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COGNITIVE DEVELOPMENT THEORY AND CONTRIBUTIONS TO PEDAGOGICAL PRACTICE IN EARLY ELEMENTARY EDUCATION

TEORIA DO DESENVOLVIMENTO COGNITIVO E CONTRIBUIÇÕES PARA A PRÁTICA PEDAGÓGICA NA EDUCAÇÃO BÁSICA ANOS INICIAIS

TEORÍA DEL DESARROLLO COGNITIVO Y CONTRIBUCIONES A LA PRÁCTICA PEDAGÓGICA EN LA EDUCACIÓN BÁSICA EN LOS AÑOS INICIALES

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ABSTRACT

The study analyzes the Theories of Cognitive Development and their contributions to teaching practice in Basic Education, specifically in the Early Years of Elementary School. Educational practice in classrooms today is considered a challenging task due to the complexity of factors related to space, materials, methodologies, and learning, given that each child is a unique individual within their social environment. The approach adopted in this research is descriptive and based on previous studies, with a qualitative perspective. The theoretical foundations are based on the theories of Piaget (1896) and Wallon (1975), as well as other authors who address mental, emotional, and motor development, which are linked to interactions with the physical and social environment and are essential for the child's development. The study concludes that developmental theories present complexities both in understanding and in practical application in the classroom, since children develop biologically in different ways, influenced by their physical and social environment and by their living conditions. Therefore, it is essential that educators, based on studies of developmental theories, carefully observe children during their school activities. It is important to assess their intellectual particularities and activity patterns, as well as ensure that teaching practices, curriculum, environment, time, and didactic resources are appropriate to effectively meet the different stages of development and promote the child's overall progress.

Keywords: Cognitive Development. Pedagogical Practice. Early Years of Basic Education.

RESUMO

O estudo analisa as Teorias do Desenvolvimento Cognitivo e suas contribuições para a prática docente na Educação Básica, Anos Iniciais do Ensino Fundamental. A prática educacional nas salas de aula atualmente é considerada uma tarefa desafiadora pela complexidade dos fatores relacionados ao espaço, materiais, metodologias e à aprendizagem, dado que cada criança é um ser singular em seu ambiente social. A abordagem adotada nesta pesquisa é descritiva e baseada em estudos anteriores, com uma

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perspectiva qualitativa. As bases teóricas são fundamentadas na teoria de Piaget (1896) e de Wallon (1975), e outros autores que abordam o desenvolvimento mental, emocional e motor, que estão ligados às interações com o ambiente físico e social, sendo fundamental para o desenvolvimento da criança. O estudo conclui que as teorias de desenvolvimento apresentam complexidades tanto na compreensão quanto na aplicação prática em sala de aula, uma vez que as crianças se desenvolvem de maneiras diferentes biologicamente, e isso é influenciado pelo ambiente físico, social e nas condições de vida em que se encontram. Portanto, é essencial que os educadores, com base em estudos sobre as teorias do desenvolvimento, observem cuidadosamente as crianças durante suas atividades escolares. É importante avaliar suas particularidades intelectuais e momentos de atividade, assim como assegurar que as práticas de ensino, o currículo, o ambiente, o tempo e os recursos didáticos sejam adequados, de forma a atender de maneira eficaz as diferentes fases do desenvolvimento e a promover o progresso integral da criança.

Palavras-chave: Desenvolvimento Cognitivo. Prática Pedagógica. Educação Básica Anos Iniciais.

