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Transfer of quantity recognition in the educational process of the preschool child. Exploratory study

Transferencia del reconocimiento de cantidades en el proceso educativo del niño preescolar. Estudio exploratorio

Transferência do reconhecimento de quantidades no processo educacional da criança pré-escolar. estudo exploratório

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ABSTRACT

In the article, a significant problem for the early childhood educational process was addressed, related to the development of the transference of the recognition of quantities in the preschool age. Correspondingly, it was intended to establish the essential aspects of the development process of the transfer of quantity recognition as part of the educational process of preschool children and the necessary requirements to implement it in the "Salvador González" semi-boarding school of the Pinar del Río municipality. The research followed a qualitative approach. In order to respond to the objective, a bibliographic review was carried out that allowed the necessary information to be collected from the previous theoretical results. In addition, other methods such as the analytical-synthetic and inductive-deductive were used, very useful in the study, interpretation and elaboration of the final results. In this way, it was possible to determine that a process aimed at the development of the transfer of quantity recognition must comply with the implementation of requirements such as: determination of the level of appropriation of the content system related to the recognition of quantities from 1 to 10, the establishment of similarities between learning tasks, the gradual structuring of the degree of difficulty in the tasks, systematization of examples that promote the abstraction of essential characteristics of the problem situations presented, establishment of connections between the content to be learned with daily experiences and the educational process of children.

Keywords: educational process; preschool age; transfer of learning; quantity recognition.

RESUMEN

En el artículo se abordó un significativo problema para el proceso educativo de la primera infancia, relacionado con el desarrollo de la transferencia del reconocimiento de cantidades en la edad preescolar. En correspondencia, se pretendió establecer los aspectos esenciales del proceso de desarrollo de la transferencia del reconocimiento de cantidades como parte del proceso educativo de los niños de edad preescolar y los requerimientos necesarios para implementarlo en el seminternado "Salvador González" del municipio Pinar del Río. La investigación siguió un enfoque cualitativo. En función de dar respuesta al objetivo, se realizó una revisión bibliográfica que permitió recopilar la información necesaria de los resultados teóricos precedentes. Además, se utilizaron otros métodos como el analítico-sintético e inductivo-deductivo, que permitieron la interpretación y elaboración de los resultados finales. De esta forma fue posible determinar que un proceso dirigido al desarrollo de la transferencia del reconocimiento de cantidades debe cumplir con la implementación de requisitos como: determinación del nivel de apropiación del sistema de contenidos relativo al reconocimiento de cantidades de 1 al 10, el establecimiento de similitudes entre tareas de aprendizaje, la estructuración paulatina del grado de dificultad en las tareas, sistematización de ejemplos que propicien la abstracción de características esenciales de las situaciones problemas presentadas, establecimiento de conexiones entre el contenido a aprender con las experiencias cotidianas y del proceso educativo de los niños.

Palabras clave: proceso educativo; edad preescolar; transferencia de aprendizaje;

reconocimiento de cantidades.

RESUMO

O artigo abordou um problema significativo para o processo educacional da primeira infância, relacionado ao desenvolvimento da transferência de reconhecimento de quantidade na idade pré-escolar. Correspondentemente, pretendeu-se estabelecer os aspectos essenciais do processo de desenvolvimento da transferência de reconhecimento de quantidade como parte do processo educacional de crianças pré-escolares e os requisitos necessários para implementá-lo no semi-internato "Salvador González" no município de Pinar del Río. A pesquisa seguiu uma abordagem qualitativa. Para responder ao objetivo, foi realizada uma revisão bibliográfica que permitiu coletar as informações necessárias dos resultados teóricos anteriores. Além disso, foram utilizados outros métodos como o analítico-sintético e o indutivo-dedutivo, que permitiram a interpretação e elaboração dos resultados finais. In this way, it was possible to determine that a process aimed at the development of the transfer of quantity recognition must comply with the implementation of requirements such as: determination of the level of appropriation of the content system related to the recognition of quantities from 1 to 10, the establishment of similarities between learning tasks, the gradual structuring of the degree of difficulty in the tasks, systematization of examples that promote the abstraction of essential characteristics of the presented problem situations, establishment of connections between the content to be learned with the daily experiences and the educational process of children.

