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## *The improvement of the Physical Education teacher to develop self-determination in students with intellectual disabilities*

*La superación del profesor de Educación Física para desarrollar la autodeterminación, en educandos con discapacidad intelectual*

*O aprimoramento do professor de educação física para desenvolver a autodeterminação em alunos com deficiência intelectual*

Deyanira Duverger Calderín<sup>1</sup> , Miriam Duany Timosthe<sup>2</sup> , Gloria Guerra Mercado<sup>2</sup> 

<sup>1</sup> Provincial Directorate of Education, Santiago de Cuba, Cuba.

<sup>2</sup> Universidad de Oriente, Santiago de Cuba, Cuba

\* Corresponding author: calderin@dpe.sc.rimed.cu

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### **ABSTRACT**

The continuous improvement of Physical Education teachers constitutes a need that has transcended different generations of teachers, determined by the growing development of science and technology, the demands of the third Cuban educational improvement, the demands in the preparation and training of teachers and the need for its impact on the



training of a qualified graduate capable of developing not only physical skills and abilities, but also for life, which allow them to act in the social, family and work environment. The objective of this research was to design a pedagogical improvement strategy to transform the modes of action of Physical Education teachers, in the direction of the teaching-learning process, based on the development of self-determination skills in students in situations of intellectual disability. The investigative methods used in the theoretical and empirical order were analysis and synthesis, historical-logical, inductive-deductive, modeling and systemic-structural-functional; In addition to the interview, observation, survey, document analysis, expert judgment and multiple triangulations, which allowed us to reveal the causes that affect the normal development of self-determination skills, as well as to develop the strategy. With its implementation, the professional and personal performance of teachers and students was improved, who graduated with the empowerment of skills for making decisions, making choices, solving problems and establishing goals and objectives.

**Keywords:** self-determination, intellectual disability, Physical Education, professional improvement.

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## RESUMEN

La superación continua de los profesores de Educación Física constituye una necesidad que ha trascendido diferentes generaciones de docentes, determinada por el desarrollo creciente de la ciencia y la técnica, las exigencias del tercer perfeccionamiento educacional cubano, las demandas en la preparación y capacitación del profesorado y la necesidad de su incidencia en la formación de un egresado apto y capaz de desarrollar no solo habilidades y capacidades físicas, sino también para la vida, que les permitan actuar en el medio social, familiar y laboral. El objetivo de esta investigación consistió en diseñar una estrategia pedagógica de superación para transformar los modos de actuación de los profesores de Educación Física, en la dirección del proceso de enseñanza-aprendizaje, en función del desarrollo de habilidades de autodeterminación en los educandos en situación de discapacidad intelectual. Los métodos investigativos utilizados en el orden teórico y empírico fueron el análisis y síntesis, el histórico-lógico, el inductivo-deductivo, la



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modelación y el sistémico-estructural-funcional; además de la entrevista, la observación, la encuesta, el análisis de documentos, el criterio de expertos y la triangulación múltiple, los que permitieron revelar las causales que inciden en el normal desarrollo de las habilidades de autodeterminación, así como elaborar la estrategia. Con su implementación se perfeccionó el desempeño profesional y personal de los profesores y los educandos, quienes egresaron con el empoderamiento de habilidades para la toma de decisiones, la realización de elecciones, la resolución de problemas y el establecimiento de metas y objetivos.

**Palabras clave:** autodeterminación, discapacidad intelectual, Educación Física, superación profesional.

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## RESUMO

O aperfeiçoamento contínuo dos professores de Educação Física constitui uma necessidade que transcendeu as diferentes gerações de professores, determinada pelo crescente desenvolvimento da ciência e da tecnologia, pelas exigências do terceiro melhoramento educacional cubano, pelas exigências na preparação e formação de professores e pela necessidade de seu impacto na formação de um egresso qualificado, capaz de desenvolver não apenas competências e habilidades físicas, mas também para a vida, que lhe permitam atuar no ambiente social, familiar e de trabalho. Discapacidade intelectual. Os métodos investigativos utilizados na ordem teórica e empírica foram análise e síntese, histórico-lógico, indutivo-dedutivo, modelagem e sistémico-estrutural-funcional; Além da entrevista, observação, inquérito, análise documental, peritagem e triangulação múltipla, que permitiram revelar as causas que afetam o normal desenvolvimento das competências de autodeterminação, bem como desenvolver a estratégia. Com a sua implementação melhorou-se o desempenho profissional e pessoal de professores e alunos, que se formaram com a capacitação de competências para tomar decisões, fazer escolhas, resolver problemas e estabelecer metas e objetivos.

