

***The guiding corrective method: a way to guide independent work with an interdisciplinary approach***  
***El método correctivo orientador: una vía para la orientación del trabajo independiente con enfoque interdisciplinar***

**Marcos Beltrán-Fernández<sup>1</sup>, Guillermina Zaldivar-Cordón<sup>2</sup>, Williana Naranjo-Leyva<sup>3</sup>**

<sup>1</sup>Ms.Sc. Auxiliary Professor. Physical Culture Faculty. Guantánamo University. Guantánamo. Cuba.

<sup>2</sup>Dr. Sc. Titular Professor. Holguín University. Holguín. Cuba.

<sup>3</sup>Ms.Sc. Auxiliary Professor. Physical Culture Faculty. Guantánamo University. Guantánamo. Cuba.

**Email:**

[marcosbf@cug.co.cu](mailto:marcosbf@cug.co.cu)

[virginiahlg57@gmail.com](mailto:virginiahlg57@gmail.com)

[williananl@cug.co.cu](mailto:williananl@cug.co.cu)

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**ABSTRACT**

It offers a didactic model specified in a methodology, carriers of new components and essential relationships between the subsystems that reveal the dynamics for the orientation of independent work with an interdisciplinary approach in the academic year. The essence of the guiding corrective method is argued, as a dynamic element between the relationships of the subsystems and components as a reflection of their materialization in the praxis. Research methods of the theoretical, empirical and mathematical and/or statistical level were applied during the research. Significant changes are found in the correction of the most significant errors committed during the orientation of independent work with an interdisciplinary approach by the year group of the Physical Culture career.

**Keywords**

Corrective; Guidance; Method; Interdisciplinary approach; Independent work.

**RESUMEN**

Se ofrece un modelo didáctico concretado en una metodología, portadores de nuevos componentes y relaciones esenciales entre los subsistemas que revelan la dinámica para la orientación del trabajo independiente con enfoque interdisciplinar en el año académico. Se argumenta la esencia del método correctivo orientador, como elemento dinamizador entre las relaciones de los subsistemas y componentes como reflejo de su materialización en la praxis. Se aplicaron métodos de investigación del nivel teórico, empírico y matemático y/o estadístico durante la investigación. Se constata cambios significativos en la corrección de los errores más significativos cometidos durante la orientación del trabajo independiente con enfoque interdisciplinar por parte del colectivo de año de la carrera de Cultura Física.

**Palabras clave**

Correctivo; Orientador; Método; Enfoque interdisciplinar; Trabajo independiente.

## **INTRODUCTION**

For the elaboration of the guiding corrective method, the historical-cultural approach of Vygotsky and his followers are assumed as theoretical references that are synthesized in the dialectical method. From the didactic point of view, the foundations of the Cuban educational model established by Álvarez de Zayas, C., & Addine and García (2005) are retaken.

Other assumed referents were those of Calzado, Mengana (2016); Milán(2022) that define the compensatory corrective method of special education, the corrective method for the pedagogical training of the students of the Physical Culture career and the interdisciplinary corrective method respectively, cited by Milán(2022).

The proposed method was carried out based on an adaptation of the already existing ones and meets the criteria set forth by Bermúdez and Rodríguez (1996) in terms of its objective, its possibilities of application and its internal relations from the objective and the subjective.

Hence, the orientation of independent work with an interdisciplinary approach brings with it the modification and the emergence of new forms and approaches in the preparation of teachers that lead to the necessary transformations in their pedagogical actions, so as to respond to the dialectic among the dimensions addressed, where the method to be used enables a dynamic that favors compliance with the demands of interdisciplinarity.

## **DEVELOPMENT**

The guiding corrective method constitutes a dynamic element during the application of the methodology used for the guidance of independent work with an interdisciplinary approach in the academic year and becomes a didactic path, based on the essential relationships between the Guiding Base and Guiding Contextualization subsystems that make up the didactic model.

