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Methodology to Conduct the Sports Initiation to Basketball from Sport for All

Metodología Para Conducir La Iniciación Deportiva Al Baloncesto Desde El Deporte Para Todos

Metodologia Para Realizar A Introdução Esportiva Ao Basquetebol Do Esporte Para Todos

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ABSTRACT

The insufficient methodological indications to lead the school sports initiation to Basketball by the professionals who work in Physical Education, motivated the development of the



research whose objective was to design a methodology with a developmental teaching approach to lead the school sports initiation to Basketball from Sport for All in the ages of 8-9 years. The research was based on the need to promote in professionals a leadership that fosters creativity, independence and the protagonism of the students. Methods such as historical-logical, analytical-synthetic, inductive-deductive, modeling, documentary analysis, survey, interview, expert criteria, the experiment, as well as statistical-mathematical methods were used. A quasi-experiment was applied, where teachers and students from the municipality of Palmira were experimental, while the municipality of Lajas was taken as a control. The methodology contains indicators and measurement criteria to evaluate the performance of the subjects involved, it shows the organization of the content for each phase of initiation, moments for its implementation, integration of its components, productive methods, as well as methodological requirements for a developmental teaching from Sport for All. The results allowed to verify the validity and applicability of the methodology, by showing significance between the experimental group compared to the control group.

Keywords: Methodology, school sports initiation, Basketball, Sport for All

RESUMEN

Las insuficientes indicaciones metodológicas para conducir la iniciación deportiva escolar al Baloncesto por los profesionales que laboran en la Educación Física, motivaron el desarrollo de la investigación cuyo objetivo fue diseñar una metodología con enfoque de enseñanza desarrolladora para conducir la iniciación deportiva escolar al Baloncesto desde el Deporte para Todos en las edades de 8-9 años. La investigación se fundamentó en la necesidad de potenciar en los profesionales una conducción que propicie la creatividad, independencia y el protagonismo en los educandos. Se emplearon métodos como el histórico-lógico, analítico-sintético, inductivo-deductivo, modelación, análisis documental, encuesta, entrevista, criterios de experto, el experimento, así como métodos estadísticos-matemático. Se aplicó un cuasiexperimento, donde profesores y educandos del municipio de Palmira fueron experimentales, mientras que de control se toma al municipio de Lajas.



La metodología contiene indicadores y criterios de medida para evaluar el desempeño de los sujetos implicados, muestra la organización del contenido para cada fase de la iniciación, momentos para su implementación, integración de sus componentes, métodos productivos, así como requerimientos metodológicos para una enseñanza desarrolladora desde el Deporte para Todos. Los resultados permitieron comprobar la validez y aplicabilidad de la metodología, al mostrar significación entre el grupo experimental en comparación con el grupo de control.

Palabras clave: Metodología, iniciación deportiva escolar, Baloncesto, Deporte para Todos

RESUMO

As insuficientes indicações metodológicas para a realização da iniciação esportiva escolar ao Basquetebol por profissionais que atuam na Educação Física, motivaram o desenvolvimento da pesquisa cujo objetivo foi desenhar uma metodologia com abordagem de ensino desenvolvimentista para a realização da iniciação esportiva escolar ao Basquete a partir do Esporte para todas as idades. 8-9. A pesquisa baseou-se na necessidade de promover liderança nos profissionais que promova a criatividade, a independência e o protagonismo nos estudantes. Foram utilizados métodos como histórico-lógico, analítico-sintético, indutivo-dedutivo, modelagem, análise documental, levantamento, entrevista, critério pericial, experimento, além de métodos estatístico-matemáticos. Foi aplicado um quase-experimento, onde professores e alunos do município de Palmira foram experimentais, enquanto o município de Lajas foi tomado como controle. A metodologia contém indicadores e critérios de mensuração para avaliar o desempenho dos sujeitos envolvidos, mostra a organização do conteúdo para cada fase de iniciação, momentos para sua implementação, integração de seus componentes, métodos productivos, bem como requisitos metodológicos para o ensino desenvolvimental. do Esporte para Todos. Os resultados permitiram verificar a validade e aplicabilidade da metodologia, mostrando significância entre o grupo experimental em comparação ao grupo controle.

