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The development of fine motor skills in preschool children

El desarrollo de la motricidad fina en los niños y niñas del grado preescolar

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ABSTRACT

Preschool education is the first link in the education system, it is responsible for creating the basis for the formation of personality in the initial stage. It constitutes a period of relevant importance in which the foundations of personality are formed, taking into account the integral development of children that encompass their physical development, particularities, qualities, processes and psychological functions. The problem of the development of fine motor skills, not yet reach the desired levels in the preparation of preschool children, this element that at the end of the preschool and assess the

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tasks of the diagnosis of tracing calligraphic features, trimming, filling and tearing, the Fine motor skills is one of the two most affected tasks in the province of Pinar del Río. The activity system was structured in stages, aimed at diagnosing, executing and evaluating the development of fine motor skills. The methods that allowed the basic study were those of the theoretical level, and empirical and those of descriptive statistics, such as the historical-logical, analysis and synthesis, induction and deduction, systemic-structural, modeling, observation, interviews, the documentary analysis. This system of activities was valued in the pedagogical practice obtaining satisfactory results in terms of the execution of traces, with regularity, precision and adjustment to the line, in the realization of their works. In addition, the correct use of instruments and materials was achieved, as well as the mastery of the techniques in the different actions of cutting, tearing, drawing, coloring, filling.

Keywords:

development; stimulation; instruments; fine motor skills; preschool; precision; regularity; strokes.

RESUMEN

La Educación Preescolar es el primer eslabón del sistema de educación. Es la encargada de crear las bases para la formación de la personalidad en la etapa inicial. Por tanto, constituye un período de relevante importancia en la que se forman los fundamentos de la personalidad, teniendo en cuenta el desarrollo integral de los niños. Considerando lo anterior la motricidad fina es una de las habilidades sobre la cual aún no se alcanzan los niveles deseados en la preparación de los niños del grado preescolar, elemento este que al finalizar la etapa preescolar y valorar las tareas del diagnóstico de

trazado de rasgos caligráficos, recorte, rellenado y rasgado, constituye una de las dos tareas más afectadas en la provincia de Pinar del Río. Para dar respuesta a esta problemática se elaboró un sistema de actividades estructurado en etapas, dirigidas a diagnosticar, ejecutar y evaluar, el desarrollo de la motricidad fina. Los métodos que permitieron el estudio de base fueron los del nivel teórico, empírico y los de la estadística descriptiva, tales como el histórico-lógico, el análisis y síntesis, la inducción y deducción, el sistémico-estructural, la modelación, la observación, las entrevistas y el análisis documental. Este sistema de actividades fue valorado en la práctica pedagógica obteniéndose resultados satisfactorios en cuanto a la realización de trazos, con regularidad, precisión y ajuste al renglón, en la realización de sus trabajos, así como la utilización correcta de instrumentos y materiales y el dominio de las técnicas en las diferentes acciones de recortar, rasgar, trazar, colorear, rellenar.

Palabras clave: desarrollo; estimulación; instrumentos; motricidad fina; preescolar; precisión; regularidad; trazos.

INTRODUCTION

Preschool age constitutes a period of relevant importance. In it the foundations of the future personality are formed. The significance of this stage means that, at present, pedagogues and psychologists from different latitudes, direct their attention to the search for ways that maximize their development.

This preparation means «that the child forms a favorable attitude towards his future school, that in him motives and

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interests have been formed to learn, knowing the phenomena of the world around him, that in him the responsibility has been achieved in the fulfillment of the tasks entrusted, that know and accept to work and share a collective work in the group of companions. As you can see, it is about achieving aspects of the development and training of boys and girls rather than knowledge ». Therefore, you should not aspire to learn more, but that your development is more broad and comprehensive. (López, 2016, p 30)

There is no doubt that children deserve the best: from a happy birth to an education that prepares them for life. That is why in Cuba the problem of the education of young generations is at the center of State and Party politics and therefore the necessary conditions for the training of professionals responsible for this honorable task have been created.

The learning of the boy and the girl must be active, meaningful, harmoniously and consciously related to the boy, on what he has to learn with what he has already assimilated, since the quality and depth of that knowledge and skills will depend his new possibilities to learn the new with systematic work.

Early childhood education is aimed at the formation of personality as a whole in the early stages of child development, not only its cognitive-instrumental component, but also the affective-motivational and volitional; that is why it is considered »[...] an eminently educational process that does not exclude teaching-learning moments, also related to development and personal training, which take place as a result of activity and communication with adults and other children ». (López and Siverio, 2015, p.31).

Figueroa (2016) defines early stimulation as:

«A series of activities carried out directly or indirectly from the earliest age, aimed at providing as many opportunities as possible for effective and adequate interaction with the human and physical environment, in order to stimulate their general development or in specific areas». (p. 45)

Richter (2016) states:

«Early stimulation of the set of environmental actions and motivations that are offered to the child even before birth to help him grow and develop healthily. Early stimulation aims to develop, enhance and correct children's brain functions through repetitive games and exercises, both intellectual, physical, emotional and social » (p.58).