RESUMEN

El estudio analiza las Teorías del Desarrollo Cognitivo y sus contribuciones a la práctica docente en la Educación Básica, específicamente en los Años Iniciales de la Enseñanza Primaria. La práctica educativa en las aulas actualmente se considera una tarea desafiante debido a la complejidad de los factores relacionados con el espacio, los materiales, las metodologías y el aprendizaje, dado que cada niño es un ser singular dentro de su entorno social. El enfoque adoptado en esta investigación es descriptivo y basado en estudios previos, con una perspectiva cualitativa. Las bases teóricas se fundamentan en las teorías de Piaget (1896) y Wallon (1975), además de otros autores que abordan el desarrollo mental, emocional y motor, los cuales están vinculados a las interacciones con el entorno físico y social y son fundamentales para el desarrollo del niño. El estudio concluye que las teorías del desarrollo presentan complejidades tanto en la comprensión como en la aplicación práctica en el aula, ya que los niños se desarrollan biológicamente de diferentes maneras, influenciadas por su entorno físico, social y por las condiciones de vida en las que se encuentran. Por lo tanto, es esencial que los educadores, basándose en estudios sobre las teorías del desarrollo, observen cuidadosamente a los niños durante sus actividades escolares. Es importante evaluar sus particularidades intelectuales y momentos de actividad, así como garantizar que las prácticas de enseñanza, el currículo, el ambiente, el tiempo y los recursos didácticos sean adecuados para atender de manera eficaz las diferentes etapas del desarrollo y promover el progreso integral del niño.

Palabras clave: Desarrollo Cognitivo. Práctica Pedagógica. Educación Básica Años Iniciales.

1 INTRODUCTION

This study analyzes the Theories of Cognitive Development and their contributions to teaching practice in Basic Education, Early Years of Elementary School. It is widely recognized that the pedagogical work in the classroom with children presents several challenges for educators, since the conditions in the school environment are full of phenomena that demand advance planning, attentive and careful observation of the child, their needs and learning disorders.

Advances are perceived in fundamental public education, taking into account the dimensions of access, but the achievements are still restricted; Quality and equity are the biggest challenges to be faced in education by teachers, managers, children and young people. Basic education is marked by inequality in terms of quality and equity, although it is visible that the right to learning, access and permanence are not always present in the school life of all Brazilian children, especially from disadvantaged classes.

There are several factors that can negatively influence the child's cognitive development, and these factors are related to the environment and living conditions in which they find themselves. Therefore, an appropriate, structured school with motivated teachers in their activities is one of the ways in which the child can achieve full mental and emotional development, in addition to promoting significant progress in learning, benefiting their physical, psychological and social well-being. For this, the analysis of theories related to children and their cognitive capacities serves as a tool to help educators and the school in carrying out this task, which is quite challenging.

Initially, the Theories of Cognitive Development are presented with emphasis on the stages of development according to the theorists Piaget and Wallon. Consecutively, analyses of the theories and contributions to school education are carried out. The results indicate that theories related to human development are fundamental for understanding the circumstances that influence the cognitive development of children, as well as the development of learning. However, the practical implementation of these theories is complex and with several challenges, since the school environment demands knowledge and practices that go beyond the educational curriculum and teacher training.

2 METHODOLOGY

This work is classified as a descriptive and bibliographic research. According to Gil (2002), descriptive research is defined by the technique of describing the characteristics of a

specific phenomenon and is similar to explanatory research. In this sense, this study aims to describe and analyze not only the theory, but also the authors and the contexts in which they were developed. Simultaneously, the researcher's perceptions form a value judgment based on his position as a teacher and his familiarity with the school environment, the students and the phenomena observed in the classroom.

For this Gil (2002), descriptive investigations are not limited to the mere identification of the presence of relationships between variables, but seek to establish the nature of this relationship. In this case, it is a descriptive research that is similar to the explanatory one. Thus, the author emphasizes that "research that, although defined as descriptive based on its objectives, ends up serving more to provide a new view of the problem, which brings it closer to exploratory research" (Gil, 2002, p. 42).

The present study, which is based on a qualitative approach, aims to interpret relevant contents of the theories discussed; Thus, immersion in theoretical sources was essential, including a rigorous analysis of bibliographic research, taking into account the professional experiences and relevant perceptions of the researchers.

For Sampieri et al., (2013) qualitative research

> It is to understand and deepen the phenomena, which are explored from the research of the participants in a natural environment and in relation to the context. The qualitative focus is selected when we seek to understand the participants' perspective [...] on the phenomena that surround them, to delve into their experiences, points of view, opinions and meanings, that is, the way in which the participants subjectively perceive their reality (SAMPIERI et al., 2013, p. 376).

Research with a qualitative focus mainly seeks to analyze data in depth, being specific to each situation. The data is thoroughly examined for the case in question, taking into account the historical and social perspective during the analysis process.