Palavras-chave: processo educativo; idade pré-escolar; transferência de aprendizagem; reconhecimento de quantidade.

INTRODUCTION

The educational influences that affect the person throughout his life condition the formation and development of his personality, allowing his effective participation in society (Martin Bravo et al., 2018). To achieve this, the social system designs and implements the educational process, which acquires singular characteristics depending on the peculiarities of the age period in which the subjects on whom it affects are found.

In early childhood, this is aimed at achieving the maximum development of the children's possibilities in order to provide them with the necessary preparation for subsequent school learning. Consequently, this process must be organized, structured and directed pedagogically to contribute to the successful resolution of the contradictions that arise in the child's life, while constituting a source for the appearance of others. Therefore, its planning invariably requires starting from a solid knowledge of both the particularities of the age period and the individuality of the child (López Hurtado, 2004).

Every moment of the process should be considered educational. This points to the need to take advantage of each of its spaces based on the integral development of the child. This is achieved from the fulfillment of a group of requirements such as its contextualization, its playful approach, the child as the center of the process, an adequate socio-affective climate, its cooperative and participatory nature (Siverio et al., 2010).

This consciously organized, directed and systematized system of influences on pedagogical bases pursues among its objectives to develop in the child the basic conditions that allow him to use the assimilated contents for the solution of the new tasks. Said use of prior learning to solve new problems is called learning transfer, a

process that has been addressed in research on early childhood learning such as Acosta et al. (2022), Bobrowicz et al. (2022), Cheng et. to the. (2021), Strouse and Ganea (2021).

Among the contents that the preschool child must assimilate during the educational process are those referred to the area of Elementary Notions of Mathematics (Mined, 1998), which are integrated into the Education and development of the relationship with the environment dimension. In the opinion of Cruz and Cartaya (2017), the teaching of these notions allows children to relate to the world that surrounds them and closely correlates with the development of their cognitive processes. They also point out the validity of promoting during their teaching that the child learns to extract the acquired knowledge from previous situations and apply it to the solution of new tasks.

In this same line of thought, it is affirmed that the actions of the early childhood education teacher in the area of mathematics must be intentionally oriented towards the generation of meaningful and contextualized experiences in the child. This contributes to facilitating the possibility for the infant to carry out transfers in a constant way based on the connection between what he learns and his previous schemes. What is achieved through the joint and gradual construction of abstractions (Felicetti and Pineda, 2016).

Other investigations also refer to the importance of the development of the transfer of contents in the area of mathematics during the educational process of the child. In this sense, the role of transfer is underlined as it facilitates the use of prior knowledge of simple concepts and procedures for the acquisition of more complex ones, constituting a main component of the construction of intellectual abilities (Kang et al., 2019).

Specifically, it is important to stimulate the development of the transfer of quantity recognition as part of the teaching of Elementary Notions of Mathematics. This is based on positions such as those of Celi et al. (2021) and Reséndiz Balderas (2020), who emphasize the need to carry out intentional and coordinated work in this area that favors the use by the child of the skills acquired during this process in their daily life. In addition, they underline the relevance of working with quantities as part of the development of logical-mathematical intelligence in early childhood.

Getting the child to appropriate the establishment of quantitative relationships between the objects that make up their environment so that they can apply them during their daily activities, constitutes a central aspect within the objectives of the educational process at age (Araujo and Gonzalez, 2021). In this direction, the development of simple and logical processes that allow it to function within the various social contexts in which it participates is significant. Aspect that is achieved through a creative teaching action that stimulates the use of strategies to solve real problems (Mujica and Márquez, 2022).

