



www.ijonSES.net

Assumptions for Developing the Critical Sense through the Teaching and Learning Process

Ronaldo Marques 
Universidade Federal do Paraná, Brazil

Claudia Regina Xavier 
Universidade Federal do Paraná, Brazil

To cite this article:

Marques, R., & Xavier, C. R. (2021). Assumptions for developing the critical sense through the teaching and learning process. *International Journal on Social and Education Sciences (IJonSES)*, 3(1), 68-81. <https://doi.org/10.46328/ijonSES.53>

International Journal on Social and Education Sciences (IJonSES) is a peer-reviewed scholarly online journal. This article may be used for research, teaching, and private study purposes. Authors alone are responsible for the contents of their articles. The journal owns the copyright of the articles. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of the research material. All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations regarding the submitted work.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.



International Journal on Social and Education Sciences (IJonSES) is affiliated with
International Society for Technology, Education, and Science (ISTES): www.istes.org

Assumptions for Developing the Critical Sense through the Teaching and Learning Process

Ronualdo Marques, Claudia Regina Xavier

Article Info

Article History

Received:

24 June 2020

Accepted:

20 October 2020

Keywords

Critical sense

Teaching and learning

Contextualization

Environmental education

Scientific literacy

Abstract

The teaching and learning process enables reflections on social and environmental contexts, among others, which directly interferes and in our lives and in the formation of critical sense, contributing to the change in behavior and attitudes in relation to the various relationships in the environment we inhabit. It is classified as a bibliographic study that was carried out from the teaching and learning process as an instrument in the teaching process in which it could point out elements for the identification and analysis of the dichotomy between (a) criticality and criticality, the transition from common sense to critical thinking and the elucidation of critical sense in the educational process. This study certifies the importance of interaction and inter-relationship of learning and the role of the teacher, for the manifestation of students' critical thinking, in which educators have a strategic and decisive role in school daily life, qualifying students for a critical position in the face of the numerous problems that afflict society today, with the horizon of transforming social habits and practices and forming a citizenship that mobilizes them to the issue of preservation and care for others in its most comprehensive meaning.

Introduction

This study presents a literature review on the characteristics and processes in the formation and development of a critical sense, in the teaching and learning process given the heterogeneity of themes that can be contextualized from the relations between society, man and nature, and in this context, as well as its relevance for the development of critical sense in the complexity of thought and in the internal elaboration in cognition considering that the quality of psychological development is not inherent in any teaching, and depends on how it is organized given that “through a correct organization of learning that leads to mental development” (Vigotski, 1998, p. 115). In this way, reflections on the formation of critical sense are explored from the literature review that contributes to the understanding of how the development of critical sense occurs, considering the debates and systematization of current problems of society from its systematization in the process teaching and learning that contributes to the transition from common to critical sense. Marques and Xavier (2018) corroborate when referring to the relevance of contextualization for the teaching and learning process, as this movement to understand both scientific knowledge and use it in practical situations of the relations of man, society and nature. The school space represents an extremely significant environment of socialization, awareness and

formation of citizenship, promoting the dissemination of knowledge, idealizing the formation of critical and active citizens in the spaces they occupy, be it local, regional or global, since the school space it has a social function to enable students to develop their fundamental skills and competences that will guarantee their autonomy and decision-making ability in the future (BUSQUETS, 1998). Thus, by awakening awareness and providing opportunities for the teaching and learning process, the development of students' critical and scientific sense of concern with the problems arising from the relationships between man, society and nature allows for an increase in the quality of life of present and future generations future.

Therefore, Marques and Xavier (2018) affirm that the process of awareness and emancipation of individuals should show itself through “action with knowledge and the ability to choose the commitment to the other, with their subjectivity and, above all, with the his way of being in the world and establishing in him his experiential mediations that make him a social being and a being of culture” (Marques & Xavier, 2018, p. 135). Thus, the present text is organized in three sections: in the first, we deal with considerations about the dichotomy between the dichotomy of (a) criticality and criticality; then, we present a discussion on the aspects of the transition from common sense to critical thinking and, in the last section, we present elements that contribute to the formation of critical thinking in the teaching and learning process. In this sense, this study aims to present fundamentals for the formation of a critical sense from the teaching and learning process in the sociocultural, environmental, political and economic dimensions. Bearing in mind that the discussions enable reflection and the adoption of personal postures and constructive social behaviors, contributing to the construction of a social and environmentally just society, in a healthy environment. We hope that the dialogues held throughout the text contribute to the discussions regarding the construction of critical sense and in the formation of critical and active subjects in the spaces in which they live for the valorization of scientific knowledge in the life of society.