Palavras-chave: Metodologia, iniciação esportiva escolar, Basquete, Esporte para Todos



INTRODUCTION

The initiation to sport has been the subject of study by a group of authors: Griego (2019); Arronte and Ferro (2020); Vicente et al., (2020), who have represented the process, have established methodologies and tests to evaluate technical-tactical development, as well as have correlated motivation and basic psychological needs in sport from sports training.

More recent studies such as Griego et al., (2021); Rodríguez et al., (2022); Torres et al., (2022); have determined the behavior of the typical phases of the game, have studied the need to awaken interest in sport from pedagogy; have supported the concern to contextualize sports teaching and establish the characteristics that differentiate it from sports training.

Another group of authors have analyzed the process from the influence that work exerts on Physical Education: among them, Tóala et al. (2019) stand out; Zayas (2019); Eduarte et al. (2020). They identify the existing needs for their improvement: In fact, they agree on the particularities of the initiation to sport, giving importance to the guidance carried out by professionals in Physical Education, their empowerment in the selection and identification of talents, the popularization of sport in schools and the community as a basis for further learning.

However, there are shortcomings in how the introduction to sport should be conducted from Physical Education, and what methodological procedures should be known by professionals working in this context. This situation is corroborated by the criteria of the aforementioned authors, when referring potentially to the basis of the process in the school stage. In addition, there are few guidelines, criteria and methodological indications for the conduct of said process based on a teaching approach that encourages creativity, protagonism and independence in the student in the teaching-learning process.

Among the activities carried out by professionals working in Physical Education, we can identify Sport for All, which according to Blázquez et al. (2010), tries to promote sports practice for recreational purposes; it is characterized by the realization of physical and sports activities where the tastes and preferences of the students are taken into account



(Oliva et al., 2011, p. 5). While, for the International Federation of Physical Education (FIEP), it is a means of initiation into sports (Tubino, 2000, p. 12).

Among the activities carried out by professionals in Cuba is the practice of basketball, which is developed through projects approved by the National Federation of this sport, with the purpose of bringing the practice closer to the work carried out by professionals in Physical Education.

For Baumann and Radovic (2005, p. 108), members of the International Basketball Federation (FIBA), there is agreement on the importance that should be given to the introduction to sport through Physical Education; stating that "... Mini-Basketball is an initiative to start in childhood with the teaching of habits, attitudes, fundamentals and techniques. It is the way to promote sport through the activities developed by the Physical Education teacher through practical activities such as running, jumping, changing speed and direction, dribbling a ball and shooting at a target, which represents a main feature of the curriculum."

Therefore, when studying the research carried out in the sport of Basketball, we can identify Diaz and Dopico (2019); Eduarte et al., (2020); Castro (2022); who provide actions for methodological improvement, the work of the basic foundations in sport in the initiation stage.

However, the results of these investigations do not contemplate the conduct of the initiation to the sport of Basketball at the school stage by professionals who work in Physical Education. In fact, no contemporary learning strategies, indications, orientations or methodologies for work at this stage are proposed that promote creativity, protagonism and independence in the student. Something that is possible from the application of productive methods and procedures that stimulate the solution and production of new knowledge from this context, where the ideal ages for the initiation to the sport of Basketball will be found.

When delving into the different ideal ages for initiation into sports, we agree with Giménez et al., (2010); Zurlo and Casasnovas (2012) and Tóala et al., (2019) in stating that between



seven and 11 years are the optimal ages for Basketball , as it is the stage in which the assimilation necessary to learn and understand a given task begins. From here, it is suggested to begin with pre-sports activities or adapted games. In addition, these ages correspond to what is proposed in the Comprehensive Program for the Preparation of Athletes (PIPD) for the 2017-2020 stage according to Monteagudo et al., (2016) and the Collectives of Authors (2022). This originates in the design of the provisional programs for Physical Education at the primary educational level during the III Cuban Educational Improvement.

In research carried out by Eduarte et al., (2019, 2020) it is identified that: the guidelines or methodological indications for conducting the process in Basketball at the initiation stage are insufficient, the methodological procedures of the teachers are based on traditional teaching models, reproductive methods, teaching styles where direct command predominates and organizational procedures that do not promote creativity, independence and protagonism in the students.

Therefore, the scientific problem is defined as: How to improve the conduct of the initiation to the sport of Basketball in the ages of 8-9 years?

By determining these shortcomings of the science under study, the objective of the research is to design a methodology with a developmental teaching approach to conduct the initiation to the sport of Basketball from Sport for All in the ages of 8-9 years.