**Palavras-chave:** autodeterminação, deficiência intelectual, Educação Física, aperfeiçoamento profissional.

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## INTRODUCTION

The dizzying development of the scientific-technical revolution in the different areas of knowledge has generated, at a global level, a dynamic and complex political, economic and sociocultural reality. In this turbulent context, education is inserted, whose fundamental function is "(...) being in contact with the needs of society, which constitutes the foundation of the relevance of educational activities, research, advice and service to society. community" (United Nations Educational, Scientific and Cultural Organization, 2021, p.33).

Cuban education begins the 21st century with the aspiration of turning the entire country into a great university. Universities, as centers in charge of the initial and ongoing training of teaching staff, do not escape these demands and demands of society. In this particular, the reflections made by professional development scholars who have highlighted the impact of the changes and transformations generated in the improvement of postgraduate education are pertinent.

It is considered that improvement should be oriented towards satisfying the needs of the subject and improving their professional activity, based on the demands for transformation of society, where intellectual capital and the ability to generate new knowledge, in any area of the human knowledge, become one of the essential resources of any nation (Bernaza , 2018); this researcher states that the objective of professional improvement is "(...) to contribute to the permanent education of the professional. Its main functions are: the systematic updating of university graduates, the improvement or reorientation of their performance, as well as the enrichment of their cultural and personological heritage" (p. 11).

In this sense, the professional improvement of teaching staff, in general and of Physical Education teachers, in particular, constitutes an important pillar and one of the most important activities to plan and develop within each educational institution (Brito, 2022).



The importance that the concept of continuous improvement of Physical Education teachers acquires in the educational system, in recent times, is a topic addressed by researchers from different latitudes of the world, such as Alfonso (2017), Brito (2022), Enríquez (2019).

In the international context, the works of Meléndez (2020), Rodríguez and Saeteros (2017) and Trigueros (2019), among others, stand out.

In the international context, the works of Álvarez (2018), Añorga (1989-2012), Bernaza (2018), Cruz (2019), Chivás and Osnelio (2019), Gálvez *et al.* (2018), García and Addine (2014), García *et al.* (2017), Gil (2023), Hernández, Martínez and González (2018), Pérez *et al.* (2018), Pineda (2018), Sainz, Estrella and Izquierdo (2017), Veitía *et al.* (2023) and Zayas (2019) stand out.

Their contributions take the form of: improvement actions for university teachers and their connection with scientific advances, in a postgraduate course ( Veitía , *et al.*, 2023); the design of a training strategy for educators to improve the direction of the Physical Education area (Zayas, 2019); the development of training actions for the efficient development of body posture in children (Pérez *et al.*, 2018) and an improvement strategy for the improvement of professional baseball coaches (Gálvez *et al.*, 2018). Likewise, actions for continuous training for professional competencies in Physical Education teachers in Higher Education (Gil, *et al.* , 2023) and an improvement strategy to raise the professional performance of volleyball teachers (García, *et al.* , 2017). However, the development of self-determination skills in students with intellectual disabilities is a poorly studied topic in the improvement of Physical Education teachers.

In Cuba, the special schools where students with intellectual disabilities are served have the purpose of "achieving the maximum possible comprehensive development of people with special educational needs associated or not with a disability, in any context, which allows them to cope with diverse levels of independence and social inclusion" (Triana, 2019, p. 14).

In this sense, authors such as Triana and Fernández (2019) highlight that one of the objectives assumed by special education is to "(...) manifest the maximum possible development in correspondence with their individual characteristics that makes it easier to



solve the problems of daily life." (p. 14). Within the framework of the third improvement, the term intellectual disability has been adopted to replace mental retardation, accompanied by its definition, understood as:

It is a relatively stable condition of development that is characterized by significant limitations and of different degrees in intellectual activity, in general, and in the acquisition of conceptual, practical and social learning revealed in the modes of social action, in particular; who require support of varying intensity throughout life. It is characterized by variability and differences in expression in functioning. It arises before the age of 18. Its degree of depth is related to the intensity of the support that a person needs throughout their life. (Leyva, 2018, p. 10)

In effect, the definition emphasizes the use of resources and supports, throughout life, necessary for the acquisition of conceptual, social and practical learning that is associated with the skills, revealed in the modes of social action, the which, according to Leyva (2018) are defined as:

(...) the way of applying conceptual, social or practical learning in social activity; that determine the way in which a person behaves and is more or less capable of facing life situations independently, in accordance with social norms for a uniform environment and group, which allows him or her to participate in activities with the fewest limitations and restriction on social participation. (p. 10)

That is why the Physical Education teacher must have a theoretical-methodological preparation, to correctly influence the fulfillment of the objective and purpose stated above, as well as enhance the acquisition of conceptual, social and practical learning from his subject that later are revealed in the modes of behavior of students with intellectual disabilities.

