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Original article

Swimming in the Ecuadorian school and extracurricular sport: A proposal of curricular improvement

La natación en el deporte escolar y extracurricular ecuatoriano: una propuesta de mejoramiento curricular

Natação no esporte escolar e extracurricular equatoriano: uma proposta de melhoria curricular

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ABSTRACT

Physical Education is committed to the integral formation, balance and well-being of the student and, within this, swimming, as a practice of exercises in the aquatic environment, promotes curricular improvement in the processes of updating and strengthening the area. The objective of this research was to present a proposal for the curricular improvement of swimming. The empirical methods of the bibliographic review were applied to 20 published documents, from 2007 to the present of the databases of Google Academic and the Platform of the Ministry of Education of Ecuador and the interview applied to 10 expert swimming trainers of the city of Quito in Ecuador. A critical and synthetic analysis was carried out in two stages; the first was dedicated to the development of the swimming curriculum in Physical Education and the second to swimming as a physical and sports practice. This helped to reach an understanding of the socio-educational-curricular fact and its real concreteness in the curricular development of swimming in Ecuadorian Physical Education. In addition, a gap was found



that allowed the proposal to be justified in three aquatic domains, linked to the essential basic curricular skills, which could standardize learning in this environment, from the use of the swimming pool as a resource and swimming as a new recreational sport practice for life.

Keywords: Swimming; Ecuadorian physical education; Curricular improvement; Physical activity.

RESUMEN

La Educación Física apuesta por la formación integral, por el equilibrio y bienestar del estudiante y, dentro de este, la natación, como práctica de ejercicios en el medio acuático, fomenta el mejoramiento curricular en los procesos de actualización y fortalecimiento del área. El objetivo de esta investigación fue presentar una propuesta de mejoramiento curricular de la natación. Se aplicaron los métodos empíricos de la revisión bibliográfica a 20 documentos publicados, desde el 2007 hasta la actualidad de las bases de datos de Google Académico y la Plataforma del Ministerio de Educación del Ecuador y la entrevista aplicada a 10 expertos entrenadores de natación de la ciudad de Quito en Ecuador. Se realizó análisis crítico y de síntesis en dos etapas; la primera se dedicó al desarrollo curricular de la natación en la Educación Física y la segunda, a la natación como práctica física y deportiva. Esto ayudó a llegar a la comprensión del hecho socioeducativo-curricular y su real concreción en el desarrollo curricular de la natación en la Educación Física ecuatoriana; además, se encontró un espacio que permite justificar la propuesta determinada en tres dominios acuáticos, vinculada a las destrezas curriculares básicas imprescindibles, lo que pudo estandarizar el aprendizaje en este medio, desde el aprovechamiento de la piscina como recurso y la natación como nueva práctica deportiva recreativa para la vida.

Palabras clave: Natación; Educación Física ecuatoriana; Mejoramiento curricular; Actividad física.

RESUMO

A Educação Física está empenhada na formação integral, equilíbrio e bem-estar do aluno e, dentro desta, a natação, como prática de exercícios no meio aquático, promove a melhoria curricular nos processos de atualização e fortalecimento da área. O objetivo desta investigação foi apresentar uma proposta para a melhoria curricular da natação. Os métodos empíricos da revisão bibliográfica foram aplicados a 20 documentos publicados, desde 2007 até ao presente, a partir das bases de dados do Google Academic e da Plataforma do Ministério da Educação do Equador e a entrevista foi aplicada a 10 peritos formadores de natação da cidade de Quito no Equador. Foi realizada uma análise crítica e sintética em duas fases; a primeira foi dedicada ao desenvolvimento do currículo de natação em Educação Física e a segunda à natação como uma prática física e desportiva. Isto ajudou a compreender o facto sócio-educativo-curricular e a sua real concretude no desenvolvimento curricular da natação na Educação Física equatoriana. Além disso, foi encontrado um espaço que permitiu justificar a proposta em três domínios aquáticos, ligados a competências curriculares básicas essenciais, que poderiam padronizar a aprendizagem neste âmbito, a partir da utilização da piscina como recurso e da natação como uma nova prática desportiva recreativa para a vida.



Palavras-chave: Natación; Educación física equatoriana; Mejoría curricular; Actividad física.

