

The cognitive independence as condition of autonomy in the Physical Education

La independencia cognoscitiva como condicionante de autonomía en la Educación Física

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ABSTRACT

The studies have more than enough cognitive independence and personal autonomy they cause discrepancies to discuss from scientific positions, for many they mean the same thing, however he/she should clear up that it is not the same cognitive independence that autonomy in Physical Education, for what seeks to differ with this investigation and in turn to identify the elements of the cognitive independence that condition it toward the autonomy from the theoretical systematizing as part essential in the study of the personality. For this study scientific methods was used; of the theoretical level, as well as of the empiric level that you/they allowed to corroborate the problem study object.

Keywords: Cognitive independence; Autonomy; Physical education; University students

RESUMEN

Los estudios sobre independencia cognoscitiva y autonomía personal causan discrepancias a discutir desde posiciones científicas, para muchos significan lo mismo, sin embargo se debe aclarar que no es lo mismo independencia cognoscitiva que autonomía en Educación Física, por lo que con esta investigación se pretende diferenciar los elementos de la independencia cognoscitiva que la condicionan hacia la autonomía desde la sistematización teórica como parte esencial en el estudio de la personalidad. Para este estudio se utilizaron métodos científicos; del nivel teórico, así como del nivel empírico que permitieron corroborar la problemática objeto de estudio.

Palabras clave: Independencia cognoscitiva; Autonomía; Educación física; Estudiantes universitarios

INTRODUCTION

At present, Cuban universities carry out essential transformations that lead to the elimination of traditional approaches, marked by a pedagogy based on old schemes, while contemporary society needs professionals with a "broad profile" who are creative, comprehensive, conductors, and guidance and, above all, managers who act autonomously in solving problems related to their profession and transform the social practice where they work.

Physical Education as a discipline of the curriculum is also in a renewal phase, revealing the need for the link between theory and practice, which allows the student to assume a more active position in the face of the various situations in the surrounding world, so that from the first stages of their training promote the appearance and manifestation of professional research, together with the development of interests and skills acquired through the productive methods of the teaching-learning process, all of which will define their self-knowledge, self-esteem and independence, conditioning aspects of efficient professional performance.

The foregoing is reflected in recent national and international studies in the field of Physical Education, focused on relating teaching concepts that promote student autonomy and support for autonomy by teachers, with various variables including: Baena-Extremera, Granero-Gallegos, Sánchez-Fuentes and Martínez-Molina (2013), who carry out a deep background analysis in relation to autonomy in adolescent students, support and motivation in Physical Education. Moreno, Gómez and Cervelló (2010) and Moreno, Vera & del Villar (2010) said studies have found positive relationships with motivation and the time and intensity dedicated to physical activity independently.

Reeve and Jang (2006) base their conceptions on autonomous motivation to teach, autonomous motivation to learn that coincides with (Rot, Assor, Kanat, and Kaplan, 2007). According to Reeve (2006) and Reeve, Vansteenkiste, Assor, Ahmad, Cheon, Jang, Kaplan, Moss, Olaussen & Wang, (2014), teachers who adopt styles of support for autonomy favor internal motivation, improve the

classroom climate and the teacher-student relationship; Reeve (2011) carries out a meta-analysis where he concludes that specific intervention programs can help the teacher on how to exercise their teaching to guide them towards supporting autonomy, a meta-analysis on which Gómez (2012) relies to simplify teaching strategies. Teacher intervention in Physical Education to develop autonomy in Primary Education students.

Support for autonomy in the school environment has shown the favorable relationship with the student's perception of autonomy. Finally, Aguado-Gómez, Díaz-Cueto, Hernández-Álvarez and López-Rodríguez (2016); López (2016) propose conceptions in the teaching-learning process of physical education perception versus reality where they carry out a whole motivational display as support for the student's autonomy from the teacher's discourse. Velázquez, Pérez and Parra (2016) and Velázquez (2018) focus on the levels of autonomy in teacher learning in foreign language training based on studies on autonomy.

The theoretical conceptions provided by the aforementioned authors at the international and national level show the potential of cognitive independence as a condition of autonomy as a category that intervenes towards the development of the student's personality.

However, although the subject has been addressed by various authors, there is a tendency to interpret autonomy as cognitive independence and to be treated as parallel categories in the teaching-learning process of university Physical Education, which compromises the methodology to be used, affecting the systematicity, comprehensiveness and unity of said process.