MATERIAL AND METHODS

Different methods were used in the research, which allow to support the methodology used, within the theoretical methods, the historical-logical one when studying the background of the object of study and the main trends, the analytical-synthetic one in the characterization of the object and field of action of the research. Also highlighted is the interpretation of the theoretical-methodological foundations of the proposal and its design; and the inductive-deductive one in the determination of the particularities for the conduction of the initiation to sport and to be able to arrive at conclusions and recommendations.



Empirical methods use: a documentary review to identify the regularities and aspects that govern and organize methodological activities. The training of sports teachers and coaches who work in Sport for All from Physical Education is also studied; the guidelines of the Comprehensive Program for the Preparation of Athletes (PIPD, 2017-2020) are reviewed for initiation ages, and reports on the main methodological irregularities detected during visits to these professionals are published. Surveys are applied to basketball coaches and physical education teachers at the primary education level to obtain information about how the process under investigation is conducted.

The structured interview with Physical Education and Basketball directors to find out the guidelines they offer and considerations on how the process develops in professionals working in Physical Education.

Indirect structured observation, to identify how driving is carried out in practice and to identify the difficulties faced by professionals working in Physical Education in Sport for All classes.

The criteria of experts, to assess from theory the validity and applicability of the methodology, determine the indicators, their definitions, measurement criteria, components and their structure.

Three specialists who participate in the methodological group for the III Improvement of Physical Education in Cuba were used to make the observations at each moment. 33.9% of Physical Education teachers at the primary education level and 52.2% of Basketball coaches who were linked to the work at the base in Cienfuegos were surveyed.

58% of the directors of the province of Cienfuegos were interviewed, 17 of whom were from the National Institute of Sport, Physical Education and Recreation (INDER), seven from the Ministry of Education (MINED) in Cuba and five who have participated in the direction of basketball in the province. Seventeen experts were also employed for the theoretical evaluation of the designed proposal.

Procedures



For the observations, the guide established for work in Physical Education by the National Department of INDER in Cuba was used. These were carried out from October to November 2017.

The three observers underwent training before carrying out the observations in order to achieve consensus on the criteria issued, taking into account Terry's steps (2008). The training lasted three weeks, through two theoretical meetings and four practical meetings:

- Theoretical meetings: the intention of the research is made clear, what is to be evaluated is specified, the willingness to participate is confirmed, any doubts that arise in the understanding of the document delivered are clarified, the indicators to be evaluated are analyzed and each observer's interpretation is provided. Considering that the theoretical stage was ready, the practical meetings are planned.
- Practical meetings: for this purpose, it was decided to observe video editions related to classes and activities of Sport for All, where the actions of the Basketball sport will be reflected. After several meetings, a total agreement was reached among the observers in the evaluations of each one of them. After these four practical preparation meetings, the results demonstrated concreteness in the observers' criteria and it was decided to proceed with the observations of the research. It should be noted that the teachers of the groups that would be evaluated also participated in this preparation.

Data quality control (reliability) is achieved through the precision and accuracy of the observations made, in this case agreed upon by the three observers. A professional SAMSUM recording camera is used for data collection, which allows for the recording of all the actions of teachers and students. This is followed by quality control, using agreed upon agreement as one of the ways to determine reliability. Unlike other ways of controlling data quality, consensus in data collection among participating observers was achieved before recording and not after. The procedure was as follows:

- 1- The recordings were made as previously stated.
- 2- Observation of the recordings.
- 3- Discussion among observers, to assign the evaluation to the action developed.



4- Record the evaluation agreed upon by the observers.

The interview was conducted individually with open and closed questions, where each interviewee expressed their criteria regarding the topic in question, in order to subsequently identify the regularities of the process. It was conducted in December 2017.

The survey was prepared by professors from the Department of Physical Education Didactics at the Faculty of Physical Culture of Cienfuegos, in a discussion group held for that purpose. Open and closed questions were prepared and the pilot test was carried out in December 2017. It was applied in January 2018.

Expert criteria: to theoretically assess the designed proposal, before its practical implementation. They were selected based on their mastery of the subject, interest and time in participating, knowledge of Physical Education, Sports Training, Pedagogy and Basketball; in addition to more than 15 years of experience. Through the application of a questionnaire, their coefficient of knowledge, argumentation and competence was determined, selecting those with the highest coefficient. The questionnaire was applied between April and May 2018.