This teacher is part of the teaching staff that works in these educational institutions and from his classes he not only promotes the development of motor skills and physical capacities, but also guides towards the development of life skills such as self-determination,





where the student takes initiatives, shows self-confidence, independence, is self-motivated and solves problems that arise during the dynamics of the game.

According to Bravo & Garzón (2019), "Life skills are a means for learners to actively participate both in their own development process and in the construction of social norms" (pp. 123-139) and with Niremborg (2020):

"Teach students how to think instead of what to think, provide them with tools for problem solving, decision making and emotional control, and encourage them to participate through methodologies designed for this purpose and the learning of skills, can become a means to strengthen and empower them" (p. 108).

One of the life skills that requires orienting and training in the direction of the teaching-educational process is self-determination, referred to "(...) set of activities and skills that the person needs to act autonomously and be the protagonist of the relevant events in his life, without unnecessary external influences" (Wehmeyer, 2009, p. 53).

The development of this skill becomes more relevant, as long as different educational strategies and forms of organization are implemented that offer opportunities to students to develop a greater sense of responsibility, make correct decisions in the face of problems and conflicts, make choices, manage stressing situations of life, be autonomous, independent, know themselves and establish appropriate interpersonal relationships.

Physical Education is a subject that is part of the common and mandatory curriculum that students with intellectual disabilities receive. It has a broad and multidisciplinary approach where, in addition to doing exercises, a balance between the mind and the body is sought, to promote the correct development. Without a doubt, this discipline has as its platform the immense possibilities of developing self-determination as one of the skills for life when the appropriate methods and procedures are used and teaching assumes the primary role in comprehensive training.





Having adequate Physical Education teaching at school is very important, "It gives students the opportunity to train in many areas that are decisive for their well-being, in a dynamic, entertaining and healthy way" (Pompa et al., 2017, p. 3). In this sense, the continuous and permanent improvement of this teacher is necessary, since it is their dual role as trainers, to guide and coordinate with other teachers, families and socio-educational agents, actions aimed at the development of life skills, as well as having available and using didactic-methodological resources with the aim of quality learning.

When carrying out an analysis of the improvement system designed for Physical Education teachers who work in Special Education, it was possible to see that the topics addressed are generalized and the content of the improvement is not particularized, according to the needs and potentialities, only in those who are in charge of caring for students with intellectual disabilities.

As a consequence, the content of the organizational forms of improvement used do not offer, in all their magnitude, the tools, methods and methodological procedures aimed at the development of self-determination in students with intellectual disabilities as a basic skill that ensures their adequate insertion into socio-laboral, adult and independent life, in terms of having a more full and autonomous participation in society.

An aspect that supports the previous reality is reflected when the student that graduates from the educational institution shows little participation in everyday life situations that involve choices according to their interests, likes and desires; which shows insecurity in decision-making and in the search for alternatives to resolve a conflict.

The aforementioned evidence that, in pedagogical practice, there are insufficiencies in the professional improvement of the Special Education Physical Education teacher that limit their preparation for the development of self-determination skills in students with intellectual disabilities.

Therefore, the objective of this work is revealed to be the development of a pedagogical strategy to improve the Physical Education teacher of Special Education, which prepares



him for the development of self-determination skills in students with intellectual disabilities.

## MATERIALS AND METHODS

In the development of the research, 125 Physical Education teachers from the Santiago de Cuba province were considered as a population and as a sample it was worked with 85 Physical Education teachers from the special schools of the Santiago de Cuba municipality, 15 directors of the educational institutions and 12 municipal and provincial methodologists of Special Education and sports in the aforementioned province.

The logic of the research assumed the dialectical-materialist approach that enabled the most effective use of methods and techniques to delve deeper into the object of study from a scientific position, in addition to facilitating the determination of the causal and functional relationships in the dynamics of said object, as well as the establishment of the essential and contradictory relationships that occur in it. To fulfill the tasks, different research methods and techniques at the theoretical, empirical and statistical level were used, which favored the processing of the information detailed below:

Theoretical methods: the analysis-synthesis, historical-logical, inductive-deductive and systemic-structural-functional allowed to establish the theoretical-methodological references that characterize the process of professional improvement of Physical Education teachers of Special Education, as well as determine and prioritize the stages and the system of actions that structure the pedagogical strategy.