However, the initial exploration carried out regarding the development of the transfer of quantity recognition during the educational process of the preschool child in the "Salvador González" semi-boarding school in the municipality of Pinar del Río, revealed difficulties in this process, related to the use of quantitative relationships by children to solve the new problems they face during their daily activities in the educational context. The instruments applied allowed us to verify the existence of insufficiencies such as:

- Difficulties in children, in the application of the recognition of quantities from 1 to 10 for the solution of new tasks.

- Insufficient systematization of the components of the educational process in order to promote the development of the transfer of quantity recognition to new problems.
- Insufficiencies in establishing structural and relational similarities between learning situations
- Insufficient systematization of activities aimed at developing the transfer to contexts outside the classroom.

These particular shortcomings seem to be related to a more general one consisting of a lack of clarity regarding the most appropriate elements to develop the transference of quantity recognition in preschool children.

In this sense, the article aims to establish the essential aspects of the development process of the transfer of quantity recognition as part of the educational process of preschool children.

MATERIALS AND METHODS

The study was carried out using a research methodology with a qualitative approach. This responded to the purpose of the work, consisting of the exploration of significant elements for the development of the transfer of quantity recognition in the educational process of the preschool child, given its relevance to guarantee the quality of their learning during the subsequent educational levels. The method chosen to obtain information was the bibliographic review, through which information was collected from several contrasting investigations. Other theoretical methods such as analytical-synthetic and inductive-deductive were also used for the study, interpretation and elaboration of the final results.

A theoretical-methodological analysis of the pedagogical and didactic foundations related

to concepts and categories such as: educational process, learning transfer, recognition of quantities, principles for the implementation of the educational process in early childhood, which support the development of the transfer of recognition of quantities in the educational process of preschool children, was carried out. The procedure followed for the selection of bibliographic sources was as follows: categories such as transfer of learning, analogical reasoning in preschool age, mathematical thinking in preschool age, early childhood educational process (both in Spanish and English) was used as a search engine, adjusted to the fact that the information was located in the last twenty years. The bibliographic search was performed using the PubMed database. In addition, articles published in journals indexed in the Scielo multidisciplinary repository were selected.

Once the search was completed, an analysis was carried out that allowed working with information corresponding to nine investigations published in the last five years, which guaranteed its updating, although some studies published on earlier dates were considered important.

The population under study was made up of a total of 20 subjects, the 18 children that make up the group of the preschool grade of the "Salvador González" elementary school and the two teachers.

RESULTS

The transfer of recognition of quantities. Its place within the educational process of the preschool child.

The analysis of the information obtained revealed the need to carry out an intentional work aimed at the development of the transfer of the recognition of quantities in the

preschool age, while this contributes to the fulfillment of the objectives of the educational process in the stage. Consequently, it was possible to verify the community of criteria in relation to the importance attributed to the transfer as a process that influences the psychological development of the preschool child and their future performance in the school context.

Consequently, with the previous idea, early childhood education is considered a process that arises among its fundamental objectives in the first instance: to ensure that the child reaches the maximum possible integral development in all areas; secondly, the achievement of the establishment of the bases and foundations that prepare it in the cognitive, affective, motivational and regulatory planes that facilitate its successful start in the conditions of school life.

On this basis, the development of the transfer of quantity recognition at this stage should constitute a process that contributes to the integral development of the child's personality. This is based on the conception of transfer as a process that enables the achievement of higher levels in the appropriation of knowledge and skills by the preschool child. At the same time, the very conception of integrality in all areas draws attention to the necessary interrelation of the executing elements with the affective-motivational and volitional elements.

Returning to the objectives of early childhood education, there is a coincidence in the recognition of the relevance of implementing an educational process that lays the foundations for subsequent school learning. In this framework, the process of developing the transfer of recognition of quantities must contribute to the establishment of broader psychological formations that, among other aspects, prepare the preschool child to understand an explanation, memorize it, implement its execution, and assess the

effectiveness of their own performance, this as part of the diagnosis for school learning 1.

