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Original article

Pedagogical strategy for introducing primary school students to handball in Sport for All

[*Estrategia pedagógica para la iniciación de los educandos de primaria al balonmano en el Deporte para Todos]*

[*Estratégia pedagógica para a introdução do handebol a alunos do ensino fundamental no programa Esporte para Todos*]

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SUMMARY

Introduction: Sports initiation is one of the tasks of school Physical Education; and the research is a result of the project "Sport for All and Local Human Development".
Objective: to develop a pedagogical strategy for the introduction of primary school students to handball in Sport for All.
Materials and methods: Theoretical and empirical methods were used: analytical-synthetic, inductive-deductive, systemic-structural-functional, document analysis,

expert criteria and the Chanlat matrix , which enabled the development of the foundations and structure of the pedagogical strategy and the assessment of feasibility.
Results: The application of the methods and techniques allowed the development of the epistemological foundations and the structuring of the pedagogical strategy for the initiation of primary school students to handball **.**
Conclusions : It is concluded that the pedagogical strategy is relevant and applicable in practice and will contribute to the introduction of primary school students to handball in Sport for All.

Keywords: pedagogical strategy; Physical Education; Sport for All; sports initiation; handball.

RESUMEN

Introducción: la iniciación deportiva constituye una de las tareas de la Educación Física escolar; y la investigación es resultado del proyecto "Deporte para Todos y Desarrollo Humano Local".
Objetivo: elaborar una estrategia pedagógica para la iniciación de los educandos de primaria al balonmano en el Deporte para Todos.
Materiales y métodos: se emplearon los métodos teóricos y empíricos: analítico-sintético, inductivo-deductivo, sistémico-estructural-funcional, análisis de documentos, el criterio de especialistas y la matriz Chanlat, que posibilitaron la elaboración de los fundamentos y la estructura de la estrategia pedagógica y la valoración de la factibilidad.
Resultados: la aplicación de los métodos y técnicas permitió la elaboración de los fundamentos epistemológicos y la estructuración de la estrategia pedagógica para la iniciación de **los** educandos de primaria al balonmano.
Conclusiones: se concluye que la estrategia pedagógica es pertinente y aplicable en la práctica y contribuirá a la iniciación de los educandos de primaria al balonmano en el Deporte para Todos.

Palabras clave: estrategia pedagógica; Educación Física; Deporte para Todos; iniciación deportiva; balonmano.

RESUMO

Introdução: a iniciação desportiva constitui uma das tarefas da Educação Física escolar; e a investigação é o resultado do projeto "Desporto para Todos e Desenvolvimento Humano Local".
Objetivo:visa desenvolver uma estratégia pedagógica para a introdução do handebol a alunos do ensino fundamental no âmbito do Esporte para Todos.
Materiais e métodos: empregaram-se os métodos: analítico-sintético, indutivo-dedutivo, sistêmico-estrutural-funcional, análise de documentos, o critério de especialistas, e a matriz Chanlat que possibilitaram a elaboração dos fundamentos e a estrutura da estratégia pedagógica e a valorização da factibilidade.
Resultados: a aplicação dos métodos e técnicas, a elaboração dos fundamentos epistemológicos e a estruturação da estratégia pedagógica para a iniciação dos ensinos primários em Balonmano.
Conclusões: conclui-se que a estratégia pedagógica é relevante e aplicável na prática, contribuindo para a introdução do handebol a alunos do ensino fundamental no âmbito do Esporte para Todos.

Palavras-chave: estratégia pedagógica; Educação Física; Esporte para Todos; iniciação esportiva; Handebol.

INTRODUCTION

Physical education in schools is an essential component of the holistic development of children and adolescents, as it contributes to the harmonious development of their physical, cognitive, and socio-affective capacities. In this context, sports initiation represents a fundamental pedagogical process that allows students to be introduced to the systematic practice of different sports, fostering the development of motor skills, the

acquisition of values, and the formation of healthy habits related to physical activity (Ramos, Rodríguez & Rodríguez, 2023).