Regarding the analysis of the texts built from the theoretical basis, the following author says that:

> To analyze means to study, to decompose, to dissect, to divide, to interpret. The analysis of a text refers to the process of knowledge of a given reality and implies the systematic examination of the elements; Therefore, it is to decompose a whole into its parts, in order to be able to carry out a more complete study, finding the key element of the author, determining the relations that prevail in the constituent parts, understanding the way in which they are organized, and structuring the ideas in a hierarchical way. It is the analysis that will make it possible to observe the components

> of a set, to perceive their possible relationships, that is, to move from a key idea to a set of more specific ideas, to generalization and, finally, to criticism (LAKATOS, 2023, p. 28).

The researcher plays an essential role in carrying out a scientific study, assuming the responsibility of clearly bringing to light the ethical, philosophical and political dimension, aiming to promote social changes and contribute to the generation of new knowledge.

Thus, scientific research should not only be informative and critical of political and social particularities. It is necessary to recognize the deficiencies in the political and administrative spheres, as well as to present solutions for improvements and new directions to be explored.

3 RESULTS

3.1 STAGES OF DEVELOPMENT ACCORDING TO JEAN PIAGET

Based on psychological theories of development, theorists Jean Piaget (interactionist) and Henri Wallon (sociointeractionist) propose different phases of a child's cognitive growth. These theories provide the educator with a perspective on the child's development and its phases, which are not fixed, but dynamic, complex and require careful attention to structure teaching in order to meet cognitive specificities. Thus, these are significant factors to be taken into account with regard to human development, among other areas. To adapt teaching so that they help the child in their development and advancement, educators can modify the methods and contents according to the child's ability to understand, starting by identifying their needs, difficulties or learning disorders, which will allow the implementation of appropriate interventions.

Understanding the factors of child development is of paramount importance for the educator who works with the teaching of children from early childhood education. However, it is essential to emphasize that these theories should not be seen as teaching methods, nor did the authors discuss education; the focus of the study was exclusively on mental development according to Piaget and Wallon and influences from the physical and social environment. In this regard, Goulart (2015, p.161) points out that "many specialists in Pedagogy have appropriated Piaget's ideas and elaborated well-defined teaching proposals, among which Hans Furth, Hans Aebli and Ruth Berd stand out".

Next, we discuss the two very influential theorists in research on children's cognitive development: Piaget and Wallon. The authors conducted research that connects on various

aspects of the stages of cognitive development in childhood and the conditions necessary for the progress of intelligence at each stage. Thus, it is essential to highlight how each of them determines the child's mental development, which the educator must evaluate what to consider from this theory for practical teaching and the relevant contributions to education.

Biologist Jean Piaget, considered an interactionist, and also an epistemologist, was born in Switzerland in 1896 and died in 1980. The central objective of his research was to analyze how the human being develops knowledge, that is, how the child transitions from an initial stage, in which he still does not have mastery of language, motor skills and understandings of the physical world. Thus, his theory is inserted in the area of genetic epistemology, since he investigated the internal origin of human knowledge.

One of the essential aspects of Piaget's theory is the understanding that mental development goes through a process of progressive equilibrium, which goes through a smaller state to a state of higher equilibrium.

Thus, Piaget presents in his studies that:

> Mental development is a continuous construction, comparable to the erection of a large building which, as something is added, will become more solid, [...]. However, an important difference must be introduced between two complementary aspects of this balancing process. From the outset, variable structures defining the successive forms or states of equilibrium must be opposed to a certain constant functioning that ensures the passage from any state to the next level (PIAGET, 1896, p. 14).

Xavier (2015) says that Piaget called the balance of these assimilations and accommodations, because mental development will take place in the sense of promoting a more precise adaptation to reality. Thus, mental development is a continuous process that begins in childhood and extends into adulthood, going through several stages and being influenced by internal biological processes and the external environment. Piaget's view suggests that the human mind is active, and growth encompasses the physical, mental, and emotional state.

Piaget observed his own children and classified structures that are formed through four stages of cognitive development, which are distinguished from each other and chronological development depends on each child. Each phase is marked by unique characteristics that differentiate it from previous phases, so each following phase depends on the previous one. The essence of these structures is maintained in the following stages

and the processes of accommodation, development and mental processes evolve more and more as the individual interacts with the physical environment.