The analysis-synthesis was used with the purpose of substantiating the theoretical-methodological references that characterize the improvement process of Physical Education teachers who work in special education and identifying the regularities of the initial and final diagnosis of the scientific problem in terms of needs. and potentialities and the historical-logical was used with the objective of studying the historical background of the improvement process of Physical Education teachers in the specific socio-historical conditions through which they have gone.



The inductive-deductive method promoted the study of the particular and singular phenomena that characterize the scientific problem, in order to infer or confirm theoretical formulations to reach logical conclusions and the systemic-structural-functional was used to structure, in a coherent manner, the proposed strategy, based on the results of the diagnosis of the state of improvement of Physical Education teachers in special schools, and the interrelation between its components, with a system character, dependency, hierarchization and structuring, as well as relationships and interdependence between the contents.

The empirical methods allowed to diagnose and evaluate the initial and final state of the preparation of Special Education Physical Education teachers for the development of self-determination skills of students with intellectual disabilities. Several scientific methods of information collection were applied, they were documentary review, observation of improvement activities, survey of Physical Education teachers and group and individual interviews with municipal and provincial directors and methodologists of education and sports.

It was worked on the analysis of the current state of the research problem with the use of the aforementioned instruments that favored the collection of data and evidence. They were previously designed, then the information was processed and the results were evaluated and interpreted, which led to the determination of an inventory of problems in the improvement process of Physical Education teachers in special schools.

With the objective of guiding the diagnosis, the indicators to be measured were determined, in correspondence with the scientific problem assumed and its close relationship with the object and defined field and were taken into account in the instruments developed and applied. The indicators were:

1. Planning and control of improvement.
2. Knowledge and use of forms of improvement.
3. Contents taught in the improvement.



4. Mastery and treatment of self-determination skills during the improvement process.
5. Diagnosis and characterization of Physical Education teachers in special schools.
6. Correspondence between the needs, the individual improvement plan of the Physical Education teachers and the improvement offers.
7. The role of the municipal and provincial structure in the improvement of Physical Education teachers and improvement offers.
8. Level of satisfaction with the improvement that is carried out.
9. Level of effectiveness in improvement based on the successful achievement of the special school for students with intellectual disabilities.

The documentary review was used with the objective of analyzing and verifying the organization, content and monitoring of the improvement designed for Physical Education teachers, based on what is established in the ministerial resolutions of the Ministry of Education (MINED) and the Ministry of Education Higher (MES). In addition, the regulatory documents reviewed were the Programs and Methodological Guidelines for the subject Physical Education; The Reports of the methodological assistance visits (VAM) of the departments of Special Education and Physical Education, of the Provincial Directorate of Education and Sports, as well as of the Municipal Directorate of Santiago de Cuba, corresponding to the school years (2018 - 2019 and 2021-2022). Likewise, the improvement strategies for Physical Education teachers in special schools conceived by municipal and provincial bodies; the minutes of the Technical and Management Bodies of educational institutions; the class systems planned by Physical Education teachers and the individual improvement plans of 65 teachers of this specialty from the Municipality of Santiago de Cuba, intentionally chosen from the selected sample that represented 76.4 % of it.

Nine improvement activities for Special Education Physical Education teachers were observed, distributed in three observations to the development of improvement courses and four, to the development of methodological preparations, all carried out by the Municipal and Provincial Department of Special Education and Sports, and two observations on the



development of the methodological help visits carried out in educational institutions with the objective of verifying how it manifests itself in practice and the causes that originate the problem under investigation.

Participant observation was applied in the development of the VAM to verify the transformations produced in the teachers' modes of action, as a result of the implementation of the different forms of improvement proposed in the pedagogical strategy.

The survey was aimed to obtain information about the improvement activities carried out for Physical Education teachers, as well as the treatment offered to the development of self-determination skills in the different improvement activities carried out. It was applied to 85 teachers who are part of the selected sample, belonging to the Santiago de Cuba municipality, which represented 68.0% of the total teachers working in the Province, in this type of specialty.

The purpose of the group and individual interview was to obtain information about how and what elements are taken into account in planning the improvement of Physical Education teachers, their effectiveness, as well as determining their improvement needs. 15 directors of the educational institutions of the Santiago de Cuba municipality were interviewed, 12 municipal and provincial methodologists of Special Education and sports in the province and the municipal advisor who attends to the improvement activity in the aforementioned municipality. The individual interview was applied to 26 Physical Education teachers, chosen at random.

