve people's sensory integration, which continuously promotes the adaptive interaction between people and the environment.

1.4.2. Progressive Education Theory

1. It emphasizes activity teaching and students' active learning

According to the progressive education theory, education should be active and linked with students' interests. It emphasizes that students have the freedom of natural development. It advocates that students' learning process should be determined not only by teachers or teaching materials, but also by students themselves according to the needs of society. Teachers should provide full opportunities for students' creativity and self-expression. Therefore, progressivism advocates learning by "solving problems" and advocates "learning by doing", rather than simply inculcating teaching materials and emphasizing the practicality of teaching.

2. Emphasizing democracy and equality between teachers and students

puts forward that the role of teachers should not be to give orders and supervision, but to encourage, advise and advise. Because students' own needs and desires can determine what they learn, teachers can guide them to learn.

1.4.3. Internal Drive

Bruner believes that there are three kinds of internal driving forces for internal motivation: one is the internal driving force of curiosity, which is the interest in seeking knowledge and exploration; Second, competitive spirit, that is, the desire to be competent and express ability; Third, the internal driving force of mutual benefit. People need to live in harmony and cooperate with each other. It can be seen that interest is one of the important internal driving forces that can cause internal motivation. The higher the level of sports interest, the stronger the internal motivation of students for physical exercise, the more positive the attitude of exercise, and the frequency of exercise will naturally increase. With long-term and high-frequency strengthening, physical exercise will naturally evolve into an automatic behavior, that is, exercise habit. On the contrary, if the interest level is low, the sports behavior will be intermittent driven by low motivation, which is not conducive to the formation of sports habits. This is the internal reason why the level of sports interest is positively correlated with sports habits.

1.4.4. Situational Interest and Personal Interest

In educational research, in order to more accurately study learning interest, Hidi et al. further divided it into situational interest and individual interest. They believe that according to the development process of "situational interest caused by external stimuli to mature and stable individual interest", the difference and relationship between situational interest and individual interest can be accurately explained

2. Methodology

2.1. Research Design

This researcher used quantitative method particularly the descriptive correlational research design to achieve the research objectives of the study. She analyzed the results, and then explained them in more detail on the basis of the research results. When the initial quantitative data results are further interpreted, it is interpretative. Within the scope of this study, the data collected by the children's sensory integration ability development evaluation scale and the questionnaire on sports learning interest and learning attitude were analyzed quantitatively.

In addition, due to the power of quantitative research,

quantitative methods are selected. At the practical level, this provides a complex research method, which may be an ideal method if researchers can obtain quantitative data. At the procedural level, a more comprehensive understanding of research issues is a useful strategy, such as: (1) comparing different views derived from quantitative data; (2) Interpretation of quantitative results through subsequent data collection and analysis; (3) The results of quantitative analysis are used to verify whether the research hypothesis is tenable. All of these are considered to be used in current research to achieve its goals and objectives.

2.2. Sampling Method

2.2.1. Sampling Locale

The study was conducted at Shanshui Sunshine Kindergarten in Huaihua City, Hunan Province, China. Shanshui Sunshine Kindergarten is located in the urban area of Hecheng District, Huaihua City, about 10 minutes' drive from Huaihua College. The kindergarten is a public kindergarten in the district. The environment of the park is optimized, the site is open, the distribution of functional areas is reasonable, various facilities and equipment are complete, the kindergarten leaders and teachers are serious and responsible, the concept is open, and they have been trying teaching reform for many years, which is easy to accept new things. Teaching standard, excellent teaching quality, once won the title of "excellent kindergarten".

2.2.2. Research Participants

The research subject of this paper are the children of class 1, and class 2 of Shanshui Sunshine Kindergarten. There are 50 children, most of whom are 5-6 years old. These children have the basic ability of self-care, are polite and disciplined, and can complete the teaching and testing process well according to the experimental requirements.

In this study, the students enrolled in the practice teaching of Huaihua College served as the assistant of the researcher to assist in the coordination between the creation and practical teaching of children's wushu games. The kindergarten officials provided many conveniences in the teaching experiment process and data measurement; In addition, it also needs the participation of kindergarten teachers and parents, who mainly served as the respondents in answering the questionnaires since the children can not answer them on their own.

2.3. Research Instrument (Validations, tool)

2.3.1. Instrument

This study mainly adapted and modified the survey questionnaire, which were answered by the teachers and parents after face-to-face observation and interviews.

For the evaluation of sports learning interest, the "sports learning interest evaluation scale" developed by Dr. Wang xiaozan (2005) is authoritative and has been widely used. This study chose this scale as a reference to formulate the evaluation scale of children's sports learning interest. The scale mainly analyzes students' learning interest from four dimensions: sports participation, positive interest, negative interest and autonomous learning, which has a certain theoretical basis. Each question in the scale is a four point scoring system, and each question has four options. The forward questions are scored from 1 to 4 in the order of options, and the reverse questions are scored from 4 to 1 in the order of options. The higher the score of each dimension, the better the result. The sum of the scores of the four

dimensions represents the level range of students' sports interest. The scale uses the expert scoring method to test the content and structural validity of the questionnaire, and modifies and improves the content of the scale according to the expert evaluation opinions. In the evaluation scale of children's interest in wushu learning, teachers or scientific research assistants clearly state the questions to children, and then accurately record the children's answers on the questionnaire.