Stage *(sensorimotor),* from birth to two years of age, which according to Piaget (1896, p. 15), are of reflexes, or hereditary mechanisms, as well as of the first instinctive tendencies (nutritions) and the first emotions. This period from birth to language acquisition is marked by an important development. For Piaget (1996-950), this stage is decisive for the entire course of psychic evolution, in which the child conquers perception and motor movements.

Moreira (2023, p. 76) points out that in the sensorimotor stage, according to Piaget, "the child does not differentiate his self from the environment in which he is The motor functions are not yet coordinated, but isolated, and the only reference is the child's own body, hence egocentrism.

Stage *(preoperative),* from 2 to 6 or 7 years old, with the emergence of language, symbols and mental images, begins a very important stage in the child's mental development, motor habits and the first organized perceptions, as well as the first differentiated feelings.

Moreira (2023, p. 76) warns that at this stage the child's thinking begins to organize, but it is not yet reversible. He says that "the child's thinking is not capable of following a cognitive path and then mentally following it in the opposite direction in order to find the unmodified starting point". At this stage, the child remains self-centered, seeing reality as he experiences, whether coherent or not. The child usually falls into contradiction when faced with situations of conservation of the whole, such as (changing the shape, changing the quantity, weight, etc.), as well as a tall and thin container and a low and wide one containing the same amount of water. The child chooses the height of the container, sometimes the width, and in the direction of it the taller and thinner one has more water.

Stage *(concrete operative)* occurs around 7 to 11 years of age, is of sensory-motor or practical intelligence, prior to language. Piaget attributes that this stage is of the elementary affective regulations and the first external fixations of affectivity. These first three stages constitute the period of lactation, that is, prior to the development of language and thought. According to Moreira (2023, p. 77), "the child's thinking is more organized, it has the characteristic of a logic of reversible operations. [...] During this period, the child gains precision in contrast and comparison of real objects and becomes able to predict which container has the most water."

Eleven-twelve-year (*formal operative) stage* of intuitive intelligence, spontaneous interindividual feelings, and social relations of submission to the adult. From there the

concrete intellectual operations, the beginning of logic and moral and social sentiments of cooperation. As well as the stage of abstract intellectual operations, the formation of the personality and the affective and intellectual insertion in the society of adults (adolescents). Moreira (2023, p. 78), expresses that in the adolescent, the individual is capable of "making hypothetical-deductive reasoning, he starts to seek general hypotheses that can explain observable facts that have occurred". At this stage, the adolescent is able to manipulate mental constructs and correlate.

For Piaget (1999, p. 15) each stage is characterized by the appearance of original structures, whose construction distinguishes it from previous stages. [...]. Piaget points out that at each stage there are modifications due to the previous development, due to the need for better organization. Thus, he designated that each stage constitutes, by the structures that define it, a particular form of balance, and mental evolution takes place in the sense of an ever more complete balance.

3.2 STAGES OF DEVELOPMENT ACCORDING TO HENRI WALLON

The Frenchman Henri Paul Hyacinthe Wallon (1879-1962) was a psychologist, philosopher, physician and politician. He became known for his scientific work on Developmental Psychology and with experience in the medical field of psychiatry. He focused his studies on understanding the field of the human psyche, directed to the child, so his theory is about the genesis of psychic processes. Wallon sought to understand the person in a dynamic and complete process, for this he investigated the child in his psychic evolution and in cognitive, affective and motor development, elaborating this development by different stages and the interconnections between each field and its implications in the development of personality.

Wallon (1968, p. 13), studied the material conditions of the child's development, both organic and social conditions, and to see how, through these conditions, a new plane of reality is built, which is the psyche, the personality.

Galvão (2023), points out that Wallon developed an integrated study of development:

> The various functional fields in which children's activity is distributed (affectivity, motor skills, intelligence). Seeing the development of man, being "genetically social", as a process in close dependence on the concrete conditions in which it occurs, he proposes the study of the child contextualized, that is, in his relations with the environment. (GALVÃO, 2023, p. 29).