As a mathematical method, percentage analysis was applied with the objective of carrying out all the processing and interpretation of the data obtained in the diagnosis, to access a quantitative and qualitative assessment of them.



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## RESULTS AND DISCUSSION

The results obtained, from the application of the methods, techniques and instruments used to verify the problem, facilitated the subsequent methodological triangulation of the information. The results were confirmed:

- Insufficient theoretical-methodological preparation of Physical Education teachers to effectively develop self-determination skills in students with intellectual disabilities.
- In the content of the organizational forms and ways of improvement most used (courses, diplomas and workshops), emphasis is placed on the elements of didactics and the content of the subject, but not on the teaching-methodological treatment aimed at the development of learning skills. self-determination.
- The self-preparation activities designed do not encourage the study and deepening of the skills for the development of self-determination.
- The development of research related to this topic is not encouraged.
- The monitoring and evaluation carried out on the improvement process of the Physical Education teacher, through the Technical and Management Bodies and in the teacher evaluation process, is insufficient.

The teachers are satisfied with the improvement actions received; however, they report that the theoretical-methodological aspects related to the development of self-determination skills have not been addressed.

The impact of teachers' improvement actions for the development of self-determination skills in students is not considered sufficient, which has among its main causes the inadequacy of the diagnosis, the problems of general and individual planning of improvement and the inadequacies of its pedagogical process, all of which is reflected in the fissures that still remain in the socio-labor insertion of students with intellectual disabilities.



To evaluate the improvement variable, some indicators were defined and the scale was taken into account: Very Adequate (MA); Fairly Adequate (BA); Adequate (A); Poorly Adequate (PA) and Inadequate (I) (Table 1).

*Table 1. - Observation of the development of improvement activities*

No.	Indicators	M.A.	B.A.	A	PA	I
1	If the results of the diagnosis and the teachers' characterization for their differentiated attention are taken into consideration.	-	-	-	2 22%	7 77%
2	If the objectives and contents that are developed respond to the needs of Physical Education teachers.	-	-	1 11%	6 66%	2 22%
3	Treatment provided to self-determination skills (control and evaluation).	-	-	-	7 77%	2 22%
4	If they offer the Physical Education teacher the tools and work instruments for the development of self-determination skills.	-	-	-	5 55%	4 44%
5	Forms of organization, control and evaluation that are used.	-	1 11%	3 33%	4 44%	1 11%
6	Correlation between the different forms of improvement.	-	-	-	5 22%	4 44%
7	Evaluation of self-preparation tasks in the improvement actions developed.	-	-	1 11%	6 66%	2 22%

The results of the diagnostic study allowed us to identify the scientific problem, hence the need to propose a pedagogical improvement strategy for the development of self-determination skills in students with intellectual disabilities. The proposed pedagogical improvement strategy assumes for the structure proposed by De Armas & Valle (2011):

The strategies are designed to solve practical problems and overcome difficulties with optimization of time and resources, they allow projecting a qualitative change in the system, by eliminating contradictions between the current state and the desired one, they imply a planning process in which the establishment of sequences of actions oriented towards the goal to be achieved occurs. (p. 34)





In accordance with what has been expressed, the pedagogical improvement strategy for the development of self-determination skills in students with intellectual disabilities is defined as: the system of closely related actions that will allow the improvement needs of Physical Education teachers to be met, in order to transform their modes of action in the direction of the teaching-learning process for the development of self-determination skills in students with intellectual disabilities.

Its design is based on the diagnosis of needs and the preparation of teachers, a general objective is required, the deadlines for its execution, those responsible and the actions that comprise it are systematically controlled and evaluated to transform the existing reality from the current state to the desired one.

For the structuring of the pedagogical strategy for improvement and the elaboration of its theoretical foundations, the philosophical, sociological, psychological and pedagogical sciences were taken as a basis, which allowed, from a theoretical point of view, to provide coherence, scientificity and organization in the planning of actions. that make it up.

The criterion of personality as a social product was taken into account in which subject-object and subject-subject interact dialectically, under the influence of different educational agents, and it was taken as a premise that this is formed in and by the activity, where the cognitive and affective form a unity, a personological approach is proposed that implies not only the recognition of the profession, its meaning in the social context and the importance of its existence in life, but also its regulatory function in the subject's activity.

