PIAGET, VYGOTSKY, AND WALLON: CONTRIBUTIONS IN THE EDUCATIONAL SCENARIO

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ABSTRACT

The present article is a bibliographic review with the objective of making a reflection based on the socio-interactionist perspective, approaching the ideas of these researchers who were precursors of Education. The text deals with concerns regarding educational paradigms and the contributions of specialists in childhood, Piaget, Vygotsky and Wallon. The speeches presented are related between the concepts of the mentioned authors and factors and imply a theoretical review and the deepening of the studies in this scenario, for the optimization of the teaching practice. As a result, it was concluded that teaching is more efficient when it considers the differences between its students, interests, aspirations, habits and customs, based on the socioeconomic reality experienced by them. It presents us with a very complex reality in terms of contexts, children, society, principles and values. From paradigm shifts, it is essential to readapt and reinvent ourselves daily so that we can really get to know our students, respecting them and making a difference in their lives.

Keywords: Researchers; education; sociointeractionism; paradigms; kids.

INTRODUCTION

The mentioned article presents studies on child development based on three renowned researchers at the national and international level: Piaget, Vygotsky, and Wallon. They observed that the ability to know and learn is constructed through the exchanges established between the individual and the environment, in other words, through interaction with others and the surroundings.

These authors were the great proponents of sociointeractionist ideas, bringing their research on child development, as well as the relationships between biological, social, cognitive, and affective factors in human

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psychology. The text provides readers with a theoretical review, contributing to the construction of reflective action in the age range from zero to five years, maintaining an ethical, academic, and professional stance towards the student and the institution, highlighting commitment and responsibility.

The article contributes to a reflection based on the sociointeractionist perspective, addressing the ideas of these researchers who were pioneers in Education.

CONSTRUCTIVIST THEORETICAL OPTIONS: SOCIOINTERACTIONISM

For many centuries, education was seen as something isolated from people's daily lives, as well as from social reality. However, with modernity and the advancement of technology, especially in the field of medicine, it was realized that what was actually simple was being complicated. Starting from the knowledge and cultural background that the student had already acquired, it became easier to understand what was new, or in other words, what they didn't know. Therefore, the socio-interactionist perspective arises from the need to change old concepts that stifle children in classrooms with monotonous activities that make no sense or simply inhibit the natural development of these children.

According to Oliveira (1996), it is through social interaction that the child comes into contact with the world and utilizes mediating tools, starting from birth. The first contact is the mother's breast, with the sucking movement the child makes to feed.

With birth, the baby quickly discovers that when they cry, someone will come to meet their needs, whether they are related to feeding or hygiene. That is why crying is the baby's first language. Therefore, the social and personal stimulation that the baby receives from the people around them and the psychological factors are not predetermined yet, as they will be acquired through interaction with the physical and social environment they have been

surrounded by since birth. Thus, we can perceive that contact with other people leads to learning.

> In sociointeractionism, learning, teaching, and development are distinct processes that interact dialectically. They do not exist independently, but rather enable the conversion of one into the other. In other words, learning promotes development, and development announces new possibilities for learning. This is not possible without the mediation of others, as knowledge necessarily passes through it. Oliveira. (1996, p.29-30).

Interacting with the child initially is a matter of survival, but as the years go by, it becomes a necessity and an opportunity for autonomy through the transmission of values, beliefs, habits, techniques imbued with cultural meanings, the mastery of which will be essential for the child's development. To this end, the school must promote an interaction with the child that goes beyond what the family provides, so that the child can develop an awareness and understanding of themselves and the others around them. It is through social interaction that psychological functions are formed, which are connected with movement, development, and teaching-learning in the virtual space of the children's zone of proximal development, as mentioned by the aforementioned author (2001, p.45).

> The formulation of a sociointeractionist perspective leads us to transcend the theoretical and practical impossibility of separating the dimensions of development, learning, and teaching; cognition and affect; spontaneous and typical concepts, as they dynamically and dialectically constitute the cognitive system.

Studies on child development by three renowned national and international researchers, namely Piaget, Vygotsky, and Wallon, have shown that the ability to know and learn is built through the exchanges established between the individual and the environment, that is, through interaction with others and the environment. These authors were the key contributors to the sociointeractionist ideas that serve as the foundation for our research today.