According to Homero “The method is the internal organization of the teaching-educational process. It is a construct that the human being makes to express on the subjective level the movement of objective reality. Therefore, the method is a succession of procedures that express the logic of the relationship that concatenates all behavior that occurs in students and that, when expressed in a system of procedures, is built as a working method to guide the work. Sources, H. (2000)

The ideas that this definition frames are shared because it is directed to the application of procedures that lead to an end, in the case of the research that is addressed, it allows the correlation between the subsystems that make up the model from the logical links that define the orientation of independent work with an interdisciplinary approach.

According to Vigotsky, the method is a mediating instrument provided by the culture with which the subject operates for the transformation of reality (Vigostky, 1987). In this sense, the one that is legitimized here is considered as such, while its apprehension is essential to optimally develop the orientation of independent work with an interdisciplinary approach of the students of the Physical Culture career through the determination of the interobjects and thus obtaining qualitatively superior results in student learning and performance. Its usefulness, magnitude and degree of generality make it valid for the Didactics of Higher Education in the current conditions of integration of Cuban universities.

It agrees with Bermúdez and Rodríguez (1996) regarding the premises for the construction, analysis and operation of the method: purpose (objective that it pursues, with an adequate theoretical foundation), elaboration (its adaptation to an already existing method), use (possibilities for its implementation, includes employment), relationship between the objective and the subjective, as well as the internal and external.

In this sense, the Special Education career applies a method based on compensatory corrective work, which has allowed the development of various basic skills in students with different diagnoses. When addressing the concept of corrective, the assessments of the definitions of "correction" by Bell and Betancourt (1997); Martín (2003) make it easier to identify its essential features, consequently with them the contribution by Betancourt is assumed, cited by Rivera (2014) who understands as correction: *"the possibility of rectifying a process, property, function, affected"* (1992, p. . twenty).

For his part, Mengana (2016), proposes the corrective method of pedagogical training, which is defined as:

*"A way that promotes the correction and self-correction in an orderly manner of the limitations and deficiencies in the development of skills, qualities and pedagogical-professional capacities of the student of Physical Culture, and also allows, to compensate all the deficiencies in this sense, guarantees of a performance as: physical education teacher, sports coach, physical recreator or physiotherapist"*. Mengana. (2016).

Unlike what is proposed in the work under investigation, the definition given by Mengana (2016) does not include the guiding term, so it is necessary to explain this new element in the proposed method, it is not enough to correct the deficiencies in the execution of independent work, but on the basis of what has been corrected, it is essential to adapt the orientation that leads to the application of new procedures for its materialization, this guarantees the establishment of guidelines and norms according to the

context in which the process is carried out of teaching-learning and the logical nature of the contents of the different disciplines that interact in the year group.

In the particular case of this investigation, the disquisitions carried out warn of the non-existence of a guiding corrective method that, in a reasonable manner, makes it possible to make the process referred to viable, with the purpose of guiding and preparing teachers in their pedagogical practice for the orientation and implementation of independent work with an interdisciplinary approach in the group of years of the Physical Culture major.

Based on the previous references, the dynamics of the didactic model that is defended is activated in the guiding corrective method, which makes the process that she describes viable - it becomes a fundamental instance that connotes its theoretical value and makes it sensitive to practice. providing a methodological procedure with scientific support.

The guiding corrective method contributes to the preparation of the teacher in the mastery of the basic nuclei of the Main Integrative Discipline "Investigative Labor Training" and the other specific disciplines of the profession; It provides the ways to select and establish the feasible interobjects to integrate. That is why it allows conducting the orientation of independent work with an interdisciplinary approach so that students participate actively; arrive at conclusions and concepts related to their specialty that have a theoretical foundation from the subjects of the curriculum; discover regularities; find the causes that cause different phenomena, assess results and make generalizations, in essence, that develop their professional skills from the execution of independent work with an interdisciplinary approach. .