RESULTS AND DISCUSSION

In the documentary analysis, the indications of the National Department of Physical Education in Cuba, the PIPD, Physical Education Programs and the indications for Sport for All, provincial reports on visits to the different municipalities, plans for the improvement of Physical Education teachers were reviewed, detecting that:

- In the PIPD (2017-2020) the indications reflect the methodological and didactic actions that the coach must carry out from the initiation to the sport of Basketball to high performance.
- There are no methodological guidelines on what should be included and how to direct the introduction to the sport of basketball at the primary education level.
- The evaluation system is based on meeting the size regulations, awarding 10 points, the completion of technical tests before a court (50 points) and the result of the



competition (40 points). To this end, a comprehensive evaluation is implemented in the events held, without taking into account indicators and measurement criteria to evaluate the systematic performance of teachers and students.

- The teachers' methodological procedures are based on traditional teaching styles, reproductive methods, where direct command predominates, and organizational procedures that do not encourage the protagonism of students.
- Insufficient use of contemporary teaching styles to direct the process that stimulates creativity, independence and production of new knowledge.
- Lack of activities to promote individualization and work in small groups within the classroom, without taking into account activities aimed at the most gifted students or those with difficulties.
- To evaluate the performance of professionals in Physical Education classes, the traditional guide is used, and for the student, systematic evaluations, systematic and partial controls, Physical Efficiency Test and Intramural Competition are used. There are no indicators with their measurement criteria to evaluate the performance of teachers and students for Sport for All.

The results of the indirect structured observation (following the steps of Anguera and Hernández, 2013), regarding the direction of the initiation to the sport of Basketball, it was found that:

- The teachers demonstrate mastery of the structural elements for the initiation to the sport of Basketball, and also demonstrate in their explanations and practical demonstrations knowledge about the treatment of the basic fundamentals, which aspects should be worked on at these ages. However, this is not updated, contextualized and does not encourage creativity and independence in the work from Sport for All.
- The teachers in question at the ages of 8-9 do not apply productive approaches, so the learners are not active in their cognitive development.



- The objectives are formulated in such a way that they do not allow for production, independence and creativity in the development of classes; their wording is directed at what they have to do and how they should do it.
- No discovery activities are proposed, based on the characteristics of the game of Basketball.

Regarding the deficiencies detected in the students, Table 1 shows the results obtained from the observed regularities. For a better understanding, it can be explained that the first column shows the errors detected; the second shows the frequency with which the error was observed; and the third column reflects the percentage of all the observations made. Finally, the last column reflects the sum of the accumulated percentages between the deficiencies or all the errors observed.

Table 1. Results of observations in the diagnosis

Offensive movements without the ball			
Difficulties detected	Frequency	Valid percentage	Cumulative percentage
Race with difficulties in support	6	28.6	28.6
Arm and leg work	8	38.1	66.7
Loss of balance	5	23.8	90.5
Maintain a high position	2	9.5	100.0
Ball grip with 2 hands			
Hand placement	5	23.8	23.8
Grasp the ball with the palms of your hands	7	33.3	57.1
	4	19.0	76.2
Separation of the elbows from the body			
Protect the ball	5	23.8	100.0
Pass with 2 hands			
Do not extend your arms	6	28.6	28.6
Working with the legs	3	14.3	42.9
Coordination of legs and arms	11	52.4	95.2



Direction of the pass	1	4.8	100.0
Reception with 2 hands			
Do not extend your hands to receive	9	42.9	42.9
Coordination of legs and arms	1	4.8	47.6
2-handed grip and ball protection	5	23.8	71.4
Take your eyes off the ball's path	6	28.6	100.0
Driving the ball with both hands alternately			
Ball control	9	42.9	42.9
Ball dribbling mastery	4	19.0	61.9
Hit the ball	4	19.0	81.0
Keep your eye on the ball	4	19.0	100.0
2-handed hoop shot			
Leg and arm placement	4	19.0	19.0
Ball grip	9	42.9	61.9
Coordination of legs and arms	4	19.0	81.0
Arm extension during throwing	4	19.0	100.0
Self-defense in a small area			
Do not bend your legs	4	19.0	19.0
Keep your eyes down	4	19.0	38.1
Crossing your legs when moving	6	28.6	66.7
Moving by lifting your feet	7	33.3	100.0
3 vs 3 game			
Teamwork	4	19.0	19.0
Applying the fundamentals of the game	10	47.6	66.7
Application of the rules of the game	5	23.8	90.5
Collective effort to achieve success	2	9.5	100.0

In the survey of Physical Education professionals, it was found that:

- 76.4% consider that they do not feel prepared to lead the introduction to the sport of Basketball at the ages of 8-9 years.



