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Original Article

A Set of Activities to Develop Motor Skills in Blind and Visually Impaired Children.

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Abstract:

This teaching material suggests a set of activities to stimulate gross motor skills of visually impaired children. The study included a sample of 6 children with a diagnostic of low vision. The subjects were 2-5 years old, in pre-school education at the Antonio Suarez Dominguez School in Santiago de Cuba. The methods and techniques were theoretical (analysis-synthesis, induction-deduction, and systemic-structural); empirical (observation, questionnaire, and interview); and statistical (percent analysis, tables, and graphics), which permitted the authors to determine the initial state, and corroborate the effectiveness of the system of activities to stimulate the gross motor skills of these children at the end of the study. The results were validated consecutively for two academic

courses. Upon the pedagogic pre-experiment, the evidence showed the positive impact of gross motor skills on the visually impaired children as an important way of preparing for the school life of the sample studied.

Keywords: Laterality, sensor-perception, socio-affective

Introduction

Contemporary Physical Education is primordially humanist, it looks to the satisfaction of diagnostic of children, depending on their real possibilities. As a pedagogic trend or movement, curricular adjustment or adaptations are produced according to the context.

The diversity observed in children with impaired vision and in terms of capacities, interests, and provisions for learning leads to a type of teaching in which the adjustment of the aids available to the learning needs is compulsory.

Hence, physical education and sports adapt like indispensable means in the learning process of visually impaired children, contributing with elements integrated as a whole, and therefore, are forms of expression that contribute to the education of children with a diagnosis of low vision. In the early ages, this period is characterized by an enormous improvement and regulation of the child's sensorial experience, the assimilation of specific human forms of perception an thought, an impetuous development of imagination, the early formation of oriented voluntary attention, conceptual memory, and especially, senso-perceptions.

It arises from the fact that education and teaching drive development. It is clear that any affectation in the sensorial system brings about harm to psychic development, the visual analyzer, and more importantly, to man, due to speed and volume of information that can be transmitted, observing other objects, phenomena, and processes of the material world. It is necessary to utilize special means, methods, and procedures for education of the visually impaired.

Vision helps identify most characters of the objective reality, the shape, size, color, which indicate distance, movement, and the perspective of objects. It somehow contributes to movement self-regulation and self-control, and the development of esthetic feelings, by praising the beauty of the world that surrounds them.

Different authors have contributed to the optimization of the educational process of children with a low vision diagnostic, through research done in the process of intervention, both in special schools and general schools. Internationally, Barros (1999), García (2001), and in Cuba, Vlasova (1992), González (1994), Fernández (2001), and Hernández (2004). Research done in 2000 by D Potter in pre-school visually impaired children revealed the regularities of their psychomotor conditions as a distinctive trait, with deficiencies in fine motor skills, balance, coordination, and agility.

In spite of the above, the author has confirmed that vision plays a fundamental role in child development and vital activities, their affection leads to the occurrence of deviations in physical development, orientation in space, the formation of representations, and problems in the performance of activities and completion of tasks associated with creating motor functions like quickness, accuracy, movement coordination, and others. Movement is developed and controlled through imitation, so this inactivity causes a sedentary condition that leads to muscle flaccidity, bone deformations, and dysfunction of internal organs.

Accordingly, this paper aims to design a system of educational activities for the stimulation of the fine motor skills of visually impaired preschool children at the Antonio Suarez Dominguez school.

DEVELOPMENT

The process of fine motor skills

The development of psychic and motor functions occur through interaction during infancy, and later, they become independent. Barros (1999) stressed that this independence is relative, because despite their respective specializations, they maintain a deep

interrelation. Addressing the issue of motor education is a complex phenomenon, considering the most diverse approaches, tendencies, and explanations.

Motor development, from tone to practice, includes a group of elements that encompass internal and external elements: the former are part of maturational and physical processes (biological laws); the latter are associated with conditions of life and education, which unleash psycho motor development.

