



Epistemological conceptions: genetic epistemology⁴⁰

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SUMMARY

Genetic Epistemology argues that the individual goes through several stages of development throughout their life. Development is observed by the overlapping balance between assimilation and accommodation, resulting in adaptation. Thus, in this formulation, the human being assimilates the data he obtains from the outside, but since he already has a mental structure that is not “empty”, he needs to adapt this data to the already existing mental structure. The process of changing oneself is called accommodation. This scheme reveals that no knowledge arrives from the outside without being altered by the individual, and everything that is learned is influenced by what had already been learned. Assimilation occurs when information is incorporated into pre-existing structures in this dynamic cognitive structure, while adaptation occurs when the organism changes in some way in order to dynamically incorporate the new information. Finally, of a modern thought that, seeking the unusual synthesis between the biological and the logical-mathematical, seems to find its limits in the even more unusual deconstruction to which all thought systematically tends today: that of self-construction in an essentially enlightened. **Key words:** Epistemology, genetic epistemology; knowledge, educational theories.

ABSTRACT

Genetic Epistemology argues that the individual goes through several stages of development throughout his life. The development is observed by the overlap of the balance between assimilation and accommodation, resulting in adaptation. Thus, in this formulation, the human being assimilates the data he obtains from the outside, but once he already has a mental structure that is not “empty”, he needs to adapt these data to the existing mental structure. The process of modifying oneself is called accommodation. This scheme reveals that no knowledge arrives from outside without suffering some alteration by the individual, and that everything one learns is influenced by what one has already learned. The assimilation occurs when the information is incorporated into the structures already existing in this dynamic cognitive structure, while the adaptation occurs when the organism is modified in some way in order to dynamically incorporate the new information. Finally, from a modern thought that, seeking the unusual synthesis between the biological and the logical-mathematical, seems to find its limits in the even more unusual deconstruction to which all thought systematically tends nowadays: that of itself building itself in an essentially enlightened way .

Keywords:Epistemology, genetic epistemology; knowledge, educational theories.

1. INTRODUCTION

When it comes to the epistemological assumptions of educational theories, it is possible to determine three different basic ways of representing the teaching-learning relationship: which are: empiricism, innatism and constructivism, which correspond, respectively, to three pedagogical models, namely, directive, non-directive and relational pedagogy. In this sense, epistemological conceptions try to portray the models linked to the way of conceiving the acquisition of knowledge based on theories that defend a model that best adapts to the current reality.

However, in order to understand a design model to be followed, it is first necessary to discuss the theme Epistemology and Education, considering it important to start with the definition of the concept of epistemology, as it consists

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in a study of science taken as a synonym for knowledge, therefore, a theory of knowledge. The study also aims to portray the theory of scientific knowledge, based on Jean Piaget's genetic epistemology, and also associate the concepts of Piaget's genetic theory with Vygotsky's socio-interactionist theory.

The present study is based on an exploratory descriptive methodology, based on bibliographical research, and for this purpose articles and publications on study sites, such as SCIELO and LILACS, in documents published in the last two decades will be used as descriptor elements and using as words -search key: epistemology, education, knowledge, Genetic epistemology, socio interactionism.

2. THE EPISTEMOLOGY OF EDUCATION

The Epistemology of education is also known as Theory of Knowledge, being one of the areas of philosophy that studies knowledge, establishing the difference between science and common sense, thus validating scientific knowledge. As philosophical practice always starts from questions, it can be understood that epistemology seeks to answer the questions that lead to understanding what science and scientific knowledge is, also seeking to prove when scientific knowledge is in fact true.(ESCOLANO, 1993).

Therefore, questions are never completely answered, which leads to new research and the search for new answers. Therefore, scientific knowledge is never finished or definitive and is considered provisional. It is always associated with an ideological, religious, economic, political and historical background.

Epistemology can be considered as the methodical and reflective study of knowledge, its organization, its formation, its development, highlighting personal and intellectual growth.Feenberg (2007) highlights that the first meaning that refers to epistemology is associated with theory about knowledge. However, the application of the phases of knowledge in the learning process appears, in a broader and deeper sense.

