

La orientación del trabajo independiente con enfoque interdisciplinar en el año académico

The orientation of independent work with an interdisciplinary approach in the academic year

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RESUMEN: El trabajo metodológico en la actualidad adquiere relevancia por las dificultades que se manifiestan en el proceso docente educativo. Por ello en esta investigación se pretende contribuir al perfeccionamiento del trabajo metodológico en la carrera de Cultura Física. Se emplearon teóricos y empíricos, que permitieron sintetizar las fuentes más relevantes del tema investigado. Se ofrece un modelo didáctico que se concreta en una metodología de orientación del trabajo independiente con enfoque interdisciplinar en el año académico de la carrera Cultura Física, que favorece la preparación de profesores y el protagonismo estudiantil en el proceso de enseñanza-aprendizaje.

Palabras clave: Modelo didáctico; Base orientadora; Contextualización orientadora.

ABSTRACT: Methodological work currently acquires relevance due to the difficulties that manifest themselves in the educational teaching process. Therefore, this research aims to contribute to the improvement of methodological work in the Physical Culture degree. Theoretical and empirical data were used, which allowed synthesizing the most relevant sources of the topic investigated. A didactic model is offered that takes shape in a methodology to guide independent work with an interdisciplinary approach in the academic year of the Physical Culture degree, which favors the preparation of teachers and student protagonism in the teaching-learning process.

Keywords: Didactic model; Guiding basis; Guiding contextualization.

Introduction

The search for objective and effective solutions for the improvement of the work of practicing teachers in Higher Education in Cuba has become an unavoidable necessity for the achievement of the efficiency of a competent professional.

In this sense, the methodological work designed for the treatment of contents must have an implicit interdisciplinary approach, which is an important aspect for students' learning. This integration favors a much deeper relationship between the subjects that make up the different disciplines and, in addition, the understanding of the relationships between them, aspects that coincide with Álvarez Pérez (2004).

At present, in the opinion of many specialists such as Álvarez de Zayas (1999); Perera Cumerma (2000); Valcárcel Izquierdo; Fiallo Leal (2002); Sagó Montoya & Guibo Silva (2006); Alonso Onega (1994); García Batista & Caballero Delgado (2003); Aballe Pérez (2009), among others, consider that one of the expressions in which the work of the teacher in the university is strengthened and that significantly connotes the integral formation of the professional.

It is the interdisciplinary methodological work, due to its integrating and systemic character, in which the planning, organization, design, evaluation, control and adequate preparation, constitute decisive factors in the integration of the didactic components of the teaching-learning process.

The author Vecino Alegret (1986) states that: one of the main directions of the educational work is the diversification of the ways to improve the methodological work. We agree with this criterion because independent work constitutes a priority in Higher Education, therefore, its approach in the methodological work has to be aimed at perfecting the teaching-learning process.

In the researcher's opinion, the least worked aspects within the methodological structure is the independent work in the different disciplines and year groups, and specifically, in its orientation from an interdisciplinary approach, a direction that must be achieved to reach better results in the students' learning, so it is valid to attend in depth this orientation in the internal aspect of the disciplines as an element that has been less studied.

These limitations indicate that the preparation process of teachers in the academic year lacks a projection that favors the adequate orientation of independent work with an interdisciplinary approach, which demands a higher level of integration of the acting subjects, which modifies the

current mode of action, as well as changes in the conception of methodological work, especially in the discipline Methods of Analysis and Research in Physical Culture.

In this sense, a methodological work should be conceived to reveal the links between these subjects and disciplines, which is essential for the teacher to prepare the student in the execution of independent work with an interdisciplinary approach from a correct orientation of the same, as required by the Model of the Physical Culture Professional.

The above was corroborated on the basis of an initial preliminary factual diagnosis carried out during the research, as well as by the author's experience as main professor of the subject Research Methodology of the Faculty of Physical Culture at the University of Guantánamo, which has served as a basis for the design and execution of a diagnosis that enabled to declare the following insufficiencies:

- Theoretical, methodological and practical limitations for the orientation of independent work with an interdisciplinary approach.
- Lack of methods and procedures for the orientation of independent work with interdisciplinary approach.
- Inadequate performance of students in the solution of independent work with interdisciplinary approach in praxis.

Due to the importance and topicality of the subject, the following objective is proposed: to design a didactic model that takes the form of a methodology for the orientation of independent work with an interdisciplinary approach in the academic year of the Physical Culture course.