The findings of Da Fonseca (1996) show that neither intelligence or motor skills have much value separately. It is their interaction and association what provides movement with the complementary function of intelligence; human motor skills, by analogy, should be designed as psychomotor.

Now, a linguistic analysis of the term psychomotor, a compound word (lexeme) motor and psyche ahows that the two elements are both phases of a single process: integrated development of a person.

Motor: It makes reference to movement.

Psyche: It designates the two components of psychic activity: socioaffective and cognitive. A review of the international bibliography revealed that some authors have dealt with several definitions of psychomotor, which are included in this research.

González (1992) notes that is an educational discipline-re-educational-therapeutics that considers humans as psychosomatic units, which act as a whole through the body and movement, within a warm and decentered relation, using active mediation methods, especially the body, to produce comprehensive development.

The author considers that these definitions are valuable from a pedagogic point of view, since they help see the human body as a whole, and stress on the need of stimulation through body movement. In addition to having consciousness of all these movements, it is important to organize and implement the pedagogic process through psychopedagogic stimulation.

In preschool age, psycho motor skills play an important role as they influence the intellectual, affective, and social development of children diagnosed with low vision, thus

favoring the relation between the children and their surroundings, permitting the development of perceptive, motor, knowledge about body scheme, lateralization, and space-time activities. Besides, it considers the personal differences, needs, and interests of preschool children.

Authors like Fernández (1994) and Hernández (2004) coincide in that the psychomotor contents are grouped according to motor development in its tone transit to practice, including a number of elements gathered into what is known as psychomotor contents. Most authors coincide in the establishment of eight contents as follows according to their level of importance:

- Body scheme.
- Laterality.
- Motor disassociation.
- Coordination.
- Balance.
- Spatial structure.
- Basic motor conducts.
- Neuromotor conducts.

The criteria presented rely on the need to interact with children from the early moments of development to stimulate psychomotor skills. It must be dealt with in the above contents in relation to the sample in the study, which particularly encourages stimulation, motor disassociation, balance, laterality, and coordination as regularities of the sample.

Laterality is the result of a brain predominance to motor control represented on the left and right body segments, which depends on the individual's neurological development and the cultural influences received. That is how a subject is declared left or right-handed, or ambidextrous.

Motor disassociation is recognized as the capacity to control every motor segment separately without the work of other segments which are not involved in the task. Balanced is defined as the capacity of the body and mind to remain stable, even when moving.

The consideration of the temporary structure demands to follow a similar process in building space. It will include the stimulation of factors like maturation, tone, movement, and action. It is the learning of concepts like yesterday, today, tomorrow, now, later, and so on.

This research considered organizational criteria to perform these activities, which were optimized through analysis and theoretical foundations collected in the bibliography. They are explained in the principles that rule the work with visually impaired children, the principle of having the possibility of teaching and educating children, a correction of the needs for personality development with a psycho-pedagogic perspective; the need to stimulate them to use their remaining vision, regardless of how little it is; the principle of early attention; correction; and compensation.

Set of activities to develop motor skills for fine motor skill development

Activity: 1

Title: The mouse eats cheese.

Objective: Model a cheese using plasticine.

Place: Special hall

Aids and methods: Plasticine, rope or thread, and a mouse figure made of carboard.

Time: 20Min

Motivation:

The children are shown a cartoon (Guaso and Carburo), in which the leading roles are played by mice; then a reflection is made on the need to eradicate these vectors of diseases, and the objective of the activity is presented.

Development

The children assemble in circles or are scattered in the hall with their materials. They are told to model some cheese to put it in the mouse trap. The teacher shows them depending on the difficulty. A piece of cheese made of cardboard is used as a model for the children to create their plasticine model, then they are told to put the mouse they brought in front of the cheese to show that the mouse fell in the trap.

