SUMMARY OF THE PHD THESIS

Name of PhD student: Ly Quoc Bien

Thesis title: Research on physical development solutions for primary school students in Hanoi City

Name industry: **Education**

Code industry: **9140101**

Full name of instructors: 1. Assoc. Prof. PhD. Tran Tuan Hieu
2. PhD. Pham Thi Thanh Huong

Training institution: Vietnam Institute of Culture, Arts, Sports and Tourism

SUMMARY CONTENT

1. Research objectives and research subjects

1.1. Research objectives

Through the analysis of theoretical foundations and empirical investigation, the thesis aims to clarify the current status of factors influencing the physical development of primary school students in Hanoi City. On that basis, the study selects and experimentally implements a number of solutions to promote physical development among primary school students in Hanoi City.

1.2. Research subjects

* The primary research subject of the thesis is a system of solutions for developing physical fitness among primary school students in Hanoi City.

* The research participants include experts, scientists, administrators, teachers, and students related to the research issues of the dissertation, specifically:

- Interview participants: Experts from the Vietnam Institute of Culture, Arts, Sports and Tourism, the Vietnam Institute of Educational Sciences; administrators from the Ministry of Education and Training, the Hanoi Department of Education and Training, district-level education offices, and primary schools; lecturers from sports universities and physical education teacher training institutions; and physical education teachers at selected primary schools in Hanoi City.

- Survey and experimental participants: A total of 1,429 students from Grades 1 to 5 at primary schools in Hanoi City.

2. Research methods

2.1. Document analysis and synthesis

This method was primarily used to systematize knowledge related to the research field, establish the theoretical framework, formulate research hypotheses, and define research objectives, tasks, and content. It was also used to verify and compare the collected empirical data. Reference materials were collected from various sources, including the library of the

Vietnam Institute of Culture, Arts, Sports and Tourism, the National Library, online academic libraries, official websites, and personal collections related to the research field. A total of 140 references were used, including 81 Vietnamese sources, 54 English sources, 2 Russian sources, and 3 websites.

2.2. Interview method

This method was employed to collect opinions from research participants on issues related to the thesis, including the identification of influencing factors and criteria for assessing students' physical development; evaluation of the current status of physical education activities inside and outside schools; selection of solution groups prior to experimentation; and collection of feedback after the experimental intervention. Indirect interviews using questionnaires were conducted to gather necessary information and data.

2.3. Pedagogical observation

This method was used to obtain independent information through direct observation and monitoring of participants' activities. Specifically, observations focused on students' attitudes, behaviors, and learning outcomes; teachers' instructional organization during physical education classes and training sessions; duration and structure of physical education lessons and extracurricular activities; students' activity levels and engagement during classes; and teaching methods, facilities, and organizational forms employed by teachers.

2.4. Medical assessment method

This method was applied to identify medical indicators and tests for evaluating physical development in terms of morphology and organ function among research participants. Data were collected before and after the experimental intervention to assess the impact of the proposed solutions. The medical indicators included standing height (cm), body weight (kg), and body mass index (BMI, kg/m^2).

2.5. Pedagogical testing method

This method was used to assess students' ability to perform physical movements and exercises according to prescribed tasks. Data collected before and after the intervention were used to evaluate changes resulting from the implemented solutions. The tests were based on the Physical Fitness Standards issued under Decision No. 53/2008 of the Ministry of Education and Training and included: dominant hand grip strength, sit-ups, standing long jump, 30-meter sprint from a high start, 4×10-meter shuttle run, and a 5-minute run at self-selected pace.

2.6. SWOT analysis method

The SWOT model was used to analyze and process research findings in order to identify strengths, weaknesses, opportunities, and challenges related to the research problem. This analysis served as a reliable intermediate step for initially proposing eight potential solutions. These solutions were subsequently screened and validated through expert interviews and statistical analyses (Cronbach's Alpha and Exploratory Factor Analysis) to select six final solutions for detailed development and experimental implementation.

2.7. Experimental method

This method was used to evaluate the current status and effectiveness of the proposed solutions through relevant indicators, focusing on their suitability, effectiveness, and impact.

* Experimental participants: A total of 953 students from four primary schools, including Khuong Thuong and Trung Tu primary schools (Kim Lien Ward) representing urban schools, and Ha Hoi and An Phu primary schools (Hong Van and My Duc communes) representing rural schools. Experimental and control groups were randomly selected by class lists. Conditions related to facilities, teachers, and students were considered relatively equivalent across groups. The experimental sample included 953 students (444 females and 509 males).

* Experimental locations: Pre- and post-intervention measurements were conducted at all four schools. Intervention activities were implemented at Trung Tu and An Phu primary schools. Data processing and analysis were conducted at the Vietnam Institute of Culture, Arts, Sports and Tourism and the Vietnam Institute of Educational Sciences.

* Experimental duration: The intervention was conducted during the 2023–2024 academic year (September 2023 to May 2024).

* Experimental design: A parallel comparative experimental design was employed.

* Experimental instruments: The study utilized equivalent sets of tools and tests for pre- and post-intervention assessments, including:

- Body composition and physical fitness tests (height, weight, grip strength, sit-ups, standing long jump, 30-meter sprint, 4×10-meter shuttle run, and 5-minute run).

- Training materials and self-made teaching equipment

- Observation sheets and practice logs

- Post-intervention questionnaires assessing changes in students' awareness, attitudes, and behaviors.

2.8. Mathematical and statistical methods

Mathematical and statistical methods were used to analyze and process the collected data. Traditional statistical parameters and formulas commonly applied in sports science research were employed, including mean values, standard deviation, coefficient of variation, comparison of means between two samples, and interaction effects among variables.

3. Main findings and conclusions

3.1. Main findings

The findings of the thesis can be summarized as follows:

First, the study identified nine key influencing factors and two groups of criteria for assessing physical development among primary school students. The survey results revealed initial indications of an urban-specific physical fitness profile. Overall, students' physical development was relatively consistent with biological and age-related psychological patterns and reached an average level according to national standards. Nevertheless, certain limitations were observed in morphological indicators and in the uneven development of

specific physical fitness components, particularly endurance.

Second, based on theoretical analysis and empirical assessment, the thesis selected six solutions grouped into two categories, with three solutions experimentally implemented within the group focusing on innovation in educational content, teaching methods, and organizational forms. Comparative analysis of pre- and post-intervention data suggests that the integrated application of these solutions was associated with positive changes in students' awareness, attitudes, learning behaviors in Physical Education, health-related knowledge and habits, opportunities for physical activity, and selected physical development indicators, compared with control groups and reference benchmarks.

Third, a notable contribution of the thesis lies in the design and implementation of an integrated intervention model comprising three interrelated components: innovation in Physical Education teaching methods, integration of nutrition education, and diversification of extracurricular sports activities. Experimental results indicate that the effectiveness of the intervention was primarily derived from the interaction and synergistic effects among these components, rather than from any single solution in isolation.

3.2. Conclusions

The doctoral thesis provides additional empirical evidence supporting the relevance and feasibility of an integrated school health education approach for promoting physical development among primary school students in an urban Vietnamese context. The findings suggest that coordinated interventions addressing attitudes, knowledge, behaviors, and opportunities for physical activity may contribute to more balanced physical development outcomes.

Within its research scope, the proposed solution model demonstrates potential for application and adaptation in primary schools with similar educational and contextual conditions, thereby offering practical implications for physical education practice and school health promotion in Vietnam.

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