The author defines Wallon's theoretical project as the elaboration of a psychogenesis of the complete person. This means that Wallon went beyond just studying the psychogenesis of intelligence development, which is related to how the child's learning develops. In short, Wallon (1968) observes that in the face of the development process there are impacts that modify behavior according to the conditions of the environment. That is, both internal development and personality are influenced by the social environment and this occurs in different ways in children.

In this regard, Wallon explains that:

> For those who do not arbitrarily separate the behavior and conditions of existence proper to each period of development, each phase constitutes, between the possibilities of the child and the environment, a system of relations that makes them mutually specific. The environment cannot be the same at all ages. It is composed of everything that makes possible the procedures available to the child to obtain the satisfaction of his needs. But for this very reason it is the set of stimulants on which its activity is exercised and regulated. Each stage is at the same time a moment of mental evolution and a type of behavior. (Wallon, 1968, p. 48).

Thus, each phase represents a moment in which the organic element (internal skills) and the social aspect (cultural context) connect to facilitate the child's total growth. It is evident that children of the same age, but from different social backgrounds, can perform a complex task, while another child of the same age group may not be able to perform the same activity. That doesn't mean that one can be considered smarter than the other. They present experiences with the environment in which the interaction was most stimulated. The child who can perform the complex task had more opportunities, or a means that stimulated and enabled the development of those specific skills necessary for the activity.

It is not a matter of superior intelligence, but of a richer or more targeted social experience. In this way, Wallon explains that:

> The psychic development of the child presents oppositions as are observed in any process of transformation, but which, owing to its breadth and the diversity of its conditions, must give rise to important problems here. [...]. In this way, in the child, factors of biological and social origin are opposed and mutually implicated. At the same time that at each stage a stable equilibrium is achieved between the present possibilities and the corresponding conditions of life, changes tend to take place whose cause is foreign to this exact functional relation. This cause is organic. (Wallon, 1968, p. 49).

Wallon dismisses the artificial division between what is internal (the child's actions and capacities) and what is external (life circumstances and environment). For him, in each phase of growth, the child and the environment constitute a set of interactions that can modify his maturation.

Gratiot-Alfandéry (2010, p. 34) says that "Wallon's psychogenetic theory of personality development integrates affectivity and intelligence. [...] this dynamic is marked by ruptures and overlaps, [...] the changes of phases do not occur by linear succession, as understood, for example, by Piaget".

Gratiot-Alfandéry (2010, p. 37), Henri Wallon points out that:

> Affectivity is central in the construction of knowledge and of the person. The biological helplessness that characterizes the first two years of human life, due to the precarious conditions of organic maturity, determines a long period of absolute dependence of the child on the care of an adult in order to survive. This makes emotionality the force that guarantees the mobilization of the adult to meet his needs. Thinking like this, Wallon states that emotional expression is fundamentally social, as it precedes and surpasses cognitive resources.

It is known that children, from a very young age, interact with the world mainly through emotions, such as "crying" when they feel hungry, or seeking attention, and throwing a "tantrum" when they want something as an object. Dependence on an adult to meet their needs results in deep emotional bonds with parents. In this context, Wallon states that emotional development is essentially social, and precedes cognitive skills.

Wallon proposes that the child goes through six stages of development, which occur as follows: *Impulsive-emotional* stage, covers the first year of a child's life, emotion is a privileged instrument of interaction. (Galvão, 2023, p. 39).

It is through emotions that the child forms his first social interactions and with the environment around him. The baby's movements are initially disordered and gradually become more coordinated as different emotions manifest themselves.

Sensory-motor and projective *stage*, lasts until the third year of age, the child's interest turns to the sensory-motor exploration of the physical world. (Galvão, 2023, p. 39). It is mainly characterized by external interactions and the development of intelligence. This internship is practical and experiential, as the functional fields are interconnected; Generally, thought manifests itself through motor actions. During this period, the presence of symbolic elements and imitation is noted, which support the advancement of language.

Personalism *Stage*, from three to six years old, the central task is the process of personality formation. The construction of self-awareness, which takes place through social interactions, reorienting the child's interest in people, the return of affectivity (Galvão, 2023, p. 39-40). In the personalism stage, it is observed that the child is influenced by affective factors, demonstrating that he already has preferences in relation to what he wants and interests in different types of food.