As Valiente (2020) states, "(...) the pedagogical strategy for improving Physical Education teachers takes into account the comprehensive and systematic approach to the components of the pedagogical process" (p.52). To do this, it is proposed:

- Comprehensive diagnosis as a process that emphasizes the level of real and potential development of Physical Education teachers, individually and in groups, as well as the limitations they present, to develop self-determination skills in students, from the fulfillment of their functions.



- An integrative objective where the system of knowledge, skills, educational intentionality, level of assimilation, systematicity, independence, depth, the ways and sources that teachers use to achieve the proposed objective are integrated.
- The selection of content and its sources, based on the diagnosis and the objective to be achieved. Everything related to the theory and methodology of how to achieve the development of self-determination skills in students with intellectual disabilities must be part of the content, through the different ways and forms of scientific-methodological work and modalities of improvement.
- The methodology to be used must guarantee the assessment of the activity of the Physical Education teacher as a counselor and mentor of social functions, their skills, abilities and behavior in life and at school; it must allow the dynamic role between the members of the group, to achieve a personological approach, based on the unity between the affective and the cognitive and the self-regulation of behavior through the application of the selected content.
- The forms of organization are varied, the general trend being workshops, training and methodological aids in which unprejudiced exchanges, interactive meetings and debates are carried out; in this sense, the teacher's self-improvement is assumed as a way of improvement for the continuity of the topics addressed in the rest of the forms of improvement, regardless of being an execution resource, it is, above all, motivational and guidance support for the students. teachers, where varied activities are taken into account.
- In the developed forms of improvement, research activity and scientific production are enhanced with the use of computer and communication technologies, which constitutes one of the forms of evaluation.
- Evaluation is conceived as an integrated component that mainstreams the development of the aforementioned forms of organization.



The principles of strategic management mentioned by Borrero & Rojas (2017, p. 9) were taken up and analyzed and contextualized, based on the regularities found in the research process and the results of the initial diagnosis. The principles are:

Clear, precise and achievable objectives: objectives are formulated that express the aspiration to be achieved, they are in correspondence with the potential and needs determined in the initial diagnosis so that they can be achievable.

Flexibility: the improvement strategy is flexible to changes, which allows it to adjust to the situations that arise and systematically enrich itself, based on new needs.

Participatory: to achieve the proposed objectives, the conscious and active participation of all the factors and actors involved is necessary, which is why it is conceived not only in its execution, but from diagnosis and decision-making to evaluation.

Organized structure: there must be a logical organization for its implementation, a system of actions structured by stages very closely related to each other is established, which allows them to complement each other and function harmoniously.

Coordinated and committed leadership: the center's management and those responsible for each of the actions must coordinate them and be committed to the proposed objectives.

As expressed by Gálvez *et al.* (2023), the pedagogical strategy is based on the understanding of pedagogy as a science that integrates the knowledge of other sciences that contribute to the knowledge of man, to address the complexity of its object of study, which is education and Cuban pedagogical thought that serves as a basis for professional improvement in the current educational revolution; likewise, its imprint on educational practice and its link with theory and the necessary interaction of instruction, education and development, to achieve the preparation of Physical Education teachers, based on the development of self-determination skills in the students. learners with intellectual disabilities.

Great importance was given to social factors, the interrelation between the affective and the cognitive, the role of experience, communication and activity in the development of personality. In this sense, the principles of pedagogy as a science, proposed by Addine