- 73.6% of teachers say that there are few productive instructions or methods to guide the introduction to the sport of basketball in the activities of Sport for All.
- In the joint operation between Physical Education teachers and Basketball coaches at the base, 94.4% indicate that they do not respond to what is established in the INDER-MINED agreement.
- 86.1% reported that they are *not* aware of any official document that guides the direction of initiation into the sport of basketball in extracurricular activities.
- By pointing out the three main weaknesses in the initiation to the sport of Basketball in the ages of 8-9 years from Sport for All, they state that *preparation, self-preparation, improvement and training* are the main deficiencies that will correspond to 65.3% of the interviewees.

In the survey of basketball coaches, the results obtained were the following:

- They consider the initiation to the sport of Basketball at ages 8-9 years *No* has difficulties represented in 73.2%, which leads to interpreting that the difficulty is not in the initiation from sports training but in what the work in Physical Education can contribute.
- They point out that the weaknesses that still persist in the initiation to sport at the ages of 8-9 years are directed at *methodological preparations* for 48.8% and professional *development* represented by 29.3%.
- The preparation of Physical Education teachers to lead the introduction to the sport of Basketball is evaluated as *poor* or *regular* for 56.1% and 41.5% respectively.
- Knowledge of official documents to lead the process from Sport for All, 52.4% consider it affirmatively and 47.6% negatively, this aspect has had a different criterion to that issued by the Physical Education teachers and that has been corroborated by the researcher in the theoretical review carried out.



- Regarding the way students are evaluated, 77.8% stated that it was through compliance with size regulations, physical and technical tests and their performance in the game, 13.8% attendance, discipline and technical progress achieved during the game and 8.4% based on the agreement established between INDER and MINED.

Interviews with methodologists and managers of the basketball sport in the province of Cienfuegos, with the aim of verifying knowledge, criteria and points of view, showed that:

- 86% agree that the initiation of basketball in the 8-9 age group requires greater attention and preparation from professionals working in Physical Education.
- 44.8% claim that the weaknesses in the process from a methodological point of view are related to the *preparation, self-preparation and the methodological treatment* carried out respectively.
- 96% say that there are few methodological guidelines for conducting the initiation process to Basketball from Sport for All.
- 69% consider the need to enhance the methodological work of professionals who work in Physical Education, to improve the management of the introduction to the sport of Basketball from Sport for All.

Structuring of the methodology with a developmental teaching approach for conducting the introduction to the sport of Basketball from Sport for All in the ages of 8-9 years and the theoretical assessment through the criteria of experts.

Based on the results obtained in the diagnosis, it was determined to design the development methodology following the steps proposed by De Armas (2011). Its organization was as follows:

- a) General objective.
- b) Justification.
- c) Cognitive apparatus that supports the methodology.



- d) Stages that make up the methodology as a process.
- e) Procedures corresponding to each stage or link.
- f) Total or partial graphic representation whenever possible.
- g) Evaluation.
- h) Recommendations for its implementation.

The objective of the methodology is aimed at improving the initiation to the sport of Basketball, its theoretical foundation, its impact on teachers and students, as well as what supports it from the Epistemological, Philosophical, Psychological, Pedagogical, Sociological and Didactic (for a developmental teaching). The conceptual apparatus is built based on the implementation in the III Improvement of the National Education System in Cuba according to the Higher Institute of Pedagogical Sciences (Navarro et al., 2021) , a system of principles for work in Physical Education and School Sports, productive methods that guarantee developmental teaching and operational concepts that support the methodology.

The instrumental apparatus that supports the methodology is determined, the variable where the research has an impact (the conduction of the initiation to the sport of Basketball from Sport for All), its conceptualization is determined, as well as its dimensions where the developing methodology will have an impact: teachers and students.

Following the steps, sections that make up the methodology is carried out . Initially, the evaluation indicators are determined for each of the dimensions of the variables to be worked on. For the review and determination of the indicators as important elements that will characterize the development methodology, the eight steps addressed by Campistrous and Rizo (2003, p.139) were taken into account as a theoretical foundation.

