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*Original article*

## *Scientific-methodological workshops, an alternative to train Rhythmic Gymnastics coaches in Ecuador*

*Talleres científico-metodológicos, alternativa para capacitar a entrenadoras de Gimnasia  
Rítmica de Ecuador*

*Oficinas científico-metodológicas, una alternativa para formar entrenadores de Ginástica  
Rítmica no Ecuador*

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### **ABSTRACT**

In the Ecuadorian context, it has been confirmed that there are insufficiencies in the training process of Rhythmic Gymnastics coaches, since the actions undertaken regularly have an empirical nature, they are based on knowledge acquired over the years in development of said activity and do not always respond to the demand and needs of these coaches. Therefore, the objective is to model a set of scientific-methodological workshops for the professional training of Rhythmic Gymnastics coaches in Ecuador that influences the improvement of their performance. The result is expressed in the organization of training



for coaches, from the formation of scientific-methodological workshops in which the interrelation of theoretical and practical knowledge is established, based on the characteristics of the teaching-learning process of Rhythmic Gymnastics with an innovative vision of these human resources that influence the improvement of sports results.

**Keywords:** training, professional performance, training, workshops

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## RESUMEN

En el contexto ecuatoriano, se pudieron constatar insuficiencias en el proceso de capacitación de las entrenadoras de Gimnasia Rítmica, pues regularmente las acciones acometidas tuvieron carácter empírico, estuvieron sustentadas en conocimientos adquiridos a lo largo de los años en el desarrollo de dicha actividad, y no siempre respondieron a la demanda de necesidades de las entrenadoras. Por ello, se planteó como objetivo modelar un conjunto de talleres científico-metodológicos para la capacitación profesional de entrenadoras de Gimnasia Rítmica de Ecuador, que incida en el mejoramiento de su desempeño. El resultado se expresó en la organización de la capacitación para las entrenadoras, desde la conformación de talleres científico-metodológicos, en los que se estableció la interrelación de los conocimientos teóricos y prácticos, a partir de las características del proceso de enseñanza-aprendizaje de la Gimnasia Rítmica y con una visión innovadora de estos recursos humanos, lo que incidió en el mejoramiento de los resultados deportivos.

**Palabras claves:** capacitación, desempeño profesional, entrenamiento, talleres

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## RESUMO

No contexto equatoriano, constatou-se que existem insuficiências no processo de formação de treinadores de Ginástica Rítmica, uma vez que as ações realizadas regularmente têm caráter empírico, baseiam-se em conhecimentos adquiridos ao longo dos anos no desenvolvimento da referida atividade e nem sempre responder à procura e às necessidades destes treinadores. Portanto, o objetivo é modelar um conjunto de oficinas científico-



metodológicas para a formação profissional de treinadores de Ginástica Rítmica no Equador que influenciem na melhoria de seu desempenho. O resultado se expressa na organização da formação de treinadores, a partir da formação de oficinas científico-metodológicas nas quais se estabelece a inter-relação de conhecimentos teóricos e práticos, a partir das características do processo de ensino-aprendizagem da Ginástica Rítmica com uma visão inovadora de estes recursos humanos que influenciam a melhoria dos resultados desportivos.

**Palavras-chave:** formação, atuação profissional, capacitação, oficinas

## INTRODUCTION

Sports organizations face important challenges, such as making their members highly competitive, but not only from the point of view of the athletes' performance, but also from the knowledge they possess in general and human capital, to respond to contingencies that occur in any context. That is why professional training assumes relevance by aiming to detect, design and integrate programs to develop the organization's human capital.

The demands for competitiveness are the spearhead for organizations to maintain a high level of specialization of their personnel, this is the reason why training is one of the most effective ways to face change and modify some attitudes. It is then necessary to transform the conception of training, which is mostly reactive in nature, that is, it is carried out based on what may be necessary to cover certain training needs.

Training, in essence, is an educational process that has a strategic nature and that requires being applied in an organized and systematic manner. This process leads people to acquire or develop specific knowledge and skills related to the functions they perform, and is translated in changes or modifications in their attitudes towards the activities of the organization, the position or the work environment (Hernández et al., 2020).

From these positions, it is insisted on the need to assume training as the most convenient way for the coach to apprehend and understand how to carry out the training process and



assume a conscious concern for his/her personal growth with regard to the treatment of the athlete preparation; therefore, an orientation with a contextualized, projective nature and a systemic, systematic and dynamic approach is required that allows solving the professional problems that arise in the sports training process.

Ecuadorian society is not left out of this situation and, like most of those that exist in Latin American countries, is subject to the action of a set of multifaceted changes that derive, on the one hand, from the processes of globalization, and on the other hand, those that come from the internal dynamics as a nation.

Contemporary society demands continuous processes of creation, dissemination, transfer, adaptation and application of knowledge, since to know, closely linked to practice, has become a transformative social force that educational systems permanently encourage to promote the sustainable development of society.

The current scenario of Rhythmic Gymnastics coaches in Ecuador requires that they be considered the most methodologically qualified personnel, to guide children, adolescents, young people and adults in the province, but for this, their preparation has a characteristic meaning to be able to perform in different options, modalities and sports educational contexts, adapt to the permanent transformations and advances in knowledge, creatively use the advantages of new technologies and learn from collaborative work.

Professional training, in relation to global trends and perspectives, shows the need to take into account the insufficiencies, problems, potentials and possibilities of professionals and athletes who work in each sporting area, this leads to projecting improvement from these situations and project various alternatives to solve the problems.

Delors' criteria (1996) harmonize with the UNESCO report on education for the 21st century, stating that education must be structured around four fundamental learning: knowing how to learn to know, that is, acquiring tools for understanding; learn to do, to be able to intervene in one's own environment; learning to live together, to enhance cooperation with



others in all human activity and finally, learning to be, as a fundamental process that integrates elements of the previous three.

