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**Review article** 

# Educación Física y su contribución al desarrollo integral de la motricidad

Physical Education and its contribution to the comprehensive development of motor skills

# A Educação Física e a sua contribuição para o desenvolvimento integral das capacidades motoras

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#### ABSTRACT

Early childhood education is the first link through which the child begins with classroom training. This work will show the systematic compilation and analysis of specialized academic sources on the importance of school Physical Education and its contribution to the comprehensive development of motor skills in children. The contribution to learning through exploration, the game, the ludic and physical education, provides a comprehensive education in the motor field to infants. The objective of this article was to carry out a bibliographic-systemic review in specialized databases such as; Scopus, Ebsco, Dialnet, Redalyc, among others, on the importance and relevance of motor skills in the child population, visualizing the determining factors for the adequate development







of the child, through the teaching and pedagogy of Physical Education and its different areas. The methodology developed was qualitative and its design is a bibliographicsystemic review, considering inclusion and exclusion criteria through categorical and heuristic matrices for the respective analysis of the information. The results illustrate that the training of school Physical Education is decisive and influential in the processes of motor and cognitive development of children, positively influencing these processes. As the main conclusion of the study, it can be inferred that the pedagogical approach of Physical Education encompasses a number of methods and tools, not only offering the possibility of promoting healthy lifestyle habits, but also optimizing motor development processes at school age.

Keywords: Physical education; School; Motor development; Motor skills.

#### RESUMEN

La educación infantil es el primer eslabón por el cual el niño empieza con la formación en el aula; este trabajo evidencia la recopilación y análisis sistemático de fuentes académicas especializadas sobre la importancia de la Educación Física escolar y su aporte al desarrollo integral de la motricidad en población infantil. La contribución al aprendizaje mediante la exploración, el juego, la lúdica y la educación corporal, brinda una educación integral en el ámbito motriz a los infantes. El objetivo de este artículo fue realizar una revisión bibliográfica-sistémica en bases de datos especializadas: Scopus, Ebsco, Dialnet, Redalyc, ente otras sobre la importancia y relevancia de la motricidad en la población infantil además de analizar, sistematizar la postura de diferentes referentes académicos especialistas del tema en la contribución de la Educación Física en los procesos de desarrollo motriz en las etapas infantiles y como estos aporta de manera transversal en las áreas integrales de aprendizaje se visualizó además los factores determinantes para el desarrollo adecuado del niño, mediante la enseñanza y pedagogía de la Educación Física y sus diferentes áreas. La metodología desarrollada fue cualitativa y de diseño revisión bibliográfica-sistémica teniendo en cuenta los criterios de inclusión y exclusión a través de matrices categoriales y heurísticas para el respectivo análisis de la información. Los resultados ilustran que la formación de Educación Física escolar es determinante e influyente en los procesos de desarrollo motriz y cognitivo infantil, influyendo de manera positiva en dichos procesos. Como principal conclusión del estudio se puede inferir que el enfoque pedagógico de la Educación Física abarca un sin número de métodos y herramientas, no solo brindando la posibilidad de promover hábitos de vida saludable, sino optimizando los procesos de desarrollo motriz en edades escolares.

Palabras clave: Educación Física; Escolar; Desarrollo motriz; Motricidad.

#### RESUMO

A educação infantil é o primeiro elo através do qual a criança começa com a formação na sala de aula; este trabalho mostra a recolha e análise sistemática de fontes académicas especializadas sobre a importância da Educação Física escolar e o seu contributo para o desenvolvimento integral das capacidades motoras nas crianças. A contribuição para a aprendizagem através da exploração, jogo, brincadeira e educação corporal, proporciona uma educação abrangente no campo das capacidades motoras aos bebés. O objetivo deste artigo foi realizar uma revisão bibliográfica-sistémica em bases de dados especializadas sobre a importância e relevância das capacidades motoras na população infantil, bem como analisar, sistematizar a posição de diferentes referências académicas especializadas no assunto sobre a contribuição da Educação Física nos processos de desenvolvimento motor na fase infantil e como estes contribuem de forma





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transversal nas áreas integrais de aprendizagem. Também se visualizaram os fatores determinantes para o desenvolvimento adequado da criança, através do ensino e pedagogia da Educação Física e das suas diferentes áreas. A metodologia desenvolvida foi uma concepção qualitativa de revisão bibliográfica-sistémica tendo em conta os critérios de inclusão e exclusão através de matrizes categóricas e heurísticas para a respectiva análise da informação. Os resultados ilustram que a formação da Educação Física escolar é determinante e influente nos processos de desenvolvimento motor e cognitivo das crianças, influenciando de uma forma positiva nestes processos. Como conclusão principal do estudo, pode inferir-se que a abordagem pedagógica da Educação Física engloba uma série de métodos e ferramentas, não só proporcionando a possibilidade de promover hábitos de vida saudáveis, mas também otimizando os processos de desenvolvimento motor na idade escolar.

**Palavras-chave:** Educação Física; Escola; Desenvolvimento motor; Competências motoras.

### INTRODUCTION

Motor skills, as pointed out by Backes, Porta & De Anglat (2015), should be a fundamental part of human development in the early stages of life due to the capacity to produce muscular movements in a coordinated and voluntary manner in children. This is how bases are formed to acquire the child's language and cognitive development; it also allows spontaneity and creativity in their developmental stages, in addition to optimizing social skills. On the other hand, Fraile, Tejero, Esteban & Veiga (2019) mention in an exploratory and experiential work of motor skills in early ages, the relevance of the game and motor skills in the development in society through didactic and pedagogical units. In this way, the child develops in an integral way in all the dimensions of the human being, it also helps to develop creativity, motor skills, cognitive, personal and social capacities. This is how the school becomes the best place to socialize and explore Physical Education, developing motor skills in the child population.