Development

The orientation of independent work with an interdisciplinary approach in the academic year

In order to verify the current state of the problem and characterize it, the dependent variable in the research was the orientation of independent work with an interdisciplinary approach in the first academic year of the Physical Culture course at the University of Guantánamo. The following are some of the results obtained in the research carried out:

Regarding potentialities:

- The academic year is recognized as a fundamental basic cell for the orientation of independent work with an interdisciplinary approach.

- The professors refer to their willingness to face the new changes that arise in the interdisciplinary methodological work of the academic year.

Regarding the main insufficiencies:

- Insufficient quality of the teachers' orientation (85.7%) of the independent work with interdisciplinary approach in its link with the spheres of professional performance of Physical Culture.
- Insufficient use of procedures by professors (78.5%) evidenced in the solution of the independent work with interdisciplinary approach by the students

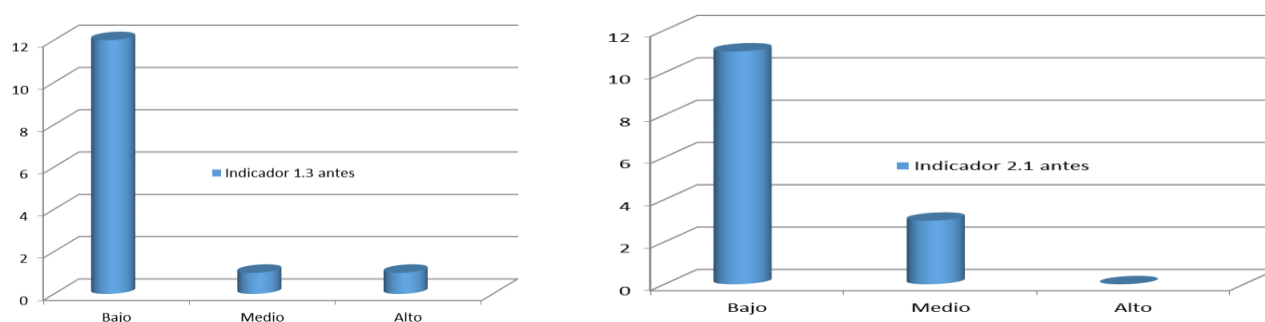


Fig.1. Representation of the tables based on the indicators and dimensions most affected in the initial diagnosis.

Source: Own Elaboration

Essential gap: Insufficient preparation of the teacher in the development of theoretical-interdisciplinary and procedural knowledge for the orientation of independent work with an interdisciplinary approach in the first academic year of the Physical Culture course at the University of Guantánamo.

The results provided by the diagnosis show that many of the insufficiencies of the methodological work of the first academic year of the Physical Culture course regarding the orientation of independent work with an interdisciplinary approach, are related to the limited preparation of teachers for the development of theoretical-methodological knowledge and the orienting procedural in the different spheres of action of Physical Culture.

In order to address the detected inadequacies, a didactic model was developed based on the authors Barrera Romero, J. L.; Castellanos Simons, D.; Calzado, D. Milán, Mengana Osorio, I; Leyva, E. (2022).

For the structuring of the didactic model, the orientation of independent work with interdisciplinary approach was conceived as a process conformed by two subsystems that reflect its internal movements, they are: the orienting base of independent work and the orienting contextualization of independent work, dynamized by the orienting corrective method.

The orienting basis of the independent work with an interdisciplinary approach: this subsystem is the result of the relationships established between the components: projective orientation and the orienting habilitation in Physical Culture, which are synthesized in the previous assimilation of interdisciplinary orientation in the Physical Culture career.

Likewise, it is the one that makes viable the orienting projection that should have the independent work with interdisciplinary approach in the career and, consequently in the academic year, integrates cognitive aspects of the disciplines and subjects, procedural, attitudinal, among others.

It is an expression of the projection made by the professors so that the integrating tasks have an interdisciplinary approach and that it is reflected in ways of acting in their students from the learning they acquire with the use of methods and procedures. It is manifested in the four spheres of action of Physical Culture.

This subsystem works from the organization of pedagogical tools that favor the planning of independent work with an interdisciplinary approach, from the identification of professional problems in any of the contexts of professional performance in Physical Culture.