Firstly, by carrying out a review of the indicators that influence the initiation to sport at the school stage and then by informally consulting experts to determine the initial set of



indicators that influence the management of the process in professionals working in Sport for All.

After determining the initial set of indicators for the introduction to the sport of Basketball from Sport for All in professionals working in Physical Education, after a first round of 39 indicators (17 for teachers and 22 for students), a second round is carried out to reduce these and bring them closer to the work carried out by professionals in Sport for All. This allows reducing them to 19 indicators (nine for teachers and 10 for students), to then proceed to the assessment of all the indicators using the criteria of experts, with the purpose of ensuring their scientific nature.

29 professionals were identified, who based on the requirements demanded by this research formed the initial pool of potential experts (interest and time to participate in the research, experience in working in Physical Education at the primary educational level, specialists in the subjects of Basketball, Theory and Methodology of Physical Education, Pedagogy, Psychopedagogy and Sports Training, more than 15 years of experience in teaching, knowledgeable on the proposed topic and with mastery of the need to initiate the basic fundamentals in sport, specifically in team sports with a ball and endorsed scientific and teaching category).

After calculating all the competence coefficients (K) of the 29 possible experts according to the steps proposed by Crespo (2007, p. 13). Where the coefficient was calculated using the expression: $K = \frac{1}{2} (K_c + K_a)$ K_c : knowledge coefficient and K_a : argumentation coefficient. After carrying out the corresponding calculations, the researcher considered having as experts the 17 who presented the highest coefficients, for the sake of greater scientific rigor, selecting 10 experts with a high coefficient with parameters between 0.85 and 0.95 and seven experts, with a medium coefficient between the parameters 0.7 and 0.80.

Next, each expert weighed the indicators that would help evaluate the direction of the initiation to the sport of Basketball, given in one of the 10 categories and once done, the corresponding calculations were carried out in the statistical package Excel, where the tables of frequencies and accumulated relative frequencies were obtained.



The results allowed us to define the indicators, based on those that reached values between eight and 10 points. According to the weighting criteria given by Lanuez et al., (2008), which state that:

- When values reach below 5 they are considered unsuitable.
- When the values are between 6.1 and 7, they are not very suitable.
- When the values are between 7.1 and 8, it is appropriate.
- When the values are between 8.1 and 9, it is quite adequate.
- When the values are between 9.1 and 10, it is very appropriate.

The following indicators were defined from this scale:

For the teacher dimension, the following indicators were determined:

- Components of the teaching process (rating 9.4).
- Favorable climate for learning (rating 8.9).
- Communication between teacher and student (rating 9.4).

For the student dimension, the following indicators were determined:

- Movements without the ball (rating 8.5).
- Two-handed passes (rating 8.6).
- Two-handed reception (rating 9.7).
- Ball handling with both hands alternately (rating 9.3).
- Two-handed basket shot (rating 9.1).
- Game in numerical equality on offense (rating 9.1).
- Game in numerical equality in defense (rating 9.7)

The methodology.