INTRODUCTION

There are many problems in the curricular area, but Physical Education as a space for educational training has many advantages over other areas, due to the range of body practices it has, for example: playful, gymnastic, expressive communication and sports (Ministry of Education 2017). The latter converges in the opportunity that students have to diversify their autonomy of physical activity (Posso-Pacheco, Barba-Miranda, Rodríguez-Torres, Núñez-Sotomayor, Ávila-Quinga and Rendón-Morales 2020b) through sports practice and, when talking about sports practice, it can be mentioned that all students have the possibility to practice the technical and tactical fundamentals of several sports, depending on the infrastructure, equipment and teaching creativity.

In this sense, it can be said that swimming is a sport not very practiced in the educational institutions, because not all of them have the possibility of having a swimming pool for the practice. In Ecuador, only 115 public educational institutions have them and, within them, only 55 are functioning (Ministry of Education, 2018). This means that the opening to the physical and sport practices of swimming begins with having a pool which will serve as a resource and educational means and swimming as a practice, a discipline that directs physical activity, which will have special emphasis on the development of motor skills in water, from the conception of integral formation of the person. Affirming this idea, Domínguez, Piñeyro and Ghe (2018) mention that there is a lot of complexity in the teaching-learning process, specifically in the contents and methodological strategies that transmit it, which is why the harmonic construction of having fun in the aquatic environment is proposed.

Completing the previous idea, the practice of swimming in educational institutions is very limited due to the basic requirement of a swimming pool and the complexity that can be the contextualization of the contents and teaching methodology to the current curriculum. It is also true that swimming is a sport that addresses several learning objectives in the area of Physical Education and by educational sublevel. To this, Fuentes Guerra, Sáenz López and Díaz Trillo (2016) argue that "swimming covers a good part of the objectives of education, when the objectives of Physical Education are compared with the objectives of teaching swimming".

While it is true, the national Physical Education curriculum is open and flexible so that curricular content can be graduated or added according to the needs and requirements of the teacher (Posso Pacheco, Barba Miranda, Marcillo Ñacato, Acuña Zapata and Hernández Hernández, 2020c). There are no clear guidelines on how to approach teaching methodologies and progressive content in swimming, from first grade to third year of high school. To this thought, Albarracín and Moreno (2017) contributes that,

"In the absence of legal references, the new curricular perspectives seek to achieve the integral development of the person through the use of all available means within the reach of the teacher, where one of them is the aquatic environment" (p. 33).



There is no doubt, then, that there is a need to generate a proposal that is contextualized to the skills, with performance criteria of the Physical Education curriculum as an alternative, so that Physical Education teachers, who are in charge of working on swimming, do not teach swimming, but rather develop water skills as a means of enjoyment, thus guaranteeing their voluntary and continuous practice in other extracurricular spaces. **Albarracín and Moreno (2012)** refer that all the contents of a Physical Education curriculum can be adapted to be carried out in aquatic environments, in a pleasant way.

With all these antecedents, the objective of this research is strengthened, which is to present a proposal of curricular improvement of swimming, which will contribute true guidelines to the educational task of the teacher, of the Ecuadorian sport.

MATERIALS AND METHODS

In this research, two empirical methods were applied: one, the literature review, and the other, the interview. In the first, 20 documents published from 2007 to the present were reviewed from the databases of Google Academic and the Platform of the Ministry of Education of Ecuador. This procedure pursued the in-depth understanding of the object of study, with an analysis and synthesis of the existing information; in the second method, interviews were conducted with 10 expert swimming coaches from the city of Quito, Ecuador, in addition to developing open questions, which allowed the completion of the required information; these were executed in the second half of 2020 and those interested were informed of the objective of the research.

There were critical analyses and syntheses, both from the bibliographic review and from the results of the interviews, based on two dimensions: the first one was the development of the swimming curriculum in Physical Education and the second one was swimming as a physical and sports practice. With this, it was possible to obtain a logical order of all the information, from the very political perspective, passing through education, then through the Physical Education curriculum until arriving at swimming.

RESULTS AND DISCUSSION

Swimming curriculum development in Physical Education

The results of the interview, based on the curriculum development dimension of swimming in Physical Education, were (Table 1).



Table 1. Results of the interview

| Dimensions | Criteria | Subcriteria | Number of responses | % responses |
|--|----------------------------------|--|--|-------------|
| Swimming curriculum development in Physical Education | Curriculum of Physical Education | It Can be contextualized | 10 | 100 |
| | | Responds to students' needs and requirements | 9 | 90 |
| | Curricular block | the sports disciplines to work can be chosen | 10 | 100 |
| | | Sport practices | The block does not specifically address swimming | 9 |
| | Curricular swimming | Curricular block content is not aligned to any aquatic skill | 8 | 80 |
| | | The curriculum has no water skills | 10 | 100 |
| | | The methodology for teaching water skills is complex | 9 | 90 |

The Ecuadorian Physical Education curriculum can be contextualized to the needs of the students. That is the virtue of this curriculum; however, since there is no infrastructure that has a swimming pool in the educational institution, the practice of aquatic skills is not planned and, in the educational institutions that do have a swimming pool, the obstacle is that there is no contextualization of the skills with performance criteria or curricular content of the curricular block.