Just as ethics refers to moral issues and politics deals with understanding aspects of society, epistemology deals with knowledge. Epistemology seeks to portray that theMan is a being who thinks how he lives. Since logic is the procedure for how to conduct thought so as not to make mistakes, it does not mean that there is only one logic, but rather the understanding of how the understanding of facts leads to the construction of new logics that start from the principle of non-contradiction, or that is, identity. According to Ferreira, the term can be defined as: "the set of knowledge that has scientific knowledge as its object, aiming to explain its conditioning, systematize its relationships, clarify its links and evaluate its results and applications" (FERREIRA, 2010 , p.817). In this sense, thescientific knowledge would be the set of knowledge that is justified and proven through tests that can be carried out in any circumstance, time and place, which will always give the same result, but which can be transformed over time, because what is believed at one time it will be rejected or invalidated later, as one of the objectives of epistemology consists of the rational reconstruction of scientific knowledge, knowing, analyzing, the entire gnosiological process of science from a logical, linguistic, sociological, interdisciplinary, political point of view, which shows that Philosophical and historical practice has the purpose of differentiating common sense from science.

2.1 ETYMOLOGY

The word epistemology has its construction from the Greek, and,*Epistem*means knowledge and*Logi*refers to the study. Thus, epistemology is the study of knowledge, and its main sources as well as its acquisition. Etymologically Epistemology: it is the science of science, or the critical study of the principles, hypotheses and results of the various sciences. It is the theory of knowledge that leads to other knowledge(OLIVEIRA, 2016, p.17). According to the same author: "Epistemology is a philosophical discipline that critically reflects on scientific knowledge. The theory of knowledge is a theory, that is, a philosophical explanation or interpretation of human knowledge" (2016, p.18-19).

Epistemology emerged with pre-Socratic philosophers. In the classical period, discussions on the topic began to take shape, especially through Socrates, Aristotle and Plato. Each of them created a method to explain their ideas, doing without myths to reach their conclusions in a rational way.

There were many discussions that led to understanding each philosopher and their conceptions, which sometimes perceived a dichotomy between your truths. However, epistemology gains strength in the Modern Age when the ideas of Humanism, Renaissance and Enlightenment were gaining ground in society.Silveira (2005) also shows that:

The first sense of epistemology is a theory of knowledge, where we seek the nature, stages and limits of knowledge, which leads to studying, including individual cognitive processes (cognitive psychology) and social processes (the formation and validity of sciences).). It seeks to answer the questions: what is knowing, what can we know, and how can we know? (SILVEIRA, 2005, p. 1).

It can be understood that education is related to the transformations resulting from the structure of thought and society,

thus mediating the actions performed by individuals and intertwined in the social context.

3. EPISTEMOLOGICAL CONCEPTIONS IN EDUCATION

Epistemology deals with the origin of knowledge, being a vast field of study that encompasses several areas, within the educational field, including insofar as it seeks to highlight the understanding of teaching practice and the interventions to be carried out in the face of the complexity of teaching and of learning.

Educational practice is not separated from social practices, and, as power-knowledge relations, production relations, notions of the world and man change, education is also changed. Regarding these issues, Nóvoa (1996) states:

[...] education is not just a scientific or rational project, as pedagogical action is carried out based on a plurality of values, ideas and situations. That it is illusory to try to control a priori. Education finds its reason not only in the reasonable, but also in the tragic, it is not only a rational act, but also a dramatic one. (NÓVOA, 1996, p. 80)

Knowledge is information acquired throughout the teaching-learning process, both formally and informally, which is part of the individual's identification plan within the organizations in which they are inserted in a society.

Every educator has an interpretation, not always conscious and reflective, about knowledge: what it is, where it comes from and how to get to it. There is talk here of a theory of knowledge or gnosiology (from gnosis=knowledge), then philosophy of science and more recently, epistemology (episteme=science). Every pedagogical practice has an underlying conception of knowledge and presupposes a learning theory (ESCOLANO, 1993).

Feenberg (2007, p. 83) mention that: "knowledge can be seen as information full of experiences, judgments and values". Ultimately, almost all knowledge resides within the individual, and for this reason, successful organizations continually provide opportunities for their employees to expand their stores of data and information.

Knowledge is the basis of epistemology. Although it is not new to reflect epistemologically on Education, every acquisition of knowledge needs a process for it to become meaningful, however in recent decades the suit has become part of the educational context with greater intensity, perhaps due to the importance it has given the construction of knowledge and the way in which the school has appropriated methods and techniques that provide teaching closer to the area of interest of its students (FEENBERG, 2008).