Meanwhile, Rojas, Bernate, Fonseca & Betancourt (2019) ratify the importance of the integral development of the child in the preschool education stage; they demonstrate how parents and teachers do not give due importance to this phenomenon and neglect, on many occasions, the biological, morphological and social scope of motor skills in the Physical Education of their children and students. In spite of the fact that there are countless theoreticians who research the importance of motor education, in the school environment it is not intertwined and articulated with the educational and curricular processes. It is often an impediment to school growth, body development, motor expression, body awareness and the development of motor and coordination capacity.

Consequently, Delgado & Montes (2017) describe how also some teachers do not take into account motor education at early ages, perhaps because they do not have enough expertise and specialized training; this could also be caused because for most it is not so relevant to educate bodily and motor versus other educational areas. It also happens that when motor skills are worked on, they are not enhanced in an efficient and ideal way, which leaves conceptual gaps in learning. As recommended by Peña, Toro, Osses, Pachón & Hernández (2018) since they emphasize working from the initial ages the basic movement patterns through school Physical Education; these patterns are executed in relevant and predetermined times, in school environments without neglecting the other academic areas, since all are important and have the same value in the integral





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formation of the child. This activity facilitates the socio-affective relationships they have with their peers, thus forming creative, social and active students. Currently, Bermúdez & Sáenz (2019) give importance to emotion and the physical, an inseparable link, which helps the body and mind to have greater psychomotor development not only in children, but in all biological stages of the life cycle.

However, in order to work the emotional Hortigüela, Salicetti, Hernado & Pérez (2018) relate that the best way to be able to introduce the child to emotionality in the work of motor education; this is achieved by developing self-esteem and self-recognition, fundamental aspects to start the process of motor development. Therefore, these components should be a fundamental part in which parents and teachers see the importance and relevance as a pillar in the training process and the emotional, social, cultural, didactic and methodological benefits that this implies in the formative process of children (Bernate, Fonseca & Betancourt, 2019).

Likewise, Callado (2018) justifies why the importance and relevance of Physical Education in early stages of the life cycle by proposing the following principles, such as:

- a) Psychomotor skills should be the first motor learning acquired when starting to develop in life, since it helps the child to be able to use physical activity as a channel for his energy, besides involving play as a fundamental factor for the enrichment of basic movement patterns and favoring his mood, social and personal states.
- b) Motor action is the fundamental motor for the sensitive phases of human development.
- c) The expressive-motor education helps to discover one's own body through experiences and experiences, which develops self-care and self-confidence, inherent principles in the pedagogical development of Physical Education class sessions.
- d) This discipline helps to improve memory and allows the child to develop notions of orientation and space in real situations of daily life.

Therefore, it is relevant to mention what is described by Aristizabal, Ramos & Chirino (2018) who state that motor skills should begin to develop while the child is having fun. In this way, the child will be perfecting his motor skills, getting more involved with socialization and help the child's creativity. That is, the game as a fundamental axis develops motor skills and socialization in the child, brings benefits to improve their creativity, skills and physical-cognitive qualities, body recognition, and memory, etc. Similarly, motor education is the form of the complete being, as it associates the awareness of action, the relationship and interaction of the subject with the environment, not only physical but also social and community (Bernate, Fonseca & Castillo, 2019).

In this order of ideas, it is imperative to mention and bring up pedagogy, as a guarantee that all pedagogical actions are carried out fully in the communities and school environments. In this context, students develop not only in the motor area but also by fostering communication and social skills, as recommended by Bernate, Fonseca, Betancourt & Romero (2020).



(...) in order for the human being to have an integral formation it is necessary to have a robust curriculum design, it must have needs in terms of the context and it must be related to the formation processes; in this sense, it must have a sufficiently structured and useful strategy to respond to the needs of Physical Education teaching, where it is sought to be integral. (p. 217)

Thus, Cabrera & Dupeyrón (2019) define emotion as the reaction of the body to the mind. Motor skills become a main plane for the cognitive, emotional, social and affective development of each child, whether in the classroom, in public places such as parks and in their homes. Therefore, it is possible to demonstrate the factors that this implies at the moment of developing in the explorations whose motor skills allow them to perform through play. In addition, this can be implemented through pedagogical proposals inside and outside the classroom in early stages, giving as primary objectives the development of motor and cognitive skills, thus improving performance in school, as the child during bodily interaction will allow him to recognize himself, and on the other hand, helps develop cognitive and motor qualities, which in the future can provide greater ease to effectively solve problems of daily living.

On the other hand, Garófano & Guirado (2017) mention that:

Motor skills are not only important because they allow the motor development of students, but also because through them the child expresses and communicates his emotions and acquires the knowledge belonging to the cycle, being the movement a determining factor in learning by being considered a motivating agent capable of driving the child to action, which together with the game occupies a relevant place in the day to day of the little one, (p. 101)

In turn, Bernate, Guataquira, Rodríguez, Fonseca, Rodríguez & Betancourt (2020) propose that Physical Education should promote and develop processes of awareness, empowerment and self-regulation regarding the quality of life of the individual and the community, with the simple aim of internalizing the practice of physical activity as a complementary element of their lives.

While Gómez, Contreras & Gómez (2009) recommend that:

(...) from the planning of classes and motor work sessions should be carried out, in such a way that, children as a whole can develop the totality of the aspects of their personality, enhancing the processes of self-confidence and self-care, rethinking an integral form of motor education. This implies that the exercises should not prioritize some aspects over others, but that they should all be given the same value, since the practice of Physical Education involves the harmonious conjunction of the three aspects described above, which make up the personality, (p. 11)

Finally, Bernate, Fonseca, Betancourt, García & Sabogal (2019) mention the importance of integrally forming children from their infant stages, strengthening the bonds of social skills through exercises and collaborative games, enhancing body education in values. For this reason, the objective of the following bibliographic-systemic review is to analyze and systematize the position of different academic referents specialized in the contribution of Physical Education in the processes of motor development in the infant stages and how these contribute in a transversal way in the integral areas of learning.