In recent decades, sports initiation has gained increasing relevance in the educational field due to its impact on fostering active lifestyles and promoting health at an early age. From this perspective, several studies agree that the sports initiation process should be conceived as a gradual formative process, where technical and tactical learning is integrated with the development of physical, psychological, and social skills in students (Llamas, Barreras, Soto & Franco, 2023).

Within this process, the Sport for All approach takes on special significance by promoting inclusive and participatory sports practice among school and community populations. This model's fundamental objective is to guarantee access for all individuals to the systematic practice of physical exercise, regardless of their physical condition, abilities, or sporting interests, thus contributing to the human and social development of communities (Rodríguez, Rodríguez & Crespo, 2021).

In the school setting, Sport for All becomes a pedagogical tool that encourages the active participation of students in physical and sporting activities, promoting the development of values such as cooperation, respect, discipline, and teamwork. Similarly, this approach allows for the integration of Physical Education curriculum activities with sports and recreational programs developed in the community, thus strengthening the process of sports initiation from an early age (Ramos, *et al.,* 2023).

In the specific case of team sports, recent scientific literature highlights the importance of applying teaching approaches that prioritize learning through play, the resolution of motor situations, and the active participation of students in the learning process. These methodological approaches allow the technical and tactical demands of sports to be adapted to the psychomotor characteristics of schoolchildren, facilitating progressive and meaningful learning (Tipán & Dávila, 2023).

Among the team sports that have achieved remarkable development in the school setting is handball, considered a discipline that significantly contributes to the development of motor, cognitive, and social skills in students. This sport is characterized by its dynamism, its collective nature, and the need for cooperation among players, which fosters the development of values related to teamwork and decision-making during the game (Pombo, 2024).

In the Cuban context, the development of Sport for All has been one of the main strategies for promoting the systematic practice of physical activity among the population, particularly children and young people. Through this program, various actions have been implemented to strengthen the widespread participation in sport and the development of a physical culture in society, integrating school physical education activities with sports and recreational programs developed in communities (Ramos, Rodríguez & Rodríguez, 2023).

However, several studies show that there are still limitations in the organization and development of the sports initiation process in certain team sports within the school environment, which is manifested in methodological deficiencies in the teaching of technical fundamentals, scarce use of pre-sports games and limitations in the preparation of teachers to lead this process (Llamas, *et al.*, 2023).

Observations of Physical Education classes, the Sport for All program, and schools; document analysis; and interviews with teachers and specialists revealed several limitations affecting students' introduction to handball, such as: (1) the sports initiation process in primary Physical Education focuses on various individual and ball sports; however, it lacks a project or major sporting or recreational event to promote students' introduction to handball; (2) Physical Education teachers lack sufficient theoretical and methodological knowledge to teach the handball unit; (3) the analysis of the Physical Education program for primary education revealed that the handball unit contains insufficient pre-sports exercises and games, as well as inadequate methodological guidelines; (4) insufficient pedagogical actions in the school strategy and the Program of

Organization of Sport, Physical Education and Recreation in primary schools that contribute to the initiation of students to Handball.

Based on the identified shortcomings, the following problem arises: How can we contribute to introducing primary school students to handball within the framework of Sport for All? Accordingly, this research aims to develop a pedagogical strategy, grounded in a theoretical framework, that will contribute to introducing primary school students to handball within the context of Sport for All.

MATERIALS AND METHODS

The research was conducted in the Jesús Menéndez People's Council of Bayamo, in the province of Granma, which has ten primary schools. The "4 de abril" primary school was selected as the sample using a purposive, non-probabilistic sampling method because it is a graded school, has four fifth-grade classes, and was initiating the third phase of educational improvement. In addition, the 30 physical education teachers from the sports complex participated in the research.

The inclusion criteria considered were: primary school Physical Education teachers from the "Jesús Menéndez" sports complex with at least two years of experience in teaching handball, and fifth grade students enrolled in the "4 de abril" primary school during the 2023-2024 school year.