For the measurement of children's sensory integration ability, the children's sensory integration evaluation scale revised by Ren Guiying and others is selected for evaluation. The full scale consists of three parts: vestibular function, tactile defense function and proprioceptive function. It contains a total of 47 test questions, which are scored by "never, sometimes, often and always". The vestibular function score reflects the development of children's large muscles and balance; Tactile defense score reflects children's tactile sensitivity and emotional development; Proprioception score reflects the development of children's proprioception. Children's sensory needs are assessed based on their sensory needs in recent months. With the help of kindergarten teachers, after clarifying the significance of experimental intervention and the requirements of filling in the questionnaire to parents, the scale will be sent to parents, who will fill it in by themselves and take it back after completion.

Through the above two scales, this study diagnosed children's learning interest and sensory integration ability.

2.3.2. Validation of the Research

The reliability test of the questionnaire adopted the "repeated test method", with an interval of 2 weeks, and then test whether the test-retest reliability meets the statistical requirements.

Before collecting data, the questionnaire was verified among the selected experts to ensure its effectiveness.

The answers of each item are analyzed according to the following scoring scheme:

Table 1. Scoring scheme

Scales	Scale Limits	Verbal Descriptions	Verbal Interpretation
4	3.26 - 4.00	Always	Very High Level
3	2.51 - 3.25	Often	High Level (Optimal)
2	1.76 - 2.50	Sometimes	Low Level
1	1.00 - 1.75	Never	Very Low Level

2.4. Ethical Considerations

The researcher constructively considered and carefully followed the ethical considerations that must be met to protect the rights of all the respondents. The following are the Ethical considerations:

2.5. Conflict of Interest

The researcher of this study will ensure that there would be no conflict of interest in conducting this study. He will elaborate and clearly state the purpose of his research study to the chosen respondents. All gathered data must not be used solely for the purpose of his study and not in any form be a form exploitation against the respondents.

2.6. Privacy and Confidentiality

Before conducting this research, the respondents will ensure that whatever information would be gathered would be confidential, and the survey results cannot be given to anyone aside from the researcher himself and the students who will answer the survey – questionnaire. The researcher must not mention the respondents' names in presenting the data gathered to protect their privacy. The identity of the respondents would remain anonymous or free from any clues and suggestions that would lead others to connect or relate with the respondents.

3. Vulnerability

The researcher will only gather the data from the student-respondents through survey questionnaire. The statements in the questionnaire does not pose any harm on their physical fitness as well as other wellness dimensions.

Recruitment

The student-respondents will be selected based on their own free will and they are free to withdraw when they felt uncomfortable answering the survey questionnaire. The statistician who will compute the data will be chosen based on his knowledge and statistics and must be an expert in this field.

The researcher will closely communicate and collaborate with the ethics committee and communicate with the reviewers to ensure the compliance of the study.

The researcher will not utilize any facility or equipment in conducting his study.

Lastly, the researcher will observe ethical principles and regulations to ensure that the rights and interests of all participants are protected.

3.1. Assent

Before conducting the data gathering, the researcher will ensure that the consent form was signed by the parents/guardians of the student-respondents already. He will orient them about the details of the study before answering the survey questionnaire. He will ensure that the consent is voluntary, explicit, and based on a full understanding of the student-respondents. The consent form is written in clear and understandable language so that the respondents could easily understand its content. Further, he will clearly indicate that consent can be withdrawn at any time without any adverse consequences. No audio-recording or video recording will be use in gathering the data because he will utilize only the questionnaire.

3.2. Risk

The researcher of this study will ensure that there would be no risk in participating in this study. The respondents will be ensured that whatever data and information that would be gathered would not harm the respondents' life and name. The respondents have all the rights to freely stop the conduct of questions at any given time if they felt harassed, questions were too personal, and or violated.

4. Summary of Finding

Considering the detailed results of the study, the researcher came up with these summary of findings:

4.1. The result could indicate that the children had a high level of vestibular function .

4.2. The result could indicate that the children had a high level of tactile defense function .

4.3. The result could indicate that the children had a very high level of proprioceptive function .

4.4. The result could indicate that the children had a high level of motivation in joining wushu games

4.5. The children had a high level of interest in joining this wushu games

4.6. The children in joining wushu games can have a very high effect on the development of their sensory integration development.

5. Conclusion

Based from the findings of the study , it can be concluded that children ages 5-6 years old could help improve their sensory motor skills by joining different games and activities like Wushu. This kind of game is very engaging in such a way that they could manipulate the different parts of their body because it requires movement of the different body part . they could explore different directions which could help improve their spatial /sense of directions. Listening to the teachers instructions can help improve their listening as well as speaking skills too.

In general, it can be concluded that the higher the motivation and learning interest of the children on this kind of game or games, it could help improve their sensory motor skills/functions.

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