Likewise, it can be pointed out that this bibliographic type of research is aimed at providing a source of consultation for students and professionals of Physical Education at higher and school levels, in order to have a theoretical and academic referenced support regarding the pedagogical strategies of the specific area in the know-how of teaching and motor education.

The methodology used in this research is qualitative and its design is bibliographicsystemic review. Hernández (2018) considers it as a detailed, selective and critical study that integrates essential information in a unitary and overall perspective, which aims to examine the published literature and place it in a certain perspective in an analytical way of conceptual and epistemological referents. In addition, the associated categories emerge in the heuristic development phase. From the operative in correspondence with the dynamics and strategy of monitoring and observation of the different selected academic sources and their respective application. For the development of the present phase, a guide was implemented, which allows locating the steps and actions in the categorical and analytical matrix individually; the guide uses protocols for the search and review of information sources, based on the categorical model proposed by Betancourt, Bernate, Fonseca & Rodríguez (2020).

The first protocol was structured in five elements: i) language of the information sources; ii) timeline; iii) keywords; iv) related articles; v) study methodology. The second protocol was structured in four elements: i) review criteria; ii) exclusion criteria (determined on the basis of the problem and the interests of the research group); iii) inclusion criteria represented in the topics relevant to the research; and iv) data extraction strategy (Table 1).

Language		Spanish and English			
Time period		2004-2020			
Keywords	Individual	Motricity, Individual, Competence, Education, Action, Motor, Corporeal,			
		Childhood, Strategies, Pedagogy, Physics, Didactic			
	Combination	Childhood Motor, Physical Education, Motor Competence, Motor Didactics, Motor			
		Didactics, Corporal Education, Corporal Motricity			
Information	i) Databases: Google Scholar, Redalyc, Ebscot Host, Science Sliever,				
resources	ProQuest, ISI, Dialnet, journals indexed in digital format (education, social work); iv; v) Ph. thesis				
Strategies	Training	Training in the use of databases, as a function of research.			
	Term	Research.			
	generation				
	Search	Combination of review of titles and abstracts of articles in databases.			

#### A. Protocol for the search of information sources

#### Table 1. - Heuristic phase development guide

#### **B.** Protocol for review of information sources

#### **Review standards**

Track the existence of works similar to the object of study, research problem, objectives, authors, laws, decrees, resolutions and institutional documents. Timeline adjusted to the context and national institutional references. Works published in indexed journals and specialized peer-reviewed scientific journals.



#### Exclusion criteria

Publications that are not related to the specific context of the object of study. Publications that are not found in scientific journals, indexed, databases and referenced as non-research products. Publications that are outside the timeline established in this study.

#### Inclusion criteria

Keywords referenced research design approach, research problem, methodology, and conceptual references. Publications within the timeline established for the research.

#### C. Evaluation of the findings

In order to account for the application of a protocol for the review of information sources, a data collection matrix was constructed, where the inclusion criteria of the research are given.

The following is the structure of the document review format, which shows the most significant topics: title of the publication, date of publication, authors, keywords, place of elaboration, description, methodology and conclusions (Table 2).

## DEVELOPMENT

AUTHOR/TITLE	MEASURES /	DESIGN	SAMPLE/INSTRUMENT	CONTRIBUTIONS
	OBJECTIVE			
García & Fernández (2020). The competence of motor skills in early childhood education.	To analyze the type of fine motor stimulation received by children at the pre-school level of the national educational center, to design a pedagogical intervention proposal that allows the strengthening or development of fine motor skills.	Intervention	10 boys and 7 girls, pre- kindergarten level, ages 3 and 4 years old. Observation script and field diaries where the processes of verbal, gestural, creative, cognitive and perceptive expression are evidenced and systematized.	The research shows the great importance of fine motor skills in the development of children. Likewise, in order to contribute to the children's education, the teacher's accompaniment as a guide and the support of the parents are needed.
Cabrera & Dupeyrón (2019). The development of fine motor skills in preschool children.	To make known the importance of the development of fine motor skills in preschool students, mentioning strategies for appropriate teaching.	Intervention	Day care center "Los Hermanitos" in the municipality of Pinar del Rio. 135 children from 7 to 10 years old, interview and field diary were used.	The results of the intervention show the improvement of fine motor skills in physical education and in the area of plastic arts due to the activities carried out so that the children can improve with the appropriate strategies.
Campo (2010) Importance of motor development in relation to the evolutionary processes of	To elaborate a manual on the development of motor skills in children from 2 to 6 years of age. To offer	Inductive intervention		The necessary tools are provided to be able to plan ludic and didactic activities from the preschool Physical Education area