The analytical-synthetic, inductive-deductive, systemic-structural-functional methods, document analysis, expert judgment, and the Chanlat Matrix technique were used . For the initial diagnosis, the following were applied: an observation guide for Physical Education classes (10 observations), semi-structured interviews with teachers (30), document analysis of the Physical Education program and the Sports Organization Program, and a questionnaire for students (120 students).

RESULTS AND DISCUSSION

The research was developed in three stages: diagnosis, development of the pedagogical strategy, and implementation and evaluation. The diagnosis (September 2023-April 2024) determined the units of analysis: Physical Education and Sport for All, and the teachers and students (Table 1).

Table 1. *Dimensions and indicators*

DIMENSIONS	No.	INDICATORS
	1.1	Delivery of the handball teaching unit
Pedagogical	1.2	Application of the pedagogical models of Physical Education
	1.3	Creation of educational resources
	1.4	Preparation of Physical Education teachers
Sports	2.1	Teacher orientation and familiarization with handball practice
	2.2	Sports and recreational projects and mega-events
	23	competitive school system
Psychological	3.1	Students' tastes and preferences
	3.2	Students' attitude towards the practice of handball
	3.3	Level of student satisfaction with handball

The diagnostic results reveal limitations in teachers' methodological preparation, insufficient use of pre-sports games, and limited incorporation of systematic sports activities into the Sport for All program. These findings align with Ramos, Rodríguez, and Rodríguez (2023), who emphasize the need to integrate Physical Education with community activities to promote broader student participation.

These results also demonstrate the need to strengthen pedagogical strategies for teaching handball in primary education. In this regard, Llamas *et al.* (2023) suggest that applying pedagogical strategies in school physical education allows for the systematic organization of educational activities aimed at developing motor skills and learning the technical fundamentals of sports.

Similarly, the proposed pedagogical strategy for introducing handball is based on the need to implement active methodologies that encourage student participation in the teaching-learning process. Several recent studies highlight that game-based approaches

are among the most effective alternatives for teaching team sports in the school context, as they allow for the simultaneous development of students' physical, technical, and tactical skills (Serra, González, and García, 2021).

In this sense, the use of pre-sports games as part of the sports initiation process allows the demands of the sport to be adapted to the psychomotor characteristics of schoolchildren, facilitating progressive and motivating learning. Research conducted by Tipán & Dávila (2023) demonstrates that the application of pre-sports games promotes the development of basic motor skills and improves the understanding of the technical fundamentals in team sports.

The second phase took place from May to July 2024, where, based on the results of the diagnosis, the actions of the pedagogical strategy were planned and the feasibility of application was assessed.

Epistemological foundations that support the pedagogical strategy

Objective: to contribute to the introduction of primary school students to handball in Sport for All.

Phase I. Diagnosis of the initial state of sports initiation

Objective: To characterize sports initiation in the context of Sport for All in the primary schools of the "Jesús Menéndez" sports complex.

Actions:

1. Selection of the socializing agents who participate in the research.
2. Development of instruments and methodology for their use.
3. Determining the fundamental problem of sports initiation.
4. Sample selection.
5. Pilot testing.

Phase II. Planning the Pedagogical Strategy

Objective **:** to plan the phases and actions of the pedagogical strategy.

Actions:

1. Establishing strategic alliances with Physical Education teachers to design the actions to be developed.
2. Assessment with the Physical Education teachers of the positive and negative results of the diagnosis.
3. Organization of work sessions at school.
4. Development of workshops for physical education teachers.
5. Planning of educational, sports and recreational activities.
6. Preparation of the handball pre-sports games manual.
7. Pioneering Handball " project

Phase III. Implementation of the Pedagogical Strategy

Objecive: To implement the actions of the pedagogical strategy.

Actions:

1. Implementation of the professional development course for Physical Education teachers.
2. Development of workshops for Physical Education teachers on the creation of alternative equipment for handball.
3. Conducting discussions with the students.
4. Development of sports and recreational activities in schools within the framework of Sport for All.
5. Screening of handball competition videos.
6. Organizing meetings with sports legends and school athletes from the sport of handball.
7. Delivery of the handball teaching unit.

