
Estrategia didáctica para el desarrollo psicomotriz de educandos ciegos, en la clase de Educación Física ***Didactic strategy for the psychomotor development of blind students in the Physical Education class.***

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Resumen: Para la atención eficiente a educandos, en situación de discapacidad visual, ciegos, es preciso realizar adaptaciones a los componentes didácticos, en la clase de Educación Física, durante el proceso de enseñanza-aprendizaje, pues provoca retardo en el desarrollo psicomotor. El objetivo de la investigación consiste en diseñar una estrategia didáctica para la estimulación psicomotriz, en educandos ciegos, en las clases de Educación Física. La misma se elaboró con un enfoque integral, personalizado y de desarrollo, se utiliza el método sistémico-estructural funcional, para secuenciar sus etapas, acciones y actividades integradas, al trabajo correctivo compensatorio con un carácter flexible, abierto y adaptable.

Palabras clave: Estrategia didáctica; Necesidades educativas especiales sensoriales; Ceguera; Desarrollo psicomotriz.

Abstract: For the efficient attention to visually impaired blind students, it is necessary to make adaptations to the didactic components in the Physical Education class, during the teaching-learning process, since it causes a delay in psychomotor development. The objective of the research is to design a didactic strategy for psychomotor stimulation in blind students in Physical Education classes. It was elaborated with an integral, personalized and developmental approach, using the functional systemic-structural method, to sequence its stages, actions and integrated activities, to the compensatory corrective work with a flexible, open and adaptable character.

Keywords: Didactic strategy; Sensory special educational needs; Blindness; Psychomotor development.

Introduction

When blind students practice physical activities, curricular adaptations to the elements and components of the educational teaching process must be taken into account, in correspondence to the sensory deficit and specifically to the delay in the development of psychic processes and motor skills in general. It is indisputable the need to attend the psychomotor development actions, which allow them to learn to

perform all physical, social and recreational activities, inside and outside their educational regime.

Several researchers have focused their studies towards the attention of schoolchildren with disabilities, in this sense, Guajardo (2018), Díaz, Durán and Agudelo (2020) stand out; they agree that the teaching-learning process is adapted and transformed taking into account the type of educational need present.

Other authors such as González and Checa (2022), Gómez, Rubio and González (2019), focus their contributions on communication strategies, in the teaching of literacy in visually impaired or blind children in the pedagogical context. When analyzing these results, it was found that there are deficiencies in the teaching-learning process in terms of enhancing the stimulation of psychomotor development.

In studies related to Physical Education for blind students, authors such as: Dabbagh (2022), Arrate and Cabrera (2020), provide knowledge related to the conception and organization of Adapted Physical Education, with a systemic approach based on the sensory educational need present, which is the objective of this area of development, however, it is insufficient from the theoretical point of view the integrative and personalized process according to their diagnosis, these researches constitute the background of this work.

Derived from the theoretical assessment and the interpretation, from practice, within the teaching-learning process, in blind students, and the factual-perceptual diagnosis carried out, through research methods and techniques, it was possible to verify the existence of certain insufficiencies.

- The teaching-learning process, during the class, is fragmented by focusing more on how to teach and not on the learning orientation of blind students.
- The theoretical-methodological preparation of teachers does not meet the didactic demands of Physical Education in the context of Special Education.
- The Physical Education program lacks adaptations in the didactic components for the realization of physical activities oriented to psychomotor development.

The purpose of the research is framed in the elaboration of a didactic strategy for the stimulation of psychomotor development of visually impaired blind students in the Physical Education class.

Development

The practical result of the doctoral thesis, proposed by the main author of the article, is taken as a reference to provide a solution to the existing problem in the teaching-learning process for the stimulation of psychomotor development of blind students in Physical Education classes.

The didactic strategy is elaborated during a systematization process, organized in different stages, to guide the research logic. It has gone through the formulation of the contradiction in its external and internal manifestations, declared by means of exploration and diagnosis.

In this sense, the research assumes the criteria of Alonso, Cruz and Ronquillo (2020), who conceive the didactic strategy as: a system of actions conceived in the short, medium and long term that allow the transformation of the teaching-learning process in a subject, level or institution based on its components and that allows the achievement of the proposed objectives in a specific time, and the transformation of a current state towards a desired one associated to the professional training process.