Methodology

The objective of this research was to search for foundations based on the literature review on the political-pedagogical, philosophical and epistemological orientations, based on the assumption of constant concern in view of the complex dynamics of educational practices in the school context regarding the teaching and learning process where it makes evident the erosion of teaching based on traditional, mechanistic and conservative models in the teaching and learning process. So the research has its,

Taken in a broad sense, research is all about problem-solving; as an activity of searching, inquiring, inquiring about reality, it is the activity that will allow us, in the realm of science, to elaborate knowledge, or a set of knowledge, that will help us understand this reality and guide us in our actions (Pádua, 1997, p. 29).

To achieve the proposed objective, a qualitative methodological strategy was adopted, using the technique of documentary survey and analysis (Calado & Ferrera, 2015). Qualitative research, according to Higgs and Cherry (2009) refers to critical and qualitative evaluations and interpretations, that is, non-mathematical. For Ludke and André (2015), the researcher's procedure in the qualitative approach is to be attentive to the multiplicity of dimensions of a given situation or problem and after analyzing the data, he launches possibilities to explain the reality, trying to find principles underlying the studied phenomenon and place your findings in a broader

context; it is an effort to build or structure a theoretical framework, within which the phenomenon can be interpreted and understood.

Results and Discussion

The Dichotomy between the Characteristics of (A)Criticality and Criticality

Every human being needs to interact with the environment in which he / she is inserted, and today, this interaction has become even more important since society has undergone countless transformations that require the subjects not only to adapt to this process of changes, but take positions and express themselves critically in the face of the facts that permeate our reality. For the individual to be able to develop his knowledge and improve his ideas, it is necessary to articulate the reflections on the knowledge he already has to the new ones, in a permanent process that favors the critical apprehension of reality. Considered in its broadest dimension, critical thinking is one of the mechanisms through which it is possible to better understand the world, positioning itself before it, contributing significantly to the review and construction of new knowledge. Critical thinking involves knowledge about knowledge itself, as the critical thinker must understand that there are different types and styles of thoughts, reflections, inferences and communication, depending on the context in which they are inserted.

Today's society is characterized by being constantly thought about. We, as active subjects in our social interactions, act, think, questioning ourselves; we do not take for granted the reality that surrounds us, but we do know about the existence of other contexts and other practices that put our quotation marks "in quotes". We must constantly filter information and get involved in society in order to survive due to the plurality of ways of life and ways of doing. We must decide on the plurality of possible options, knowing that "for life" is something that does not happen either at work or in marriage (Flecha & Tortajada, 2000, p. 26).

For this, the formation of the critical, autonomous subject, with the development of his subjectivity becomes even more evident, since every critical being can rationalize and better understand everything he does, experiences and feels the facts that are part of his daily life. Therefore, critical reflection must be considered as an internal movement, as the growth of each individual who needs to exercise their role in the context in which they live. For Castanho (2000), the subject who does not think critically is justified by his own beliefs and considers them obvious and natural, that is, a matter of personal philosophy. Most of the time he defends beliefs in irrelevant evidence and fails to ground ideas on solid evidence.

It turns out that, to the great appeal for criticality, it was sometimes answered as not knowing exactly what the possibilities and the limits of critical sense are, as well as with a certain lack of self-criticism that predisposed to the arrogance of imagining that everything can be criticized, all the time, with or without proper knowledge of what was to be criticized (Castanho, 2006, p. 54). Studies reveal that most of the subjects who are unable to take a critical position because they do not master the subjects that situate them in the world, do not have knowledge that can sustain the development of an argument, a reflection or even a critical position. Thus, being critical means being able to discern, distinguish, interpret, judge facts and issues using some pre-established

criteria. Using these criteria, it is possible to analyze a certain situation and, through criticality, demonstrate a positive or negative position in the face of such a situation. It is perceived, therefore, that the criticality will serve to mediate the positioning on a given subject, since through the criticality the reasons that instigated to take this or that position can be pointed out.

In any case, critical evaluations cannot be permeated with arrogance; on the contrary, they must present a certain vision, a possible reading that is not merely guided by subjectivity. We cannot say that a situation is wrong or unacceptable because it does not match my personal values, as this goes so far as to put me as a reference in the world. However, I cannot fail to affirm - that yes - that, we live the values that I live and cultivating the criteria that I cultivate, I have a negative personal reading in relation to the mentioned situation (Regis Morais, 2000, p. 56).