The scope of these purposes is reached from the implementation of actions that intentionally direct the development of the transfer of the recognition of quantities in age. Therefore, it is essential to stimulate in the child higher levels of development of his processes and psychological formations and, consequently, contribute to the adequate insertion of the child in the school system.

The previous idea is aligned with the position that establishes the need that, during the evaluation aimed at verifying the child's readiness to start school learning, he or she is capable of assimilating a procedure for solving a task demonstrated by the teacher and applying it to solving a new exercise. This includes the contents related to the recognition of quantities, which include the quantitative comparison of sets, the recognition of a quantity in different positions, the action of counting and the establishment of the part-whole relationship.

Other positions coincide in the recognition of the importance of the development of the transfer of mathematical contents in the education of the preschool child. In addition, they agree on the proposal of guidelines to achieve this goal. Therefore, the educational process in this direction must guarantee the appropriation of quantity recognition by the child and simultaneously create the conditions so that it can be applied to other situations.

In this line of thought and based on the particularities of the educational process at age, the development of quantity recognition transfer must be characterized, among other elements, by having an investigative, discovering and critical approach that allows the generation of significant and contextualized experiences. In this way, the conditions are created for the child to learn

to transfer said contents to the daily activities in which he participates.

The internal idea can be integrated into another proposal that considers that the appropriation of the content system related to the recognition of quantities is achieved by implementing a process directed by a system of methodological guidelines. Thus, the work with the elementary notions of mathematics in general, and in a particular way the recognition of quantities must consider: the diagnosis of the level of development of the child; organizing content in a logical order; the structuring of activities with a gradual complexity; the conception of activities in connection with daily reality, in a playful atmosphere; that promote both the development of cognitive independence and collective work.

Within this order of ideas, there are criteria that deepen the importance of generating significant experiences in children, hypotheses and the assessment of the reality in which they develop. For this, it is necessary for the teacher's practice to consider that preschool children already use mathematical concepts from an early age, a use that is conditioned by the needs that their daily actions present. This aspect acquires marked relevance to promote the application by the child of the recognition of quantities to solve the situations they face in their educational process.

Based on this own conception, the development of quantity recognition transfer is understood as a process that influences other areas of child development. In this sense, it is necessary that any didactic proposal directed to this end in initial education, implicitly carries an integral conception of childhood from which it is understood that any action aimed at strengthening a specific dimension of development impacts on the rest of the areas. In addition, at the base of any proposal, knowledge of the individuality of

each child and the creation of an environment that stimulates trust, reflection, action and questioning must be found as an important condition.

In line with this perspective, it is worth considering the positive influence of environmental support on transfer at this age. Within this framework, it is understood that the work aimed at the child identifying quantities and using this knowledge to solve new tasks is conditioned by the way in which the teachers integrate this content into the rest of the activities. In this sense, although they emphasize the link with later stages, it is valid to recognize that they point out the need for the activities aimed at the development of the transfer to be aligned with the rest of the contents of the curriculum that is worked with the child.

Another of the elements in which there is a community of criteria regarding its influence on the development of the transfer of mathematical contents and therefore on the recognition of quantities, are the actions that must be carried out to guarantee that this acquires significance for the child. Thus, the integration between different areas of the curriculum is proposed so that it starts from rescuing the mathematical knowledge that children possess and the identification of its uses in everyday scenarios. This is achieved from the establishment of multiple relationships between objects, events and actions in which the child participates both inside and outside the educational institution.

The achievement of the significance of the recognition of quantities constitutes an element that conditions the development of the transference in the child and, in turn, is integrated with others that also influence in that direction. In this way, another of the ideas present in the literature in this regard shows a close relationship between deep knowledge of the psychological characteristics of children and significance.