In the research, the previously stated referents are taken into account, considering the diagnosis as an essential element for the adequacy of the didactic components of the teaching-learning process in Physical Education. The evaluation of the contributions made by the aforementioned authors allowed the adoption of the following considerations regarding the didactic strategy as a scientific result:

- Its implementation includes stages, actions and activities, oriented towards specific areas.
- It takes into account an integral diagnosis, which includes the characterization of blind students, from specific dimensions based on the disability present.
- It is developed, as part of the teaching-learning process, in the context of Adapted Physical Education, specifically in Primary Education.

- It includes the participation of the specialists, of attention to the blind student, of the educational institution as formative agents of the integral preparation of the student.

For its application in Physical Education classes, it is necessary that the teaching-learning process be oriented towards the maintenance of a dynamic balance between the organization and execution of physical activities, through a constant search for didactic resources to adapt them to the needs and potential of blind students in order to achieve the stimulation of psychomotor development.

The following guiding ideas should be taken into account for its application:

- The didactic procedure of teachers requires a scientific level to adapt methods, procedures, means and organizational forms, with the purpose of planning, controlling and evaluating physical activities, for the application of adapted physical exercises in the context of Adapted Physical Education.
- In the Adapted Physical Education class, as a pedagogical process, the particularities, possibilities and individual potentialities of blind students will be taken into account.
- The methodological preparation of Physical Education teachers requires a close link between theory and practice in the attention to the teaching-learning process for the psychomotor stimulation of visually impaired blind students.

The implementation of the strategy requires the participation of all teachers involved in the education of blind students, under an integral didactic conception (Adapted Physical Education teachers, psychopedagogue and orientation and mobility specialist) who must prepare themselves for the implementation of the compensatory corrective work oriented to their education.

The strategy requires a flexible organization and attitude on the part of Physical Education teachers. It is characterized by:

The location in the school context that contemplates the characteristics of the place where it is applied and those of the adjacent socio-cultural environment.

The flexible character that is proposed is general, it is not of a rigid and closed algorithm, but it leaves open the space for the incorporation of new theoretical, methodological and practical actions, which can enrich and improve from the

transformations in Physical Education and the changes that are acquired in the teaching-learning of blind students.

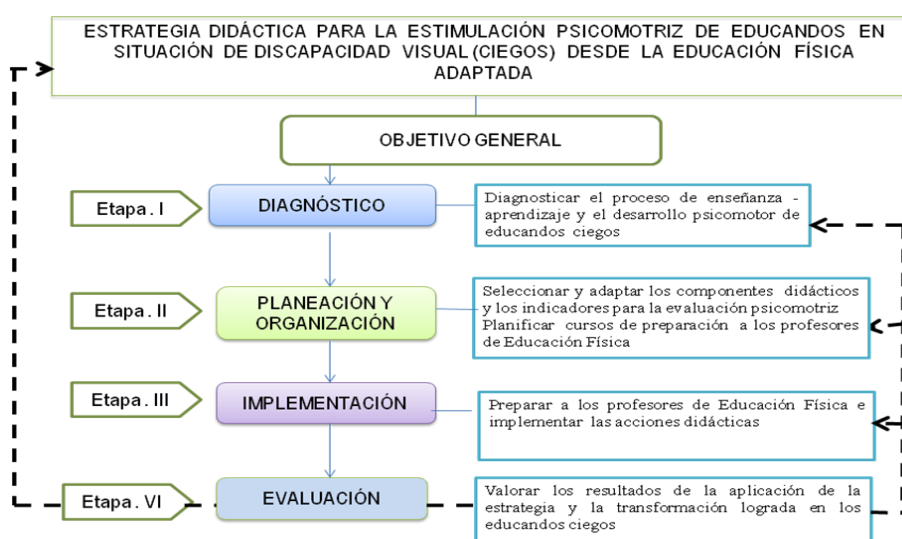
The systematicity of the actions orients to the educational continuity in the teaching-learning process, other spaces with diverse means and organizational forms for the realization of the physical activities.

The integral, personalized and developmental approach is manifested in the achievement of psychomotor stimulation in blind students, through the compensatory corrective work, which is carried out in Physical Education classes, for their future preparation for adult and independent life.

For the elaboration of the didactic strategy, the criteria established by: De Armas, Lorences and Perdomo (2003), regarding its structure and stages that conform it.

The proposed strategy consists of four stages, each of which sets out the objectives, actions and activities to be carried out for its practical implementation. Figure 1 below shows the graphic representation.

Figure 1. Didactic Strategy



Source: self elaboration

Objective of the Strategy: to favor the psychomotor stimulation of blind students, from the Adapted Physical Education class, during the teaching-learning process, as well as to increase the development of physical skills and abilities, based on their

needs, possibilities and potentialities, for the achievement of an adult and independent life.