Gamboa (2010), reports that the term that has always represented the acquisition of knowledge, gained prominence with the expansion of educational research, thus epistemology began to be used to refer to philosophical reflections on knowledge, the subject-object relationship, research strategies, the theory-practice interface, the scientificity of educational knowledge.

The individual is endowed with capabilities to reflect and store information transmitted to him during the teaching-learning process, his intellectual growth, he envisions an autonomy to identify and doubt the things to which he has access, leading to seeking more information for which if you look for an answer, when you come across and complete the search you wanted to find (GAMBOA, 2010).

Understanding how this whole process happens is to seek the epistemological answer to an enormous concern of continuing to discover information that is not yet clear in the face of a new curiosity that arose during the discovery of the research, to obtain a precise concept based on the great possibility of knowledge.

Epistemology is present in the individual when he feels the need for discoveries, the intervention is gradual, although he does not realize this process in which he is being subjected by his own unconscious (MOSQUERA, 1994, p.15).

Therefore, the construction of human knowledge begins to have great significance based on the relativity of the importance of their interests in discovering, in learning, thus highlighting the articulation between the social function of knowledge and the role of the school in the construction of learning.

2254. PIAGET'S GENETIC EPISTEMOLOGY

Jean Piaget's epistemological work is, without a doubt, one of the main contributions to the understanding of how human beings develop. The Genetic Epistemology proposed by him is essentially based on intelligence and the construction of knowledge and aims to answer the question not only of how individuals, alone or together, construct knowledge, but also through what processes and by what stages they manage to do this (KESSELRING, 1993).

According to Kesselring (1993), Piaget shows that learning will be more meaningful for the student the more relationships

This person is able to establish the experiences arising from their social practice with what the school proposes, thus facilitating the elaboration of knowledge, through their own experience. The more experiences and involvement in everyday life, the greater your development will be.

Genetic Epistemology will remain open, interdisciplinary, where the central objective is the elucidation of scientific activity, based on a psychology of intelligence, it must always be a continuous construction, understanding and inventing the real, adding quality to the constructive process of knowledge (PIAGET, 1970)

The learning theory, developed by the philosopher Jean Piaget (1896-1980), proposes that knowledge results from the interaction of sensorimotor intelligence with the environment. The study demonstrated that a child learns spontaneously, organizing external data from which he builds his knowledge, he is not a “being” shaped by the teacher. Notions such as proportion, quantity, causality, volume and others arise from the child's own interaction with the environment in which he lives (KESSELRING, 1993).

The author also alludes that Piaget studies cognitive development, moral judgment and language in parallel and is able to understand the relationship between cognitive structures and social development.

In the stages of psychic development, Piaget distinguished different aspects, which we relate to: the functions of knowledge, which are responsible for the knowledge we have of the world and which include thought; the representation functions, which include all the functions thanks to which we represent any meaning, using a determined signifier; and affective functions, which constitute, for Piaget, the engine of cognitive development (PIAGET, 1970).

Piaget's concern was the study of the constitution of valid knowledge, in the elaboration of facts, logical-mathematical formalization and experimental control, which he called interdisciplinary psychogenesis.

It is important to orient this study towards the contribution of Jean Piaget, who shows us through his theory that the human subject establishes a relationship of interaction with the environment from birth. According to Jean Piaget's theoretical conception, it assumes that:

[...] the development of intelligence **It is** determined by mutual actions between the individual and the environment. The idea is that man is not born intelligent, but he is also not susceptible to the influence of his environment. On the contrary, it responds to external stimuli by acting on them to build and organize its own knowledge, in an increasingly elaborate manner. (LOURENAÇÃO, 2001, p. 11)

For Piaget (2003), a child's way of reasoning and learning goes through stages. Around the age of two, it evolves from the sensory-motor stage, in which the action involves the sensory organs and basic neurological reflexes (such as sucking a bottle) and thinking only takes place about the things present in the action it develops, to the pre-operative (PADUA, 2009, p.27).

At this stage, the child becomes capable of doing one thing and imagining another. She does this, for example, when she plays with dolls and represents situations experienced in previous days. Another progression takes place around the age of seven, when it moves to the operational – concrete – stage.

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4.1 MAN IN HIS SOCIO-PSYCHIC LIBERATING VISION.