In the educational programs of pre-school education through institutional channels, contents of the different areas that develop the personality of boys and girls in the areas of physical, moral, aesthetic, labor and intellectual development are contemplated, which include fundamental elements that from the first year of life children receive for the acquisition of active language and ocular-manual movements related to fine motor skills.

Within the domain of movements, which takes place in the first year of life, the process that leads to prehensile action,

that is, to grip, is of vital importance for the child's cognitive development. This begins around the third or fourth month of life and is perfected in the second half with the movement of the hand towards the object and the possibility of putting the thumb, which allows you to hold it with your fingers (digital clamp).

These achievements enable the improvement of actions with objects, based on manual eye coordination. Thus the child can act, not only with one object, but also, with two at the same time, trying to obtain a result: collide an object with another, place one next to another, overlap them, place them in an upright position or put one inside another.

In the contents of the areas of development such as: Mother Tongue (Prewriting), Plastic Education, Knowledge of the World of the Elemental Objects and Notions of Mathematics, as well as in a transversal way, each area fosters the possibility of exercising these skills for its contents motor, so it is necessary to achieve motivation and stimulation of preschool children in the different organizational forms of the educational process.

Stimulation of fine motor skills in preschool children; It refers to excite, to enliven, the muscles involved in the development of motor activities, are the changes, the fine movements, which demand accuracy.

Dr. Gladis Bécquer (1999) assumes the concept of fine motor skills as «the harmony and precision of the fine movements of the muscles of the hands, face and feet». (p.38).

Fine motor:

"They are the movements of the hand and fingers precisely, for the execution of an action with a useful sense, where sight or touch facilitate the location of objects and / or instruments, and is given in almost all of the actions performed by the human being » (...) Example: trim, tear, fold, pleat, paste, cut, cut, trace, draw, and color, among others (Zaporózetis VA 1988).

There have been several authors who have addressed the issue at international level referring to the development of fine motor skills; García (2012) conducted an educational action research in Colombia to diagnose levels of deficiency in the development of fine motor skills of the CDI. Navarro and Márquez (2013) refers in their thesis to an innovative strategy for the stimulation of fine motor skills of children from 3 to 5 years of the Bolivarian School. Torres (2015) refers to the importance of fine motor skills in the CIS preschool age in Venezuela.

That is why many Cuban researchers agree with the importance of the development of fine motor skills in early childhood. Among which stand out Rosés (1995); who addresses the preparation of the child for school from the formation of calligraphic skills, Rojas (2004) proposes a system of preparation of doctors and nurses for the development of fine motor skills in children from 0 to 2 years, and in el (2013) Rojas in his PhD thesis proposed a model about the biopsychological foundations of diagnosis for the learning of writing in early childhood education.

Theoretical Considerations on the development of fine motor skills in child development

Psychomotricity encompasses many different concepts, which, in Fonseca's opinion (2000), give rise to a semantic chaos that expands through several scientific disciplines (Physiatry, Psychiatry, Psychology, Physiotherapy and Pedagogy). On the other hand, it would be important to delve into the knowledge of this discipline, psychomotor skills, based on its definition, whose analysis will allow a more complete assessment of its complexities in the conceptual theoretical plane and very uniquely in educational practice. A below will address some of them:

Pacheco (2015) states: «Psychomotor skills is and should be studied by the teacher, not as a foreign technique but as a resource of his own work». (p.21)

Escalona (2016) in his article «The Family and the motor development of the child» refers to the performance of exercises that give answers to the concept of Becquer (1999) on fine motor skills such as «the harmony and precision of the fine movements of the muscles of the hands, face and feet »p.43)

Fine motor is the type of motor that allows small and very precise movements. It is located in the Third Functional Unit of the brain, where emotions and feelings are interpreted (effector unit par excellence, being the unit of programming, regulation and verification of mental activity) located in the frontal lobe and in the pre-central region. It is complex and requires the participation of many cortical areas, it refers to the coordination of neurological, skeletal and muscular functions used to produce precise movements.

The human being, as a social being, from his birth appropriates the knowledge, skills, customs, qualities present in the social environment with which he interacts and communicates and also of his own motor forms, characteristics of the culture to which he belongs, Family, friends, children's institution, media, available resources (equipment, space, objects), these show the boy and the girl the motor forms and behaviors and influence their motor development. A following analysis of the position taken by different authors on motor development and the movement is made.