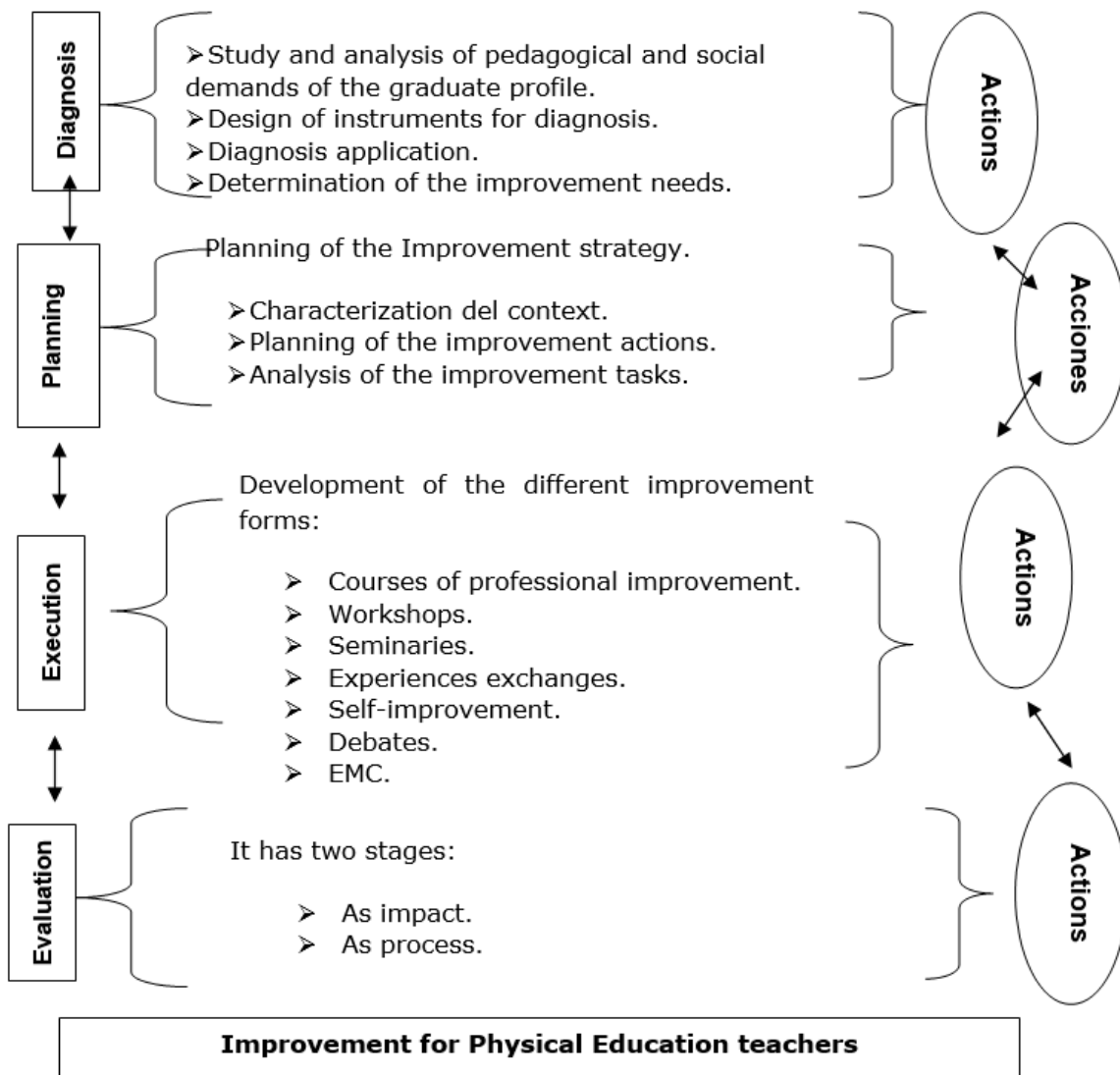
(2014), were considered. It is highlighted that these principles are general (feasible to apply at any level of teaching, grade and subject) and essential (considers non-personal components) of the educational process); furthermore, they have system character. These principles are:

1. The unity of the scientific and ideological character of the pedagogical process.
2. The linking of education with life, the social environment and work in the process of personality education.
3. The unity of the instructive, the educational and the developmental in the process of personality education.
4. The unity of the affective and the cognitive in the process of personality education.
5. The collective and individual nature of education and respect for the personality of the student.
6. The unity between activity, communication and personality (p. 83).

The strategy was implemented with the work system of the Municipal Directorate of Education of Santiago de Cuba and was executed by teachers from the Faculty of Early Childhood Education and Physical Education of the Universidad de Oriente, advisors from the Diagnostic and Orientation Center, and provincial methodologists of Special Education and the Provincial Sports Directorate, in two school years. It contains a system of actions, structured in four stages, where the different organizational forms of professional improvement are energized and articulated (Figure 1).

Consequently, with the application of the strategy and based on the diagnosed improvement needs, several educational strategies aimed at the development of self-determination skills in students with intellectual disabilities were modeled, designed and socialized through workshops, to based on what is stated in the graduate's profile. Its evaluation was carried out through the workshops themselves and in the performance of the duties of the Physical Education teachers.





*Fig. 1. - Dynamics of the pedagogical strategy for the improvement of special education physical education teachers*

In the diagnosis, the needs and potential were determined in the level of preparation that Physical Education teachers have, based on the study and analysis of the pedagogical and social demands for the development of self-determination skills, in students in situations of intellectual disability.



Subsequently, it was proceeded to the planning stage where the strategy actions were designed, aimed at improving the teacher for the development of self-determination skills. The objectives, responsible persons, contents, organizational and evaluation forms were defined. The planning of improvement activities was conceived, based on the conception and articulation of the different forms of improvement that appear reflected in advanced education such as workshops, seminars, courses, self-improvement, debates, exchange of experience, according to Añorga (cited by Cardoso et al., 2022).