Stage 1: Diagnosis of the teaching-learning process of Physical Education.

Objective: to diagnose the teaching-learning process of Physical Education for blind students, and the psychomotor development, as well as the preparation of teachers with this type of disability, in order to achieve the ability to observe and prioritize the analysis of the fulfillment of the dimensions and indicators determined for its evaluation.

Actions to be developed in the stage:

- To characterize the teaching-learning process of Physical Education, for the psychomotor stimulation of blind students, from the Adapted Physical Education.
- To characterize the theoretical-methodological preparation that Physical Education teachers have for the psychomotor stimulation of blind students, from the Adapted Physical Education class.
- To characterize the General Physical Education program and the didactic procedures for the psychomotor development of blind students.
- To characterize the situation presented by the psychomotor development of blind students in Adapted Physical Education, taking into account the indicators selected for the psychological and motor evaluation.

Stage 2- Planning and organization of the teaching-learning process of Physical Education.

Objective: planning and organizing the teaching-learning process of Physical Education, in the context of special education, as well as the selection and adaptation of the didactic components in the class, to favor psychomotor stimulation.

Actions to be developed in the stage:

- To select and adapt the objectives, contents, methods, procedures, means, organizational forms and evaluation, in the teaching-learning, of the Physical Education class, to favor the psychomotor stimulation of blind students.

- To select the indicators for the psychomotor evaluation of blind students in the Physical Education class, in correspondence with the sensorial educational needs and the learning results.
- To plan courses for Physical Education teachers, oriented to the theoretical-methodological preparation for the psychomotor stimulation of blind students in the Physical Education class.

The proposed actions are aimed at the psychomotor stimulation of blind students, from Adapted Physical Education; from the development of motor skills and physical abilities as the main contents of Adapted Physical Education. Based on the above, adaptations will be made to the contents of the program's units, related to physical condition, athletics and pre-sports games.

It is necessary to select and adapt the physical exercises and games to treat the contents of the program, according to the adaptation criteria and the type of sensory educational need present in these students. It is considered that this action in the didactic strategy is of great significance because Physical Education teachers do not have the necessary tools that allow them to attend, in a personalized way, to blind students.

The adapted physical exercises should be distributed in the different subjects of the program for their implementation in Physical Education. They are carried out according to the moments of the class, in correspondence with the type of sensory educational need present in these learners.

In relation to the methodological components of the Physical Education class, it should be taken into account the adaptation to the methods, procedures, means and organizational forms necessary for the work with these students, in correspondence with the visual deficit for psychomotor stimulation. In order to make the pertinent modifications to the methodological aspects, the productive methods applied in Physical Education, exposed by Menéndez, Calderón, Mejías and Valdés (2008) are used, to which the coactive, cooperative and reactive methods used in special education in the compensatory corrective work for the attention to these learners are incorporated.

In addition, the productive methods proposed by Valdivia and Labarrere (2001) are used, contextualized to Adapted Physical Education as:

- The didactic game: to develop and perfect motor skills and physical abilities, which favors creative thinking; as well as volitional and affective qualities depending on its structure.
- The method of independent work: it is used for the differentiated attention within the class taking into account their needs and potentialities.
- The method of joint elaboration: which allows the students, together with the teacher, to build knowledge.

In the evaluation of psychomotor development, it is necessary to establish indicators for the psychological and motor evaluation of blind students, through the selection and adaptation of the established tests.

The planning of the improvement courses for Physical Education teachers should be oriented to their theoretical-methodological preparation, in order to improve the attention of blind students, from Adapted Physical Education. In the methodological order, it is important to organize the process in such a way that it allows them to appropriate new knowledge in order to improve their teaching performance. The courses are developed with the collaboration of specialists in the topics, with the objective of deepening on theoretical-methodological issues necessary for the psychomotor stimulation of blind students, from Adapted Physical Education.

Stage 3: Implementation of the teaching-learning process of Physical Education.

Objective: To implement the actions designed in the didactic strategy oriented to the psychomotor stimulation of blind students in the Physical Education class.

In this stage, the training of Physical Education teachers is developed, aimed at the characterization of blind students and the teaching-learning process of the Physical Education class for this type of sensory educational need, and the actions of the strategy are applied with the incorporation of physical exercises and adapted games.

The proposed actions are aimed at:

- To prepare Physical Education teachers by means of improvement courses.