In this regard Damasio (1995) states: "The mind would not be what it is if there was no interaction between the body and the brain during the evolutionary process, individual development and interaction with the environment." (p.96)

«The psychic and the motor development of the present formulate an epistemological evangelism, reveal an unquestionable synthesis between the affective and the cognitive, which are in the motor development that is the logic of the functioning of the nervous system in whose mature interaction a mind arises that transports images and representations and that results from mediated learning within a socio-cultural and socio-historical context ». (Fonseca, 1989, p.293)

Motor skills reflect all human movements. Palacio (1979) states: "These movements determine the motor behavior of boys and girls from 0 to 6 years old which is manifested through basic motor

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skills, which in turn express the movements nature of man" (p. 15) .

According to the objectives and tasks of the activity, movement formation occurs at one level or another. This relationship allows discovering the deep and psychological process, in the internal formation of the movement in the process of ontogenetic development.

Rodríguez (2010) reports that fine motor skills imply precision, efficiency, economy, harmony and action, what we can call movements with useful meaning and that is what makes the big difference between man and animals. In addition, it can be defined as the actions of the human being in whose performance the intervention of the eye, the hand, and the fingers in interaction with the environment is related, although it is not exclusive of the hand, where the feet and fingers are also included, the face with reference to the tongue and lips. (p.2)

The author considers that the coordination of the hand and the eye constitute one of the main objectives for the acquisition of skills in the development of fine motor skills. The most important motor traits of the emotional period are: the tonic function, which determines the domain of the hands to catch and gesture; postural activity, which allows you to sit, crawl, walk, discover space, objects and your body; and the establishment of relationships between the mouth, hands and feet.

These levels in the development of fine motor skills are achieved in close relation to the development of thought (Vigotsky, 1982), ranging from external orientation actions (grip, manipulation), to written language: qualitatively superior moment in development of the psyche that is only reached in school age, which is possible if

a conscious process of instruction is carried out that allows the child to be prepared for the important achievement of Prewriting when the preschool age ends.

The preparation criteria are considered: "mastery of fine hand movements, visual perception, manual eye coordination, spatial orientation and assimilation of generalized analysis procedures, in intimate relationship" (Rosés, M. A (1995), which should begin to be stimulated for their development, from the birth of the child (Rojas, 2014, p.10)

There are some differences in the achievement of the fine motor actions mentioned above, according to the age of children in preschool childhood, with respect to the beginning of the movements of arms and hands to reach an object, to grab, manipulate and perform actions simple imitation, correlation and with instruments, considering that it depends largely on the socio-cultural conditions of life, established system of educational influences, with greater or lesser weight of stimulation in its surrounding environment for the activation and enhancement of the development of children from birth taking into account sensitive periods. As well as the conditions and the ways, that are used to achieve it.

These ages are considered the moment in which the stimulation constitutes a determinant of the development by a series of factors that provide it: the accelerated growth, the development of the sensory systems, of the osteomyoarticular system (the flexibility of the muscles and tendons, calcification of the bones, presenting in the hand different stages of maturation), the power to establish innumerable temporary nerve connections (synaptogenesis), as well as the myelogenesis process , which constitute the physiological basis of the

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psychological formations that allow us to configure the conditions for learning.

Its purpose is to acquire skills and abilities in the movements of the hands and fingers. (...) »The acquisition of the digital clip, as well as a better manual eye coordination (hand and eye coordination) are one of the main objectives for the acquisition of fine motor skills». (Almeida, 2015, p.48).

Many studies on these ages state that investing in early childhood is very convenient.

«Early Childhood Development is the most powerful way a society has to lay the foundations for equity. (...) Over the past few years, early childhood development has been progressively positioning itself on the international and national agenda, thanks to the advances in scientific knowledge about the key role of this stage for human development and social development and also due to the growing political will of rulers and decision makers »(UNICEF. Early Childhood 2001)

The well-stimulated child, even the one who has a health disorder or problem, will become a useful human being for himself and for society, as he will be able to achieve the greatest possible independence and self-validity, which will become benefits for his country.

Hernández (1999) defines the Near Development Zone as the difference between what the child is capable of doing

on his own and what he can do with the help of adults and other children. The first indicates the real evolutionary level of the child, the level of development of their mental functions that have already matured, that is, the final products of their development, while, the second reveals those functions that have not yet matured, but are found in maturation process ». (p.133)

The author considers that the development of motor skills in infants depends on part of the set of perceptual, cognitive and socio-emotional experiences achieved by the development and physical maturity of the muscles involved. The motor reflects all your movements and determines the motor behavior, which is manifested through basic motor skills. That is why the importance attached to stimulating the development of fine motor skills from early childhood.

This work aims to design a system of activities that contributes to the stimulation of fine motor skills in children of the preschool grade of the «Los Hermanitos» Day Care Center.