The teacher places the materials for the next activity: paper rolls, plasticine, and color pencils. The teacher assigns the homework, which consists in a game entitled Playing with Fingers. They must join every fingertip to the thumb, one at a time, and repeat this at home.

Rule: 1_The game ends when all finish modeling the cheese.

2_The winners are the children that complete the model correctly.

Variants:

Children can be suggested to model their figures in groups of two, three, or all together, making a giant cheese.

Activity: 2

Title: Dressing a baby.

Objective: To tear paper to dress a baby.

Place: Special hall

Aids and methods: Plasticine, paper sheets, color pencils.

Time: 20Min

Motivation:

The teacher will show a previously dressed strap baby so that the children have a reference. Then they told to draw paper clothes, tear the design using their fingers, and dress the figures to stimulate fine motor skills, visual-manual coordination in young children with a diagnostic of low vision.

Development:

The children assemble in circles or are scattered in the hall with their materials.

The materials brought by the teacher and placed on the table are checked, then the activity is explained and demonstrated; the teacher talks about the importance of this

practice for life, and students refer to their experiences. The children will begin to dress their babies at the teacher's signal.

Conclusions of the activity.

For the next activity, the teacher places paper, table tennis balls, cloth, water colors, and thread. Then the teacher assigns the homework: roll a ball on a line using the fingers.

Rule: The game ends when all students have dressed the baby.

The winners are the children that complete the activity correctly.

Variants:

The gianyt baby can be made by groups of two, three, or all together. baby.

The children can opt to do it blindfolded.

Activity: 3

Title: The bee

Objective: To tear paper and make a bee.

Place: Special hall

Aids and methods: Newspaper or any type of paper, glue, water colors, color pencils, markers, balloons, and scissors.

Organization: The teacher greets the students and assembles them at their tables, seated correctly with the materials. Then the activity will be assigned.

Time: 20 min.

Motivation:

The activity will begin with a video of the Art Attack TV show, in which different animals are made. The teacher tells the students that day they are going to make a paper bee.

Development:

The children are given the objective of the activity, each will receive the materials they are going to use, and are told that they will begin by tearing all the paper strips they can, and then will glue them around the balloon to give it a bee shape. Then they will wait until it is dry and perforate the bee underneath for the stick.

Conclusions of the activity.

The teacher will orient the children that they should practice with other figures at home. The materials are placed on the table for the next activity: cardboard with flowers where the bees can stand, they can also use color bands.

Rule:

The game ends when all students make their bees.

The children who complete the tearing job will be assessed in practice.

Variants:

Alternate utilization of materials to make different types of animals.

Activity: 4

Title: Threading figures.

Objective: To thread figures using a needle and cardboard.

Place: Special hall

Aids and methods: A 20x20 cm piece of cardboard or cloth with lines or figures having holes, shoe laces or thick yarn, with a needle made of cardboard.

Time: 20Min

Motivation:

The children are suggested to ask for help from a teacher or another adult who can sew well to show them the figures that they can make using several different materials, such as triangles, squares, and circles.

Development:

The children are organized in circles or remain scattered in the hall with their materials.

The children are given cardboard pieces containing lines and figures with holes in them, through which they should thread a shoe lace or yarn, using a cardboard or wood needle, and the teacher shows them how to do it. The children begin to thread when the teacher gives the signal.

Conclusions of the activity. The teacher assigns the next activity: they will be working with 20x20 cm cardboard pieces containing figures with holes in them, show laces or yarn, a cardboard or wood needle, crayons, water colors, or color pencils.

Rule:

1_The game ends when all students thread through the holes of the piece.

2_The winners are the children that complete the task correctly.

Variants:

3_The utilization of one piece with several lines of colors, using thread in the same color as the colors on the cardboard.

4_It can be done by duos, trios, or a team, as a giant piece with several lines or figures.

Activity 5

Objective: To check the skills acquired by the visually impaired children in the special hall, by making a pinata to celebrate a collective birthday party.