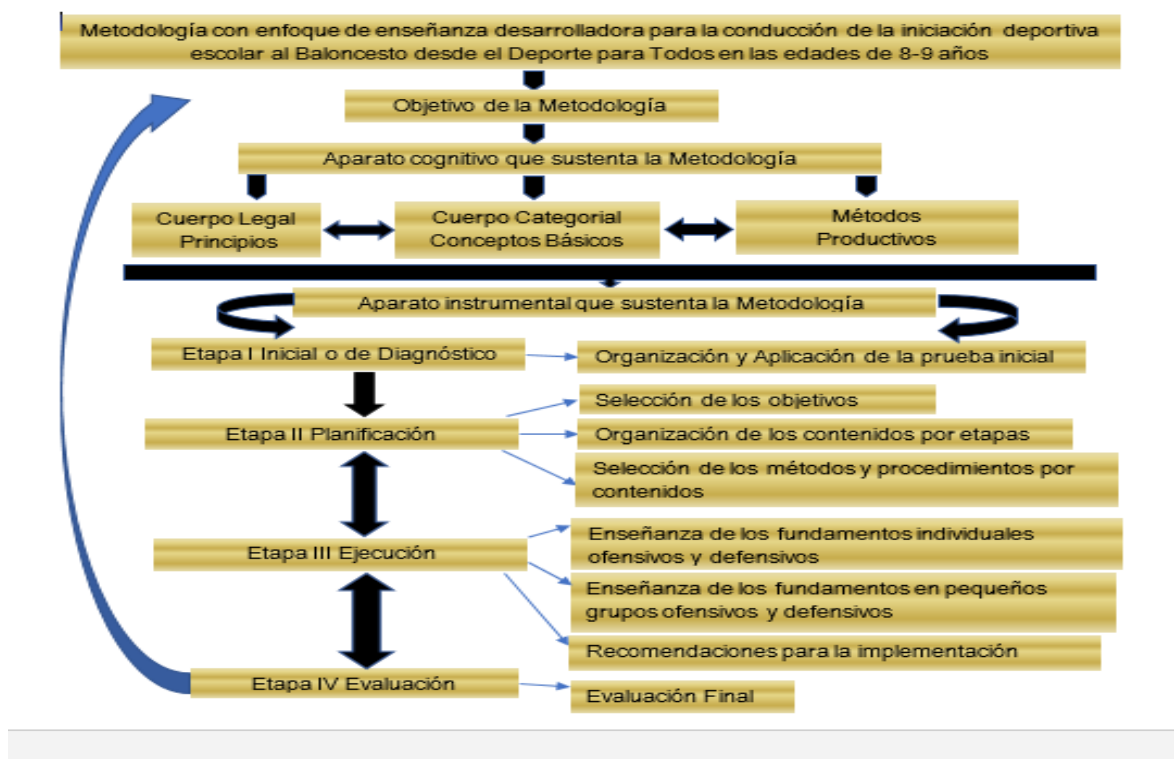


Figure 1. Graphical representation of the methodology

The pretest was based on the direction of the introduction to the sport of Basketball from Sport for All by professionals working in Physical Education and consisted of: the recording and observation of six classes where the teacher develops the conduction of the basic fundamentals of Basketball and the students carry out one-on-one, two-on-two and three-on-three confrontations, observing the behavior of the indicators and measurement criteria developed for this research.

The observations followed the steps used by Terry (2008) , where the researcher decided to continue working with the three observers already selected previously in the diagnosis stage, as they were the same ones who participated in the preparation of the observation form and in the evaluation of the methodology, so they are already familiar with the indicators and measurement criteria to be evaluated designed for this research.

The behavior of four teachers in both groups was observed. They were selected because they were all graduates of higher education, they were part of the selected schools, they had the



desire and time to participate in the research, they had more than 10 uninterrupted years of work in Physical Education, they had been satisfactorily evaluated and they agreed on the methodological problems reflected in their previous evaluations. The indicators and measurement criteria for the pretest after six recorded observations behaved as follows:

When both groups were verified based on their initial results to determine the level of significance between them, the results obtained when applying the non-parametric Pearson Chi-square test were that the values ranged from 0.220 to 0.745, confirming that they are not significant for a 95% confidence interval percentage as shown in Table 2.

Table 2. Significance results for both groups in the pretest

Pretest results for both groups (Experimental and Control)	Next (bilateral)
Process Components.	,525
Favorable climate for learning	,220
Communication between Teacher-Student	,745

After the methodology has been implemented (10 weeks), the post-test or final test is carried out to verify the influence exerted by the independent variable in the experimental group, using the same instruments and means, the same number of observations used in the pre-test for both groups and the same schedule that they usually worked, observing six classes again.

By contrasting the statistical results and assessing the level of significance through the non-parametric sign test for a related sample, it is shown that for the experimental group there were significant changes from the results obtained when comparing the pretest and the posttest, however, in the control group the results obtained are not significant since their results are in the range between 0.250 and 0.500, higher than the values that indicate significance (values lower than 0.05 for a confidence range of 95%).

Table 3. Significance results for the experimental and control group teacher dimension



Pretest and posttest results of the Experimental group	Next (bilateral)
Process Components.	,000
Favorable climate for learning.	,000
Communication between Teacher and Student.	,000
Pretest and posttest results of the Control group	Next (bilateral)
Process Components.	,500
Favorable climate for learning.	,250
Communication between Teacher and Student.	,250

When analyzing the conclusive results and comparing both groups (Experimental and Control), their level of significance in the posttest shows that there was a significant transformation as shown in Table 4, when introducing the independent variable to the experimental group, providing transformations in the methodological procedures of the teachers, evidenced in the ranges of significance for both groups after applying the methodology, which were between 0.000 and 0.022, below 0.05 for a confidence range of 95%.