To specify the path of this research, the criteria of Bernaza et al. (2018) are significant when they highlight the existence of a controversy, training or professional improvement?, and proposes:

Generally, when the need for professionals to improve themselves arises, it is talked about training, and it is recognized that through it they can become capable of performing in accordance with the objectives set to satisfy the needs of production or the services that are needed for society. (p. 13)

This approach is made explicit in Decree Law No. 350 of 2018 "On the training of workers", of the Republic of Cuba, Chapter 1. General provisions, article 3.1, which declares that:

(...) training is the set of continuous and planned preparation actions, in correspondence with the needs of production, services and the results of the work evaluation, conceived as an investment, aimed at improving the qualification and requalification of the employees. workers, to fulfill the functions of their positions with quality and ensure their successful performance. (p. 52)

Therefore, the actions facilitate creating, maintaining and raising the knowledge, skills and attitudes of workers to ensure their successful performance.

It is the opinion of these Cuban researchers, and from the conception of the postgraduate course, that training is a much more generalizing concept than professional improvement, a holistic concept that aims to develop the subject's capacities to perform in a certain job position and with it, his development as a human being. (Bernaza, et al., 2018, p. 13)

The dialectical approach of the transformative role of man and the influence of the group and society in the development of personality is significant, an issue that leads to seeing training as a system in constant development and improvement, based on the needs that are generated from the changing environment where sporting activity takes place.



To organize the training process in sports, it is necessary to take into account the state objectives and interests to direct the actions to be carried out in the context of the organization under investigation, with a scientific basis that responds to current pedagogical, didactic and psychological trends of sports training in its entirety.

For the coach, it is important to keep in mind that, from the perspective of the athlete's preparation, correct planning of the macrocycle is required to obtain the expected results and consider the multiple components that are integrated. From this criterion it is explicit that there is a close relationship between the action of the coaches who direct and guide the training process and the athletes as executors of the result.

It is clear from this research that the sports training process is a complex pedagogical act, in which in addition to the indicated criteria, the necessary attention and care of the athlete's health is incorporated, respect for their quality of life as a premise in the sports coach training. In sports training, the technical, tactical, physical, theoretical and psychological components work harmoniously and coherently, they relate to each other, which leads to the achievement of optimal results in the application of a training program.

In the case of the sports specialty being investigated, it is a requirement to take into account the articulation between specific training methods and the adaptation of existing ones, this in correspondence with the specificities of each athlete and the physiological and functional demands that this type of sporting activity poses.

By accepting that training is an investment, it is recognized that it is oriented towards the future aspirations of the organization, so the people who improve themselves must be potentially capable of achieving success in transferring knowledge to their position job; the training of individuals is oriented based on collective and individual needs.

Every organization is concerned and deals with achieving adequate quality of its products or services, an issue that is achieved through its personnel. However, to have a productive staff, it is essential to provide them with the corresponding training, so, if this is taught



comprehensively, it generates the need in the individual for an interest in knowledge and updating, which are the best allies for the progress of every human being.

This accumulation of workers' knowledge is what can really lead institutions to success or failure, since people are the most important thing in an organization, since they are the ones who generate the results of operations. Well-trained staff are able to continually deliver additional value to everything they do.

When analyzing the previous statements, it can be stated that the development of the Sports Concentrations of Ecuador, where Rhythmic Gymnastics training is carried out, are subject, for their sporting growth, to the knowledge that their human resources possess, by assuming the importance that training plays in this aspect.

For any sports organization in the Ecuadorian context, it is considered pertinent to design training, based on the results of the diagnosis, both of the organization and its members, aimed at the technical preparation of human resources that contributes to the efficient performance of assigned functions, produce quality results, provide excellent services to its clients, prevent and solve potential problems within the organization in advance; through training, it is achieved that the profile of the human resource adapts to the needs of knowledge, skills and attitudes required in a job (Hernández, 2011) .

From the previous approach, it is deduced that training is not an isolated event from the entire process carried out by an organization, but is part of a complex and coordinated system, which is planned, executed and evaluated, its main purpose is motivate human resources so that they feel in a pleasant work environment in which they can develop their creative and productive capacity.

Mintzberg (2002), in his studies of organizational behavior and considered one of the great exponents of the subject, made famous his motto "Quality begins with training and ends with training". He used this motto to determine that the raining process entails continuous learning, which lasts a lifetime and at the same time, is the best way to achieve quality in any scenario in which one intends to act.





From the general theory of administration it is inferred that training constitutes the core of a continuous effort, designed to improve people's skills and, consequently, the performance of the organization. This is one of the most important processes in human resources administration. (Chiavenato, 1993).

In this sense, training constitutes an important factor so that all employees and managers of the organization contribute the best to their productivity. Training is a constant process that seeks efficiency and thereby achieve high levels of productivity. The above means that all training involves making decisions in critical and important areas of the organization, and those decisions must be founded and very objective. In this regard, Drucker (2007) asserted that in any company, state agency or other entity, the training and development of personnel is a task that the best leaders must prioritize.

In summary, it is considered that the training of Rhythmic Gymnastics coaches constitutes a process that is of great importance for their human growth and the development of gymnasts, and in a general sense contributes to their identification with the objectives of their sport and competition, favors the direction of sports training, eliminates deficiencies and insufficiencies in work performance and guarantees qualified personnel to achieve future objectives and goals, thus contributing to the adoption of effective decisions.

It was confirmed, through carrying out an initial diagnosis (observation of the performance of coaches, informal conversations), that there are insufficiencies in the training process associated with the improvement of their performance as Rhythmic Gymnastics coaches, since the actions that are undertaken are empirical in nature, based on the knowledge acquired over the years in the development of said activity and do not always respond to the demand and needs of these coaches. The stated objective was to model a set of scientific-methodological workshops for the professional training of Rhythmic Gymnastics coaches in Ecuador, which affects the improvement of their performance.



## MATERIALS AND METHODS

The research was developed as part of the master's and doctoral studies, between 2016 and 2023, at the "Comandante Manuel Fajardo" University of Physical Culture and Sports Sciences, Havana.