The proposed method reflects a logic that moves from the lower to the higher, from the simple to the complex; For this reason, its didactic nature is determined by the very nature of the model that is defended. On its objective basis and as corroboration of its scientific nature, there are the most general laws with which didactics operates: the law of the relationship of the school with life, with the social environment and the law of relationships between internal components. of the object (Álvarez de Zayas, 1996). Its foundations reside, at the level of the general, in the dialectical-materialist principle of the universal concatenation between facts, processes and phenomena; and, in that of the singular, with an interdisciplinary approach that - when consciously reflected and applied - constitutes it as a dynamic element of the didactic model. That is why it is reiterated that it is in it where its level of applicability lies.

Another reference used is the one provided by Milan (2019) when he defines the interdisciplinary corrective method as:

*"An alternative that guarantees the correction and self-correction in an articulated way of the restrictions and incorrectness in the development of interdisciplinary theoretical-methodological knowledge and interdisciplinary professional qualities of Physical Culture teachers and students, and also allows to compensate all the deficiencies that arise in their preparation to execute the establishment of interdisciplinary relationships in the academic year". Milan (2019).*

Consequently, and based on this definition, the term guide is incorporated into the method proposed in this research and the corrective guide method is defined as the ways and procedures that make possible correction and self-correction in an articulated and cooperative way of theoretical knowledge. methodological from delimiting their errors and deficiencies in the development of students' learning skills, which facilitates an adequate orientation of the teacher in the methodological performance of the group of year or career. In the particular case of the investigation, it energizes the qualities that emanate from the Guiding Base and Guiding Contextualization dimensions, which contributes to the preparation of teachers for the implementation of a system of procedures that make it possible to eliminate the fragmentation and diversity with which the teaching is developed. orientation of independent work with an interdisciplinary approach in the Physical Culture career.

In consequence of the above, the method proposes, based on its objective, the logical structuring of the orientation of independent work with an interdisciplinary approach in the academic year and its guiding contribution, from a different perspective in order to favor a better preparation of the academic year. teacher in the execution of interdisciplinary methodological work.

In relation to the internal and external structure of the method, the first one is characterized by the pointing and reference of the gradual movement of the mental activity of the teachers. Didactically, its internal aspect generates in them a succession of basic thought operations that promote a qualitatively superior stage; since the didactic procedures to support the solution of the independent works with an interdisciplinary approach, conceived in a coherent way, respond to a productive dynamic that assumes as a reference the integration of the affective, the cognitive, the educational, the instructive and the developer, which strengthens its logical and psychological aspect.

Regarding the external aspect of the guiding corrective method, it is expressed not only in the execution of the different forms of organization of the methodological work in the academic year; since, when applied, also in the dynamics of the orientation process of independent work with an interdisciplinary

approach, due to its social and pedagogical nature, self-development is stimulated, transformations are aroused in students, from the correction and self-correction of their training in the educational reality where the guiding role used by the teacher for its materialization is decisive, whose evolution will determine the concretions and modifications in pursuit of its purpose.

The essence of the method lies in the correction of the orientation of independent work with an interdisciplinary approach, mediated by the development of theoretical-methodological knowledge and the procedural guide, which has the purpose of solving various professional problems.

In order to achieve the objective of the guiding corrective method, it is necessary to enrich the scientific-professional culture of teachers, by reorienting the logic of the design of independent works with an interdisciplinary approach in the academic year, as well as in the investigative work practice, of integrate from diversity the different spheres of action of the Physical Culture career, as well as to arouse correct ways of professional action, knowledge of universal culture and, in particular, those that correspond to the different academic disciplines.

From the theoretical point of view, the established dimensional relationships determine the method. Its essence is to intervene in the dynamics of the activity where the unity between instruction, education and development must be taken into account, based on a fundamental quality that facilitates a culture in the integral construction and development of knowledge.

The method proposes as a complex connection the guiding projective trait, through which the dialectic of the individual and the social is manifested in the development of the teaching process, by favoring the personal growth of the student in initial training, through the appropriation of the organizational culture. inherited from the significant experience acquired during the apprehension of knowledge where the cognitive, the metacognitive, the affective and the professional are interrelated, which are then intentionally manifested in the systematization.