In this sense, and according to the critical analysis of the bibliographic review, it can be said that the government and the Ministry of Education of Ecuador itself should establish educational policies that guarantee that students can develop physically, socially, cognitively, and emotionally in both the terrestrial and aquatic environments. This is supported by the **National Planning Secretariat (2017)** which promulgates the *Good living* or SumakKawsay as a citizen's right. The United Nations Educational, Scientific and Cultural Organization **UNESCO (2015)** pointed out that "The Constitution is based on the recognition of the right of the population to live in a healthy and ecologically balanced environment that guarantees sustainability and good living" (p. 32).

Curricular updating implies making changes that do not affect the objectives of the program or the graduation profile of the curriculum, whose objective is the revision of the curriculum in response to the needs of the present time; in essence, curricular updates are inclusions of new knowledge that are legitimate for teaching (**Nervi-Haltenhoff, 2004**). On the other hand, curriculum strengthening is an intentional, planned and systematic process of curriculum improvement, with actions of "revision



and execution of curricular designs, pertinent and contextualized classroom practices and an evaluation" (Ministry of Education of Colombia, 2017, p. 7).

Consequently, the recovery of Physical Education, which began in 2016 (Ministry of Education, 2017), pursued changes inherent in the curriculum design. Its implementation and educational practice, such as the curricular flexibility that allows for Physical Education proposals in their contexts, were a clear expression of "a greater diversification and expansion of an optimal range of educational and learning possibilities of knowledge and practices" (Díaz Villa, 2007, p. 27).

From this positive aspect that this new curriculum has, emerged the possibility of making new proposals for Physical Education according to the context in which each educational institution is framed (Posso Pacheco, Barba Miranda, Leon Quinapallo, Ortiz Bravo, Manangon Pesantezy Marcillo Ñacato, 2020a). The intention of this new curriculum, finally, was to bring the students closer to the participation of the diverse body practices, culturally significant in Ecuador. The existence of curricular blocks and transversal blocks, from the application of three approaches to the area: corporeality approach, playful approach and inclusive approach, as specified in the official document (Posso-Pacheco et al., 2020b).

Circular No. MINEDUC-VE-2017-00001-C dated January 31 was promulgated (Ministry of Education of Colombia, 2018), which promoted the use of this infrastructure resource of mandatory compliance and rules its use under the application of the document called Guide for the educational use of swimming pools in educational institutions "which provides guidance on the proper use of swimming pools, student safety and teaching work, articulating the national curriculum of the area of Physical Education to the activities that can be carried out in these infrastructure resources" (Vice Ministry of Education, 2017, p.2).

In the "National Physical Education Curriculum", the development of aquatic skills will also involve socialization and psychological-emotional stability (Meolans, 2016). Although there are few swimming pools in educational institutions, physical education teachers will be encouraged to take advantage of them to offer the unique possibility of curricular development that will make them learn for the present and for the future. And by learning to swim, the students of EGB or GBU will have the possibility of experiencing physical and sport practices to which they are entitled.

Swimming as a physical and sport practice

The results of the interview, based on the dimension of swimming as a physical and sport practice, were (Table 2).



Table 2. - Results of the interview

| Dimensions | Criteria | Subcriteria | Number of responses | % responses |
|--|-------------------|--|---------------------|-------------|
| Swimming as a physical and sport practice | Physical practice | Generates autonomy of physical activity | 8 | 80 |
| | | Reduces sedentarism | 10 | 100 |
| | | Improves health | 10 | 100 |
| | Sport practice | Generates technical and tactical foundations | 8 | 80 |
| | | Provides the opportunity to practice for competition | 8 | 80 |
| | | It is worked in extra-curricular hours | 8 | 80 |

The practice of swimming can be appreciated from two sides, according to the results of the surveys; the first is the physical practice in which this attachment to physical activity is generated, reached with the autonomy of physical exercise; therefore, sedentarism can be reduced and the health of students increased; The second is sports, in which they agree that the school environment is not ideal for perfecting swimming skills, but that it should be managed as an option, so that students motivated by physical education can seek or have alternatives to participate in sports training.