The population was made up of 22 people, 15 Rhythmic Gymnastics coaches and seven managers. They were intentionally selected for their experiences, direct links with this type of sporting activity and their willingness to participate. The following graph shows the institution of origin of the declared population.



*Figure 1. Characterization of the population participating in the research. (Own creation)*

In addition, 11 professionals participated as specialists, they were selected with a level of intentionality, based on years of experience in the sports system in their countries, for their theoretical-practical preparation as coaches and for their performance as athletes in some period of their professional practice. In the case of PhD, two are Gymnastics coaches; two, specialists in curriculum for coaches and athletes and two have knowledge of Biomechanics and Morphophysiology of Physical activity. The participation of professionals from countries that are linked to sports activity, but who studied in Cuba at the EIEFD, in addition to having received postgraduate training at the UCCFD (Fajardo) and UCP (Varona), both in master's degrees, was also considered as doctorates, so they have experience of the work



carried out in this country in terms of preparing professionals in Physical Culture and Sports.

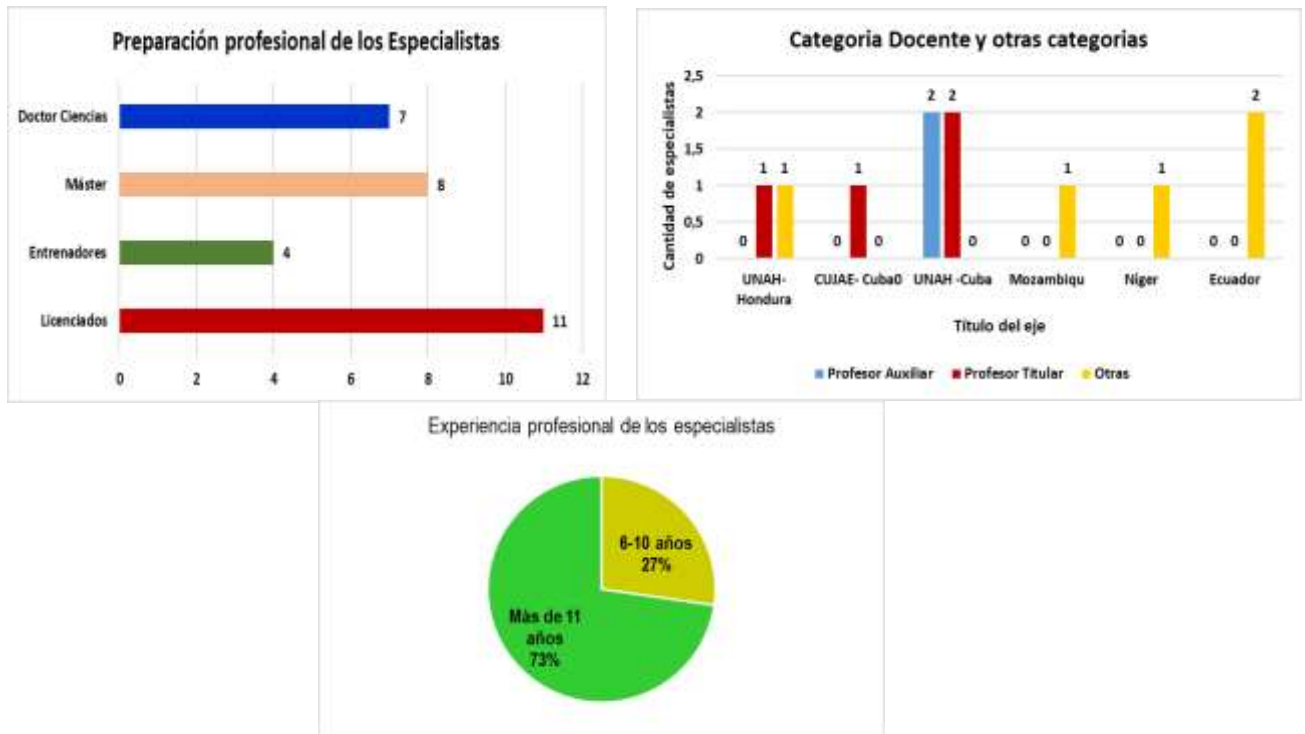


Figure 2. Characterization of the specialists participating in the research. (Own creation)

All were informed (informed consent) about the objectives of this research and its importance, from a scientific, academic and professional point of view for Rhythmic Gymnastics coaches. The participants gave their willingness to collaborate, it was considered a population whose selection was intentional, this was related to the real availability of coaches in the Sports Concentrations <sup>1</sup>, which, although all the provinces have one, not all have the sports specialty that is being investigated.

Different investigative, theoretical (analysis and synthesis, induction-deduction, theoretical modeling, structural systemic approach), empirical and mathematical statistical methods were used that allowed carrying out the necessary investigations and specifying the existing situation in Ecuador.



From the empirical point of view, observation is conceived to specify the performance of Rhythmic Gymnastics coaches, as well as the regularities of said sporting activity as an expression of the knowledge and skills they possess for the proper development of training. The objective of the survey was to investigate the situation presented by the coaches, and diagnose the current state of the training process.

The technique of determining training needs (DNC in Spanish) made it possible to identify the main weaknesses in the knowledge that the Rhythmic Gymnastics coach needs to perfect for his actions in the sports training of the gymnasts and the interview, with the aim of determining the ways in which the training of professionals was promoted and, in turn, knowledge of how it was organized.

The analysis of documents, regulatory documents of the Ministry of Sports of Ecuador and the Pichincha Sports Concentration were reviewed, such as the General Regulations of the Sports Concentration, the Constitution of the Republic of Ecuador and the Law of Sports, Physical Education and Recreation.

Methodological triangulation, to contrast the information and results obtained, through the application of the different methods and techniques used, and descriptive statistics, was used to process the data obtained, from the application of the declared empirical methods, which led to the use of simple frequency tables, statistical graphs and the determination of the modal behavior and the arithmetic mean (%).