MATERIALS AND METHODS

The study was carried out in «Los Hermanitos» Day Care Center in the municipality of Pinar del Rio. To achieve the objective in the research process, the dialectical-materialist method as a base and guide was assumed as a general method of science, for the integral study of objects, processes and phenomena in terms of their internal contradictions and their universal concatenation, subject to laws and principles, which allowed them to penetrate their dynamics, to discover the links established in their operation and the

logic that favors the application of methods.

These research methods can be considered as ways or ways of studying the phenomena of nature, society and thought, to discover the essence of the problem and solve it. They contribute to the obtaining of necessary information and that later ordered, processed and analyzed allow conclusions and recommendations to be reached that satisfy the problematic object of the investigation.

At the theoretical level, the following were used:

Historical and Logical: allowed the analysis of the historical development of the problem and the logic of its operation and development.

Induction and Deduction: made possible, based on irregularities, to develop a system of activities that allow perfecting the conceptions about the development of fine motor skills in preschool.

Analysis and synthesis: in order to analyze and deepen the essence of the historical background of the system of activities to be designed that contribute to the stimulation of the development of fine motor skills in preschool children.

Systemic Approach: provided general guidance for the study of how to stimulate fine motor skills in preschool children. In addition, it provided the possibility of determining the theoretical and methodological elements that will be used for the elaboration of the system of activities.

Empirical Methods:

The observation of activities in the educational process was carried out with

the objective of knowing the level of development of the stimulation of fine motor skills presented by preschool children in the areas of Mother Language (Prewriting), Plastic Education, and in the different schedules of independent activities.

The interview with teachers served to verify the level of development that children in preschool have about the development of fine motor skills and the level of knowledge they have about this aspect of child development.

Documentary analysis: allowed to obtain information about the level of development of preschool children in fine motor skills, through the applied pedagogical situations, the study of the products of the pedagogical process (Workbooks, Review of work done by preschoolers, worksheets).

Statistical methods: descriptive statistics were used to process the data in percentages and express them in tables and graphs.

Dimensions and indicators evaluated in preschool children

* **Dimension I:** The correct use of instruments.

Indicators: - Hold the pencil or crayon correctly.

- Place the workbook correctly.
- Color with adjustment to the contours.
- Use movements evenly.
- Postural habits.

* **Dimension II:** Quality in the stroke.

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Indicators: - Order in the realization of the stroke.

- Precision in the layout.
- Continuity in the realization of the stroke.
- Adjustment in the line.
- Cleaning of the line made.

* **Dimension III.** The solution of the tasks.

Indicators: - Provision.

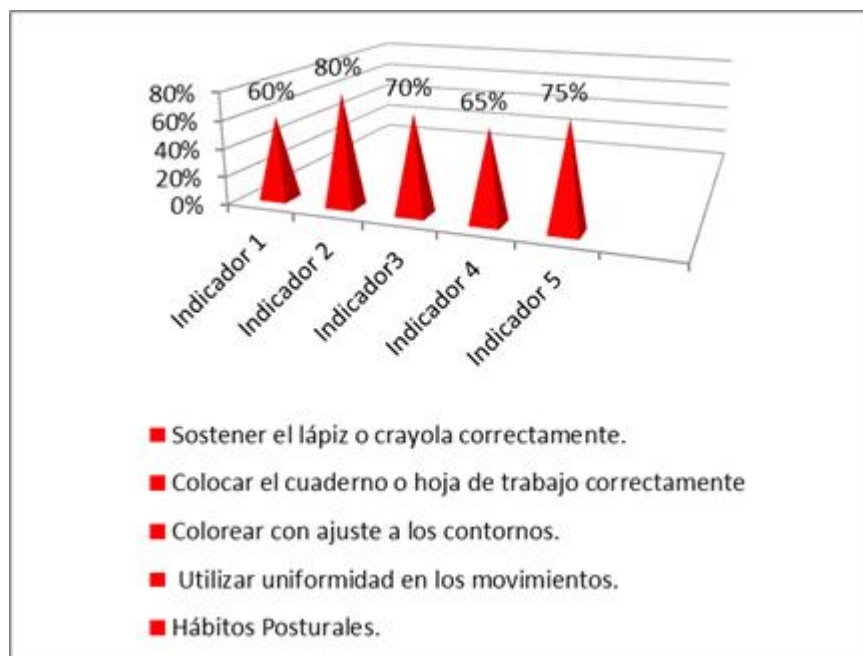
- That you start and finish the task alone.
- Amount of tasks that manages to solve.
- Assessment of the work done.
- Satisfaction of the results of the tasks.