Criticism is not permeated by tensions or conflicts, but is based on the serenity of mature arguments, because at the moment when the subject is critically positioned, his individuality must be respected and the individuality of other people too, since the sense critic needs to guarantee harmonious coexistence between different subjects. Criticizing means evaluating situations, pronouncements, using well-defined and well-explicit criteria, so that the critical exercise does not lose its dimension of relativity:

[...] criticality is something in need of comprehensiveness, because first of all, we will need to critique existence as a whole: in its historicity, in its politics, in its affectivity and in its production of intellectual goods. After all, we cannot resign from the only thing that differs from other animals on the zoological scale: our condition as thinking beings (Regis Morais, 2000, p. 57).

Criticism cannot be conceived as a thought process without guidance, on the contrary, it must have a very well-defined purpose in the face of problems that must be analyzed beyond our own personal intentions and actions. Being critical, according to Carraher (2011), involves an intellectual curiosity that is based not only on satisfying and solving problems through social conversations. Intellectual curiosity depends on an investment of the individual for a long time in order to understand phenomena deeply.

The person with a critical sense raises doubts about what he believes, rigorously explores alternatives through reflection and evaluation of evidence, with the curiosity of those who are never satisfied with their current state of knowledge. It tends to be a producer of knowledge rather than a consumer of previously ready knowledge, thus, it does not passively accept the ideas of others. Most of the time his curiosity is so keen that he ends up finding questions of interest in phenomena that others do not think it necessary to explain.

In addition to this attitude of intellectual curiosity mentioned by Carraher (2011), the critical thinker, according to the author, needs to have a tolerance and even predilection for cognitive states of conflict, in which the problem is not yet fully understood. Thus, the critical subject,

[...] he cannot be distressed when he does not know 'the correct answer, this anxiety can prevent further exploration of the problem. Second, having intellectual curiosity implies having intellectual honesty, which is not simply a question of the individual's character. The less demanding thinker with himself

tends to see the interpretations he wants or that satisfy the minimum requirements (what the teacher wanted). Intellectual honesty means being willing to reshape positions in the face of new information, to question our opinions and to question positions that constitute intellectual fashions - the most powerful form of dogmatism. Third, an intellectual curiosity attitude implies adopting multiple perspectives, to examine issues from various perspectives (Carraher, 2011, p. 21).

The critical awareness of how ideas are produced and constructed, characterizes the critical sense, as Carraher (2011) mentions, as not only a set of cognitive skills and attitudes, but also a type of social awareness of communication, in which the facts they are actually discussed, questioned, analyzed and even influenced by the critical view of the subject who analyzes him. When there is a concern to verify how the ideas were constructed and produced, it is verified that the subject acts on what is being observed, questioned and does not appear impartial before the questions that are presented to him. The critical thinker is not polyvalent who enters any field to elucidate his fundamental questions. Each field has its own premises, its own "common sense", its own perspectives. Thus, although there are certain general characteristics in the development of critical sense, the exercise of critical sense in a given field requires intimate knowledge of conceptual issues, traditions, current conflicts, paradoxes and communicative styles - in short, a knowledge of practices and the network of meanings in that field. For this reason, the critical sense requires, in addition to certain cognitive processes and attitudes, a broad experience in the specific field of knowledge in which it operates (Carraher, 2011, p. 21).

The individual who is not critical does not create or evaluate the appropriate evidence to develop his knowledge, tends to accept everything passively and only defends points of view that have been previously defended by other people. When assuming a critical posture, the individual also assumes the role of creator of knowledge, carries out his searches and starts to study the evidence that can clarify certain doubts. It starts from a humble position in relation to its knowledge, and presents its own opinion and justifies its expectations during the reflective process.

Carraher (2011) mentions that the critical thinker demands the consistency that logic provides, but recognizes its limits. First, it recognizes that many ideas that lack rigorous logic have value and considers the adequacy of the ideas that it accepts as premises. Critical sense demands the recognition that our ideas are not facts, because facts are not considered problematic, they are not questioned; it is what is undoubtedly stated.

It is not surprising, then, to note the tendency among less critical individuals to view ideas and opinions as facts. Perhaps there is nothing to protect our ideas and opinions as facts. Perhaps there is nothing that protects our ideas from reflection other than the belief that they are "natural", evident and real. In presenting our ideas as facts, we place them above any discussion. It is precisely for this reason that we need to reflect on the nature of the facts and their distinction from other types of ideas (Carraher, 2011, p. 119).