In particular, the guiding corrective method has a significant impact on the activity of the subjects and on the appropriation of knowledge. It enables the transition to a higher rung in human achievement, by being constituted as a specific succession of ordered operations that are mediated by the orientation and the intention to achieve in close relationship with the components of the teaching-learning process. To proceed with the method, the contents provided by the subjects of the different disciplines will be taken into account, and which contribute to the orientation of independent work with an interdisciplinary approach. The method is configured didactically in two phases or subsystems, dialectical relationships are established between them, which express not only dependency links, but also rapprochement. These forms of dialectical movement reveal the circularity with which

interrelations are established in a single global interdisciplinary process. It doesn't happen linearly; but, on the contrary, it occurs in a circumvallate way; processes present themselves and emerge in a spiral fashion.

The phases of the method are appropriate to the context of the present investigation due to those contributed by Milán (2022) in his scientific work and are the following: conceptual construction of theoretical-methodological knowledge, from positions that reveal the procedural guide of independent work with an interdisciplinary approach in the methodological work of the academic year. These are based on the epistemological foundations of independent work with an interdisciplinary approach as a process in Physical Culture, and are specified in the relationships between the guiding Base subsystems and the guiding Contextualization for Physical Culture.

The first phase "Conceptual construction of theoretical-methodological knowledge reflects the conceptual bases of independent work with an interdisciplinary approach. As its name indicates, the new is built, on the basis of previous experiences and ideas of the teachers, of the meanings already elaborated; As key elements for orientation in this phase, they have the necessary epistemological references to support the method. The emphasis is on everyone getting involved to share the achievement of their goal.

It is important in this phase to consider the contents of the subjects of the disciplines of the academic year, the articulation of interdisciplinary theoretical-methodological knowledge, with different approaches, based on topics that generate reflection, all around a thematic axis or point of reference. view that privileges, the contents of the disciplines themselves; In addition, from its structuring into themes, its logic and interdisciplinary relationships, the aspects that foster the possibilities to select the integrating conceptual objects, interobjects and interdisciplinary nodes must also be determined, based on the use of the strengths of teacher preparation. allows their selection and relationship with the spheres of action of the Physical Culture career depending on the acting environments.

Hence, the dialectical relationship between the phases is evidenced in the interaction of the theoretical-methodological knowledge and the guiding procedural acquired in the methodological work developed in the academic year; Likewise, the essential contradictions of the object of study are identified, problematized, configured and represented in a process that goes from a problematic situation to the formulation and resolution of professional problems through the orientation of independent works with an interdisciplinary approach.

The group exchange of theoretical-methodological knowledge constitutes the synthesis of this phase; meanwhile, it promotes dialogue and controversy between teachers and students, which enriches and

motivates respect for diversity, enhances listening, participation, free expression of thought and, above all, in which components concur. personal; but also not personal to the teaching-learning process.

These components act as mediators in the orientation of independent work with an interdisciplinary approach between scientific disciplines, the necessary theoretical-methodological knowledge and the guiding procedural, which when integrated contribute to the development of a broad and diverse cultural foundation in relation to individual, institutional interests. and social for the training of professionals who think and act in an interdisciplinary way in their different spheres and contexts of professional performance.

In this area, the teacher's actions are produced to guide independent work with an interdisciplinary approach, through which the different branches of knowledge are related as part of the diversity of disciplines and subjects of the year; A reflection on the contextual, changing and dynamic needs of the academic year is derived from this.

This construction phase focused on the integration of theoretical-methodological knowledge and the guiding procedural, puts the teacher in a position to appreciate the spectrum of all possible factors and causes that prevent an adequate execution of independent work with an interdisciplinary approach in the academic year.

In the conceptual construction of theoretical-methodological knowledge, analysis and deepening prevail, in addition to the causes, relationships and consequences, of the behavior and actions of teachers and students. In this way, it goes from the conceptual construction of theoretical-methodological knowledge and the procedural guide of independent work with an interdisciplinary approach to its materialization in educational practice.

The orientation of independent work with an interdisciplinary approach is the other phase in which the logic to follow in this process is indicated. In it, through deep reflection, the members of the educational community (teachers, students, tutors, among others) share; and it is essentially directed to the determination of decisions, taken consciously in relation to the aspects that this orientation includes from an interdisciplinary approach in the Physical Culture career.