RESULTS AND DISCUSSION

Observation was carried out on 20 activities programmed in the areas of Mother Language (Prewriting), Plastic Education, and in the different schedules of independent activities, with the objective of verifying the achievements made by children of the preschool grade in the development of fine motor skills

In comparing the results you can see the increase in achievements and the reduction of difficulties in the area of Plastic Education, since by 25 %, the use of the instruments was achieved at 60 %, in placing the notebook or worksheet correctly of 15 %, results were obtained much higher than 80 %, just as coloring with adjustment to the contours of 10 % was achieved at 70 %. In addition, using

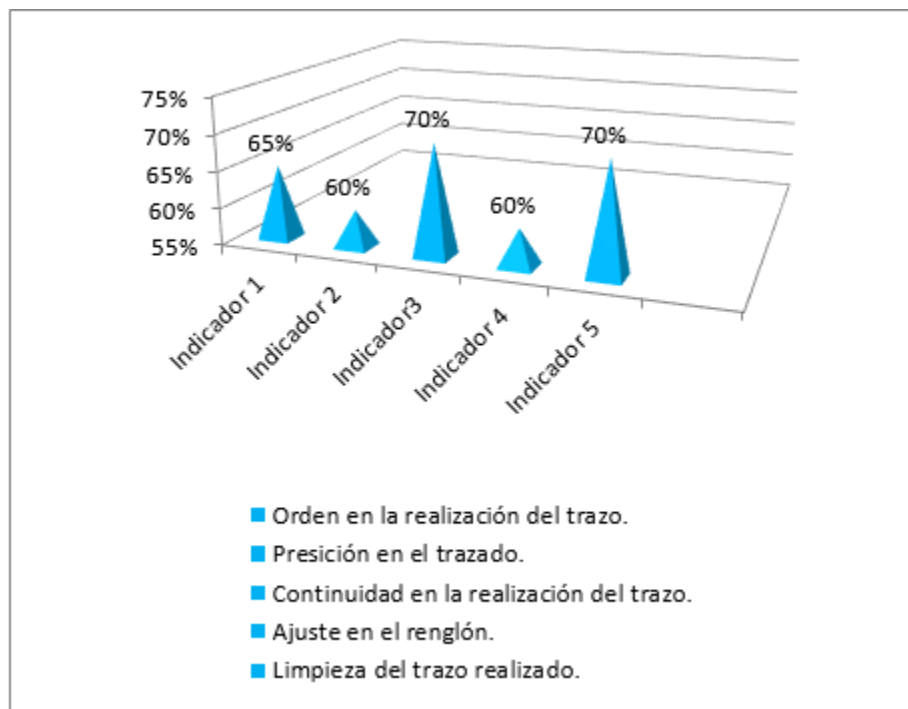
uniformity in movements of 10 % was achieved at 65 % and with respect to postural habits from 25 % to 75 %.



Graph 1- Results of the Final Diagnosis of Dimension I: The correct use of instruments.

From the analysis of the results of this instrument, it was found that of the 5 indicators evaluated, they only have achieved the indicator that maintains cleanliness in their work for 30 %, the order in the realization of 45 % was evaluated the strokes, as well as their shape and not achieved the indicators to

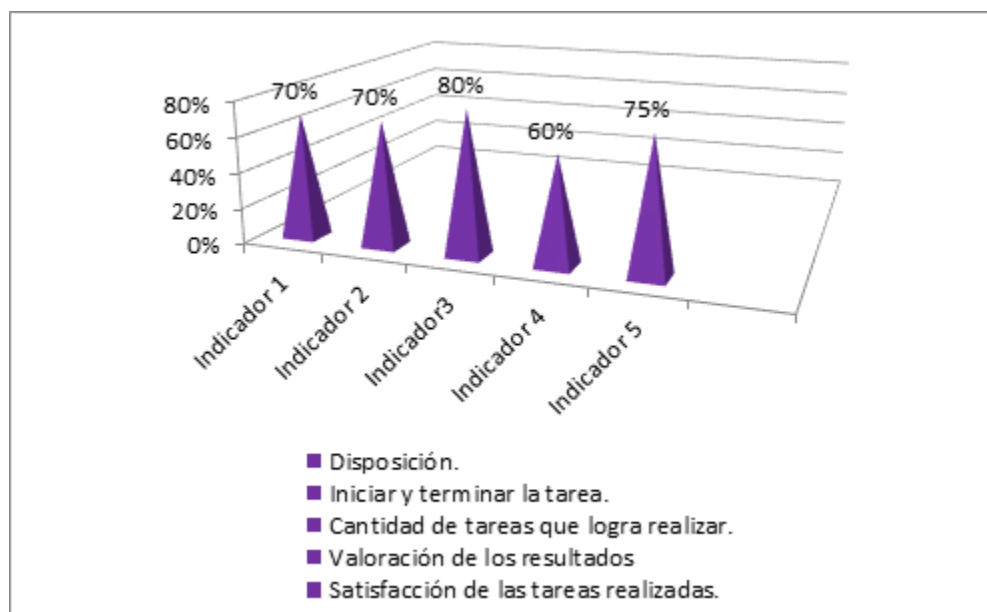
make strokes with precision, by the limits with line adjustment for 60 %, the continuity in the path, for 70 %, start and finish by themselves the tasks for 70 %, the valuation of the works carried out was found at 40 % as well as in demonstrating satisfaction for the tasks they perform in 30 %. (Graph 2)



Graph 2 - Results of the Final Diagnosis of Dimension II: Quality in the stroke.