This is represented in the following scheme:

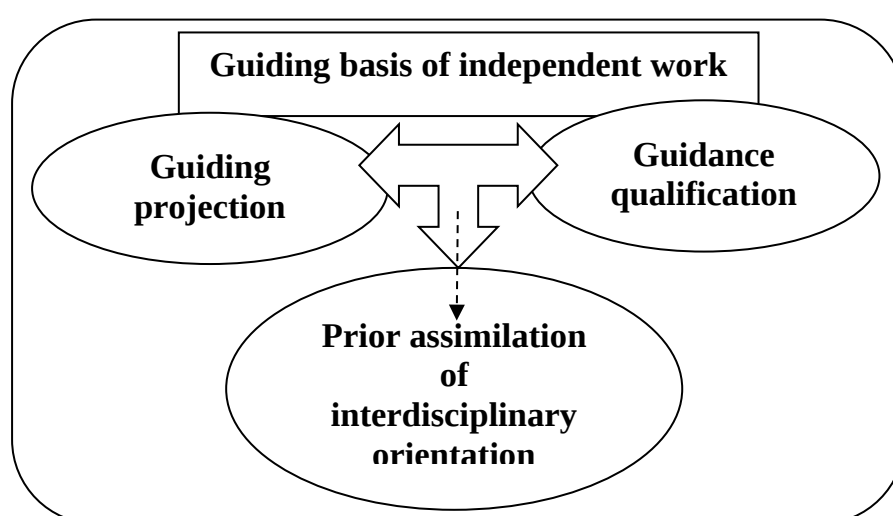


Fig. 2.1 Representation of the internal relations of the subsystem: Guiding basis of independent work

Source: Own Elaboration

The subsystem Guiding basis of the independent work is defined as: the process of interaction and assistance between the teacher and students to guide the orientation of independent work with an interdisciplinary approach, which allows the articulation in a coherent and systemic way of the cognitive nodes that, make up the disciplines in the academic year. Beltrán Fernández (2022)

The Guiding basis of independent work for Physical Culture allows determining the levels of help and projection required by students, the needs, demands, expectations and possibilities of the career and within it, of the academic year for the orientation of independent work with interdisciplinary approach in the methodological work.

This subsystem propitiates and projects the tasks to be performed by the students from a perspective that enables the understanding, interpretation and transformation of the educational reality, with the purpose of conveniently articulating attitudes and values to favor their extension, derivation and consequent generalization, all aimed at promoting a professional culture in the sense previously specified in the university community.

For its execution, it is first required the reproduction and assimilation of the object of study of the profession, that is, the knowledge of everything concerning their professional work, whose starting point will be the problems inherent to the social and professional reality, so that they can determine and solve them with a better preparation.

All this allows the assurance of a successful planning and orientation of independent work with an interdisciplinary approach as a result of such articulation.

The orienting Contextualization subsystem is defined as: the process that orients in an integrated and contextualized way the contents of the different disciplines and subjects from the formative and interdisciplinary aspects, which contributes to a better preparation of the teacher for the orientation of the independent work with interdisciplinary approach in the academic year and favors his performance in all the different spheres of action of the Physical Culture professional.

It evidences a development process on the part of the teacher, which allows him to place students in concrete situations of interdisciplinary relevance; it includes the orienting concurrence, the interdisciplinary orienting correction and the contextual orienting procedure in Physical Culture, as its components. Beltrán Fernández (2022)

The orienting Contextualization becomes the moment where both what is taught and what is learned are integrated and contextualized; this scenario consolidates the interdisciplinary approach among

the academic disciplines of the year, taking into account the spheres in which the Physical Culture student performs; say in Physical Education, sport, physical-prophylactic activity or in recreation. In this order, the subsystem favors the development of an integral subject adjusted to the specific historical conditions of society and identified by its interdisciplinary culture, with a level of involvement to carry out independent work with an interdisciplinary approach materialized in the methodological work.

The orienting Contextualization is made up of components with a dialectic and interdependent relationship. The graphic representation of these components is shown below:

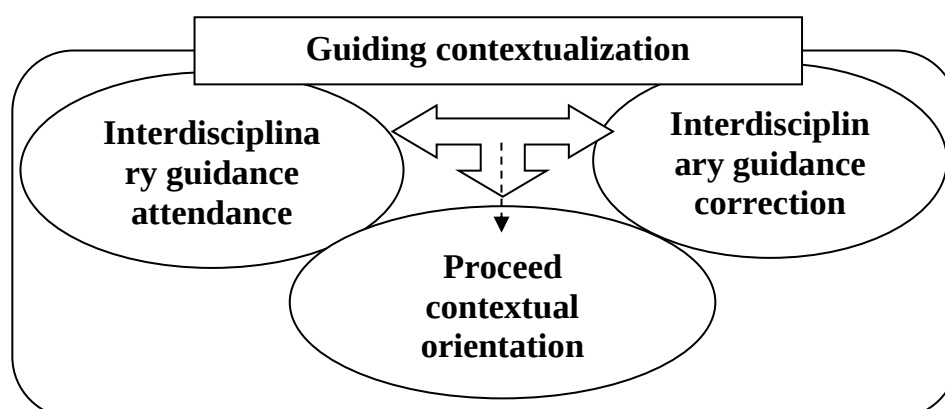


Fig. 2.2 Representation of the internal relations of the subsystem Guiding contextualization

Source: Own Elaboration

This subsystem requires an orientation that takes into account the context and the specific historical conditions in which the teaching-learning process is developed in the Physical Culture career, taking into account its particularities and the need for an interdisciplinary methodological work that favors the link between academic disciplines, mediated by the socialization that is generated.