#### Table 2. - Analytical matrix of bibliographic-systemic review



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language and cognition in children aged 3 to 7 years in the city of Barranquilla (Colombia).	guidance to teachers so that they can develop motor skills in their students.			adequate for the needs of the students, through observation and adequate analysis.
Morán (2017) Motor development in the infant stage.	To observe students who present a motor disability. To discover the importance of motor skills in the teaching and learning process in students in the classroom.	Inductive intervention	Observation and registration.	The improvement in the basic motor skills is appreciated, through the exercises proposed from Physical Education and how these provide a real sense of orientation in the children's state of mind.
Berruezo (2008) The content of Psychomotricity: reflections for the delimitation of its theoretical and practical scope.	To develop or establish the capacities of the individual through the corporal way, developing the aptitudes and potentialities of the subject.	General assessment	125 children from 8 to 12 years old, Development proposals: Activities and contributions of psychomotor skills with their objectives.	It provides guidelines which help to support the development of psychomotor skills in children, mentioning its importance for life in the social and community environment.
Gelpi, Romero, Mateu Rovira & Lavega (2014). Emotional education through motor practices of expression. Gender perspective.	To know the characteristics of our own body and that of others. To promote confidence and companionship. Recognition of the positive qualities of others.	General assessment and intervention	The field diary and observation script were used for children from 5 to 10 years of age. The child should be a participant in his or her own learning process. Competences in linguistic communication	To provide appropriate characteristics to foster the development of affectivity through motor skills in children for socio-affective relationships.
Águila &López (2018). Body, corporeality and education: a reflective look from Physical Education.	Contribution made by Physical Education to the process of social transformation from a critical and transforming posture of society.	Inductive	Personal autonomy and initiative	To understand the result of the evolution of physical education for early education, mentioning contributions to acquire better learning quality to develop basic motor skills.
Hernández& Rodríguez, (2009) A praxeology, is to say (On the knowledge of the science of motor action and its organization).	To determine the constitutive elements of motor skills that configure it as a human dimension, from an interdisciplinary perspective, which allows overcoming the existing partial readings.	Qualitative approach	Semi-structured interviews with experts. Document research. Interviews	The construction of research approaches to understand human movement and/or motor skills as a representative element of expression and communication of the subject is evidenced, aspects that are enhanced from the praxeological motor pedagogy.
Rodríguez, Gómez, Prieto & Gil (2017) Psychomotor education in its contribution to language development in children with	To understand the relation of fine motor skills in the integral development of children from 3 to 5 years of age at C.E.I.	Intervention	children from 3 to 5 years old	It establishes the relation of motor skills in the initial ages and the contribution of the corporal education class with recreational and ludic activities to give knowledge of the





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specific educational support needs.				importance of this on the cognitive and motor development of the child.
Hernández (2012) Development of fine motor skills through didactic-artistic processes in students of Escuela Unitaria (Doctoral dissertation).	To propose and develop artistic pedagogical actions with children of the unitary school, as alternative solutions for the stimulation and development of fine motor skills.	Intervention	Students from the school of Teusaquillo in the municipality of Otanche (300) Interview and observation	The lack of stimulation in fine motor skills, which has repercussions on the student's learning, is evidenced, thus allowing the construction of activities in the area of school Physical Education for the best stimulation through motor skills in education.
Franco & Ayala (2011) Contributions of motor skills in teaching.	To unveil the meaning of motor skills for teaching; this article describes the relationships of the categories. Contributions of motor skills in teaching.	Qualitative case study and reflexive ethnography	Teaching in the classroom Classroom performance scenarios.	The training of the teacher is visualized, who has been trained from the academic in front of the social, cultural and family formation, which makes possible other ways of seeing, living and creating the Physical Education class with creative and appropriate contents for the students.
Gil, Romance & Nielsen (2018) Play and physical activity as indicators of quality in Early Childhood Education.	To propose and develop the acquisition of fine motor skills, allowing the acquisition of knowledge through innovative techniques and playful methods, achieving the development of skills that enhance the maturation processes: socio- affective, motor and cognitive in students, contributing to their holistic development.	Intervention	From 0 to 12 minutes motor actions for 4-year-old students of the Escuela de Educación Básica Fiscal "Padre Juan de Velasco" (School of Basic Fiscal Education), compilation of field diary and pedagogical planning.	It is concluded that the game is a great promoter of the development of motor, social and affective skills, allowing the acquisition of knowledge and skills for motor development.
Serna (2014) Motor intelligence and emotional intelligence in basketball (Doctoral dissertation, Universitad de Lleida).	Propose an emotional motor education program to improve formative motor behavior.	Inductive	Specific pedagogical and didactic activities for children from 3 to 5 years of age, using planning and experience systematization diary.	It was possible to demonstrate that emotional motor skills are preponderant for the optimization of the motor processes of infants through children's and pre- sports basketball.
Fernández & Iglesias (2019) Importance of motor skills and body expression in the training of the specialist teacher in	To know the current situation of motor skills and corporal expression in Early Childhood Education centers and, in turn, the degree of training that teachers have,	Intervention	The study involved 29 teachers from 15 schools in the province of Pontevedra (Galicia). Under the design of systematization of experiences.	It was possible to analyze the training that teachers have for the teaching of motor skills and corporal expression, as well as to highlight the errors in the training, since it is



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early childhood education.	determining if this can influence the practices they carry out in the classroom on a daily basis.			insufficient, explaining why and how to improve it for the future teacher to be trained.
Peixoto, Martínez & Rico (2019). Analysis of parental behaviors in relation to motor stimulation and play in children aged 1 to 4 years. An exploratory study.	To determine the importance of motor skills in the Early Childhood Education stage and in the learning of the curricular contents of the child in the second cycle of this stage.	Inductive	Compilation, organization, analysis and synthesis. Field Diaries and Observation Script.	To provide knowledge about movement at early ages, mentioning the pertinence development, which helps the child to develop his/her own personality to execute movements and/or activities for motor development.
Harrison, Goodman, Sluijs, Andersen, Cardon, Davey & Pate, (2017) Weather and children's physical activity; how and why do relationships vary between countries?	To provide children with an adequate motor development with the expectation that during the development of the activities and with the use of innovative teaching means, children will develop motor skills.	Intervention	Children from 3 to 5 years old Early education center and directed by a kindergarten teacher. Field diaries.	It is concluded that through adequate stimuli such as psychomotor activities in infants from their first years of life will develop skills that will have a significant impact throughout their lives, both motor and social.
Moreno, López, Gutiérrez, Cascada, & Fernández (2004) Current situation of motor skills in the 0 to 6 years stage according to Early Childhood Education teachers.	To describe the current situation of motor skills according to the opinion of the early childhood education teacher.	Intervention	139 early childhood education teachers in the Region of Murcia. Questionnaires.	It was determined that the best place for the practice of motor skills is the Physical Education class, since it integrally develops the student in the psychomotor areas based on the results of the pre and post tests.
Giraldo (2008) Research: an action strategy for the current teaching role.	To propose pedagogical and didactic strategies for the role, which try to reconcile what is learned with what is lived, theoretical knowledge and daily experience.	Mixed	To present proposals for the current teaching role, interview and survey.	The research yields a favorable result, since it helps to reinforce the knowledge on directed activities for the teaching role. Encouraging the correct formation of motor skills for the child.