Piaget[1] researched for over fifty years to answer the following question: How is human knowledge structured? He was a biologist and therefore conducted his research with his three children and other children. He was not interested in the answers themselves, but rather how children arrived at them. He wrote over fifty books and dissertations, having published around two hundred articles on cognitive development.

According to Piaget, the child is seen as a dynamic being who constantly interacts with the environment in which they are embedded, actively operating with objects and people. It is through this constant interaction with reality that the child constructs and acquires ways of making them work.

Piaget is considered the pioneer in the constructivist approach, although he did not directly write for teachers. However, teachers are the ones who benefit the most from his studies, as they need to know how a child's development occurs in order to understand them in all aspects when working with children.

In the Piagetian approach, according to (Craidy and Kaercher, 1998, p.26):

> To know means to place the object of knowledge within a specific system of relations, starting from an action performed on the said object. This process involves the ability to organize, structure, understand, and later, with the acquisition of speech, explain thoughts and actions. In this way, intelligence improves as the child establishes contact with the world by actively experiencing it.

According to Piaget, at birth, the child did not have ready-made mental reactions, and to acquire them, they went through three basic processes: assimilation, which is the process of absorbing some experience and being

[1] **JEAN PIAGET**: was born in Neuchâtel, Switzerland, in the year 1896 and passed away in 1980. His main concern was with the epistemic subject and he studied the evolution of thinking until adolescence. Piaget's theory of cognitive development is a stage theory, which assumes that human beings go through a series of ordered and predictable changes. The Piagetian theory considers development in a prospective dimension, that is, it emphasizes that the process of formation can be completed through the assistance offered to the subject in the accomplishment of a task.

able to relate it to others; accommodation, where the organism adapts to the new experience, but there is no accommodation without assimilation, it is the equilibrium between the two instances that allows adaptation to the new situation, and finally, we have equilibration, which means that the child strives to have an understanding of the world they live in. It is only with all these internalized processes that learning occurs, as accommodation takes place, the mind restructures itself, increasing its knowledge and adapting to the environment. When assimilation is not achieved, the child reorganizes itself to allow for a new equilibration. Piaget states, as cited by (MOREIRA, 1999, p.103),

> The child is born with only a few sensorimotor schemes, such as sucking, looking, attempting to reach and grab, which serve for their initial interactions with the environment. However, from there, equilibration is the major driving force behind their intellectual development.

In addition to the processes of assimilation, accommodation, and equilibration, Piaget described four stages of cognitive development that individuals go through throughout their lives. These stages are: sensorimotor (0 to 2 years), preoperational (2 to 6 years), concrete operational (7 to 12 years), and formal operational (12 years and onward). Early childhood educators should be familiar with all stages of development, but the first two stages are particularly important for them. They need to provide activities that allow students to engage in assimilation, as it is responsible for all stages of cognitive development.

It is important for every educator to be familiar with the stages of development, but the first two stages are fundamental for the practice of early childhood educators. They need to maintain ethical behavior, ensuring that these children are not exposed to embarrassment or discomfort. They should provide activities that allow students to engage in assimilation, as it is responsible for all subsequent stages of cognitive development.

The sensorimotor stage ranges from zero to two years of age and is the phase in which the baby responds to the environment around them. In order

for a child to transition from one stage to another, they need to be stimulated. According to Piaget, this is the period of greatest assimilation in human life. Consequently, the sensorimotor stage, is divided into six sub-stages:

Reflexes: (0 to 1 month): sucking, the first instrument that the child uses.

Stage of Primary Circular Reactions: (2 to 4 months): the baby repeats actions, tracks objects with the eyes, moves arms and mouth and sucks the thumb, these are primary circular reactions.

Stage of Secondary Circular Reactions: (4 to 9 months): also known as intentional sensorimotor actions, it involves purposeful movements focused on a result produced in the external environment, with the intention of maintaining it.

Stage of Coordination of Secondary Schemes: (9 to 12 months): Piaget refers to this stage as generalized assimilation. Now, the child not only repeats what they have discovered but also acts with the intention of doing something new.

Stage of Tertiary Circular Reactions: (12 to 15 months): The first signs of mental planning appear, meaning the baby repeats what they know in order to achieve a new outcome. They may repeatedly, throw a toy on the ground.