For Piaget (2003), a child's way of reasoning and learning goes through stages of psychic development. Piaget highlights distinct aspects, which relate the functions that are responsible for knowledge of the world and that include thought and the functions of affective representations, which constitute, for Piaget, the engine of cognitive development.

226 Piaget clarifies that the development of such functions is marked by periods that prepare the individual for the next stage (PADUA, 2009, p.23). The stages of cognitive development are: Sensorimotor Stage: which represents the conquest of the practical universe, through perception and movements. Pre-Operative Stage: which is the preparation and organization of concrete operations; the child turns to reality and the appearance of language appears.

Operational Stage: actions are internalized and constitute operations, what was constructed in the action plan can now be reconstructed in the field of representation, it is at this stage that the child is capable of cooperating. Formal Operations Stage: which distinguishes between the real and the possible (PADUA, 2009, p.24).

In this way, Piaget shows that there is always a natural-cognitive evolution in relation to the acquisition of knowledge.

Thus, it lists the four stages in which subjects evolve at their own pace, in a calm and calm way, presenting until they are prepared for the ability to know to surpass the limits of what is around them, establishing a common way in the periods of this development of as follows (PADUA, 2009, p.27-29):

Sensory-Motor Stage begins with birth until approximately two years of age, the child reaches a level of biological and cognitive balance that allows the formation of a linguistic structure, that is, conceptual; and this is around 12 - 18 months. Around the age of two, it evolves from the sensory-motor stage, in which the action involves the sensory organs and basic neurological reflexes (such as sucking a bottle) and thinking only takes place about the things present in the action it develops, to the pre-operative (GARCIA,2002).

Pre-Operative Stage: according to Piaget (1970), it is based on the still incipient constitution of an operative structure, and remains there until reaching approximately 7 - 8 years of age, with proper balance being achieved here when the child is with age 4 - 5 years. At this stage, the child becomes capable of doing one thing and imagining another. She does this, for example, when she plays with dolls and represents situations experienced in previous days. Another progression takes place around the age of seven, when it moves to the operational - concrete - stage.

Concrete operational stage. Starting at the end of the second stage, progress is made in the ability to coordinate well-ordered actions in "ensemble systems or 'structures', capable of closing" as such, it lasts, on average, until 11 - 12 years of age. And specifically regarding the level of balance itself, this happens here around the age of 9 - 10 (PIAGET, 1970).

As Piaget (1970) describes, the formal operational stage, which begins at the end of the third year and in which the human being remains throughout adulthood, reaching a state of equilibrium around 14 - 15 years of age. However, it is worth highlighting that regardless of the stage in which the person is, the acquisition of knowledge will occur, evidenced through the relationships established between subject and object. This relationship occurs through processes of assimilation, accommodation and balance, in a mutual and progressive synthetic development, being dialectical, that is, it arises through logic so that ideas fit together. In the words of PIAGET (1967-a, p. 39),

"All the successes and failures of the activity are registered in a kind of permanent scale of values, the first raising the subject's aspirations and the second lowering them with respect to future actions. Hence a judgment of oneself to which the individual is led, little by little, and which can have great repercussions on the entire development."

According to Piaget, from two to twelve years of human life, several domains of affectivity undergo changes in line with the development of cognition: interests and values, personal feelings, games, etc. (PIAGET, 1970)

The stages established by Piaget are constituted from an evolutionary development, considering what was initially missing to achieve the need that has not yet been identified, but which is achieved through interaction with a specific object, until the ability to perform formal operations through which one abstracts oneself after constituting specifically concrete objects for oneself PIAGET, 1970.

In this way, the subject's need for knowledge of the object leads him to perform everything from simple actions to operations on the object. On the one hand, until approximately two years of age, the emotions and feelings generated by the baby's contact with the mother are centered in the child's own body, constituting global affective schemes.

As the infant body separates from the body of other people ("I" - "other"), exchanges occur between them that, although not genuinely social, cause the emotional life to decenter itself from the baby and transfer to others.

Still according to Piaget (1976, p. 226),

"(...) each of the characters in the child's environment causes in their relationships with them a kind of affective scheme, that is, summaries or templates of the different successive feelings that this character provokes (...)" The set of affective schemes will constitute the person's character.