Grasso (2009) confirmed that "Physical Education changes" and changing is not only changing the how, but the what. According to him, these changes, to be true, can lead to rethinking goals, redefining objectives, rethinking goals and reformulating principles. And the essence of Physical Education really changes; According to Brito Soto, (2009) it changes because it is not an isolated compartment of disciplinary knowledge not related to others. It is learning motor skills while being a human being which, according to these authors, is a knowledge, do and be that involves diverse basic learning.

Swimming was thus, promoting extracurricular activity and Physical Education for health and life. Swimming was the achievement of what was foreseen as a public health problem that, politically, had to be addressed and to which importance was given to objectives and activities in the national plans from 2013 and the achievement of the process of updating and strengthening the curriculum that bore fruit in the design of the Physical Education curriculum in 2016. In this sense, we can mention Lanfrancesco, G. (2005) who stated that "Educational centers must educate not only in knowledge and know-how (professionalize and prepare for work), but they must also develop being" (p. 47).

According to Castañer Balcells and Camerino Foguet (2009), it is necessary not to lose the essence of the discipline in the movement; that is to say, Physical Education has its essence in the movement, in teaching to move, why people move. This was the educational change that swimming brought with it; from the curriculum point of view, it



implied complying with the Physical Education curriculum from its approaches, curriculares blocks, transversales blocks and, in addition, aligning as a curricular strategy the aquatic skills to the already established curriculum skills.

With all these antecedents, a proposal for the improvement of the swimming curriculum was founded in order to understand what the opening to swimming, as a physical and sport practice, means, and its own process of development of the curricular alignment.

Proposal for curricular improvement

It is proposed to establish a proposal for the improvement of the Physical Education curriculum for swimming as a physical and sports practice. This will help to develop the skills in established aquatic environments, in the sports practice block, which aligns the skills established in the Physical Education curriculum, with a view to the aquatic skills, which they involve: (b) improvement of cognitive and motor skills, personal balance, interpersonal relations, and social integration and performance, as outlined in the Guide for the Educational Use of Swimming Pools in Educational Institutions (*Office of the Deputy Minister of Education, 2017*). To this end, three aquatic domains will be aligned with the basic curricular skills, essential in aquatic environments, with the aim of standardizing learning in this environment:

Domain 1

- It indicates previous knowledge of different forms of movement and flotation in the water.
- It shows in the terrestrial environment the different forms of movement and flotation in the water.
- It shows in the aquatic environment the different forms of movement and flotation in water.
- It identifies different ways of breathing in and out of the aquatic environment.
- It make different combinations of movement and floatation in the aquatic environment.
- It uses combinations of floating and movements to play in the water.

Domain 2

- It creates exercises to float with kicks in a water environment.
- It applies the different forms of breathing in the different exercises in the aquatic environment.
- It creates crawl and backstroke exercises in the aquatic environment.
- It create underwater exercises.
- It uses different exercises with kick, stroke, back and underwater to play in water environments.



Domain 3

- It demonstrates the execution of activities with crawl and backstroke style.
- It corrects crawl and backstroke swimming techniques.
- It reinforces and applies the technical and tactical rules of crawl and backstroke styles.
- It organizes recreational and competitive activities, linking crawl and backstroke styles.
- It understands the limitations and strengths of water activities.

It is concluded, stating that swimming, as a physical and sports practice, is a reality in Ecuadorian Physical Education, today as a result of a process of curricular improvement in 2016, where the Physical Education curriculum is a specific one, which promotes pedagogical and didactic proposals, according to the context that frames the educational institutions. Consequently, swimming can be an experience and a learning experience for children and adolescents who are studying in the levels of General Basic Education and the Unified General Baccalaureate, with the guidance of their Physical Education teachers can align learning proposals for the development of motor skills in aquatic environments.

This review founded the design of a proposal of contribution of swimming to the promotion of the curricular improvement of Physical Education for swimming as a physical and sport practice, in which three domains were proposed that will standardize the learning in the aquatic environment, orienting to the skills, with performance criteria of the curricular block sport practices, to align substantially to the aquatic skills, with the contribution towards a current look of the Ecuadorian educational practice in the aquatic environment.

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Conflict of interests:

The authors declare not to have any interest conflicts.

Authors' contribution:

Roberto Javier Terán Díaz: Conception of the idea, literature search and review, instrument application, literature search and review, general advice on the topic addressed, statistic analysis, preparation of tables, graphs and images, database preparation, drafting of the original (first version), review and final version of the article, article correction, general advice on the topic addressed, translation of terms or information obtained, review of the application of the applied bibliographic standard.



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