From this edge, a determining link is established between the consideration of the characteristics of the preschool age period, the individual particularities and the respect for the learning rhythm of each child with the stimulation of the emergence of positive affective experiences during the process.

There is also a coincidence between the nature of the relationships that are fostered between the participants in the educational process and their influence on the transfer. Thus, it is recommended to stimulate interactions between peers as an element that influences the generation of a favorable affective climate and the generation of levels of help, both determining factors for the appropriation of quantity recognition and its subsequent application to different situations.

In the line of thought itself, there are positions that highlight the role of the adult as a mediator in the development process of the transfer of quantity recognition in the educational process of the preschool age. In this regard, the influence of intentional adult mediation on the appropriation of mathematical content by the child and its use in daily activities is emphasized. For this, it is necessary to integrate the new knowledge system with the existing ones from the implementation of multiple and varied learning situations.

In line with this proposal, the mediating role of the adult also implies that the teacher guides the transfer process through questions that make it possible to take advantage of the knowledge that the child possesses and strengthen their understanding of the content worked on. Based on this, it is considered advisable to use questions that stimulate the externalization of the way in which children understand the task, error management as an opportunity for learning and debate about the strategies used by them.

Now, although the ideas present in the research results validate a group of necessary elements to take into consideration for the development of the transfer of quantity recognition in the educational process of preschool children, the analysis of other results is important. In this sense, other investigations implemented with children of this age coincide with some of the criteria analyzed and at the same time present new requirements that, in their opinion, condition the development of the transference in the stage.

Requirements for the development of the transfer of quantity recognition in the educational process of the preschool child

Among the elements to consider in order for the child to apply their learning related to quantities during the solution of the tasks they face in their educational process, it is considered essential to assume those proposed in various investigations on the subject. Although it is true that these are not related to the Elementary Notions of Mathematics, they do provide guiding elements for the development of transfer in this area in a general way and specifically for the recognition of quantities.

In this sense, a group of elements has been found to consider from the didactic aspect to favor the development of the transfer of learning in children of this age. The analyzed results propose elements that show points of contact with the ideas discussed previously. Thus, the need to commit the child to exploratory and evaluative thinking that guarantees the successful resolution of the task is confirmed, as well as the importance of the significance of the content to be transferred.

There is also agreement on the recognition of the role of the interactions between the subjects involved in the process. This is justified by the fact that the process of

formation and development of the cognitive processes involved in the transfer is co-constructive by nature.

This group of research proposes other elements that intervene in the development of learning transfer and that, when analyzed in depth, can be related to each other. In this sense, there are criteria that emphasize the need to carry out a repetitive and guided practice, which gradually affects the formation and development of the processes involved in the transfer of learning.

In this direction, it is necessary to provide the preschool child with multiple examples that allow him to contrast their similarities and differences, facilitating the abstraction of the essential and common characteristics that they share. At the same time and closely linked to this finding, the influence of providing levels of verbal help that underline the essential characteristics shared by the systematized examples has been verified.

Another of the ideas proposed about the influential elements in the transfer of learning in preschool age, is associated with the mastery by the teacher of the knowledge that the child possesses regarding the area involved in the task to be solved, as well as the particularities of the memory and attention processes. From this perspective, it is necessary to characterize the knowledge system that the child dominates as it constitutes the basis on which the processes involved in the transfer operate. In the same way, the determination of the level of functioning of processes such as attention, given its influence on cognitive activity and memory as it allows the mapping between the learned task and the new one to be solved.

Another element proposed by the literature as a determining factor on the development of learning transfer at this age is the importance of implementing a pedagogical practice that seeks to stimulate the

motivation to transfer. The work in this direction supposes the full knowledge of the needs and interests of the preschooler as a previous step for the design of the educational activities. At the same time, it supposes the creation of a climate that favors the persistence in the application of the content in the new task.