Six workshops, three seminars and one course were planned, the latter was implemented in the methodological preparation sessions, with the use of participatory techniques, debates and exchanges. Self-improvement addressed the topics worked on in the different forms of improvement. In the design of the methodological help visits, the topics developed in the methodological preparation, in the workshops and seminars were taken into account and the improvement process was granted a system character.

In the execution stage, the improvement actions designed in the strategy were implemented. In the development of improvement activities and as a form of evaluation, scientific production is intended for Physical Education teachers, based on the preparation of scientific articles, complementary programs, consultation materials for teachers and families, exercises and others; all aimed at developing self-determination skills in students with intellectual disabilities.

The fourth stage, the evaluation, was aimed to evaluate the knowledge and skills achieved by Physical Education teachers, based on the application of improvement actions to effectively develop self-determination skills in students. The evaluation was considered as a process and as a result, the latter valued based on its impact on the professional performance of Physical Education teachers.

According to Reyes Pérez, A. (2022), "(...) improvement is a continuous process aimed at professional and human improvement that must respond to the transformations required in the behavior, knowledge, skills and professional qualities of teachers and teachers" (p. 27). From this perspective, the professional improvement of Physical Education teachers constitutes a need determined by the development of science and technology, the changes





that are taking place in the Cuban educational system, as an expression of the third educational revolution, and the teachers own needs in order to achieve their professional and human growth.

There have been many researchers who have ventured into the topic related to the improvement of Physical Education teachers. In the case of Gil et al. (2023) provide actions for continuous training by professional competencies in Physical Education teachers in Higher Education. The direction of improvement of the school Physical Education teacher during job training has been studied by Iglesias *et al.* (2017); the professional competencies of Physical Education in the academic training process: systematic review, by Brito (2022) and the formation of professional competencies in the careers of Physical Education and Sports Training, theoretical reflections, by Zambrano- Yamalá (2018).

Obviously, these contributions offer the tools and methodological procedures for deepening, updating and perfecting the professionalism of the Physical Education teacher who is in training and those who have already graduated. When comparing the results of the aforementioned studies with the pedagogical improvement strategy for Physical Education teachers proposed in this research, it is revealed that there are coincidental aspects, related to the theoretical, methodological and didactic foundations that support the process of professional improvement of the teachers, as well as the need for permanent improvement of Physical Education teachers.

However, in the consultations made to these and other research works, in general, the number of works referring to the psychopedagogical preparation of Physical Education teachers who work in special schools is very small, and in particular, what is related to the direction of the teaching-learning process for the development of self-determination skills in students with intellectual disabilities.

It is necessary to highlight that the suggested pedagogical improvement strategy takes into account the model of the educational professional to assume the integrative tendencies of the contemporary school, proposed by Pla (2005) who assures that "(...) the pedagogical activity is developed through of five directions in which the teacher's performance is specified" (p. 37). These directions of pedagogical activity allow the teacher's functions to be





resized, assumed by the aforementioned author as a cognitive, design, communicative, guiding, social interaction and investigative function, an approach that corresponds to the purposes of this research.

## CONCLUSIONS

The socialized pedagogical strategy had as objective to prepare Physical Education teachers to transform their modes of action in the direction of the teaching-learning process aimed at the development of self-determination skills in students with intellectual disabilities.

The diagnosis carried out reflected insufficiencies in the design and content of the organizational forms of improvement, which do not satisfy the needs based on the development of self-determination skills in students with intellectual disabilities.

The improvement courses and workshops that were planned and developed as part of this pedagogical strategy provided Physical Education teachers with the necessary tools to develop the aforementioned skills. The feasibility and relevance of the pedagogical strategy were verified in educational practice.

The evaluation of its impact allowed to define the results obtained in the professional performance of Physical Education teachers based on the development of self-determination skills in the students, where it was appreciated the efficient organization and better results in the direction of the teaching-learning process, the use of teaching methods and procedures that fostered the link between sports activity and the development of life skills (self-determination), quality in the graduation and transit process, improvements in the orientation process for families and other agents community and the positive transformation in the modes of action of the Physical Education teachers and the students who graduated with the empowerment of decision-making skills, solving problems, establishing and achieving their objectives and making choices, based on their likes and preferences.



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The authors declare not to have any interest conflicts.

***Authors' contribution:***

The authors have participated in the writing of the work and analysis of the documents.



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