Table 4. Significance results of the posttest for both groups in the teacher dimension

Post-test results for both groups	Next (bilateral)
Process Components.	,022
Favorable climate for learning.	,000
Communication between Teacher and Student.	,003

After all the analysis carried out when comparing the results of the control group with those of the experimental group (Table 5), it can be seen that the changes are significant. Everything is due to the fact that the latter presents greater transformations in all the measurement criteria for each indicator. This is expressed in the number of observations that have superior results, a greater number of criteria satisfactorily evaluated based on the changes experienced and the implementation of development activities.



The use of productive methods in the direction of the introduction to the sport of Basketball from Sport for All, encourages the active participation of the students in their own process. Something very different from the results in the control group, although there was a slight improvement, there are activities that lead to greater dependence on the guidance of the teacher. At the same time, less progress is evident in the results of the evaluated indicators, which correspond to methodological procedures of the teachers with a tendency towards the traditional.

Table 5. Pretest and posttest results for both groups in the teacher dimension

General results of the Pretest and Posttest for both groups	Next (bilateral)
Process Components.	,000
Favorable climate for learning.	,000
Communication between Teacher and Student.	,000

After carrying out the study of the main results of the research, it can be identified that although there are works carried out for the improvement of the work of the Physical Education teacher, the link to achieve a student who is the protagonist of his own teaching-learning process still requires greater attention from researchers in the work from Sport for All in order to guarantee the success of the sports projects developed by the sports management in Cuba, in the effort to bring sports practice closer to everyone.

This research took into account as a scientific basis the contributions of some authors who have studied the object of study and the treatment of some problems of this research. Díaz and Dopico (2019) develop a methodological improvement strategy for basketball coaches in teaching tactics. Arronte and Ferro (2020) characterize the process of school sports initiation in Volleyball. Vicente, et al., (2020) study aspects of motivation in young athletes and identify the basic psychological needs that stand out in the sports initiation phase.

However, it can be seen that these investigations are aimed at sports coaches and not at Physical Education teachers for their work in Sport for All. They do not have implicit in their proposals methodological actions that contribute to improving the initiation process from the work carried out by these professionals in Sport for All.



Another study consulted was the proposal by Torres et al., (2022) aimed at awakening interest in sports initiation through aerobic, muscle strength, and flexibility exercises in educational centers for the development of high-performance sports. Castro (2022) designs a set of exercises for teaching the technical fundamentals of Basketball to 8th year elementary school students.

However, closer to the purposes of this research is the proposal by Zayas (2019), which identifies the needs in the educational process of Physical Education to encourage preschool children to initiate sports with a playful approach, for which a didactic strategy is designed that contains educational and extra-teaching actions and establishes interdisciplinary links between the different areas of the curriculum. Oliva et al., (2011), implements a methodological alternative for practicing volleyball in Sport for All in secondary education that allows for the open nature of motor activity.

Although these investigations were carried out in Physical Education, they have aspects in common and it can be identified that the difference is in the purpose to be transformed in the educational context, as well as the field of action where it interacts, the theoretical contribution and the novelty of the research. In our case, the sport of Basketball is used in the 3 against 3 modality, the contribution to the theory is realized in the specificity of the order, sequence and interrelation of the procedures, steps and actions proposed in the methodology, supported by the organization and systematization of the methodological requirements with a developmental teaching approach to lead the school sports initiation to Basketball from Sport for All in the ages of 8-9 years. All this promotes the independence, the protagonism and the creativity of the student in his own teaching process.

CONCLUSIONS

The designed methodology is characterized by its developmental teaching approach, which encourages creativity, protagonism and independence of the students, the integration of its stages, actions with methodological requirements specific to this teaching, which define its procedure and show the internal organization of the components, as well as the contribution of indicators and measurement criteria for the evaluation of the performance of teachers and



students in the conduct of the initiation to the sport of Basketball from Sport for All in the ages of 8-9 years.

The main irregularities detected in the diagnosis are related to: insufficient methodological guidelines to guide the initiation to the sport of Basketball that encourage creativity, protagonism and independence of the students, predominance of direct command, rigidity in the activities causing serious difficulties in the students in movement, gripping the ball, passing, receiving and dribbling the ball.

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The author declares that there are no conflicts of interest.

Author's contribution:

The author is responsible for writing the work and analyzing the documents.



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