8. Pioneering Handball" project in Sport for All.

Phase IV. – Evaluation of the effectiveness of the Pedagogical Strategy

Objective: to assess the feasibility and practical effectiveness of the pedagogical strategy.

Actions:

1. Preparation of the necessary clarifications and adjustments for the improvement of the pedagogical strategy.
2. Comparison of the correspondence between the previously prepared proposal and the results achieved.
3. Assessment of the relevance and effectiveness of the pedagogical strategy in the sports initiation process in Sport for All (Figure 1).

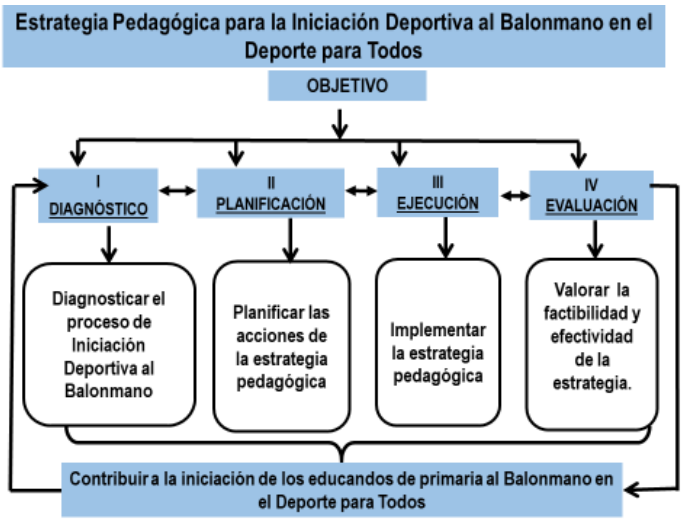


Figure 1. *Pedagogical strategy for introducing primary school students to handball through Sport for All*

Premises of the pedagogical strategy:

- Sport for All as the center of the sports initiation process.
- The Physical Education teacher as the main socializing agent.

- Attention to diversity.

Results of the assessment of the expected effectiveness of the strategy

The expected effectiveness of the strategy (EEE) was assessed using the Chanlat Matrix (Rosales, 2023). To determine the expected effectiveness, three variables were considered: functionality (F), related to the purpose; opportunity (O), referring to the suitability of implementing the pedagogical strategy, based on the theoretical framework; and impact (I), framed within the influence of said strategy. The assessment made by the specialists allowed for prescribing the expected effectiveness of the strategy (EEE) and then making logical adjustments based on the suggestions provided (Table 2).

Table 2. *General characterization of the selected specialists*

Scientific or academic level	Quantity	Category teaching	Quantity	Years of Exp .	Quantity	Specialty	Quantity
Doctor	9	Holder	7	+30	6	Physical education	3
Specialist		Assistant	5	21 to 30	4	Sport	4
Master	3	Assistant		10 to 20	2	Pedagogy	3
Graduate						Psychology	2
Total	12		12		12		12

The following formula is used to calculate the expected effectiveness of the strategy (EEE): $EEE = F\ x\ O\ x\ I\ (impact, functionality, opportunity)\ /\ 100$.

According to the aforementioned authors, scholars and creators of the Chanlat matrix , the classification of EEE results is used in the following ranges:

- If EEE is greater than 8, the strategy is considered strong.
- If EEE is between 5 and 7, the strategy is considered medium.
- If EEE is less than 5, the strategy is considered weak.

Furthermore, the results obtained in the evaluation of the expected effectiveness of the pedagogical strategy, based on expert criteria, demonstrate a high level of acceptance of the proposal, which is reflected in the value obtained for the expected effectiveness of the strategy (EEE). This result confirms the relevance of the proposed pedagogical strategy for facilitating the process of introducing handball to children within the context of Sport for All.