During the inquiry conducted on the relevance of motor development in children, the fundamental factors of motor development are evidenced, making known why motor skills should be paramount in the classroom curriculum and outside it, in addition, parents and teachers base as primordial and ideal the Physical Education class in psychomotor development, since this encompasses a high enrichment of determining factors for the child to be formed. For this reason, Cenizo, Ravelo, Morilla, Ramirez & Fernández (2016) recommend that Physical Education is understood as the engine of integral development of the human being, using the game as a complement, in which the child can experience body recognition, environment in which he/she is and the way he/she develops with the society of the same age, just as it can be achieved to strengthen memory, social relationships, attitudes, their emotions, and therefore,





strengthen writing and reading skills; This without leaving aside the state of mind in which the child may be (Bernate, Bejarano & Cardozo, 2020).

Specifically, motricity is one of the principles to take advantage of the motivation provided by the practice of activities and the attitudes that the Physical Education teacher expresses to his students, since it depends on this that children take positive and participatory attitudes to find motivation and improve their basic motor skills. In the same way, Urrutia Garmendia & Arruza (2017) state in their contributions to motor skills for the child, mentioning the motivation that the child has when being active; they mention how the student, not only can be motivated through active movement, but also when he questions himself, when he helps, when he begins to recognize and experiment about his environment. Therefore, the child tends to feel the desire to obtain more, analyzing in depth and questioning the reason for the objective of each activity.

On the other hand, it is found that the game is a strategy or resource for motor development, which is used by Physical Education teachers to begin to develop the motor skills of children, as this is how they begin the recognition and experimentation of themselves based on their environment, enriching their imagination and their social interactions, not only focusing on these points, but also on building self-confidence and the confidence of those around them. However, Gómez (2017) determines some results for the game to be used as a didactic strategy, mentioning that it should enhance the processes of autonomous and cooperative learning, so that teachers implement strategies to strengthen the work of both learning, the environment should be suitable for the active and motivational participation of infants, allowing them to learn from each other, learn to integrate in groups and build ways of self-knowledge.

At the same time, emotions can be worked through motor skills, but in children emotions cannot be clearly evidenced as they are shown by adults, therefore, three-year-old children highlight their first emotions, show their pride, success and failure during their stage either of play or of their schooling. Therefore, Contell, Molina & Martínez (2017) sustain that the Physical Education class in infant ages should be a fundamental part of social and human development, since it helps to improve self-esteem, teamwork, improve mental and physical health. This is how the child can be evidenced in its development stage, since it begins to expose emotions when performing motor activities, as well as when executing activities that provide them with interest, because this influences the active participation of children.

On the other hand, motor skills should be implemented in the classroom, through fine and gross motor work in school craft activities and outside them, through the field work of the physical educator, because with the bibliographic support of the contributions of different authors on motor skills, it can be taken as a reference to have an academic and scientific basis on how to develop body and motor education in school and especially in infant ages (Villafuerte & Delgado, 2019).

Reiterating that the game should be the basic and primary tool in the Physical Education class due to the various forms of development that this involves such as: self-recognition, exploration of the surrounding environment and their own body, social relationships, emotions that transmit through active participations, growth of knowledge of both motor and cognitive skills, as recommended by Rodriguez, Pazos & Palacios (2015) ludic and play activities are inspired by the same pleasure of enjoyment, They also contribute to the development of motor skills and allow the child to create his or her own personality, let the imagination flow, strengthen family and social ties, emotions





that can be easily expressed, because it is through play that the child can generate more confidence in the use of his or her body.

However, strategies can be created and implemented that help the child's motor skills from school Physical Education, and that in turn, involve the fundamental pillars for the child to be formed correctly, which previously mentioned are active participation, emotions, exploration and social relations; these strategies can be through activities such as origami, dances, drawings (plastic arts), physical and motor exercises, basic movement activities, readings and creation of dialogues such as stories. In the same way, Bernate, Fonseca, Urrea & Amaya (2019) propose three considerations, which are motor, in charge of body control, affective which is in charge of emotions, towards motivation and there is the cognitive which is in charge of awareness to make decisions, execute certain movements and the full execution of the same. In order to articulate and link the motor processes to the experiential and expressive ones.

It is also relevant to mention the role of the Physical Education teacher for the development and improvement of motor skills in children. From what Quirós & Arráez (2015) socialize, the teacher must possess adequate qualities such as cultural, comprehensive and creative, and should be responsible for the assertive learning of each student, preparing to improve their skills as time evolves. This is how the teacher must be creative, inquiring according to the needs of the student, have the qualities to make the classes participatory, active and that the child is involved in them, showing affection on it, that can be participatory and influential and not feel excluded, likewise the physical educator must provide the necessary tools for participation, where the child contributes ideas and help their peers to conflict resolution.

For this reason, Urrea, Bernate, Fonseca & Martínez (2018) raise the importance for the teacher to seek in the daily praxis, the social growth of children in the cultural and community environments of the Physical Education class, through dynamic and comprehensive classes.

Finally, not everything can be accomplished by the teacher, that is where the family comes in to play a fundamental role, as this should be a mechanism to help the child find support and advice on how to improve in each session of motor work; this means helping the child emotionally with values, rules, learning to obey orders, providing appropriate spaces to explore or develop recognition through play, it should be noted that parents begin to provide teaching processes from the prenatal stage, through small processes of movement. In such a way, that the child can obtain all the necessary tools from the family and physical educator, for its motor development and that, in the future, this does not contract problems whether affective, motor, participatory or cognitive; this previously mentioned by the authors which support to achieve demonstrate why the importance of motor development at early ages and its social factors involved (Rius & Torrebadella, 2019).