The feeling that the child has experienced in the past for the mother will guide future feelings. Even if there is an assimilation of successive loves between brothers, friends, lovers, etc. These feelings will be linked to the mother-love, as this is the primitive feeling that will shape the deepest emotions and behaviors (Piaget, 1976, p. 268).

Piaget then exemplifies that cognitive development occurs through the assimilation of the object of knowledge to previous structures present in the subject and through the accommodation of these structures depending on what is going to be assimilated. Adaptation involves assimilation and accommodation in an inseparable relationship, this being the mechanism that allows man not only to transform the assimilated elements, making them part of the organism's structure, but also provides the adjustment and accommodation of this organism to the incorporated elements. When the affective field is affected, adaptation does not happen, the child assimilates, it can even accommodate, but the adaptation will not materialize (GARCIA,2002).

In this way, it is possible to understand that the dynamism of balancing occurs through successive situations of balance - imbalance - rebalancing that aim, so to speak, to “dominate” the object of knowledge that is constituted in this process (MORO, 2000).

5 GENETIC EPISTEMOLOGY AND THE LEARNING CONTEXT

By appropriating Jean Piaget's epistemology, educators seek ways to carry out their actions in line with genetic development, and according to this logic, methodological activities are adapted considering such aspects. The teacher has the role of coordinating activities, understanding how each student develops and proposing expressive learning situations.

Therefore, the development of the construction process generating learning, which is called constructivism.

Constructivism has a dynamic and logical operating content, taking into account the construction process, which Piaget calls functional invariants, which persists in the subject-object interaction in a single bipolar structure as a source of knowledge; from this interaction, this will be balanced as a central process; which will lead to adaptation, assimilation or accommodation and organization; From there, experience and abstraction arise with the passage from action to conceptualization, that is, the content is abstracted and with it new learning emerges.

Thus, it is understood that constructivism is a theory, and according to Piaget, Vygotsky, Bruner and Ausubel, who highlight the different stages that individuals go through, it happens naturally, taking into account previous and new knowledge in the process of forming that human intelligence enables the individual to become autonomous. Thus, constructivism stands out as an activity of a transformative nature, because from the perspective of Philosophy it is relationist.

However, nowadays more spaces are opening up for this understanding and for understanding what, in the mid-twentieth century, scholars such as Piaget, Vygotsky and others began to defend as the construction of knowledge.

Piaget and Vygotsky show that learning will be more meaningful for the student the more relationships they are able to establish between the experiences arising from their social practice and what the school proposes to them, thus facilitating the elaboration of knowledge through their own experience. The more experiences and involvement in everyday life, the greater your development will be.

Although the understanding of the world and knowledge is closely linked to cognitive development and the initial process of acquiring writing is related to schooling, they cannot be confused with it, as social practices related to reading and writing go beyond not only the limits of school but also precede the child's enrollment in the formal education system. For more than three decades, evidence has emerged about the gradual and dynamic nature according to which the process of acquiring written language occurs, from authors such as Ehri, Ferreiro and Teberosky and Read. Piaget and Vygotsky show that learning will be more meaningful for the student the more relationships they are able to establish between the experiences arising from their social practice and what the school proposes to them, thus facilitating the elaboration of knowledge through their own experience.

In this way, it is understood that epistemologically it is an interactionist theory, leaving aside empirical and rationalist factors, its object of construction is the psychogenesis of intelligence and knowledge, being considered a cognitivist theory whose object is the psychogenesis of intelligence and knowledge and, by method, the clinical-critical method.

Constructivism also has a democratic focus, where it takes effect from the construction through the transformation of knowledge, that is, nothing matters to it and the reality that we live from the elements that enable new learning and that contributes to knowledge, that is It is the elements of the “proximal zone” that contribute to new learning taking place. Furthermore, the democratic bias contributes to social transformation.

The information and content are fundamental, but the process by which the student reaches them and how they establish relationships and comparisons is the most important. In this way, schools believe that they produce more critical, opinionated and investigative children. The subjects are focused on reflection and self-evaluation, therefore the school is not considered rigid. Although understanding the world and knowledge is closely linked to cognitive development and the initial process of acquiring writing is related to schooling, they cannot be confused with it, as practices

social issues relating to reading and writing go beyond the limits of the school, but also precede enrollment of the child in the formal education system. The more experiences and involvement in everyday life, the greater your development.