When evaluating the work carried out with quality and using the vocabulary of the area in only 60 % of boys and girls in preschool, satisfaction was verified by the results achieved in 75 %, which was demonstrated in the observations made in the different activities developed. In

addition, in the valuation of the works, the boys and girls are able to express 60 % of how they are left, what techniques they used, what they can do so that in the next activities the jobs are better, showing satisfaction with the tasks performed on 75 % (Graph 3)



Graph 3 - Results of the Final Diagnosis of Dimension III: The solution of the tasks.

30% of the boys and girls maintain order in the realization of the strokes, as well as 10% are able to start and finish the activities on their own since the spatial orientation and directionality demonstrated are insufficient. In addition, more than 70% are not at the desired levels, they do not achieve independence in the actions they perform, when plotting they are clumsy, insecure and lack precision, they constantly lift the pencil. When valuing the work, they are honest at times; because they express that, they get very tired, showing 10% satisfaction with the work done, but not 60% of the group.

70% of the children observed lack security to start and finish the strokes by themselves, needing levels of help and differentiated attention to achieve it, only 2 children representing 10% achieve it and 20% almost achieve it with help, representing the total of 4 children.

In the elaborated pedagogical situations it was found that they use the colors

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correctly, as they are able to recognize and name them, as well as the use of their shades that embellish the works they perform demonstrating that 10% show satisfaction with the tasks performed, not being able to color with 50% of children adjust to the contour, only 10% achieve it without difficulty and 40% achieve it with help.

Taking into account the follow-up of tasks related to fine motor skills, 60% change very frequently for other activities, and there is no systematic monitoring of the variability of visual coordination tasks according to the difficulties presented by children.

60% of children do not use the correct technique to tear through a line or doubles, because 12 children of 20 do not achieve it accurately, presenting irregularities, selecting more frequently the free, colored drawing, this does not happen with the path of lines and paths in circular figures.

In the selection of educational games related to fine motor skills only 30% do so systematically, not being achieved in 70 % of children, because they like modeling activities, puzzles, block building games, pyramids. When assessing the work, only 60 % do so according to the vocabulary of how they made the strokes, if they fit well or badly explaining the steps used, 40 % do not explain what they did, they only refer to the category of how they fit.

Preschool-grade boys and girls are motivated by activities that develop 25 % motor skills since 50 % prefer the selection of construction tasks, assembling and disarming objects. 15 % use different techniques in their work, 25 % more frequently use free drawing with crayons, and 60% have inadequacies in the mastery of the techniques.

In the analysis of the products of the activities, such as children's drawings, worksheets, notebooks, for their application they were provided with the materials and instruments necessary for performing visomotor coordination tasks with the performance of straight, curved strokes, analyzing the products based on the proposed indicators, as well as the different techniques to be used.

In the interview with the teachers of the fourth cycle, it was found that 50 % said that the activities that contributed most knowledge have been the demonstrative and open activities that were developed in the different areas of development. As well as, seminars for differentiated treatment and mastery of methodological steps.

The *principles and foundations* that support the system of activities for the development of fine motor skills are based on a systematization of principles of a

philosophical, psychological and pedagogical nature:

Principle of education

The system approach

The principle of unity between the affective and the cognitive

Teaching as a guide and source of development

Sensitive periods

The Principle of Interdisciplinarity

The attention to diversity in the educational process

The methodological flexibility

The psychological and pedagogical foundations of this research are based on the cultural historical paradigm, which conceives the development of the child as a socially conditioned biological process, the result of the educational influences that children receive in the broadest sense of the word. Therefore, education goes ahead, guides and drives development, in this way; it has the purpose of coherently organizing and structuring the educational process of stimulation of fine motor skills of preschool children.

General Objective: To propose a system of activities that contributes to the stimulation of fine motor skills in children of the preschool grade of the "Los Hermanitos Children's Circle".

Specific objectives:

Stimulate the development of fine motor skills in preschool children.

Encourage adequate spatial orientation based on its location in space, (worktable).

Promote inter-annual coordination and motor independence of preschool children.

To contribute to the stimulation of the fine movements of the hands in the realization of strokes that favor the adjustment to the line, the precision and the continuity.

Stages of the Instrumentation of the activity system

First stage: Previous study

The study was carried out on the children of the preschool grade of "Los Hermanitos" Day Care Center.

Collection of information on existing criteria about the development of fine motor skills in preschool children.

The actions corresponding to this study were carried out in the "Los Hermanitos" Children's Circle of the Province of Pinar del Río.