The core of this phase is to favor a space for the improvement of future practice, from which new commitments, projects and initiatives arise, evident in the transformation of teachers and students. The relevance is revealed in the substantial change shown by both in their performance in situations and problems corresponding to personal and professional reality, in which the development of theoretical-methodological knowledge and the procedural guide acquire equal meaning.

Unlike the previous phase, orientation is emphasized as an essential help element for the successful execution of integrating tasks with an intention of a more integrated nature, which does not nullify the specialized knowledge built up to that moment; Quite the contrary: it is nourished by the best experiences, and subordinates this other look to the claim of the demands of the contemporary Cuban university, without neglecting the existing connections between the known and the new to be known. Teachers and students are offered the tools to face the difficulties regarding how to relate or integrate the knowledge in the solution regardless of different situations; therefore, it allows them to determine essences, establish links and relationships, as well as apply knowledge to new situations.

The development scenario of this phase is the academic year, as a space that allows a non-hierarchical action of professors and disciplines in order to facilitate the orientation of independent work with an interdisciplinary approach, as a process of cooperation and participatory elaboration, in which the Group work is crucial.

The proposed method is specified in each stage of the methodology. The sequence of its development must serve as an orientation for the orientation of independent work with an interdisciplinary approach in the academic year of the Physical Culture career, although they can be extended to the remaining years, from Investigative Labor Training, as the main integrating discipline.

The corrections have a guiding component (guide teachers and students regarding the procedures to be used, depending on the purposes), and an executing component (includes the operations intended to put these procedures into practice) and a control component that allows evaluating execution properly. What has been explained above encourages students to articulate their theoretical knowledge with what they have learned in practice; take advantage of all the possibilities offered by the convergence areas according to the contexts; Likewise, it enables them to develop professional skills that promote self-management of self-learning. Regarding the professors, the dynamics of the methodological work of the academic year facilitates the orientation of independent work with an interdisciplinary approach based on these relationships between the components of various disciplines.

The method contributes to the interdisciplinary approach because it allows the determination of interobjects and interdisciplinary nodes. In it, the theoretical and methodological conceptions of the different disciplines that make possible the acquisition of a system of knowledge, habits, skills, values, convictions and human relations, applicable to work and social life according to the aspiration, are coherently structured. of the Model of the Physical Culture professional.

Based on common features, each subject conceives their own ways to integrate, connect, establish new relationships, which facilitates cooperative action for the orientation of independent work with an

interdisciplinary approach. This is possible after the process of disciplinary specialization, which allows to determine the essence, to later establish the links that allow interdisciplinary interaction, in correspondence with the main categories revealed from the epistemological deepening.

It is precisely from this perspective, that a regulated change is sought through the support of facilitators, strategic aid, and orientation of independent work, which will be mediated by didactic procedures. In this sense, the didactic procedures proposed by the author are: interdisciplinary orientation and interdisciplinary projection, which are described in the epigraph that exposes the orientation methodology of independent work with an interdisciplinary approach in the academic year based on the didactic structure and its respective educational resources that serve as support.

The elaborated procedures allow the correction and self-correction of the limitations and deficiencies declared regarding the orientation of independent work with an interdisciplinary approach and compensate the deficiencies in this regard.

Likewise, the correction can have a direct signaling character or be revealed indirectly, either mediately or immediately. Any of the procedures used must be evaluated in a final stage, in which teachers and students will reflect on the successes and failures, always in an interactive and dialogic climate.

### **ANALYSIS OF THE RESULTS**

The results obtained from the application of observation and interviews with the 14 professors who teach in the first year of the Physical Culture major (the selected population) reflect that the application of the guiding corrective method is considered as a process and result aimed at the preparation of teachers based on theoretical-interdisciplinary and procedural guidance knowledge, guarantees an orientation with an interdisciplinary approach in the different spheres of professional action.