The need for questioning ideas is a characteristic of the critical thinker, who generally finds it difficult to know which opinions are most valid in a debate on any subject. It is noticed that the individual who performs a critical

reading notes the different positions presented in the face of any problem and critically evaluates them and verifies which is the most appropriate. Undoubtedly, the critical thinker is not free of values and does not pretend to be, because he can have convictions and make strong commitments. It values coherence, clarity of thought, reflection and careful observation because it wants to better understand social reality. The critical individual contributes significantly to the construction of new knowledge and, consequently, to the development of science. For that, however, he needs clarity and rigor in his thinking, the courage to adopt a broad perspective of the problems he studies, he needs to establish associations, use his intuition, formulate new ideas, see similarities between events and areas of knowledge apparently unrelated, explore implications, suggest new investigations, look at phenomena in new ways.

Transition from Common Sense to Critical Thinking

It is known that in reality the subject's critical capacity does not develop so quickly, even because each and every person presents a worldview of their own, with social elements that share the same way of thinking and acting. In fact, we are conformists, we accept the facts and we are part of a "mass-man" reality, which according to Gramsci (1981), does not have a critical and coherent worldview, but a common sense conception, transmitted from generation to generation in a generation that often turns into religious belief, into doctrines that are not forgotten. When the conception of the world is not critical and coherent, but occasional and disaggregated, we belong simultaneously to a multiplicity of mass men, our own personality is composed in a bizarre way: it contains elements of the cavemen and principles of the most modern science and progressive; prejudices from all past historical phases, roughly localist, and institutions of a future philosophy that will be characteristic of the globally unified human race (Gramsci, 1981, p. 12).

According to Gramsci (1981), the knowledge acquired by tradition, inherited from the ancestors and to which the results of the experience lived in the community are added, is called common sense and can be classified as a set of ideas that allows the subject to interpret the reality of non-reflective way, since it confuses with beliefs and values. It is naive knowledge, in other words, non-critical, fragmentary and conservative, as it resists change. Common sense is usually subjective, expressing feelings and opinions of individuals or groups, varying from one person to another or from one group to another, depending on the conditions in which we live. For this reason, it becomes heterogeneous and individualizing, in which each thing or each fact appears to us as an individual or as an autonomous being. Most of the time, common sense is limited to solving practical problems. Therefore, if knowledge works by giving the desired response to a given situation, the same knowledge will continue to be used without much questioning.

Common knowledge, or common sense, is limited to describing the appearances of phenomena, not examining their root causes and effects. This is not to say, however, that common knowledge cannot successfully solve certain problems, but in many cases its applicability, marked by beliefs, can cause disastrous effects. For Gramsci (1981), common sense usually brings together in one opinion or one idea things and facts that are considered similar and tends to establish cause and effect relationships between them. He is not surprised or surprised by the regularity, constancy, repetition and difference of things, but, on the contrary, admiration and

amazement are directed towards what is imagined as unique and extraordinary. This insufficiency of common sense is a consequence of the attachment to immediate consequences and the fact that it remains at the level of appearances, instead of seeking deeper explanations due to phenomena not directly observable.

In common sense, according to Badaró (2005, p. 22), “one finds a thought, a knowledge that is used and reproduced mechanically, without having this awareness. These are concepts that are often imposed by the external environment or by tradition. ” In this sense, common sense can be defined as a set of opinions and beliefs admitted in a given society, associated with everyday life, where a naive awareness of person, world and science prevails. It is noticed that the common sense attitude, unlike the critical attitude, as Badaró (2005) states, is customary, since it does not distrust the veracity of certainties, the immediate adherence of things and generates an absence of criticism and lack of curiosity.

Common knowledge observes a fact in a generic (immediate) way, without doing the necessary debugging (this is what we learn many times at school). On the contrary, science analyzes it, removing its objectivity and verifiability from its inquiries, through a rigorous language, whose concepts are defined in order to avoid ambiguities (Badaró, 2005, p. 29). It becomes somewhat evident why there is a certain natural resistance by individuals to abandon the view of common sense and assume a new posture with a critical, reflective and scientific perspective of reality, considering that, when thinking critically, security and certainty about certain fact or subject ceases to prevail. Space is opened for new ways of thinking, no longer based on subjectivity and self-opinion, but on opinions that are built on the scientificity of historically constructed knowledge. However, the individual's common way of thinking should not be overlooked, but must be overcome. According to Gramsci (1981), common sense is the sound core of common sense. Anyone, when stimulated in the exercise of critical understanding, becomes capable of establishing wise judgments that contribute to the formation of new reflections.