Among the investigations on the subject, there is also a community of criteria regarding the importance of establishing similarities between the task to be solved and the one in which a previous learning occurred that can be applied to the solution of the first one. This alignment between tasks must include both the structural conditions and the consideration of elements of a socio-psychological nature. This element must be considered in the planning of the process, in close connection with the rest of those previously addressed, as it facilitates the significance of learning and mapping during the transfer.

Finally, the literature proposes the need to develop metacognitive awareness during the development process of learning transfer in preschool children. In this sense, it is important to stimulate the increase in their self-regulation possibilities, so that they are oriented towards self-control over the efficiency of the result of their activity, always taking into account the psychological particularities of the stage.

Based on the criteria analyzed up to here, the following can be established as important requirements to implement the development process of the transfer of quantity recognition in the educational process of preschool age:

- determination of the level of appropriation of the content system relative to the recognition of quantities from 1 to 10.
- presentation of content in a meaningful way for the child.

- determination of the particularities of the executing and inducing subsystems of their personality in formation.
- establishing similarities between learning tasks.
- the gradual structuring of the degree of difficulty in the tasks.
- systematization of examples that promote the abstraction of essential characteristics of the problem situations presented.
- provide stimuli that encourage the child to seek feedback on the result of his activity.
- level at which the establishment of interactions between the participants in the process is fostered.
- establishment of connections between the content to be learned with daily experiences and the educational process of children.

Principles for the development of the recognition of quantities in the educational process of the preschool child

Determined the essential characteristics that identify the development of the transfer of quantity recognition in the educational process of the preschool child, it was necessary to determine the system of principles that guide the implementation of this process. For this, the principles established for the educational process in early childhood are assumed, which find points of contact with the criteria analyzed in relation to the development of the transfer of learning in preschool age. They are:

- The center of any educational process is the child.

The process of development of the transference of the recognition of quantities in the preschool age must consider the psychobiological particularities of the child. Its design necessarily starts from the functioning of their cognitive and affective

processes, from psychological formations, from the particularities of their volitional activity and from the conditioning that all these elements exert on their work rhythm.

- The adult plays a leading role in the child's education

The teacher constitutes a figure that organizes, guides and directs the process of appropriation of the necessary procedures for the child to transfer amounts to various situations of the educational process. The adult guide creates conditions, organizes and implements the actions that guarantee the appropriation by the preschooler of the transfer procedure, conceiving the child as an active entity in the process.

- The link between the child's education and the surrounding environment

The implementation of a process that motivates the child towards the appropriation and subsequent application of quantitative relationships supported by the inherent needs of age must be guaranteed. It should also facilitate the establishment of connections between the already assimilated content system and the new one.

- The integration of activity and communication in the educational process

The relationships between peers and the child teacher should constitute an element that facilitates the appropriation of contents related to quantities, the procedures to operate with them and their application to the solution of various problems while explaining the result of their activity. Said appropriation must take place in an organized system for the development of the transfer that includes activities in the classroom context and in the different spaces that the preschool develops.

- The unity of the instructive and the formative

The transfer of the recognition of quantities must contribute to the formation and development of psychological processes and formations, moral qualities that lay the foundations for the achievement of higher levels in the personality in formation of the preschooler. The potentialities offered by the quantitative contents and the development process of the transfer must be taken advantage of for the formation of psychological qualities and the development of processes in the sphere of executing regulation, fundamental for the application of what has been learned in the resolution of a new problem.

- The link between the children's center and the family

The development of the transfer of quantity recognition requires the use of the potential offered by the family environment. Thus, the educational institution must guide the family so that it becomes an agent that stimulates the development of the transfer, complementing the work of the teachers from the realization of coordinated activities between them.

- The systematization of the different components of the educational process

Developing the transfer of quantity recognition involves considering the relationship of dependency and interrelationship between the components of the process. The objective of getting the preschool child to apply what he has learned to solve new tasks, contributes to guaranteeing a level of development in his personality that facilitates the assimilation of the new content system to be dealt with in subsequent educational systems. The teaching of contents related to quantitative relationships contributes to this, given its

influence on the development of cognitive and affective processes in the child.