DEVELOPMENT

The study of cognitive independence and autonomy as a gnoseological phenomenon is based on the dialectical-materialist theory of knowledge, this theory breaks with the metaphysical, contemplative and idealistic postulates of pre-Marxist philosophers, among its principles are: materialism, reflection, development and practice, constituting guiding ideas that direct man's activity in society. Therefore, the dialectical-materialist theory of knowledge constitutes a fundamental reference for other scientific theories; such is the case of the theory

of activity, communication and learning.

The foregoing is a foundation to consider cognitive independence as a conditioner of autonomy in the zone of proximal development, this reasoning is based on the conceptualization of both definitions, their typical elements and essential features. The historical-cultural theory of Vygotsky (1979) is assumed, and especially the general law of formation of the human psyche enunciated by this author. According to this law, the teaching-learning process runs from the external, social and inter-psychological to the internal and intra-psychological, once the subject appropriates the knowledge. Thus, this author states: *“All higher psychological functions originate as relationships between human beings.”*

The foregoing shows that in order to develop autonomy in university students, it is necessary to stimulate cognitive independence from each of the motor physical learning tasks and procedures that the teacher proposes, must bear in mind the diversity of thoughts and ways of assuming the tasks. that, from the theory, the help of "others" is taken into account, expressed in the knowledge, skills, attitudes and forms of coexistence that lead him to improve himself humanly and transform the environment where he lives and works, highlighting in an essential way the role played by the unity of the cultural and instrumental cognitive and the motivational affective in this process.

For this reason, the theoretical positions assumed on developer learning are based on psychological bases where the activation-regulation of personality, significance and motivations, predominantly intrinsic to learning, occupy a special place.

It also takes into account, in addition, the transition from the Current Development Zone to one of near development and then potential Vygotsky (1979), that is, starting from the knowledge that the teacher possesses on the development of autonomy, taking into account the characteristics of the university student and the level of autonomy development that students present to carry out the activities, as well as what new level of development they have reached to put it into practice in their independent cognitive-cultural and instrumental performance.

Autonomy in general, from the diversity of its use in different contexts, is

considered a generalized concept. The idea of autonomy is central to modern practical philosophy Cfr. Habermas (1989) and Rawls (1980), as well as for legal philosophy and for Law. Meanwhile, it provides a normative foundation for the constitutional state, particularly through the ideas of political autonomy, individual or personal autonomy, and morals. Also, for the theme of diversity and unity in law and human dignity.

In pedagogy, autonomy is a category identified within emotional intelligence in which the behavior of autonomy in student learning is analyzed, referring to the possibilities of training from reason, responsibility when making decisions and creative power independently.

Therefore, from the theory, the concept of autonomy is fragmented and it is approached according to the different elements and binding interests that make it up, so that an integrative and systemic position is not yet achieved in its study, so the author of this Research considers them as personal or institutionalized theories and consequently dialectical.

Philosophy relates autonomy to the idea of cognitive independence and is prior to science and, in fact, this is heir to the second, both with an indissoluble link given by the search or love of knowledge. However, as the author himself puts it, this distinction that we make today was not always obvious.

According to the DRAE (1992 p. 234), in its second meaning, autonomy is understood as the *“condition of the individual who depends on no one for certain concepts”*. Although this definition is not very broad, it does allow us to get closer to a first idea of what is understood as autonomy in Physical Education.

There are other concepts related to autonomy such as: self-government, self-management, self-realization, autarky, self-determination and independence. As can be seen, autonomy is alluded to as a condition or state of a person and his independence from established concepts or prejudices. In this same sense, a concept closely related to the above is that of independence.

In DRAE (1992, p. 1157) this will be conceived as a synonym of autonomy. And as for independent, it is collected as that *“person who holds his rights or opinions without admitting outside intervention.”*

It is known that when applying autonomy to the sphere of learning to refer to developer styles always with the intention of highlighting the active role of the student, it leads to citing cognitive independence and thus to signify the works of authors who stand out in this countryside. Among them are: Rojas (1978), Dubrocq (1980), Majmutov (1983), Pidkasisti (1986), Rubinstein (1986), Talízina (1992), Lima (2001), Durant (2015), Ruiz-Lores (2015).

In its definitions, cognitive independence is seen as a deep and intelligent assimilation, to think and work with originality by itself, efficiently and from the teacher's guidance. However, it is necessary to recognize processes that condition it towards autonomy in Physical Education, to generate both the intellectual effort and the integral development of university students.

Of these studies on cognitive independence, it is suggested that it has as typical elements in its structure the following:

- Separate the objective of the activity: the determination and the assumption of objectives.
- Determine the purpose of the activity.
- Select the means of the activity.