Second stage: Development of the activity system

For the elaboration of the system of activities, the results obtained in the previous stage were taken into account, which provided information on the main issues that should appear in the system based on the regularities of the children, in correspondence with the achievements of the development and the particularities of each one of them.

The system of tasks allowed obtaining a set of information necessary for the fulfillment of the purposes of this investigation.

Third stage: Assessment of the system of activities in educational practice

Structure of the activity system

Foundation of the activity system.

General objectives.

Specific objectives.

Activities for the stimulation of fine motor skills.

Dosing of the contents to work in the different areas of development.

Methodologies for a better application of the techniques in the activities.

Evaluation system.

Methodological guidelines for the application of the activity system

A favorable climate must be created and the child will be stimulated, giving him security and confidence in his possibilities to perform the tasks.

The conditions of the premises and the materials necessary to facilitate the concentration of boys and girls in the tasks they perform must be guaranteed.

From the first day that the boys and girls begin to carry out the activities, they should be encouraged to start and finish their work, managing to assess the results.

These activities can be carried out in the programmed activities of the different development areas. (Table).

Table - Dosage of actions to develop fine motor skills

Order	Activity Title	Development area	Contents
one	Trace the flower stalks to the vase, following the dotted line	Prewriting	Draw dotted lines
two	Trace the flower stalks to the vase	Mathematics	Length Comparison
3	Color the oranges from the tree, with circular strokes from the center	Independent activities	Filled with circular shapes
4	Color the center of the oranges following the contour from the center	CMOR	Draw the shapes of the figures and fill them.
5	Trace the path that will take Luis to his suitcase	Phonic Analysis Notions of Mathematics	Determine the long or short words. Measure roads

In the *evaluation* of children, the scale of Achieved, Achieved with help, Not achieved, based on the objectives of the structuring of the system of designed activities, was used to stimulate the development of fine motor skills.

Accomplished

- It has the manual preference defined in the instrumental processes.
- Control the grip of objects.
- Make precise movements of hands and fingers.
- Master the technique of trimming, tearing, coloring and drawing figures without help.
- Integrates with straight references, straight lines, curves vertically, and horizontally.
- Achieve security and accuracy when performing activities.

Achieved with help

- They need help and repeated demonstrations to carry out the activities.
- They show difficulties in drawing, trimming, tearing and drawing figures.
- It has disposition for learning, but the level of assimilation is less.

Unachieved

- They have no defined manual preference in instrumental processes, when using the pencil correctly.
- Upon receiving the different levels of help, they do not internalize them and therefore fail to perform the task.
- It fails to make straight, curved, cut, tear and draw shapes along its contours.

With the implementation of the system of activities in pedagogical practice, the development of boys and girls in the preschool level contributed to the stimulation of fine motor skills.

- Boys and girls develop their abilities to the fullest in the area of Plastic Education.
- Strokes are achieved by the center of the given limits, regularly with precision and continuity in the layout.
- They manage to carry out their work start and finish on their own, the tasks oriented without help.
- They perform the assessment of their work, according to the indicators offered by the teacher.
- Children manifest themselves more effectively and autonomously both at home and in the institution during the tasks.
- Positive relationships are established with the correct use of instruments and materials.
- The small muscles of the hand are strengthened and a close relationship is established between the eye and the hand.
- The mastery of the techniques in the actions of trimming, tearing, tracing, coloring was achieved.
- The achievements of the development of preschool children, related to fine motor skills, are consolidated, are satisfied by the results obtained in the tasks performed.

With the application in the educational practice of the system of activities, satisfactory results can be found in many of the indicators corresponding to the area of fine motor skills, in the areas of Plastic Education, Prewriting and in the schedules of independent activity.

When carrying out the comparative study on the basis of the results obtained in the initial and final diagnosis, it was observed that of the 15 indicators evaluated, 8 independently meet the boys and girls for a 53 % achieved. In addition, there are 4 indicators that with help manage to perform the corresponding actions for 27 % and a total of 3 indicators that do not manage to do so for 20 %.

In the observations made in the independent activities after applying the system of activities it was found that boys and girls are 70 % willing to carry out several activities, achieving concentration and interest in carrying them out, achieving in 70 % that they are capable of starting and finishing tasks alone, solving several tasks in 80 % of cases.