Invention of New Means through Mental Combinations: (18 months to 2 years): The child now engages in thought and uses words to refer to objects and absent people. This stage represents the transition from sensorimotor intelligence to representational intelligence.

The preoperational stage spans from two years of age to six or seven years. With the emergence of language, there is a profound transformation in the child's intellectual and emotional life. During this phase, the child develops the capacity to perform logical-mathematical operations. They

discover through play and interaction with others, but they are very self-focused due to the evident egocentrism, which is the main characteristic of this stage. They believe in their fantasies and give life to inanimate objects hence their thinking is considered animistic. It is a period characterized by emotional imbalance. The child experiences intense feelings of both sympathy and hostility.

Throughout cognitive development, children do not "lose" anything they have learned; they add to it in order to achieve equilibrium. However, now a new author emerges, who is Vygotsky[1], which is contested by Piaget regarding the social context, as in Piagetian theory internal factors prevail over external ones, whereas in Vygotskian theory, development varies according to the child's lived environment. This presents a new paradigma to be studied.

It was based on the development of the individual as a result of a socio-historical process, emphasizing the role of learning in this development. This theory is considered historical-social, where the focus of study is the acquisition of knowledge through the interaction of the individual with the environment.

According to Vygotsky, psychological functioning is structured based on the social relations established between the individual and the social world.

According (OLIVEIRA, 2002, p.128):

> Vygotsky states that every higher psychological function first manifests in an intrapersonal situation. The mother can draw the child's attention to a specific object by asking, "What is this?" while also helping to provide an answer.

[1] **LEV SEMENOVIC VYGOTSKY:** was born on November 5, 1896, in Orsha, a small city in Belarus. When he was about one year old, his family moved to the city of Gomel in the same country. He lived in Russia and died of tuberculosis at the age of 37 in 1934. A professor and researcher, he was a contemporary of Piaget. As a Russian scholar in the fields of history, literature, philosophy, and psychology, he is one of the pioneers of the sociointeractionist perspective, which goes beyond Piaget's interactionism. His theory is based on the individual's development, and its central question is the acquisition of knowledge through the interaction between the subject and the environment. Vygotsky's studies on the development of intelligence and cognition in children aligned with the research conducted by Piaget and later by the American psychologist Jerome Bruner.

According to Vygotsky, as cited by (CRAIDY and KAERCHER, 1998), initially, the child uses socialized speech for communication, and only then does she begin to use it as an instrument of thought with a social adaptation function. This may be the main divergence between Vygotsky and Piaget because, for the latter, the egocentric speech would be a transition between the individual's mental situation and logical thinking. However, for both theorists, this egocentric discourse is understood as a transitional factor, although with different processes.

As Vygotsky based his theory on the socio-historical development of the individual. According to him, higher functions such as language and memory were constructed throughout history, and these functions were voluntary processes and conscious actions that depended on learning processes that individuals go through during their lives.

This process occurs through mediation, both between individuals and with the environment itself. Language plays a central role in this process, as it serves as the intermediary and communication tool between people, allowing them to internalize, generalize, and share thoughts.

According (MOREIRA 1999, p.111):

> This mediation includes the use of instruments and signs. An instrument is something that can be used to accomplish something; a sign is something that signifies something else. There are three types of signs: 1) indices, which have a cause-and-effect relationship with what they signify; 2) icons, which are images or drawings of what they signify; 3) symbols, which have an abstract relationship with what they signify. Words, for example, are linguistic signs, and language, both spoken and written, as well as mathematics, are systems of signs.

Learning interacts with development, creating openings in the ZONES OF PROXIMAL DEVELOPMENT, which refers to the distance between what a child can do independently and what they can achieve with the assistance of an adult. According to Vygotsky, this distinction occurs when the child goes through two levels: the level of actual development, which represents the knowledge already acquired and what the child can do on their own without

the help of others, and the level of potential development, which represents what the child can do or learn through interaction and assistance from others. As stated by (CRAIDY and KAERCHER, 1998, p.25):

> The potential for performance alteration through the interference of others is fundamental in Vygotsky's theory. According to this author, the zone of proximal development or potential refers to the distance between the level of actual development and the level of potential development. It is the responsibility of the school to help the child advance in their understanding of the world based on their already consolidated development, with the goal of reaching subsequent stages that have not yet been achieved.