This allows teachers to self-regulate, to take into consideration their motivations, knowledge and evaluations; from the personalization and possible plans and projects conceived for their materialization in physical education, sport, recreation or therapeutic and prophylactic physical culture.

As another significant element, it is necessary to mention the interactions established by the professors of the academic year and tutors during the research work practice and in the year group; this enables linking and establishing links and relationships among the inserted students, and among the students themselves, as conditioning aspects for the execution of independent work with an interdisciplinary approach.

That is why this process requires the mastery of theoretical-methodological knowledge and the guiding procedural in its different spheres of professional performance; as a condition of great importance in the execution of methodological work in the academic year.

As a resultant component of higher order, among all the elements that make up the didactic model, the following was obtained: the orientation of independent work with an interdisciplinary approach, which becomes a process and result as a consequence of a methodological work during the year that is fruitful, flexible, corrective and adjusted to the concrete historical conditions of its participants in the different contexts of action of the Physical Culture career.

The subsystems Orienting Base and Orienting Contextualization of the independent work with interdisciplinary approach in Physical Culture are concretized or materialized in the methodological work. From the relationships identified in each of the components of the system, their structural levels can be deduced.

A first structural level, of lower complexity, is given in the Orienting Base subsystem, which is represented by the orienting projective components, orienting habilitation and that of previous assimilation of orientation of independent work with interdisciplinary approach, which are materialized in the orienting Contextualization subsystem, so this constitutes the second level of complexity.

Particularizing this model, the theoretical knowledge obtained in the Orienting basis of independent work with interdisciplinary approach for Physical Culture is constituted in the Orienting Contextualization. In this way, the hierarchy of the different levels of complexity in the modeled system is revealed.

The modeled system is structured by a higher order system, it contains two subsystems; however, the relationship between the components of the process of orientation of independent work with interdisciplinary approach, as well as the relationships that identify these components reveal the independence, creativity, correctness and coherence of the modeled system, which accounts for its recursiveness.

The following scheme illustrates the structure of the proposed model, the subsystems that integrate it, their respective components in order to develop a methodological work in the academic year for the orientation of independent work with interdisciplinary approach.