According to Gratiot-Alfandéry (2010, p. 35), for Wallon this stage extends until the age of six; During this time, the child's personality and self-awareness develop. In this process, the child begins to oppose the adult with whom he lives and, simultaneously, the adults become models to be imitated, both in motor skills and social characteristics.

Categorical Stage, around the age of six, consolidation of symbolic functions and the differentiation of personality and advances in the level of intelligence. (Galvão, 2023, p. 40). The child starts to think conceptually, advancing to abstract thinking and symbolic reasoning, favoring functions such as voluntary memory, attention and associative reasoning.

Adolescence Stage, from the age of eleven. The puberty crisis breaks the affective "tranquility" that characterized the categorical stage and imposes the need for a new definition of the contours of the personality. (Galvão, 2023, p. 40).

In this period, physical and emotional changes predominate in the affective dimension. At this stage of adolescence, due to hormonal changes, it is common for internal and external conflicts to arise. The individual turns to himself, seeking to assert himself and deal with the transformations related to his sexuality and emotional crises.

The understanding of the development theories of the authors addressed is fundamental for the field of school education and teachers to build their pedagogical and curricular practices aligned with issues involving development (mental, physical, emotional) and the human essence.

4 DISCUSSION

4.1 THEORY OF COGNITIVE DEVELOPMENT AND CONTRIBUTIONS TO SCHOOL EDUCATION

The stages of development discovered by Piaget are important for the teacher to understand the conditions that affect the child's cognitive progress. The classroom environment is not limited to a passive position of spectator. It is a space for childcare,

interaction, dynamism and creative experiences that favor and stimulate the gradual development of the child.

Regarding Piaget's clinical method, the following author corroborates that:

> The extension of the clinical method to school situations can be interpreted as this attitude of observation. In fact, teachers are often so preoccupied with teaching that they do not have enough patience to wait for children to learn. For this reason, they hardly wait for the child's answers and thus lose the opportunity to follow, through spontaneous answers, the reasoning structure of their students (GOULART, 2015, p.161).

The more there is imbalance in the mental schemes, new assimilations and adaptations occur with the child. According to Goulart (2015), Piageti's thesis is that cognitive development is a sequential process marked by stages characterized by mental structures.

The author then says that, "[...] In each of the stages, the way to understand the problems and solve them depends on the mental structure that the child has at that moment". Goulart (2015, p. 163). In this context, the teacher could carefully observe the moment in which the child is in his development. In addition, it could use the readiness probing instruments proposed by Piaget, and the pedagogical work could start from where the child needs to develop.

It is observed, as Piaget presents, that mental development is a process that occurs concomitantly with physical development.

> Just as a body is evolving until it reaches a relatively stable level, characterized by the completion of growth and the maturity of the organs, so mental life can be conceived of as evolving toward a form of final equilibrium, represented by the adult spirit. [...] Thus, from the point of view of intelligence, it is easy to oppose the relative instability and incoherence of children's ideas to the systematization of adult reasoning. In the field of affective life, it has often been noted how much the balance of feelings increases with age. And finally, social relations also obey the same law of gradual stabilization. (PIAGET, 1999, p. 13).

According to Piaget, the mental development of the child is a continuous and progressive process that increasingly requires the need for the child to interact with the physical and social environment. This understanding is of paramount importance for the school to organize strategic spaces and materials to undertake the advancement of the child's learning, as it depends on this contact with the physical context (materials) and language for the process of assimilation, imbalance and accommodation.

In this regard, Piaget understands that:

> By assimilating objects, action and thought are compelled to accommodate themselves to them, that is, to readjust themselves on the occasion of each external variation. It can be called "adaptation" to the balance of these assimilations and accommodations. This is the general form of psychic equilibrium. Mental development will then appear in its progressive organization as an ever more precise adaptation to reality. (PIAGET, 1999, p. 17).

In this sense, the child in his physical growth evolves his intelligence gradually, being able to gradually perform complex tasks of the previous stage, such as: expanding vocabulary through language, moving, thinking abstractly, manipulating objects, among other various skills. However, this evolution occurs in conjunction with mental, motor and emotional schemes.