The user satisfaction criterion, with the objective of knowing the evaluation of the proposed workshops to train gymnastics coaches, the relevance of these workshops and their themes, and the Chanlat Matrix, an instrument put to the consideration of a group of specialists, which made it possible to establish on a theoretical level the effectiveness of the proposal. The specialists analyzed the variables: impact, functionality and opportunity, based on their respective indicators. Formula to determine the expected effectiveness of training workshops (EESC),  $EESC = I \times F \times O / 100$ . The following criteria were taken into consideration: if EESC is greater than eight, the expected effectiveness was considered



strong; if EESC was between five and seven, the expected effectiveness was considered medium and if EESC was less than five, the expected effectiveness was considered weak.

## RESULTS AND DISCUSSION

The population has an intentional character, considered from the disposition of the people listed below who belong to four concentrations in Ecuador where the preparation of athletes in the specialty of Rhythmic Gymnastics is carried out and for the present research it is made up of:

- 5 Rhythmic Gymnastics coaches from the Pichincha Concentration.
- 3 Rhythmic Gymnastics coaches from the National School of Rhythmic Gymnastics of Ecuador.
- 4 Rhythmic Gymnastics coach of the D'Fer Club of Pichincha.
- 3 Rhythmic Gymnastics coaches from Manabí, Portoviejo.
- 2 directors of the Rhythmic Gymnastics Association of Ecuador.
- 5 directors of the Pichincha Concentration.

### Observation results:

**Objective:** to verify the treatment carried out by Rhythmic Gymnastics coaches to different elements of training. A qualitative scale B (Good), R (Fair) and M (Bad) is applied. The observation guide was applied by consensus with the participants; of the 15 Rhythmic Gymnastics coaches, eight coaches were selected, two from each of the aforementioned centers (Pichincha Concentration, National School of Rhythmic Gymnastics, Club D'Fer de Pichincha, Manabí, Portoviejo), the results are:

- In the indicators to be observed, the coincidence of the results of one, three, six, eight, nine, eleven and twelve with results of B is significant.
- Indicator two, five are B and three are R.
- Indicator four, seven are B and one is R.
- In indicators five and seven, three have an evaluation of B and five have an R.



- In indicator ten, it can be seen that four obtain an evaluation of B and the other four of R.
- On indicator ten, four turn out to be B and the other four turn out to be R.

This allows, preliminarily, to determine that insufficiencies are manifested in the planning of sports training (2), in the demonstrative executions by the coach to correct the gymnasts, because although they are carried out, the need to delve into these elements is appreciated. On the psychological side, treatment has difficulties (5, 7).

**The results are the following:**

*Table 1. Observation Results. (Own creation)*

Aspects to observe	<b>b</b>	<b>R</b>
1. Suitable place for training.	8 (100%)	
2. Adequate use of the different moments of training.	5 (62.5%)	3 (37.5%)
3. Use of the means of Rhythmic Gymnastics (Instruments).	8 (100%)	
4. Demonstration by the coach of the most difficult executions.	7 (87.5%)	1 (12.5%)
5. Differentiated treatment of the gymnast.	3 (37.5%)	5 (62.5%)
6. Gymnast identifies with the signals that are made to him.	8 (100%)	
7. Persuasion capacity of the coach.	3 (37.5%)	5 (62.5%)
8. Educational treatment during the development of the activity.	8 (100%)	
9. Relationships between the gymnast and the coach.	8 (100%)	
10. The trainer's practical theoretical knowledge.	4 (50%)	4 (50%)
11. Treatment of the values of persistence, industriousness and dedication in gymnasts.	8 (100%)	
12. Treatment of the values of persistence, industriousness and dedication in gymnasts.	8 (100%)	



It was highlighted, in the process of observing the training activities of Rhythmic Gymnastics, that an important part of the results has their sources in the expertise of the coaches who, although they have academic preparation, systematic practice provides them with sufficient skills to resolve any situation that arises in the training sessions. In addition, the exchanges between the coaches are appreciated to provide solutions to problems that emerge at certain times.

The results of the survey, with the objective of determining the criteria and/or perception of the Rhythmic Gymnastics coaches, about the training they have received are:

Regarding training, and how it is understood, it is proposed that they are actions for the professional growth of the members of the organization, projections of the management of the organization for its members, in order to improve themselves and courses that do not always satisfy the needs. professionals.

A significant part 11 (73.33%) declare receiving some training, and consider that they have been good activities. Furthermore, they all consider that training is a means to obtain better theoretical-practical and competitive results.

All of the respondents (100%) consider it necessary to have a training projection that contributes to their preparation as a coach in general, and they claim that it is dynamic and there are active exchanges between the participants. They suggest for their planning:

- Consider topics specific to sports training in Rhythmic Gymnastics.
- Let them be short courses and with greater dynamism and prominence of the participants.
- That the opinions be taken into account to design the training modality.
- Make it a more practical, creative and innovative training.
- That the training promotes the socialization of the best experiences in the sports training of Rhythmic Gymnastics.

The results of the DNC technique constitute a complement to the applied survey, its objective is to determine the main weaknesses in terms of the knowledge that the Rhythmic



Gymnastics coach considers necessary to perfect the actions in sports training and can be included in the professional training. It is considered pertinent that the trainer defines the level of depth required by the suggested content; the workshops will be required accordingly.

- **Advanced level:** knowledge must be updated, at a high level with the aim of fully mastering the subject.
- **Medium level:** the knowledge has a general nature, which allows the situation to be understood and does not require the coach to become an expert on the subject.
- **Basic level:** sufficient primary knowledge to understand what the difficulty is about and to specify possible solutions at an elementary level.