Emília Ferreiro, based on PIAGET's words, expanded the theory to the field of reading and writing and concluded that children can become literate alone, as long as they are in an environment that encourages contact with letters and texts. In view of the study, it is essential to highlight the contribution of psycholinguistics Emília Ferreiro, who is considered a precursor of Jean Piaget, who has a vision focused on the practice of reading and writing, using as a study tool a diversity of informative texts that allow children to build their skills. critical and reflective in different social classes.

Ferreiro also emphasizes not using the primer as a source for developing reading and writing. According to the aforementioned author, it is important for the educator to value the child's productions since early childhood education, no longer considering them just as scribbles, but rather as significant texts. The author states that: "Language does notIt isa rationally created code, therefore,it cannot be taught by one method, whatever it may be. that considers reading and writing a simple mechanism for decoding and encoding graphic signals" (PELLEGRINE, 2003,P. 27).

It is important to orient this study towards the contribution of Jean Piaget, who shows us through his theory that the subject establishes a relationship of interaction with the environment from birth.

Continuing this theme, we mention the contribution of the great Brazilian educator, Paulo Freire, who defends an education that starts from the reality experienced by the child, which allows the student to build their autonomy, giving meaning to the development of reading and writing, the starting from a renewing and reflective education. Another important aspect of Freire's philosophy is his reflection on the traditional school, where the student was a mere receiver of knowledge, passive without contributing to the teaching-learning process.

In this sense, Paulo Freire highlights the role of school as a social space, with a view to providing children with their role within society, based on the social and cultural contexts they experience. Therefore, it is important that the school reviews its pedagogical stance in order to allow students to understand and understand the complexity of their space through a meaningful and contextualized reading.

It is important to clarify that all human learning occurs through an interaction that Jean Piaget called subject-subject, subject-object and subject-environment. And, more than all of this, interaction depends on an individual attitude. According to Moore and Kearsley,

Distance Interaction is the interrelationship of people, who are teachers and students, in environments that have the special characteristic of being separated from each other. It is physical distance that leads to a gap in communication, a psychological space of potential misunderstandings between instructors and students that needs to be bridged by special teaching techniques. (MOORE; KEARSLEY,2007:240)

About interactivity Frago (2001) clarifies: "The word interactivity, derived from the English neologism *interactivity*, was coined to name a specific quality of so-called interactive computing." It is clear that the term interactivity has its emergence linked to interactions between the subject and the computer, or the technological resource.

The interactions that individuals establish in the virtual environment are the basis for learning and depend on the quality of relationships and communication.

The quality of interactions is decisive for the good progress of any relationship. In these exchanges, individuals express their points of view and are exposed to the points of view of other individuals, which results in reflection, which can lead to harmony or conflict. This reflection is directly related to the capacity for understanding, tolerance, respect and balance. Furthermore, due to discoveries that occur during learning, people generally change their point of view and open their minds to new questions and new conclusions.

FINAL CONSIDERATIONS

The development of this work paved the way for a more in-depth study in relation to the epistemology of education, given its importance in the construction of knowledge as a preponderant construction factor.

From the understanding of having as a work focus an epistemology that meets the desired objectives in the educational process that is established, it is possible to understand the theories related to these and the construction of knowledge.

In this sense, using knowledge acquired about the epistemology of knowledge, it is concluded here that the socio-constructivist and interactionist theories that originated from the concepts of Piaget and Vygotsky are those that best fit the model of knowledge process that is expected achieve today and that meets the needs of understanding socioeconomic, political and cultural issues as promoters and determinants of the educational modalities implemented whether for transformation, for the maintenance of "*status quo*"serving as promotion

229 future research, theoretical deepening and subsidizing an emancipatory pedagogical action that is conscious of specificity of the educational modality.

Piaget and Vygotsky understood the child's intellectual transformation as they have the opportunity to participate in the system of knowledge presentation that takes place at each stage, in their own time, learning takes place through the environment in which the individual is provided with freedom to think, act and transform. This needs to be gradual, so the child learns from examples, a process in which they can reproduce and participate. The phrase: "Life is a learning experience", used in popular language, analyzing how much truth it punctuates, because knowledge is not limited, but rather the aggregation of what we already have with what has just been presented to us.

In this way, the student will have the possibility of understanding the world around them, being able to interact and contextualize

facts in society, providing direct action in social relations making them conscious critical and reflective citizens in a global social context.

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