Often, when the transition from common sense to common sense occurs, the individual is excluded from decision-making in the community where he is inserted. In non- democratic societies, for example, information does not circulate equally across all social strata, so not everyone has an equal right to consume and produce culture. It is believed that any individual who has a certain freedom will be able to develop self-awareness, to critically elaborate their own thinking and to critically analyze the situation in which they live. To criticize the very conception of the world, therefore, means to make it utilitarian and coherent and to elevate it to the point reached by the most developed world thinking. It therefore means to criticize, as well, all the philosophy that still exists today, insofar as it left stratifications consolidated in what we really are, that is, a “know yourself”, as a product of the historical process developed until today, which left you with a multitude of traits received without benefit in the inventory (Gramsci, 1981, p. 12).

Creating a new culture, leaving the common sense view to adopt a critically coherent worldview, does not mean making discoveries individually, but rather, disseminating critically already discovered truths and socializing them. As stated by Gramsci (1981, p. 13) "to transform them into the basis of vital actions, in an element that leads man to think coherently and in a unitary way the present reality". Critical knowledge allows the individual,

as mentioned by Badaró (2005, p. 34), "a process of mental appropriation in relation to the world in which he is a part, in an attempt to elaborate explanations and reflections distinct from the different facts and phenomena that surround him. " The concept of criticality is thus associated with the act of turning to oneself in the search for reflections that lead the individual to better understand what he does, experiences and feels.

According to Badaró (2005), the formation of critical sense is linked to a qualitative change in the way of thinking and understanding the world. This change causes a reinterpretation and the enrichment of existing knowledge. The proposal of this new knowledge demonstrates that the world is knowable by man. The real world of theory, as opposed to the apparent world of common knowledge and naive realism, changes the way we learn reality. The cognosant subject must critically analyze reality, an analysis of scientific concepts, in order to highlight the dialectical growth through approximations with the object. The reality is, therefore, irreducible to the subject, the possibility of approximations between subject and object are inexhaustible (BADARÓ, 2005, p. 35).

The opinion that is situated in the mind, as an obstacle, needs to be deconstructed in order to give place to the construction of knowledge, which will require the individual to have a critical, objective and systematic posture, which will lead him to detach himself from the vision of sense common reality and intuitive opinions. For this overcoming of common sense to exist, education needs to play its role in a significant way, contributing to a learning that develops in the students the development of critical sense. Education needs to favor training based on the acquisition and improvement of knowledge and allow the development of skills necessary for today's society, such as selection and information processing, autonomy, ability to make decisions, group work, flexibility, critical sense, which are essential in different social contexts.

The Formation of Critical Sense in the Educational Process

Several studies reveal that education, especially the systematized school, has and assumes a primary role in the education of students as active subjects of the social reality in which they are inserted. School institutions have been urged to rethink their role in the face of the transformations that are revealed in today's society. In this sense, it is understood that it is necessary to overcome the education that is characterized and based on the mere transmission of values and knowledge and provide a participatory and interactive education, which aims at the integral education of the student.

These attitudes must be linked to others such as understanding scientific concepts and theories, acquiring cognitive skills, associated with the practice of science, as well as fostering a scientific attitude of looking at the world and, finally, developing skills to use scientific knowledge in solving problems (Badaró, 2005, p. 108). It can be added that the school should be concerned with the cultural and scientific training of all its students and thus offer them cultural, scientific, technical, aesthetic, ethical contact, showing the concern and the development of critical thinking. Certain skills are fundamental in this process, among which the following can be highlighted: the development of creativity, sensitivity, imagination; the preparation for the productive, technological and communicational process, as well as the formation of critical citizenship, which offers

conditions for every individual to be able to critically interfere in reality to transform it and not just train to integrate the labor market.

Education, in turn, will only favor critical thinking when it plays a significant role in socio-political processes, as it is related to the development of critical self-awareness. This criticism would imply breaking with the old discourse, whether in the theoretical or practical scope, to recreate a new cultural process. The criticality-based perspective must be able to neutralize the old theory, showing its inconsistency. It appears, however, that in order for this old theory to be neutralized and the common sense view overcome, the school and its actors must assume the central role of the teaching-learning process in favor of building a unitary world view, which free men from common sense and their spontaneous philosophy.