The themes proposed to the 15 coaches participating in the research received the following classification:

#### **Advanced level:**

- General theory of sports training. (15/ 100%)
- Biological foundations of sports training. (15/ 100%)
- Psychological preparation on the treatment of errors in Rhythmic Gymnastics. (15/ 100%)
- Flexibility training. (15/ 100%)
- Techniques to evaluate flexibility in gymnasts. (15/ 100%)
- Strength training planning. (10/ 66.6%)
- Treatment of motor skills in Rhythmic Gymnastics. (9/60%)
- Pedagogical conception of Rhythmic Gymnastics. (9/60%)
- Physical preparation in the treatment of Rhythmic Gymnastics. (8/ 53.3%)

#### **Middle level:**

- Construction of choreographic routines for the competition. (15/ 100%)





- Main injuries associated with Rhythmic Gymnastics training. (11/ 73.3%)

These results led to the design of the professional training workshops.

In the results of the interview carried out with managers from Ecuador, based on the objective of specifying the ways or procedures used to plan, organize and execute the professional training of Rhythmic Gymnastics coaches, the need to participate in the process is specified, for be decision-making agents for the implementation of the proposed results. The managers (seven participating) were asked to respond consciously and objectively to the questions, in order to be able to give and propose the most appropriate solution to the needs of said coaches.

Regarding the way in which training for Rhythmic Gymnastics coaches is conceived, the diagnosis is declared as a starting point, (2/28.57%), based on the needs of the organization (3/2.85%), on the offers that received are from other institutions (2/28.57 %). It is significant that it is not considered to articulate or combine the interests of the coaches with the needs of the organization (Concentration or Club). Related to the topic of priority for the professional training of female coaches, sports training, group work and management from the perspective of sports management are highlighted.

The managers participating in this research consider it pertinent to design professional training aimed at the specific preparation of the Rhythmic Gymnastics coach. Its justification is related to the possibilities of improving sports training, thereby achieving better performances, from delving into aspects related to this sports discipline, its international behavior and the criteria for evaluating the performance of gymnasts among others; better preparation of coaches facilitates the updating of theoretical and practical aspects and enables the exchange with professionals of significant results, among other advantages.

The criterion that Rhythmic Gymnastics coaches have good professional performance is explanatory, supported by the results in the different competitions their gymnasts attend, according to the country's projection. However, it is worrying that, in the Olympic medal table, Ecuador is in 71st position.



**Results of methodological triangulation:** In search of common elements, the use of this method is considered pertinent, which according to Ruíz (2007), is a method whose essence lies in the collection of data from different angles to compare and contrast them with each other, that is, carry out a control crossed between different data sources.

In the case of this research, it is considered to verify and specify the regularities between the results obtained, from the application of applied empirical methods that facilitate confirming the results, therefore, the information and analysis of observation, survey, interview and the needs determination technique, these regularities are:

- The development of Rhythmic Gymnastics in Ecuador is in an environment of advantageous opportunities to implement a training system aimed at deepening specific aspects of training in this type of sport.
- There are insufficient course offerings focused on specific training for these coaches that satisfy their professional growth needs.
- Willingness is expressed by both managers and coaches to deploy professional training, which allows the improvement of the performance of coaches and managers.
- There is a need to propose more creative and innovative alternatives to develop training activities.
- There are conditions in the country for the organization of the professional training of the Rhythmic Gymnastics coaches.
- The understanding and internalization that professional training constitutes an alternative to level the knowledge of coaches and put themselves at a higher level in relation to the changes and transformations that systematically occur in sports activity.

### **Solution to the investigated problem**



For this research, the use of general systems theory is recognized as a method and tool of analysis and synthesis, of functional and structural expression from the generality, particularity and singularity in the phenomena and objects of objective reality (De la Peña et al. al., 2018). The graphic representation of the training system is considered as follows:

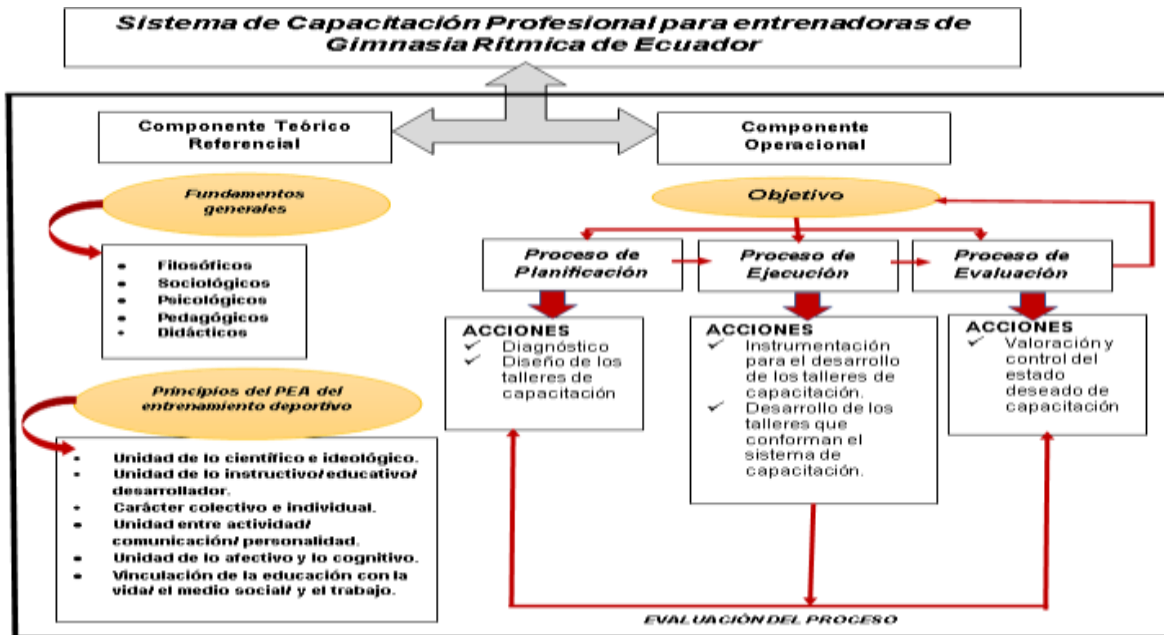


Figure 3. Representation of the organization of the professional training system for Rhythmic Gymnastics coaches of Ecuador. (Own creation)

The System is made up of two components:

1. Theoretical-referential component, referring to the theoretical foundations (philosophical, sociological, psychological and didactic foundations) that support the processes and actions of the operational component of the proposed training system, as well as the didactic principles for the Rhythmic Gymnastics training process in Ecuador. To do this, it is assumed that sports training constitutes a specific type of teaching-learning process and that sports training as an educational process is organized based on the didactic components of objective/content/methods/means/evaluation.