According to Vygotsky, the activity of the subject refers to the mastery of mediation objects, including their transformation through mental exercise. The subject is not only active but interactive, as they form knowledge and are constituted by intrapersonal relations.

It is precisely within the zone of proximal development that the emergence of new ways of thinking can occur, and where, thanks to the assistance of others, it can result in the process of modifying one's schema of knowledge, constructing new knowledge established through school learning.

According to CRAIDY and KAERCHER (1998), Vygotsky emphasizes the importance of play for child development, especially pretend play. Another factor he considers important is the issue of imitation, which is widely used by children. He understands this process as an individual reconstruction of what the child has observed in other people.

Therefore, the teacher, according to Vygotsky, has an explicit role in interfering with the process, unlike informal situations where the child learns through immersion in a cultural environment.

The educator, by observing the zone of proximal development, can guide learning in order to accelerate a child's potential development, making it real.

Another researcher who adheres to socio-interactionism is Wallon. However, he differs from Vygotsky by introducing the importance of emotional

factors in child development in his studies. Psychogenetics, essentially sociocultural and relativistic, with a strong organic foundation, his theory considers the development of the complete person integrated into the environment in which they are immersed, with all aspects integrated.

Unlike Piaget, Wallon sought to be more directly involved in education, discussing the ideals of the New School.

According Wallon, apud (OLIVEIRA, 2002, p.130):

> Every individual constitutes a specific and optimal system of exchanges with the environment. This system integrates their actions in a process of functional equilibrium that involves motor skills, emotions, and cognition, but in which, at each stage of development, a particular form of action predominates over the others.

This process of development is connected to neurological development, as its condition and limit. Organic maturation is seen as a condition for development and allows it to be described in successive and integrated stages.

Cognition is considered as part of the complete individual that can only be understood when integrated with it, and its development occurs based on the organic conditions of humanity. It is the result of the integration between the organism and the environment. Therefore, development is conditioned by both organic maturation and functional exercise provided by the environment.

According to (WALLON, 1979, p. 131):

> What allows intelligence to transfer from the motor plane to the speculative plane is not evidently explainable in the development of the individual (...), but in it [the transfer] can be identified (...), it is the aptitudes of the species that are at play, especially those that make man essentially a social being.

According to Wallon, as cited by Lunardi (2003), development does not occur in a linear and continuous manner, but rather through the integration of new functions and acquisitions with the previous ones. The quantitative accumulation of functions triggers their qualitative evolution through a new organization in which motor, affective, and cognitive aspects integrate in

various ways with the previous stage. The predominance of one aspect over the others is the result of their integration.

Emotion, prior to language, is the means used by the baby to establish a relationship with the human world. Gradually, the expressive movements, initially physiological, evolve into affective and more complex behaviors. Emotions are quick and direct, and, they can be expressed as genuine bursts of energy.

The integration of motor, affective, and cognitive aspects, which is the core of Wallon's theory, is interpreted by (MAHONEY, 2000, p. 15):

> The motor, affective, cognitive, and individual aspects, although each of these aspects has its own structural and functional identity, are so integrated that each one is a constitutive part of the others. Their separation is only necessary for the purpose of description. One consequence of this interpretation is that any human activity always involves all of them. Any motor activity has motor and cognitive resonances; every mental operation has affective and motor resonances. And all these resonances have an impact on the fourth set: the individual.

Wallon indicates that development occurs discontinuously, characterized by ruptures and setbacks. Marked by contradictions and conflicts, it is the result of maturation and environmental conditions, causing qualitative changes in behavior in general. However, it does not refer to new stages, but to a new type of conduct that truly becomes dominant, without precisely fixed limits by chronological age.

The constitution of the person occurs according to their conditions of existence, where the social environment and culture constitute the conditions, possibilities, and limits of development for the organism.

Thus, Wallon divides the stages of child development, affirming that there is also a type of interaction between the individual and the environment.