In accordance with the above, Pombo (2024) points out that the planning of the handball teaching process in the school context should be oriented towards pedagogical models that integrate the teaching of technical fundamentals with the active participation of students in real game situations. This perspective coincides with the conception of the pedagogical strategy proposed in this research, which is based on the use of playful, sporting, and recreational activities that foster students' motivation to practice handball.

The results obtained from the specialists' assessment are as follows: regarding functionality, when tabulating the results of their indicators, the structuring of the strategy stands out as having the lowest average with a mean of 8.7; regarding opportunity, the disposition and support of the socializing agents stands out as having the lowest average with a general mean of 9.0; and in terms of impact, the expected acceptance has an impact with a mean of 8.8. After the assessment of the variables and indicators, the formula established by the technique was applied and the final result of the expected effectiveness of the strategy was obtained (Figure 2).

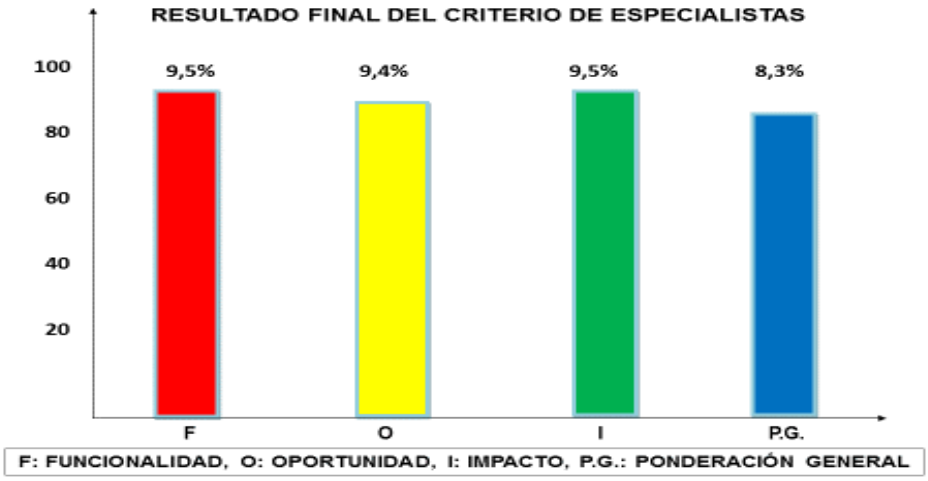


Figure 2. *Results of the expert criteria based on the effectiveness indicators*

The analysis of the expected effectiveness of the strategy, based on the theoretical framework of sports initiation, using the aforementioned formula, yielded a score of 8.48 out of a maximum of ten. This score, when applied to the evaluation scale, indicates strong expected effectiveness. Therefore, it is considered that the proposed pedagogical strategy will contribute to the introduction of students to handball at the "4 de abril" primary school in the municipality of Bayamo.

In this regard, the results obtained in this research demonstrate that the proposed pedagogical strategy constitutes a viable alternative for improving the process of introducing children to handball in primary education. The implementation of pedagogical, sports, and recreational activities within the Sports for All program promotes the active participation of students and contributes to the development of motor skills, social values, and habits of systematic physical activity. Therefore, the pedagogical strategy developed is considered to have high potential for contributing to the improvement of the process of introducing children to handball in schools, as well as for strengthening the integration between school physical education and community sports activities.

CONCLUSIONS

The process of introducing handball to students in primary school has shortcomings in its current conception, which negatively influence the education of students from the perspective of Sport for All.

The systematization of the theoretical conceptions of the strategy as a scientific result allowed the foundation and structuring of the Pedagogical Strategy to promote the initiation of handball in Sport for All.

The implementation of the Pedagogical Strategy contributed to enhancing the initiation of handball sports among students at the "April 4th" primary school, part of the Jesús Menéndez sports complex in the municipality of Bayamo.

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.Conflict of interest:

The authors declare no conflicts of interest.

Authors' contribution:

The authors have participated in the writing of the work and analysis of the documents.

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