- Operational component of the training system that includes the planning, execution and evaluation processes, specifies the what and how of each of the processes.

### Workshop system

Planning process. Objective: project actions that contribute professional training to raise the level of specific professional preparation of Rhythmic Gymnastics coaches in Ecuador.

### General objectives of the workshops:

- Update pedagogical and didactic knowledge that supports the main training needs and priorities of Ecuadorian Rhythmic Gymnastics coaches, aimed at improving the scientific management process of training and the comprehensive quality of the gymnasts' training process.
- Delve into the theoretical, methodological and practical foundations of Gymnastics sports training, linked to applied sciences, which fosters scientific and methodological skills in Ecuadorian coaches.

*Table 2. Topics for training workshops.*

Workshop/Topic	Aim	Hours/Workshop
Workshop: The pedagogical conception of gymnastics.	a) Assess the conception of Pedagogy for gymnastics training in its different modalities. b) Analyze the sociohistorical development of gymnastics.	8 hours
Workshop: Psychological preparation on the treatment of errors.	a) Analyze errors as an alternative to improve Teaching-learning Process in gymnastics. b) Determine didactic alternatives to correct errors.	20 hours
Workshop: Motor skills	a) Characterize the motor skills in the performance of the gymnasts for the execution of the different instruments of the gymnastic routines.	16 hours



Workshop: Flexibility training.	a) Describe the stretching techniques most used in scientific literature, b) Analyze the existing scientific literature regarding which stretching techniques are most effective for improving flexibility. c) Determine from the context (clinic, warm-up, cool down, specific sessions), the most appropriate application of one technique or another, to achieve the proposed objectives.	24 hours
Workshop: Evaluation of flexibility in gymnasts.	a) Determine the flexibility behavior of gymnasts from 20 joint movements of the body.	16 hours
Workshop: Planning strength training.	a) Determine the most advisable types of strength work to perform in the training of gymnasts.	24 hours
Workshop: Construction of competition choreographic routines	a) Determine the essential components for the construction of competition exercises, taking into account the components of the choreographic routine.	12 hours
<b>129 hours</b>	<b>4 credits</b>	

Implementation process. Objective: determine the fundamental organizational forms to develop professional training to raise the level of specific professional preparation of Rhythmic Gymnastics coaches in Ecuador.

Conference: (RM 47/2022) Organizational regulation of the teaching process and direction of teaching and methodological work for university courses. Chapter XII Teaching Work. Article 273. The conference is the type of class whose main objective is to transmit to students the most up-to-date scientific-technical foundations of a branch of knowledge with a dialectical-materialist approach, through the appropriate use of scientific and pedagogical methods, so that it helps them in the integration of the acquired knowledge and in the development of the skills and values necessary for the exercise of the profession.



Specialized conferences are held linked to the proposed topics, which contribute to deepening their knowledge about the complexity of sports training. It is also intended that the participants take center stage based on previous orientations given by the facilitator on the topics. It is suggested to use methods such as brainstorming, videos to support the topics, among other methods that promote creativity on the part of professionals. It is important to promote the problem conference that promotes the activation of learning in the professionals participating in the workshops. Throughout the process, it is recommended to establish the links between the different subjects that contribute to the themes of the different workshops, that is, the necessary inter-subject relationship. In the context of the development of the workshops, specialized conferences are proposed that promote the deepening of some topics. The facilitator specifies the moment for its execution. The following are suggested:

*Table 3. Topics for specialized conferences.*

Conference	Aims
Theory of sports training.	Assess the theoretical and methodological foundations related to the theory of contemporary sports training and its influence on the comprehensive training process of gymnasts (childhood and adolescence).
Biological foundations of sports training.	Characterize the predominant energy systems in the physical sports activity of Rhythmic Gymnastics.
Traumatology. Main injuries associated with Rhythmic Gymnastics training.	Identify the main traumas and injuries typical of inadequate practice of physical exercise and training, which facilitates the preventive activity of the coaches and the quality of life of the athletes.

**Workshop class:** (RM 47/2022) Organizational regulation of the teaching process and direction of teaching and methodological work for university courses. Chapter XII Teaching Work. Article 277. The workshop is the type of class that aims for students to apply the knowledge acquired in the different disciplines. It contributes to the development of



practical professional skills, as well as the solution of problems specific to the profession based on the link between the academic, research and work components. It also promotes group work, for the group and with the help of the group, where interdisciplinary relationships prevail. This type of activity is considered to have functions such as:



**Practical seminars:** (RM 47/2022) Organizational regulation of the teaching process and direction of teaching and methodological work for university courses. Chapter XII Teaching Work. ARTICLE 274. The seminar is the type of class whose fundamental objectives are for students to consolidate, expand, deepen, discuss, consolidate, integrate and generalize the oriented contents; address the solution of teaching tasks through the use of methods specific to the branch of knowledge and scientific research; develop their oral expression, the logical ordering of content and skills in using different sources of knowledge.

**Evaluation process:** The evaluation of learning must be conceived as continuous, qualitative and integrative; based, fundamentally, on the performance of the participant during the learning process. In the development of the workshops, frequent and partial evaluation is fundamentally considered, corresponding to the degree of systematization of the objectives to be achieved by the participants at each moment of the process.