- Attention to individual differences

The process of developing the transfer of recognition of quantities in preschool age must start from a diagnosis of the level of psychic development of each child, the level of mastery of the contents of elementary notions of mathematics, their main topics of interest, their psychological qualities, their volitional activity and how these influence the appropriation of the content and its subsequent transfer to new situations. This influences the significance of the content and the structuring of individual help levels.

DISCUSSION

The systematization carried out through the exploratory theoretical study, allowed us to understand that the development of the transfer of quantity recognition in the early childhood educational process must contribute to the achievement of the maximum integral development of the child. In line with the criteria of López Hurtado (2004), getting the preschooler to apply the contents related to quantitative relationships during the solution of new tasks in everyday situations implies mastery by the teacher/educator of adequate pedagogical procedures that facilitate the emergence and development of psychological processes, functions and formations that guarantee the adequate adaptation of the child to the school system.

Based on the system of principles proposed by Siverio et al. (2010) the process of developing the transfer of quantity recognition in preschool age must take several points into account. In this sense, it is important to establish a link with the family that allows obtaining more information about the characteristics of the social situation of

the child's development in order to use it for the design of the educational process. This link also facilitates knowledge of the environment in which the child develops as a basis for planning activities considering their previous experiences with the reality that surrounds them.

During the development of the transfer of recognition of quantities, it should also be considered that the teaching of knowledge related to the subject is directed in the first instance to stimulate the formation and development of processes, functions, psychological formations and character traits in the child. In this sense, there is also agreement with López Hurtado (2004) when considering that the development that is achieved in children through learning is more important than the assimilation of knowledge.

On the other hand, in agreement with Felicetti and Pineda (2016) it is understood that intentional development of quantity recognition transfer in preschool children implies the design of a relational, interactive, meaningful process that enhances autonomy. In addition, it is important that the teacher plans the activities based on the infant's daily experiences. In this last aspect, Celi et al. (2021) for whom the use of skills related to mathematical logical thinking should be stimulated from an early age to face real situations in everyday life.

Achieving that the preschool child transfers the recognition of quantities to the various situations he faces during the educational process requires work that stimulates the assimilation of knowledge related to quantitative relationships, a positive predisposition towards these and their use, as well as the development of logical thought operations. In this sense, there is agreement with the position of Mujica and Márquez (2022) when they underline the need to promote in the child, through individual and collaborative work, analysis, reasoning,

serialization and inclusion as a previous step in the construction of the bases that allow the recognition of quantities.

The development in the child of the transfer of the recognition of quantities requires the systematic implementation of actions that constitute conditions or requirements for the achievement of this purpose. In this sense, the results obtained by Bobrowicz et al. (2022), Cheng et al. (2021), Reséndiz Balderas (2020), Strouse and Ganea (2021), draw attention to the need to implement a process that aims to diagnose the level of assimilation of the content system by the child, as well as the particularities of their psychological processes and personality characteristics.

It is also important for the development of the transference of the recognition of quantities in the educational process of the preschool child the planning, organization and execution of situations that share a certain degree of similarity with each other. At the same time that the establishment of connections between the content to be learned with the daily experiences and the educational process of the children is constituted, as well as the problematization of the content to be worked on.

On the other hand, it is important to stimulate the appropriation by the child of an algorithm that allows him to recover previous experiences related to quantitative relationship tasks and the mapping between these and the task or problem to be solved. Then the role of the teacher acquires special relevance at the time of offering him levels of help that guide him in this direction. This agrees with the results found by Strouse and Ganea (2021) regarding the influence of the systematization of contrasting examples that allow the abstraction of the essential characteristics of a problem on the formation of the cognitive structures necessary for the transfer of learning.

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

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