And as essential features for the teaching-learning process the following:

- Understanding the objectives of the learning tasks.
- The analysis of the evaluative and cognitive demands of the tasks for learning.
- The identification of the evaluative, instrumental and cognitive resources that the student has to face the learning tasks.
- The analysis of the sociocultural elements of the learning tasks.
- Mastery of specific content, strategies and procedures for the application of actions in solving learning tasks.
- The verification of the effectiveness of the actions in solving the learning tasks.
- Communication as a mediator of the process.

Therefore, these characteristics of cognitive independence lead to signifying the coincidence that occurs with Kohlberg (1982) cited by Gómez (2012 p 56), which goes further and establishes a whole series of stages that make it a condition of autonomy. in physical education, from heteronomy as the search for cognitive

independence to autonomy as a category, which he distinguishes as “*a process of moral construction from the individual*”.

He considers that there are three types of morality: pre-conventional, where the rules come from the outside and are not understood, they are assumed without any critical criteria; the conventional one, where the important thing is to have a feeling of independence and act according to what is expected according to the potential of each person; and the post-conventional that establishes some universal principles of conscience by which one acts with total cognitive independence. About this, the author refers to six stages through which autonomy passes:

1. Obedience. It is the stage of egocentricity: there is no cognitive independence in its management.
2. Mutual selfishness. Search for self-interest: it has a very low level of cognitive independence in its management.
3. Interpersonal expectations. It is about respecting the group's norms and being accepted: you have an acceptable level of cognitive independence in your management.
4. Order and responsibility. The person wants to maintain the social order and fulfill his responsibility: he has a medium level of cognitive independence in his management.
5. Everyone has the right. The good is sought. Right to a dignified life and freedom to act: it has a high level of cognitive independence in its management.
6. We are all the same. Here we arrive at universal morality. The conduct is governed by universal ethical and moral principles (equality, respect, dignity, freedom and independence): a high level of cognitive independence is achieved in its management.

It is important to overcome the heteronomous phase, since it is a partial perspective on any question under consideration. The university student limits himself to constructing his own cultural cognitive point of view on his body and another cognitive instrumental point of view of the application of the intention of the physical motor exercise, after careful consideration of the teacher's

perspective. This would mean staying focused on himself or on the imposition of others.

Therefore, cognitive independence conditions autonomy in physical education in the motor-cognitive and social-affective aspects, as dynamics of the interactions that occur in the teaching-learning process of university Physical Education, where the university student creates the base of the culture around your body and intention of the motor physical exercise what to do, how to do and why to do it, so that you can adjust the performance of physical exercise according to your need, gaining confidence in yourself and drawing up a strategy or personal project to complete their teaching activities even in a contextual transfer situation (outside the classroom context).

In agreement with Lima (2001), the cognitive independence of students is shown from different angles:

- In the ability to see and represent the cognitive task of a theoretical and practical nature.
- In determining the plan and the methods of its solution using the safest and most effective procedures possible.
- In the independence of the activities aimed at fulfilling the task outlined.
- In understanding the essentials and checking outlined solutions.

Each subject makes culture his own, based on learning processes that allow him the progressive mastery of objects and their uses, as well as ways of acting, thinking and feeling, and even current ways of learning. in each historical context; In this way, the learning that he carries out constitutes the essential foundation for a process of intellectual development to take place. Meanwhile, Ruiz (2007 p. 35), an aspect that coincides with Lima (2001) when relating the previous aspects, the position shared by the author of this research, determines that autonomy in learning Physical Education is based on:

“The acquisition of knowledge, which is carried out by itself in a continuous, relational and questioning process through which strategies are applied to independently understand any type of phenomenon or information, self-regulate to plan learning actions and solve problems with knowledge on the basis of an

integral development of the personality that facilitates the individual to respond and correctly face the demands of personal and social life”

What leads to relate cognitive independence through the security it grants to university students to question on the basis of knowledge, since its essential objective is to guarantee self-validism in situations of contextual transfer, improving integral development.

This aspect also coincides with the consideration of Lorente (2004, p. 65) cited by Álvarez (2015, p. 71): “... *personal autonomy is a departure from egocentrism and is the product of an active construction of the subject in the social interaction in Physical Education, through a process of decentration...*”. This autonomy is based on questioning, formulating one's own reflections and reasoning and not only on respect for the teacher's authority, an aspect that coincides with Rutten, Boen, and Seghers (2012). For this reason, it must support with affective-motivational aspects: communication, levels of aid necessary for university students. This requires cognitive independence in the management of Physical Education.