**User criteria:** Fifteen coaches who agree to participate, on a preliminary basis, in the workshop design process and who have previously received a specialized workshop on Project Management are considered to apply this instrument. To determine the final result = " of the selected indicators / 90 (if there are 15 users and six indicators,  $15 \times 6=90$ )



The instrument has four dimensions associated with the development of the workshops in general, the results of the users are the following:

- a) About the workshop facilitator. 14.4% of users agree with the criteria, while 85.5% completely agree.
- b) About the contents taught. 18.8% of users moderately agree; 51.1% agreed and 30% totally agreed.
- c) About logistics. 41.6% agree with the assurances and 58.3% totally agree.

Other considerations are that users express the need to carry out this type of activities more frequently, in addition to including other elements such as those related to refereeing, planning micro-, meso- and macrocycles of training, in addition to working on matters related to the selection of sporting talents for this type of sporting activity. Although informally references were made to exchanges with professionals from countries with significant results, this issue is suggested to the management of the Concentrations and the Ministry.

Criteria of users/managers and decision-makers, to implement the training workshops. The objective of applying this method is to assess the impact and functionality of the workshops for training gymnastics coaches, expressed in the degree of opportunity for their application and generalization. Five managers who are decision-makers in the promoting of coach training in Ecuador are asked to evaluate the results of this research, they belong to the National Olympic Committee, Ministry of Sports of Ecuador and three are from Sports Concentrations in Ecuador.

The application of the Chanlat Matrix allows evaluating the impact, functionality and opportunity of the proposal to determine the expected effectiveness, from the subjective empirical criteria of the participants.





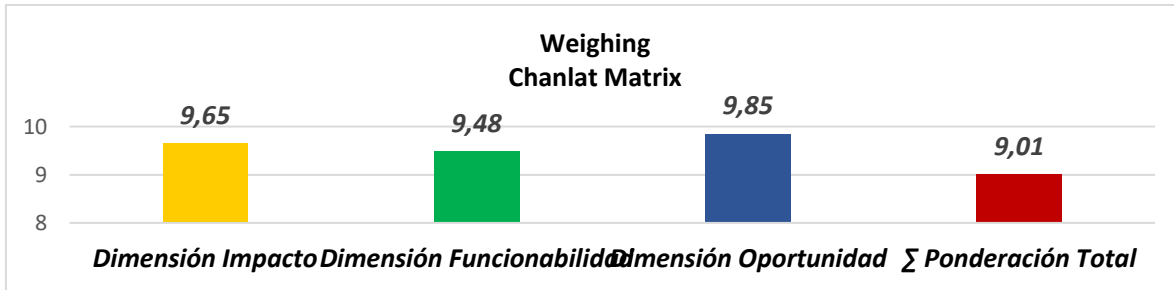


Figure 4. Weighing results. Chanlat matrix. (Own creation)

The variables and their indicators are analyzed based on a maximum score of 10 units for each sub variable, and a weighting is established. Below is the result obtained:

- In relation to the impact (I), the average weighting is 9.65, so the expected effectiveness is strong.
- Related to functionality (F), the average weight is 9.48, so the expected effectiveness is strong.
- Associated with opportunity (O), the average weight is 9.85, so the expected effectiveness is strong.

In general, it was confirmed that the expected effectiveness of the training workshops for Gymnastics coaches in Ecuador had an average weight of 9.01, so the expected effectiveness was strong. As a result, it was evident that it can be applied and socialized at the country level.

**Specialist criteria:** The response to the evaluative questionnaire by the specialists (11) declared the components that make up the training workshops, the theoretical foundations and their coherence with the general objective of the proposal as important. Furthermore, the themes of the specialized workshops and conferences are adjusted to the needs of improving sports training of said sports specialty, as well as the correspondence between objectives, content systems, time and bibliography for its execution. In general, it was assumed as completely appropriate that the workshops can contribute to the change in gymnastics training in Ecuador and thus increase the sporting results of this specialty. Suggestions included the need to socialize the experience, the importance of proposing



more dynamic alternatives in the training of coaches and the possibility of managers taking part in these training sessions. At the end, the specialists evaluated the feasibility, feasibility and potential of the workshops, as follows:



Figure 5. General evaluation of the workshops by the specialists. (Own creation)

### Methodological triangulation:

The instruments applied in this process to determine the relevance of this research, as well as the possibility of its generalization, it is confirmed that the evaluators generally consider:

- Carrying out this type of research is pertinent.
- The use of workshops as a learning modality is viable and leads to the development of investigative skills in the participants, as well as to work in groups to find solutions.
- A coincidence is evident in the criteria of coaches and managers regarding the need to deepen knowledge about professional practice.

Alemán et al. (2019) carried out a research referring to the need for teachers to take into account in the training of health professionals the development of motivation as an essential aspect of the teaching-learning process, which encourages intervention in intellectual and creation of values, essential for the development of the profession.



Meanwhile, Lombino & Jiménez (2019) consider that teachers in the exercise of their profession face important challenges, which is why professional preparation must be designed focused on both the development of intellectual abilities and teacher leadership. This research carries out an analysis of the different theoretical conceptions related to the preparation of teachers, learning related to the manifestations of hyperactivity and the figure of the teacher as leader of the teaching-learning process.

In a systematization study from the theory of research related to the development and evaluation of professional competencies, linked to the initiation stage, Caveda (2020) determines indicators that facilitate the development of professional improvement. The study detects an inadequate scientific methodological preparation of the technical force and proposes the organization of professional improvement with the use of specific professional skills linked to the sports initiation stage.

The research of Echevarría (2021) refers to the teaching-learning process of Rhythmic Gymnastics, its results refer that the teaching and preparation of new Physical Education teachers need new tools that allow them to acquire the necessary knowledge, to face the reluctance, laziness and boredom of students, so it is necessary that these teachers experiment with active methodologies and an arsenal of tools, to focus on the student the control of their own learning and supports their arguments in the application of ICT.