The main incidents detected in the diagnosis and that were corrected with the application of the proposed method and its subsequent orientation throughout the process were:

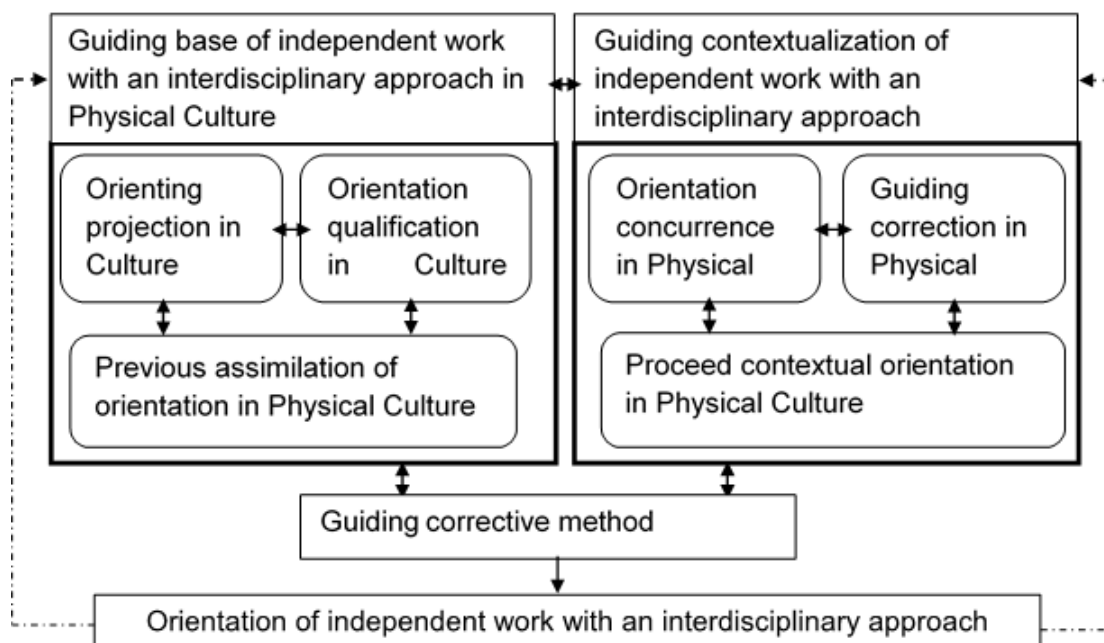
- Insufficient quality of teachers' orientation (85.7) of independent work with an interdisciplinary approach in its link with the spheres of professional activity of Physical Culture.
- The use of procedures by teachers (78.5) is insufficient, evidenced in the solution of independent work with an interdisciplinary approach by students.
- Insufficient preparation of the teacher in the development of theoretical-interdisciplinary knowledge and procedural guide for the orientation of independent work with an interdisciplinary approach in the first academic year of the Physical Culture career at the University of Guantanamo.

In summary, the orientation of independent work is mistakenly assumed as an end and not as a systematic process that allows its concretion in the academic year, the above demands a conscious

preparation in the interdisciplinary preparation of teachers in the academic year so that they can assume this process with quality.

The guiding corrective method responds to the particularities and demands of the training of the Physical Culture career professional. The didactic procedures that complement it guarantee, in teachers and students, a leading role, increase their autonomy and control; it also allows them to appropriate consistent scientific content and, in turn, a shared interdisciplinary conception.

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



## CONCLUSIONS

The application of the guiding corrective method guaranteed a higher quality in the guidance of independent work with an interdisciplinary approach by teachers, 92.8% of these eliminated the insufficiencies detected during the investigation.

Teachers show a greater use of procedures in their classes (85.7%) evidenced in the solution of independent work with an interdisciplinary approach by students.

The professors report feeling willing to face the new changes that arise in the interdisciplinary methodological work of the academic year.

The transformation of teachers in the theoretical, practical and methodological preparation for the orientation of independent work with an interdisciplinary approach in the academic year.

The guiding corrective method, which is based on procedures and didactic resources, was incorporated into the methodological work cycle of the year groups, being recognized as a support for the investigative work practices of the students for their pre-professional performance.

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