For his part, Velázquez (2018) who agrees with (Manrique, 2004, p. 17), states that:

“...To achieve Learning to learn, which leads us to autonomy in learning, it is imperative to teach students to progressively adopt and incorporate learning strategies, teach them to be more aware of the way they learn, so that they can successfully face various learning situations...” (p. 12)

In this quote, it is highlighted that being more aware of the way they learn, is in our opinion what refers to the self-recognition of learning styles and their use.

This analysis leads to consider the definition of Álvarez, C. (1999) cited by Bello (2011, p. 192), as a reference in this research when considering cognitive independence as problematic and relevant for solving tasks of learning, considering cognitive independence as the ability to see and represent the problem, the cognitive task with a theoretical or practical character in determining the plan, the methods for its solution, using the safest and most effective procedures in the mental process active, in the creative search for suitable solutions and in the verification of the adopted solutions.

With the above, Rué (2007) agrees by highlighting three approaches to learning in university Physical Education that also condition cognitive independence towards autonomy. These are: the technical approach, in which the student selects the spaces, certain routes and the order of materials, according to the teacher's guidance. The cognitive approach, which implies assuming a greater degree of responsibility for their own learning, since the student defines the realization of topics or activities and ways of realization. Political approach, which implies a total degree of responsibility and freedom in the assumption of the entire learning process, from the definition of the area, the subject, its objectives, the contents, its achievements, as well as the basic criteria that define them.

The significance of these arguments, such as the notion of making consistent decisions and praxis, also as a civic innovation, understanding innovation as the ability to detect and carry out changes in science applied to the teaching-learning process of university Physical Education.

For all the above, it should be noted that, if it is intended to enhance, or develop autonomy in university students, the stimulation of cognitive independence as a conditioner, plays an essential role in the teaching-learning process of university physical education. It is also recognized that the personality develops in the socialization process, with activity and communication playing an important role as necessary tools of cognitive independence and autonomy that by themselves do not respond to the expectations in the aforementioned process.

These criteria show the materialistic nature of cognition and its condition as a social phenomenon that contributes to the transformation of the environment, based on social relations and from a dynamic that should promote conscious regulation and continuous learning in education. Cognitive independence as a practical activity contains a wide range of cognitive and metacognitive processes that occur in the socialization process that are fundamental as requirements to possess autonomy.

It is significant in this systematization from the theory that, although cognitive independence is complemented with autonomy, they are different categories to take into account in the formation of personality, in which the appropriation of

knowledge must occur in a dialectical unit that motivates learning mediated by communication and activity.

Therefore, cognitive independence and autonomy have a very common aspect that unites them and this is cognition, since in order to have autonomy, the student must have knowledge of the laws that regulate the process, its possibilities and potentialities, as well as its weaknesses.

Cognitive activity constitutes an essential form of man's spiritual activity and conditioned by practice, it reflects reality and reproduces it in the form of knowledge and is expressed in principles, laws, categories, hypotheses, theories, among others. Knowledge mediates all human activity, including its substantial foundation: practice. It manifests as a subject-object dialectical interaction, the result of which is expressed in a certain knowledge of the reality apprehended in said process.

Shared activities, such as workshops, seminars, practical classes, excursions, cinema debates, spaces for reflection, participation in productive and socially useful activities, among others, in which equal opportunities are provided for everyone to express their points of view and are listened to with respect, based on the cooperation between all to achieve common goals, it favors a "climate favorable to learning", the development of levels of consciousness, that the knowledge and skills that the school intends for him to appropriate, acquire a personal meaning for it, in addition to understanding its meaning or social importance.

Simultaneously, the levels of development reached open safe paths to higher intellectual levels and to new learning. In this way, it is evident that in order to develop autonomy, the conditions that promote the stimulation of cognitive independence in physical education as a potential development zone, towards a developing character of the teaching-learning process for the formation of students, must be taken into account. university students from the interpsychological, to later proceed from its external manifestation with the intervention of the teacher for the proper use of physical motor tasks.

The Zone of Proximate Development allows the teacher, from the identification of

the current development zone of the student, the offer of opportune helps that go beyond the mere fulfillment of the learning tasks so that these are applied with cognitive independence and autonomy in any situation or problem in the social context.

CONCLUSIONS

Cognitive independence and autonomy are processes that complement each other, but are different from each other, so their treatment from the teaching-learning process of university physical education must be carried out in such a way that they stimulate the first (cognitive independence) and give as results the second (autonomy).

The teacher's mediation between the teaching content and the motor behavior of the university student, communication and activity are essential processes to stimulate cognitive independence and achieve autonomy in the actions to be carried out in the direction of the teaching-learning process of physical education university.

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