- To implement the didactic actions, carried out to the adequacy of the components of the Physical Education program.

For the training of Physical Education teachers, courses are given, with a total of 32 class hours, with four topics to be developed. Topic 1 is related to the development of the theoretical-methodological foundations of visual impairment, topic 2 refers to Adapted Physical Activity, topic 3 to the adaptations of the didactic components of the Physical Education program for 4th grade, and topic 4 is directed to physical exercises and games adapted for these students. Theoretical and practical workshops are also carried out for each topic and the evaluation is applied.

The implementation of the didactic strategy is carried out through the practical application of the proposed actions, with the incorporation of physical exercises and adapted games in Physical Education classes. The proposed motor exercises constitute a way that enriches the teacher's possibilities to fulfill the objectives of the class, which are used together with the contents of the different units that are developed and are adjusted to the requirements according to the period in which they are.

The exercises and games selected and adapted in the contents of the units: physical condition, athletics and pre-sports games, are applied in the initial part of the class, combining them with the joint conditioning exercises and the general and special warm-up. In the main and final part of the class, after the workload, in an interval of 1-2 minutes, to establish the work-rest relationship, with the use of exercises oriented to psychomotor stimulation, according to the contents of the Physical Education program.

These actions should be aimed at enabling the blind student, through Physical Education classes, to acquire, master and improve the various motor skills and physical abilities, which should be oriented to:

- Develop gross motor skills to promote the evolution of the learner in aspects such as sitting, walking independently, development of balance.
- Encourage the exploration of objects in the line of its central body axis (lying or sitting).

- Exercise prone cubitus movements. For example, blankets with sound objects or different textures are useful so that the learner can manipulate them in crawling position and facilitate their spontaneous mobility.
- Develop increasingly elaborate habits of personal autonomy (walking and detecting obstacles with a small cane adapted to the height of the learner).
- Encourage the learning of autonomous walking.
- Develop fine motor skills, to provide the learner with objects and toys with different textures and perform activities of discrimination, classification, to use both hands in a coordinated manner, to draw, cut or chop figures and mold plasticine.
- To develop the body scheme, the recognition of the different parts of the body and its basic functions, where he/she defines his/her laterality, the internalization of the concept of right and left.

Stage VI: evaluation of the didactic strategy

Objective: to evaluate the results of the application of the strategy and the transformation achieved in blind learners.

This stage is related to the evaluation of the follow-up of the didactic strategy and its results, it is developed in relation to the self-evaluation by the teachers involved, and the assessment of the psychomotor development of the blind learner. During the course of the proposal, it is necessary for the teachers to evaluate the aspects of their performance and the results of the development of the didactic activity in the teaching-learning process in the Physical Education class, according to the requirements of the strategy.

Actions to be developed during the stage:

- Delimit the forms of evaluation, methods and techniques to be used.
- Design of the evaluation.
- Execution of the evaluation.
- Collection and processing of information.
- Redesign of the strategy based on the results obtained.

In order to comply with the evaluation stage, it should be carried out systematically, through the daily control carried out by the teacher, with the purpose of verifying the psychomotor development of each of the students, during and after the application of the physical exercises and adapted games. An evaluation of the established psychomotor indicators should be applied to the students every three months.

With the evaluation, the achievements and dissatisfactions should be identified, in favor of projecting and generating changes in the implementation and subsequent application of the didactic strategy, derived from the objective planned for each stage, as well as the actions developed in each one of them.

Therefore, it is considered that the work does not end with the evaluation of the effectiveness of the didactic strategy, because reality is constantly changing and there will always be more needs to be solved, which evidences its cyclical nature. In both cases, the diagnosis is taken up again as a new starting point to establish a new cycle. First, to update the study, the needs and climb higher rungs in blind learners; second, to deepen the study, redesign and redefine the actions in correspondence with the real needs that, logically, are based on the certainty of the diagnosis. The objective of the new diagnosis is to broaden or deepen the knowledge of the current reality in order to solve the problem.

Conclusions

The proposed didactic strategy allows, based on its structure, functioning and the transit of its stages, to organize the teaching-learning process in Physical Education classes, oriented to the stimulation of psychomotor development for visually impaired blind students.

Actions were planned for the preparation of teachers, directed to the selection and adaptation of the didactic components of Physical Education, in fourth grade, for its later application in the classes of blind students. Its actions can be inserted, coherently, to the program and methodological orientations of the subject, as a didactic alternative with flexible, open and adaptable character to the sensorial educational needs of visual type.

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