Piaget characterizes the scheme of Assimilation as the way the organism (mind) acts in the face of reality. In this way, the mind is seen as a set of schemas that apply to reality. They tend to incorporate exterior elements compatible with their nature and to assimilate each other in increasingly larger, mobile and stable structures.

Moreira (2023, p. 80) attributes that Piaget's theory is about mental development, and not about learning, for him, "there is only learning (increase in knowledge) when the assimilation scheme is accommodated". Teaching/Educating means causing imbalance in the child's mind so that he seeks rebalance (major balance), restructures himself cognitively and learns.

Therefore, teaching must activate this mechanism through tasks that are increasingly overcoming the child's potential. This activation must be compatible with the level of mental development (cognitive stage) in which the child is. It is a common mistake to try to teach content that presupposes conservation and reversibility to children who do not yet have it, or to teach it at a purely formal level to children who are in operational-concrete reasoning in many areas.

Like so. Moreira (2023, p. 81) points out that for Piaget, "there is only learning when there is accommodation, that is, a structuring of the cognitive structure (existing assimilation scheme) of the individual that results in new assimilation schemes". Thus, the mind, as a cognitive structure, seeks to maintain balance, continuously raising its level of internal organization and adapting to the environment.

The implications of the theory of mental development demonstrate that teaching must be through actions and demonstrations. The child must have the opportunity to act (practical work). The action must be integrated with the teacher's argumentation to generate knowledge.

Piaget defends active methods:

> The transformations of action resulting from the beginning of socialization are not only important for intelligence and thought, but also have profound repercussions on affective life. [...]. In all conduct, the motivations and energetic dynamism come from affectivity, while the techniques and the adjustment of the means employed constitute the cognitive aspect (sensor-motor or rational). There is never a purely intellectual action (multiple feelings intervene, for example: in the solution of a mathematical problem, interests, values, impression of harmony, etc.), just as there are no acts that are purely affective (love presupposes understanding). Always and everywhere, in behaviors related to both objects and people, the two elements intervene, because they imply each other. (PIAGET, 1999, p. 33).

In this process, the teacher is indispensable to create initial situations and devices that raise problems and to organize examples that lead to the control of hasty solutions. The teacher should stimulate research and effort, instead of transmitting ready-made solutions. He needs to be well informed about the peculiarities of the development of intelligence. If the environment is poor in unbalanced situations, the educator should produce them artificially, avoiding imbalances that do not lead to greater equilibrium.

Wallon, like Piaget, sought to understand how mental development occurs in the child, both agreeing that intelligence is not something that comes from birth. According to these authors, at birth, the child begins to develop the mind as he grows and has experiences with the physical and social environment. In this way, the development of intelligence occurs progressively until adulthood, its evolution deduces from the contact that the individual has in his social and cultural environment. From this perspective, however, development is not a straight and hierarchical line (as in Piaget), but rather a sequence of crises and conflicts that result in a dialectical transformation.

Galvão (2023, p. 29) clarifies that Wallon understands that the development of intelligence is driven by biological, cognitive factors and social and affective influences. In this way, Wallon's proposal is considered a Psychogenetics of the whole individual. This is because it is evident that the human being is interconnected with biological (cognitive/motor) and psychological (emotional/social) factors.

In this regard, Galvão (2023) argues that

> Wallon progressively cedes space for determination to the social. Present from the acquisition of basic motor skills, such as grasping and walking, the influence of the social environment becomes much more decisive in the acquisition of higher psychological behaviors, such as symbolic intelligence. It is culture and language that provide thought with the instruments for its evolution. The simple maturation of the nervous system does not guarantee the development of more complex intellectual skills. In order for them to develop, they need to interact with "cultural food", that is, language and knowledge. Thus, it is not possible to define a terminal limit for the development of intelligence, nor of the person (GALVÃO, 2023, p. 36).

Wallon understands that there are no boundaries for the development of human intelligence; Our skills are endless, because by interacting with aspects of culture, we are able to absorb knowledge. This varies according to the environment in which the person is. For Galvão (2023), mental functions can continue their development in a continuous and complex process, even after they have already reached maturity.