### CONCLUSSIONS

In conclusion, it is proposed that the pedagogical approach of Physical Education encompasses a number of methods and tools, not only providing the possibility of promoting healthy lifestyle habits, but also optimizing the processes of motor development at school age; it is for this reason that the area should become a tool for



life, developing in children the motor assets but also in integrally forming them in values to holistically articulate the learning processes.

The emotional aspect should not be left aside since it is articulated with the development of children's motor skills, since it is a fundamental axis in the cognitive functioning of the child, clarifying that this is due to the experiences that the child lives bodily in the Physical Education classes, for this reason, integral motor class sessions should be planned, where the emotional feeling of the child is involved and thus achieve a significant learning that transforms the somatic reality of the students, turning the motor development area into a fundamental and imperative pillar of the school.

The manifestation of motor skills is evidenced in instruments that allow the ease with which the child begins to demonstrate the development of their motor skills and which should take over all the spaces in which they are. Then, the intervention of teachers and family members for the development process, providing tools and support so that they can have a better performance according to what motor skills imply in all areas already mentioned. With this, we seek to enrich and stimulate the importance of motor skills at an early age and its great connection with the other areas of the classroom and the social environment around them.

Finally, it is relevant to mention the game as the main tool for pedagogues and physical educators for the development of motor skills in infants, generating satisfaction and enjoyment of it with a solid and common objective, which is to enhance and optimize the basic patterns of movements, physical conditional and coordination capacities among others, for this reason this tool should be linked in the pedagogical processes inside and outside the classroom.

### REFERENCES

- Águila Soto, C., & López Vargas, J. (2018). Cuerpo, corporeidad y educación: una mirada reflexiva desde la Educación Física (Body, corporeity and education: a reflexive view from Physical Education). *Retos*, (35), 413-421. https://doi.org/10.47197/retos.v0i35.62035
- Aristizabal, J., Ramos, A., & Chirino, V. (2018). Aprendizaje activo para el desarrollo de la psicomotricidad y el trabajo en equipo. Revista Electrónica Educare, 22(1), 1-26. https://doi.org/10.15359/ree.22-1.16
- Backes, B. M., Porta, M. E., & de Anglat, H. E. D. (2015). El movimiento corporal en la educación infantily la adquisición de saberes. *Educere*, *19*(64), 777-790. https://www.redalyc.org/pdf/356/35643544010.pdf
- Berruezo, P. (2008). El contenido de la Psicomotricidad: reflexiones para la delimitación de su ámbito teórico y práctico. *Revista Interuniversitaria de formación del profesorado*, (62), 19-34. https://dialnet.unirioja.es/servlet/articulo?codigo=3749115
- Bermúdez Torres, C., & Sáenz López, P. (2019). Emociones en Educación Física. Una revisión bibliográfica (2015-2017). Retos, 36(36), 597-603. https://recyt.fecyt.es/index.php/retos/article/view/70447.





Bernate, J., Bejarano, B., & Cardozo, D. (2020). Cotejo de las competencias ciudadanas en estudiantes de Licenciatura en Educación Física. Mendive. Revista de Educación, 18(3), 647-660.

http://mendive.upr.edu.cu/index.php/MendiveUPR/article/view/2049

- Bernate, J., Fonseca, I., & Betancourt, M. (2019). Impacto de la actividad física y la práctica deportiva en el contexto social de la educación superior (Impact of physical activity and sports practice in the social context of higher education). *Retos*, *37*(37), 742-747. https://doi.org/10.47197/retos.v37i37.67875
- Bernate, J., Fonseca, I., & Castillo, E. (2019) Impacto social del deporte y la actividad física en el ámbito escolar. *ATHLOS Revista Internacional de Ciencias Sociales de la Actividad Física, el Juego y el Deporte International Journal of Social Sciences of Physical Activity, Game and Sport, 16(8), 78-97.* https://dialnet.unirioja.es/servlet/articulo?codigo=6837390
- Bernate, J. Fonseca, I. Betancourt, M. García, F. & Sabogal, H. (2019) Competencias ciudadanas en la educación física escolar. *Revista Acción Motriz, Asociación Científico Cultural en Actividad Física y Deporte (ACCAFIDE) LAS PALMAS DE GRAN CANARIA*, 23 (2), 90-99. https://dialnet.unirioja.es/servlet/articulo?codigo=7112441
- Bernate, J., Fonseca, I., Betancourt, M., & Romero, E. (2020). Análisis de las competencias ciudadanas en estudiantes de Licenciatura en Educación Física. *PODIUM Revista de Ciencia y Tecnología en la Cultura Física, 15*(2), 202-220. http://podium.upr.edu.cu/index.php/podium/article/view/918
- Bernate, J., Guataquira, A., Rodríguez, J., Fonseca, I., Rodríguez, M., & Betancourt, M. (2020). Impacto académico y profesional de un programa de educación física a nivel universitario (Academic and professional impact of university physical education program). *Retos*, (39), 509-515. https://doi.org/10.47197/retos.v0i39.81087
- Bernate, J., Fonseca, I., Urrea, P., & Amaya, G. (2019). La educación física y el deporte social para la paz y el posconflicto en Colombia. EmaisF: revista digital de educación física, (61), 33-47. https://dialnet.unirioja.es/servlet/articulo?codigo=7133736
- Betancourt, M., Bernate, J., Fonseca, I., & Rodríguez, L. (2020). Revisión documental de estrategias pedagógicas utilizadas en el área de la educación física, para fortalecer las competencias ciudadanas (Documentary review of pedagogical strategies used in the area of physical education to strengthen citizen competenci. *Retos*, *38*(38), 845-851. https://doi.org/10.47197/retos.v38i38.74918
- Cabrera Valdés, B., & Dupeyrón García, M. (2019). El desarrollo y la estimulación de la motricidad fina en los niños y niñas del grado preescolar. Mendive. Revista de Educación, 17(2), 222-239. http://mendive.upr.edu.cu/index.php/MendiveUPR/article/view/