Impulsive-Emotional Stage (occurs in the first year of life): During this phase, social interactions with the environment and basic emotions such as well-being and discomfort prevail in children. They develop sensorimotor

skills during this period, such as grasping, looking, and walking, which will be further refined throughout the second year of life. During development, the respiratory symbiosis of the fetus transforms into nutritional symbiosis in the newborn, and around three months, it evolves into affective symbiosis, which is characteristic of the human species.

Sensorimotor Stage (approximately 1 to 3 years): In this period, the child develops practical intelligence and the ability to symbolize, meaning that symbolic conduct (symbolic function) characterizes their relationship with reality. There is an exploration of the physical world.

Personalism Stage (approximately 3 to 6 years): In this phase, the construction of self-consciousness occurs through social interactions, directing the child's interest towards people, thus emphasizing affective relationships. The level of thinking shifts from the initial undifferentiation between intelligence and affectivity.

According to Wallon, as cited by Lunardi (2003), for humanity to survive, it is necessary for the helplessness of the newborn to affect others and provoke feelings of solidarity in them; this is the guarantee of the species' survival.

Categorical stage (6 years): In this phase, the child directs their interest towards knowledge and the exploration of the external world, based on the intellectual progress they have achieved up until then.

The child sees themselves capable of participating in various groups with different degrees and classifications based on the activities they engage in. This stage is important for the development of the individual's intellectual and social abilities.

According to Wallon (1975, p. 215): "There is an awareness on the part of the individual of the group they belong to. There is an awareness on the part of the group of the importance it can have in relation to individuals."

Emotion is the first resource that a baby has to communicate with the adult world. It is an important means of social interaction and evolves throughout life, influenced by maturation, relationships with the environment, and culture. However, the motor, affective, and cognitive aspects are always interconnected.

We conclude this study by understanding the significant importance of the cited authors for the comprehension of child development. Although these authors share interactionist assumptions, the differences between them are substantial and should not be overlooked.

Piaget does not adhere to the idea that a child grows in a linear manner; rather, development occurs through internal conflicts, where each stage establishes a specific form of interaction with the other. His studies focus on the subject-object relationship. On the other hand, Vygotsky places greater emphasis on the role of the object. However, both Vygotsky and Wallon believe that the social aspect is indispensable. Culture and language provide the elements for thought to evolve and become more sophisticated. Social cognition is highly flexible, and there is no linear progression in development; it is discontinuous. Both the subject and the object are equally considered.

FINAL CONSIDERATIONS

The purpose of this article was to conduct a study and theoretical review on the researchers: Piaget, Vygotsky, and Wallon, who have distinct perspectives on child development.

Piaget, a biologist, based his studies on the socio-interactionist perspective, recognizing that the capacity to know and learn is constructed through exchanges established between the subject and the environment, where the child becomes the protagonist of their knowledge in a process of social interaction in the world, they live in.

Vygotsky, a psychologist, was a pioneer in the intellectual development of children, considering social interactions and life conditions. He emphasizes

the importance of the school institution in knowledge formation. According to him, pedagogical intervention brings about advancements that wouldn't occur spontaneously. Good teaching is one that stimulates the child to reach a level of understanding and skill that they haven't fully mastered yet, leading them to new knowledge.

Wallon, a philosopher and psychologist, was the first to bring the emotions of the child into the classroom beyond their physical body. His approach considers the child as a whole, where intellectual development involves more than just the brain.

According to Wallon's ideas, unfortunately, schools insist on confining the child to a desk, limiting the fluidity of emotions and thought, which are essential for the complete development of a person. The subjects and disciplines in education should not only focus on content, but also help in discovering the self in others. This dialectical relationship aids in the child's development in harmony with the environment. The basic elements of his theory are: affectivity, movement, intelligence, and formation of the self.

The teacher needs to effectively assume their responsibilities as educators. Often, teachers are prepared to work with abstract, idealized students who do not exist in reality. However, as they begin their work, they realize that their students do not form a homogeneous group, but rather present many differences among themselves. Consequently, they come to understand that teaching is more effective when it considers the differences between students, their interests, aspirations, habits, and customs, taking into account the socioeconomic reality they live in.

The new educational scenario presents us with a highly complex reality in terms of contexts, children, society, principles, and values. As paradigms shift, it becomes indispensable for us to readjust and reinvent ourselves daily so that we can truly get to know our students, respect them, and make a difference in their lives.

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