The development of the child, for Wallon, is a process that can be continuous or discontinuous, as each phase brings transformations from the stage that precedes it. However, the actions of the previous process can be maintained in the subsequent process, which infers that the advancement depends on the circumstances in which the person lives. Therefore, affectivity is a motivating factor for learning and must be directly linked to pedagogical practice, ensuring that the bond and the emotional environment of the classroom are prerequisites for cognitive advancement.

Piaget proposes that mental development goes through a process of progressive equilibrium, according to the stages, it goes through a lower state to a state of higher equilibrium, while Wallon emphasizes that development is characterized by functional alternation and by conflicts and crises that promote a dialectical transformation of functions, not following a continuous linear and hierarchical trajectory of overcoming, but rather a sequence of reorganizations motivated by this alternation between the affective and the cognitive.

Wallon, for example, emphasizes the interconnection between the affective, motor and cognitive fields, with affectivity being central in the construction of knowledge and the sociocultural context. Development is a continuous and discontinuous process, as opposed to Piaget's "progressive equilibrium" and hierarchical, as each phase brings transformations, but the actions of the previous process can be maintained in the subsequent one

Piaget (Cognitive Psychogenetics) with the main focus on cognition (Intelligence). Thus, the nature of the Stages is sequential and hierarchical (the previous stage is a prerequisite for the next). The mechanisms of change occur through Equilibrium (constant search for balance between assimilation and accommodation).

Wallon (Functional Psychogenetics) his main focus was the integration of affective (emotion), motor and cognitive dimensions. The nature of the Stages persists in functional alternation (sometimes affective predominance, sometimes cognitive predominance). The mechanism of change is conflicts and crises (dialectical transformation of functions). Finally, the moment of greatest convergence is in the idea that development is an active construction that occurs through interaction, but Wallon complements Piaget by integrating affectivity as a central factor, especially in the first years of life.

Therefore, for Wallon, pedagogical practice should be a constant invitation to functional interconnection (affect, motor and cognition), promoting an environment rich in social and cultural stimuli (the "cultural food") that meets the crises and conflicts of each stage. This constitutes Wallon's mechanism of change.

In general terms, although Piaget and Wallon present foci and structures of different stages, the main intersection between their theories lies in the emphasis they both give to action and the interaction of the individual with the environment, this as essential engines of development. Piaget focuses on the interaction of the subject with the object (the physical environment) for the construction of knowledge, where the child's action leads to the assimilation and accommodation of new mental schemes. Wallon emphasizes the importance of interaction with the social and human environment, highlighting the mediating function of emotion and affectivity for the development of intelligence and personality. Both see the child as an active being in the process of building their development and not just a passive receiver of information.

In view of the theories presented, it is understood that the teaching performance increasingly requires competencies that go beyond the transmission of information or just keeping the child as a spectator/listener in the classroom. It includes processes of interaction of instruments that constitute the internal development and construction of knowledge and the consolidation of the evolution of learning.

5 CONCLUSION

Piaget's interactionist theory and Wallon's socio-interactionist theory offer important contributions to understanding that child development is a dynamic process, which depends on biological (internal) and environmental (social) conditions, which is continuously altered and transformed by human actions. The stages proposed by the two theorists, in a way, contribute to educators and psychologists having bases for recognizing the stage in which the child is. Because it allows the possibility of creating meaningful strategies to help her progress or, at the very least, not interfere negatively. Understanding the stages of development helps to clarify the child's internal conflicts, emotions, and personality formation, in addition to highlighting how much he depends on the adult for his survival and evolution.

In view of the complexity of teaching and learning, it is concluded that it is essential for the teacher to have self-formative and continuous alternatives in studies on theory and practice. This search is essential for understanding the necessary conditions for the development of the child's learning, which also depends on biological and emotional development.

In short, although the theories of cognitive development presented are the "scientific" basis for understanding the child, the success of teaching and the progress of learning depends on the continuous effort of the teacher and the school to adapt this knowledge to the singular and dynamic reality of their classroom, promoting didactic situations with significant interactions and instruments for the constitution of the imbalance, balance and cognitive accommodation defined by (Piaget), and the integration of the complete person according to (Wallon). However, it is essential to continue research that, based on these theories, develops new effective knowledge that meets current social needs, as behaviors change and alter over time.

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