Place: The early age hall.

Aids and methods: Cardboard, thread, paper strips, shoe laces, cardboard or wood needles.

Time: 20Min (Due to the complexity of this activity, it can be done in two or three sessions).

Motivation:

The teacher asks the children: Do you know what a birthday party is? The birthday is celebrated on the day you are born, today we will make a pinata to celebrate a collective birthday at school.

Development:

The teacher brings an object covered with a cloth in bright colors, and asks a child to uncover it. Do you know what this is? A pinata! It will be used in the collective birthday that we will celebrate in our hall on April 10th. We will celebrate another anniversary of the day-care centers in our country, and we will celebrate the birthday of all the children who were born in this month. So today, I am inviting you to build a pinata like this, you will join the walls and roof with the lace, you will draw the walls and roof with water colors and pencils, tear the paper strips and glue them to the bottom of the pinata, you will use plasticine to model the chimney, and will make paper balls to put in the pinata.

Conclusions of the activity.

The children will receive assistance in making the pinata when needed. Upon tearing the strips, they will be glued to the pinata.

At the end the teacher will ask them.

What did you do today?

How did you make it?

What did you do it for?

How were the paper strips that you tore?

What will the pinata look like now?

Finally, the children are asked to sing the song of Happy Birthday.

Assessment: Practical.

Conclusions

The process of fine motor stimulation helps integrate the tasks associated with psychomotor education, particularly, visual and motor coordination, with special interest in the correction-compensation of children with a low vision diagnostic, in the special hall.

The initial diagnostic applied to the sample showed shortcomings and deficiencies in the type of activities of tearing and amassing; however, better results were observed in coloring activities, though certain difficulties were seen.

A system of educational activities to stimulate fine motor skills was designed for children with a low vision diagnostic, that relies on the Marxist-Leninist philosophy, in terms of psycho-pedagogy, as it responds to the socio-historical theory, and the development lines to cope with this condition according to the conceptions of the special hall.

The implementation of this system of educational activities to stimulate fine motor skills in the low vision children of the especial hall evidences the effectiveness of the proposal. The result of the pedagogical experiment was positive, since the quality of coloring, threading, modelling, tearing, and shrinking was increased.

References

Barros, D. (1999) Educación psicomotora en la infancia desadaptada. Editorial Médica Panamericana.

Da Fonseca, V. (1996) Estudio y Génesis de la Psicomotricidad. Barcelona: Editorial INDE Publicaciones.

D Potter, J. C. (2000). Actividades físicas adaptadas a las deficiencias visuales. Universidad de Bruselas. Material Impreso.

Fernández Marcote, A. E. (1998): Los juegos sensoriales y psíquicos motores. Madrid, Editorial Gymnos.

Fernandez Vidal, F. (1994). Psicomotricidad como prevención e integración escolar. Psicomotricidad. Revista de Estudios y Experiencias. nº 47, 75 - 86.

Gallego García, C. I. (2001) La expresión corporal del niño a través de la música. Revista mensual de publicación en Internet Número 13º - Febrero.

González Castro, V. (1994) Enfoque sistemático de los medios de enseñanza. En Revista Cubana de Educación Superior. Vol. 9. Ciudad de La Habana.

Gonzalez, Carrillo. (1992). La rehabilitación del deficiente visual. La Habana. Editorial Pueblo y Educación.

Hernández, Rosa Maria. (2004). Concepción pedagógica para potenciar el desarrollo psicomotor en niños y niñas de tres a cinco años con discapacidad visual. Tesis de Doctorado. Ciudad de la Habana, ISCP.

Vlasova. T. A, V. I. Lubouski y N. A, Tsipina.(1992) Niños con retardo en el desarrollo psíquico. Ciudad de la Habana, Editorial Pueblo y Educación.

Conflict of interests:

The authors declare the absence of conflict of interests in relation to this manuscript.