- Callado, C. V. (2018). El aprendizaje cooperativo en educación física: Planteamientos teóricos y puesta en práctica. Acción motriz, (20), 7-16. https://dialnet.unirioja.es/servlet /articulo?codigo=6435704
- Campo, L. (2010). Importancia del desarrollo motor en relación con los procesos evolutivos del lenguaje y la cognición en niños de 3 a 7 años de la ciudad de Barranquilla (Colombia). *Salud Uninorte*, *26*(1), 65-76. https://www.redalyc.org/pdf/817/81715089008.pdf
- Cenizo Benjumea, JM., Ravelo Alfonso, J., Morilla Pineda, S., Ramírez Hurtado, JM, & Fernández- Truan, JC (2016). Diseño y validación de instrumento para evaluar coordinación motriz en primaria. Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte / Revista Internacional de Medicina y Ciencia de la Actividad Física y el Deporte, 16 (62), 203-219. [Fecha de consulta 26 de mayo de 2020]. ISSN: 1577- 0354. https://www.redalyc.org/articulo.oa?id=542/54246044002
- Contell-Lahuerta, S., Molina García, J., & Martínez Bello, V. (2017). Niveles y patrones de actividad física en sesiones de motricidad infantil basadas en el juego libre. Sportis. Scientific Journal of School Sport, Physical Education and Psychomotricity, 3(2), 303-322. https://doi.org/10.17979/sportis.2017.3.2.189
- Delgado-Lobete, L., & Montes-Montes, R. (2017). Perfil y desarrollo psicomotor de los niños españoles entre 3 y 6 años. *Sportis. Scientific Journal of School Sport, Physical Education and Psychomotricity*, *3*(3), 454-470. https://doi.org/10.17979/sportis.2017.3.3.2002
- Fraile García, J., Tejero-González, C. M., Esteban-Cornejo, I., & Veiga, Óscar L. (2019). Asociación entre disfrute, autoeficacia motriz, actividad física y rendimiento académico en educación física (Association between enjoyment, motor selfefficacy, physical activity and academic performance in physical education). *Retos*, 36(36), 58-63. https://doi.org/10.47197/retos.v36i36.63035
- Franco Jiménez, Alejandra María, & Ayala Zuluaga, José Enver (2011). Aportes de la motricidad en la enseñanza. *Revista Latinoamericana de Estudios Educativos (Colombia), 7*(2), 95-119. [Fecha de Consulta 3 de junio de 2020]. ISSN: 1900-9895. https://www.redalyc.org/articulo.oa?id=1341/134125454002
- Fernández, J. E. R., & Iglesias, M. (2019). Importancia de la motricidad y la expresión corporal en la formación del maestro especialista en educación infantil. *TRANCES. Transmisión del Conocimiento Educativo y de la Salud*, (6), 867-890. https://dialnet.unirioja.es/servlet/articulo?codigo=7293955
- García-Marín, P., & Fernández-López, N. (2020). La competencia de las habilidades motrices en la educación infantil. *Apunts. Educación Física y Deportes*, 141, 21-32. https://doi.org/10.5672/apunts.2014-0983.es.(2020/3).141.03
- Garófano, V. V., & Guirado, L. C. (2017). Importancia de la motricidad para el desarrollo integral del niño en la etapa de educación infantil. *EmaìsF: revista digital de educación física*, (47), 89-105. https://dialnet.unirioja.es/servlet/articulo?codigo=6038088





EN LA CULTURA FÍSICA

- Gelpi Fleta, P., Romero-Martín, M. R., Mateu Serra, M., Rovira Bahillo, G., & Lavega Burgués, P. (2014). La educación emocional a través de las prácticas motrices de expresión. Perspectiva de género. Educatio Siglo XXI, 32(1 marzo), 49-70. https://doi.org/10.6018/j/194081
- Gil-Espinosa, F., Romance García, Ángel, & Nielsen Rodríguez, A. (2018). Juego y actividad física como indicadores de calidad en Educación Infantil (Games and physical activity as indicators of quality in Early Childhood Education). *Retos*, (34), 252-257. https://doi.org/10.47197/retos.v0i34.60391
- Giraldo, D. I. A. (2008). Investigar: una estrategia de actuación para el rol docente actual. Investigaciones Educación, 8(1), 63-81. en Disponible de: http://revistas.ufro.cl/ojs/index.php/educacion/article/view/944
- Gómez Smyth, L. (2017). La construcción de instancias de juego con rasgos lúdicos en la educación física del nivel inicial. Sportis. Scientific Journal of School Sport, *Psychomotricity*, *3*(3), Physical Education and 569-588. https://doi.org/10.17979/sportis.2017.3.3.2069
- Gómez-Víllora, S., Contreras-Jordán, O., & Gómez-Barreto, P. (2009). Justificación de la educación física en la educación infantil. Educación y Educadores, 11(2). https://educacionyeducadores.unisabana.edu.co/index.php/eye/article/vie w/737/1715
- Harrison, F., Goodman, A., van Sluijs, E. M., Andersen, L. B., Cardon, G., Davey, R., & Pate, R. (2017). Weather and children's physical activity; how and why do relationships vary between countries? International Journal of Behavioral Nutrition 74. and Physical *Activity*, 14(1), https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-017-0526-7
- Hernández, J. & Rodríguez, J. (2009). Una praxeología, es decir.... (sobre los conocimientos de la ciencia de la acción motriz y su organización). Acción motriz, (3), 16-24. https://dialnet.unirioja.es/servlet/articulo?codigo=6700102
- Hernández-Sampieri, R., & Torres, C. P. M. (2018). Metodología de la investigación (Vol. 4). México<sup>^</sup> eD. F DF: McGraw-Hill Interamericana.
- Hernández Virguez, E. (2012). Desarrollo de la motricidad fina a través de procesos didáctico-artísticos en estudiantes de Escuela Unitaria (Doctoral dissertation). https://intellectum.unisabana.edu.co/handle/10818/2528
- Hortigüela Alcalá, D., Salicetti Fonseca, A., Hernado Garijo, A., & Pérez Pueyo, Angel. (2018). Relación entre el nivel de actividad física y la motivación de docentes de educación física. Sportis. Scientific Journal of School Sport, Physical Education and *Psychomotricity*, 4(2), 331-348. https://doi.org/10.17979/sportis.2018.4.2.3291
- Morán, A. (2017). Desarrollo de la motricidad en la etapa infantil. Revista Espirales 1(3), 8-17 Doi: https://doi.org/10.31876/re.v1i3.11
- Moreno, J. A., López, B., Gutiérrez, E. M., Cascada, M., & Fernández, M. R. (2004). Situación actual de la motricidad en la etapa de 0 a 6 años según el profesorado de Educación Infantil. Revista iberoamericana de psicomotricidad y técnicas corporales, 16, 17-34.