BIBLIOGRAPHIC REFERENCES

- Bécquer, Gladis (1999). Desarrollo de la motricidad en la actividad programada de Educación Física en la educación preescolar. Tesis presentada en opción a Título académico de Doctor en Ciencias Pedagógicas I. S P Enrique José Varona. La Habana. 2001. p.38
- Damasio, R. (1995). Experiencias Prácticas de Lectura y escritura en el Preescolar. Disponible en: <http://motricidadfinaenlaeducacionpreescolar.blogspot.com/p/la-coordinacion-motora-fina-es-toda.html> 26/1/18 p.96
- Escalona, M. (2016). La Familia y el Desarrollo Motor del Niño. XII Encuentro Internacional de Educación Inicial y Preescolar. La Habana, MINED, p.43

- Figueroa, E. (2016). Desarrollo Motriz. Barcelona: Habilidades del área motriz fina y las actividades de estimulación temprana. Revista Publicando, 11(1), 526-537. ISSN 1390-9304
- Fonseca, D V. (1989). Manual de Observaciones psicomotriz. Inde: Barcelona España. p. 293.
- Fonseca, D V. (2000).» La prevención en la psicomotricidad.» VII Congreso brasileño de Psicomotricidad, Fortaleza Ceara, Brasil, p. 14.
- García H. (2012). Investigación acción educativa para diagnosticar los niveles de deficiencia en el desarrollo de la motricidad fina del CDI, Tesis presentada en opción a título académico de Máster en Ciencias de la Educación. Colombia.
- Hernández Rojas, G. (1999). La zona de desarrollo próximo. Comentarios en torno a su uso en los contextos escolares. Perfiles Educativos, (86). Recuperado de <http://www.redalyc.org/resumen.oa?id=13208604>
- López, J. (2016). Plan de estudio de la Primera Infancia. Versión 2. La Habana: Ministerio de Educación. p 30.
- López, J, y Siverio, A.M. (2015). Plan de estudio de la Primera Infancia. Versión 2. La Habana: Ministerio de Educación. p. 31.
- Navarro y Marqués. (2013). Estrategia innovadora para la estimulación de la psicomotricidad fina de niños de 3 a 5 años de la Escuela Bolivariana. Tesis presentada en opción a título académico de Máster en Ciencias de la Educación. Venezuela.
- Pacheco Guadalupe, M. (2015). Psicomotricidad en la Educación Inicial. Algunas consideraciones conceptuales. Primera Edición, p. 21. QUITO ECUADOR ISBN: 978-9942-21-591-8.
- Palacios, J. M (1979). El deporte en el niño y el adolescente. Cumbre Mundial sobre la Educación Física, Berlín, Alemania.
- Rosés. M. A. (1995). Preparación del niño, relacionada con la formación de habilidades caligráficas, en Estudio sobre las particularidades del desarrollo del niño preescolar cubano. Editorial Pueblo y Educación: Ciudad de La Habana. p. 227.
- Almeida Reyes, I., Cando Vaca, E., Panchi, E. (2015) Aplicación de instrumentos lúdicos para el Desarrollo de la motricidad fina de niños y niñas de 4 años de edad con variables de Género, clase, etnicidad y territorial, incluye uso de Tic´s. ANALES de la Universidad Central del Ecuador, 1(373): 311-327.
- Richter, R. (2016). Estimulación temprana. p. 58. Madrid: Tarraza Publicaciones.
- Rojas, E, J. (2014). Consideraciones acerca de la motricidad fina en la edad inicial y preescolar. IV: Editorial Pueblo y Educación, Ciudad de La Habana. p. 10.
- Rojas, E, J. (2013). Modelo acerca de los fundamentos biopsicológicos del diagnóstico para el aprendizaje de

- la escritura en la educación infantil. Tesis presentada en opción a título académico de Doctor en Ciencias de la Educación. Universidad de Ciencias Pedagógicas Enrique José Varona. La Habana.
- Rojas, E, J. (2004). Sistema de preparación de los médicos y enfermeras para el desarrollo de la motricidad fina en los niños de 0 a 2 años. Tesis presentada en opción a título académico de Master en Ciencias de la Educación. Universidad de Ciencias Pedagógicas Enrique José Varona. La Habana.
- Rodríguez Abreu, M. (2010). Las bases perceptivo-motrices en primaria: la percepción espacial. [http://www.efdeportes.com/Revista Digital](http://www.efdeportes.com/Revista%20Digital), 15(146). Recuperado de <https://www.efdeportes.com/efd14>
- 6/las-bases-perceptivo-motrices-en-primaria.htm
- Torres, G. (2015). La importancia de la motricidad fina en la edad preescolar», Tesis presentada en opción a título académico de Doctor en Ciencias de la Educación. Centro de Referencia Latinoamericano para la Educación Preescolar. CEI Venezuela.
- UNICEF. (2001). Primera Infancia. UNICEF. Consultado en: <http://www.unicef.com.co/situacion-de-la-infancia/primera-infancia/> . Consultado: 17 de enero de 2014.4.
- Vigotsky, S. L. (1982). Obras completas. (Vol. 2) Capitulo 5 Pueblo y Educación. La Habana. p. 186.
- Zaporózethts V.A. (1988): Pedagogía Preescolar. La Habana: Editorial Pueblo y Educación. p. 83.



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