Leyva et al. (2023), with a result that raises the need for the preparation of teachers in various areas of knowledge, starts from the diagnosis of the needs of teachers in terms of their preparation and obtains as a result that the most vulnerable areas where preparation should be directed are pedagogy and didactics, methodological work, the use of information technologies and scientific research. These areas are considered important for comprehensive training and to raise the quality of teachers.

## CONCLUSIONS

The theoretical foundations addressed were based on the criteria of researchers with extensive results in this field, which provide significant criteria to give theoretical soundness



to the system that is based and contextualize it to the demands of Ecuadorian society, with respect to the training process.

The application of various empirical methods allowed to diagnose and characterize the current state of training for gymnastics coaches in Ecuador, it was found, among other aspects, the insufficiencies in the offer of courses focused on specific training.

The combination of different instruments such as specialists' criteria, users' satisfaction and the application of the Chanlat Matrix aimed at evaluating the result of the present research was feasible for its application, because no difficulties were determined for its execution and, potentially, the system can produce the effect of change that is expected in Rhythmic Gymnastics in Ecuador, so as a result its applicability is evidenced.

## REFERENCES

Alemán Marichal, B; Navarro de Armas, O.L; Suárez Días, R.M; Sánchez Jiménez, M & Encinas Alemán, T.C (2019). La preparación profesoral para el desarrollo de la motivación profesional en estudiantes de la carrera de medicina. Revista Médica Electrónica. Vol. 4, No.1. ISSN 1684-1824.

Bernaza Rodríguez, G., Troitiño Díaz, D., & López Collazo, Z. (2018). La superacion profesional-mover ideas y avanzar más. Universitaria del Ministerio de Educación Superior.

[https://www.researchgate.net/publication/325951220\\_La\\_superacion\\_profesional\\_mover\\_ideas\\_y\\_avanzar\\_mas](https://www.researchgate.net/publication/325951220_La_superacion_profesional_mover_ideas_y_avanzar_mas)

Chiavenato, I. (1993). Administración de recursos humanos. McGraw-Hill.  
[https://books.google.com.cu/books/about/Administraci%C3%B3n\\_de\\_recursos\\_humanos.html?id=ZqGKQgAACAAJ&redir\\_esc=y](https://books.google.com.cu/books/about/Administraci%C3%B3n_de_recursos_humanos.html?id=ZqGKQgAACAAJ&redir_esc=y)

De la Peña Consuegra, G & Velázquez Ávila, R.M (2018). Algunas reflexiones sobre la teoría general de sistemas y el enfoque sistémico en las investigaciones científicas. Revista



- Cubana de Educación Superior (online) Vol.37, No.2. ISSN 0257-4314.  
<http://scielo.sld.cu>
- Delors, J. (1996). La Educación encierra un tesoro. (Compendio) [Informe a la UNESCO de la Comisión Internacional sobre la Educación para el Siglo XXI]. UNESCO.  
[https://unesdoc.unesco.org/ark:/48223/pf0000109590\\_spa](https://unesdoc.unesco.org/ark:/48223/pf0000109590_spa)
- Drucker, P. F. (2007). Management: Tasks, Responsibilities, Practices. Transaction Publishers.  
[https://books.google.com.cu/books/about/Management.html?id=j0IHUc8510C&redir\\_esc=y](https://books.google.com.cu/books/about/Management.html?id=j0IHUc8510C&redir_esc=y)
- Gaceta Oficial de la República de Cuba (2018). Decreto Ley no.350 de 2018 "De la capacitación de los trabajadores".
- Gaceta Oficial de la República de Cuba (2018). Decreto Ley no.350 de 2018 "De la capacitación de los trabajadores". Disponible en: <https://www.gacetaoficial.gob.cu> (Consultada: 22 de febrero de 2024)
- Hernández Orozco, C. E. (2011). Planificación y programación. EUNED.  
[https://books.google.com.cu/books?id=lcss-90S7UMC&printsec=copyright&hl=es&redir\\_esc=y#v=onepage&q&f=false](https://books.google.com.cu/books?id=lcss-90S7UMC&printsec=copyright&hl=es&redir_esc=y#v=onepage&q&f=false)
- Hernández Simón, L., Frómeta-Moreira, N., Caballero Riera, L., & Leon Reyes, B. B. (2020). El desempeño profesional pedagógico de los entrenadores de levantamiento de pesas con adolescentes limitados físicos motores. *Sociedad & Tecnología*, 3(1), 10-18.  
<https://doi.org/10.51247/st.v3i1.53>
- Lara Caveda, D. (2020). Superación basada en competencias profesionales específicas relacionadas con la iniciación deportiva. *Acción*, 16, Article s/n.  
<https://accion.uccfd.cu/index.php/accion/article/view/92>



Leyva Sánchez, E,K; Díaz Rojas, P,A & Vicedo Tomey, A (2023). Necesidades sentidas de preparación profesoral para la gestión del proceso docente. EDUMECENTRO. ISSN 2077-2874.

Lombino, L & Jiménez Puerto, C, L (2019). La preparación del docente y su papel como líder del proceso enseñanza aprendizaje. Revista ATLANTE: Cuadernos de Educación y Desarrollo. Disponible en:  
<https://www.eumed.net/rev/atlante/2019/07/preparación-docente-enseñanza.html> / [hdl.handle.net/20.500.11763/atlante1907preparacion-docente-enseñanza](https://hdl.handle.net/20.500.11763/atlante1907preparacion-docente-enseñanza)

Mintzberg, H. (2002). Diseño de Organizaciones Eficientes. El Ateneo. Disponible en:  
[https://books.google.com/cu/books/about/Dise%C3%B1o\\_de\\_Organizaciones\\_Eficientes.html?id=MQMKAAAACAAJ&redir\\_esc=y](https://books.google.com/cu/books/about/Dise%C3%B1o_de_Organizaciones_Eficientes.html?id=MQMKAAAACAAJ&redir_esc=y)

***Conflict of interest statement:***

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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