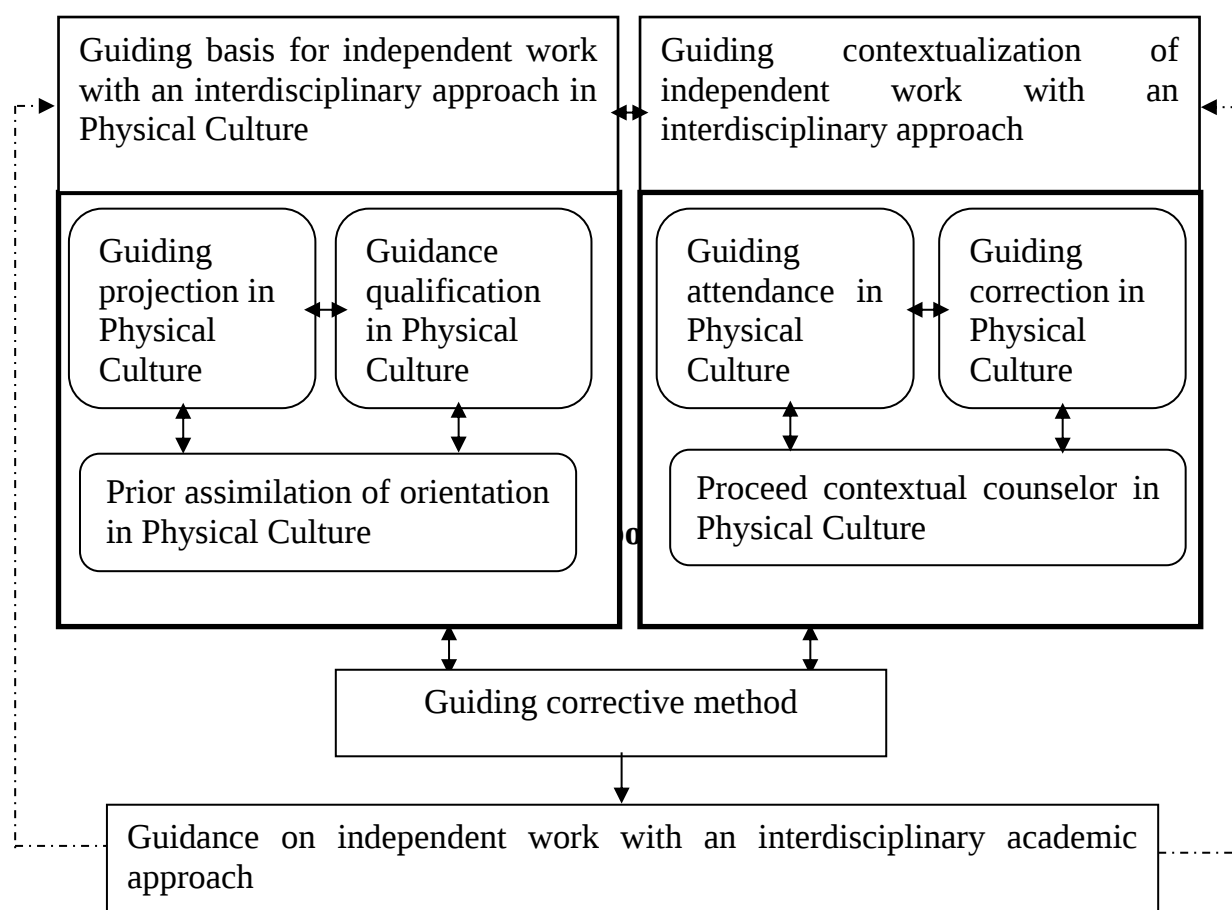


Fig.2.3 Representation of the structure of the didactic model of the independent work orientation with interdisciplinary approach in the academic year of the Physical Culture course

Source: Own elaboration

Theoretical valuation of the didactic model by means of the expert criterion

A total of 14 experts were consulted. The experts' criteria were centered on five aspects: theoretical foundations on which the didactic model is based, level of organization and structuring of systems and subsystems, level of practical applicability from a didactic and methodological management in the academic year, level of theoretical and methodological orientation offered to teachers and directors of the academic year, originality of the didactic model.

Most of the aspects were evaluated positively, since the opinions of the experts were between the categories of Very Adequate (MA), Adequate (A) and Not Adequate (NA), with a predominance of Very Adequate in relative frequencies that ranged between 80 and 100 percent. The experts offered recommendations taken into account for the improvement of the didactic model in its general conception.

The analysis of the values of the cut-off points allows inferring that the experts expressed consensus in evaluating the aspects as very adequate.

The statistical analysis of the results obtained with the application of the experts' criteria, using Green's methodology, made it possible to determine the consensus regarding the level of relevance of the aspects evaluated by the experts.

Such aspects were corroborated in the qualitative and quantitative interpretation of the data obtained, when considering the didactic model coherent with its methodology and adequate relations between the subsystems and components; as well as, the internal ones of the components of each subsystem that favor the conditions for the organization and implementation of the methodology.

Valuation of the didactic model through the pre-experiment

The indicators evaluated in the pre-experiment show superior results and a better preparation of the teachers regarding the mastery of the theoretical-methodological knowledge and the demonstration of guiding procedures for the execution of independent work with an interdisciplinary approach, comprehensive mastery of the knowledge of a particular area of a discipline and of its different contexts of interdisciplinary professional performance.

Main results obtained from the application of the pre-experiment:

- Greater mastery of the teachers (92.8%) about the theoretical-methodological knowledge demonstrated in the reflection of their modes of action during the concrete and precise orientation of the independent work with interdisciplinary approach reflected in the performance of their students in the solution of the same during the educational teaching process in the first year of the career.
- Their classes show (76.9%) an adequate didactic and methodological conception that privilege the orientation of independent work with interdisciplinary approach and its link of the contents of their subject with the different spheres of professional performance of Physical Culture.

Conclusions

The diagnosis of the current state of the problem made it possible to identify the existing insufficiencies for the orientation of independent work with an interdisciplinary approach and that

their cause lies essentially in the theoretical-methodological knowledge and in the guiding procedural aspects.

The proposed didactic model constitutes a way to contribute to the orientation of independent work with interdisciplinary approach, which as a result of the relationship between its subsystems, orienting Base and orienting Contextualization, becomes the orienting corrective method, which constitutes an alternative solution to the declared scientific problem.

The results obtained with the expert criterion method and the pre-experiment show the feasibility of the didactic model in terms of its structure, the relationship between its subsystems and its objectives aimed at the orientation of independent work with an interdisciplinary approach.

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