https://dialnet.unirioja.es/servlet/articulo?codigo=3739246







- Peña Troncoso, S., Toro Arévalo, S., Osses Bustingorry, S., Pachón Moreno, J., & Hernández Mosqueira, C. (2018). La Dimensión Conceptual del Conocimiento en Educación Física: Un estudio Binacional (Conceptual Dimension of Knowledge in Physical Education: A Binational Study). *Retos*, (35), 170-175. https://doi.org/10.47197/retos.v0i35.63164
- Peixoto-Pino, L., Martínez-Román, R., & Rico-Díaz, J. (2019). Análisis de los comportamientos parentales en relación a la estimulación motriz y el juego en niños de 1 a 4 años. Un estudio exploratorio. Ágora para la Educación Física y el Deporte, 21, 96-11. Doi: https://doi.org/10.24197/aefd.0.2019.96-110
- Quirós Pérez, V., & Arráez Martínez, J. M. (2015). Juego y psicomotricidad. Propuesta y análisis de un programa de trabajo (Segunda parte). *Retos*, (9), 23-31. https://doi.org/10.47197/retos.v0i9.35055
- Rius, J., & Torrebadella Flix, X. (2019). El juego del cornerball, un pre-texto del pasado para crear debate en la educación física del presente (The game of Cornerball, a pre-text of the past to create debate in the physical education of the present). *Retos*, *37*(37), 810-819. https://doi.org/10.47197/retos.v37i37.67484
- Rodríguez, M. T., Gómez, I. M., Prieto-Ayuso, A., & Gil-Madrona, P. (2017). La educación psicomotriz en su contribución al desarrollo del lenguaje en niños que presentan necesidades específicas de apoyo educativo. *Revista De Investigación En Logopedia*, 7(1), 89-106. https://revistas.ucm.es/index.php/RLOG/article/view/58183
- Rodríguez Fernández, J. E., Pazos Couto, J. M., & Palacios Aguilar, J. (2015). La promoción de juegos populares y tradicionales en los centros de enseñanza primaria del municipio de Boiro (A Coruña). *Sportis. Scientific Journal of School Sport, Physical Education and Psychomotricity*, 1(1), 53-74. https://doi.org/10.17979/sportis.2015.1.1.1401
- Rojas, M., Bernate, J., Fonseca, I., & Betancourt, M. (2019) El método praxeológico como herramienta pedagógica de aprendizaje motriz. ATHLOS Revista Internacional de Ciencias Sociales de la Actividad Física, el Juegoy el Deporte International Journal of Social Sciences of Physical Activity, Game and Sport, 18(3), 12-35. https://dialnet.unirioja.es/servlet/articulo?codigo=7086787
- Serna Bardavío, J. (2014). *Inteligencia motriz e inteligencia emocional en el baloncesto* (Doctoral dissertation, Universitat de Lleida). https://www.tdx.cat/handle/10803/285048#page=1
- Urrea, P., Bernate, J., Fonseca, I., & Martínez, A. (2018). Impacto social de los graduados de la Licenciatura en Educación Física, Recreación y Deporte UNIMINUTO. Educación Física Y Ciencia, 20(2), e050. https://doi.org/10.24215/23142561e050
- Urrutia Gutiérrez, S., Otaegi Garmendia, O., & Arruza Gabilondo, J. A. (2017). Competencia motriz, percepción de competencia y práctica físico-deportiva en adolescentes. *Sportis. Scientific Journal of School Sport, Physical Education and Psychomotricity*, 3(2), 256-271. https://doi.org/10.17979/sportis.2017.3.2.1908





AD REVISTA DE CIENCIA Y TECNOLOGÍA EN LA CULTURA FÍSICA

 Villafuerte, J., Pérez, L., & Delgado, V. (2019). Retos de la Educación Física, Deportes y Recreación en Ecuador: las competencias docentes (Challenges of Physical Education, Sports, and Recreation in Ecuador: the teaching competences). *Retos*, *36*(36), 327-335.

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The authors declare not to have any interest conflicts.

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**Jayson Bernate**: Conception of the idea, authorship coordinator, general advice on the topic addressed, literature search and review, translation of terms or information obtained, instrument making, instrument application, compilation of information resulting from the instruments applied, statistic analysis, preparation of tables, graphs and images, database preparation,Drafting of the original (first version), review of the application of the applied bibliographic standard, revisión y versión final del artículo, review and final version of the article, article correction.



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