The elaboration of an organized worldview is not done arbitrarily around any ideology, the will of some personality, fanatical, philosophical or religious groups. The non-adherence or adherence of the mass to an ideology demonstrates the critique of the historical rationality of the ways of thinking. Arbitrary constructions are the first to be eliminated in historic competition; the constructions that correspond to the demands of a complex and organic historical period always end up imposing and prevailing, even though they go through many intermediate phases in which their affirmation occurs only in a more or less bizarre and heteroclitic combination (Gramsci, 1999, p. 111).

The school, in its broadest sense, collaborates significantly to reinforce an autonomous conscience, to educate students to think clearly, freeing them from a simple chaotic vision, collaborating according to Gramsci (1999), for an education that is not limit it to the simple theoretical enunciation of principles and methods, but that articulates educational work with induction, deduction, formal logic and dialectics. Thus, education would really assume an emancipatory character, contributing to the formation of the individual who acts and reflects on his own history. With this view of the school, as mentioned by Gramsci (1999), the old school would be abolished and replaced by a school that, through what it teaches, fights against all the traditional sedimentations of worldviews, in order to spread a more modern conception, which aims at the full and collective development of the individual, making it able to participate actively in the reality to which it is inserted, with a view to transforming and socializing it.

Gramsci (1999) states that criticality can and must be built daily, in a slow and continuous training process, in which the subject will enter a magnificent world, with values of aesthetic and technological relevance and with these values will be able to identify new techniques and constructions that will allow you to take on different points of view in the face of any and all facts or issues that may be placed on the agenda. The formation of a critical sense depends on a certain intellectual maturity, on the formalization of thought and on a critical education that is linked to the different and possible roles that education could and can play within a particular socio-political context. However, studies reveal that to favor the construction of this critical thinking, it is not enough for the teacher to master the art of teaching, it is necessary to master it and put it into practice using the knowledge he has, so that the content to be taught can be full of meaning for the student.

[...] critical sense depends on a certain intellectual maturation and formalization of thought not found in children, even the most intelligent. Critical thinking refers to skills already developed (and not just potential), presumably through reading, reflection and practice itself (Carragher, 2011, p. 20).

Therefore, the teaching-learning process should foster the development of skills that lead the individual to a critical and reflective formation and the teacher offers subsidies for the student to raise his level of information that is fundamental to the problematization and apprehension of reality. The teacher cannot assume a practice without reflection, nor be impartial in the face of historically constructed knowledge, as this attitude will portray his lack of commitment to the social, cultural and intellectual formation of his student. It is noted that the teacher needs to be committed to research and critical analysis that verifies certain theories and practices. He needs to favor the enrichment of his student's intellectual repertoire and this will only be built through the practice of differentiated readings and related to the content worked in the classroom or to the facts and daily events. The teacher must at all times instigate his student to read, research, experience situations so that this cognitive universe can be expanded daily. It is from these cognitive experiences that the student will be able to express ideas with expressiveness, argue to defend them or deny them, using his creativity, giving a different approach from the already known.

In this sense, “the intellectual authority” mentioned by Carragher (2011) needs to be left aside and human coexistence will be constituted through the struggle of intelligences, that is, the confrontation between the different ways of reading and understanding reality. Education in the information society must be based on the use of communicative skills, in such a way that,

Allow us to participate more actively and more critically and reflexively in society. If we intend to overcome the inequality that generates the recognition of certain skills and the exclusion of those people who do not have access to information processing, we must think about what kind of skills are being strengthened in the formative contexts and whether it is easier to interpret the from a transforming perspective (Flecha & Tortajada, 2000, p. 31).

Education needs to break with traditional discourse based on conservative theories, which advocate education based on reproduction, and adhere to an integrative, participatory and permanent process, based on the joint action of all those involved in the process, without any type of exclusion. , offering answers to students' needs. The formation of a critical subject must cease to be the privilege of a portion of our society, making it necessary for a greater number of people to enjoy this infinite wealth of subjects and areas of information. The educational reality needs to contemplate the human experience, to make possible at all times a meaningful learning that takes into account the specific characteristics of each student, compensating for the differences, not harming the individuality nor the formation of the critical sense.

Education needs to change its culture, overcoming the culture of individualism, which is so present within educational institutions, by a culture based on shared work, based on the development of open activities that contribute to the formation of democratic citizens and, above of everything critical. Anyway, changing people is not enough to transform education and its consequences. We do have to change people and educational and

social contexts (people in their contexts). In this way, we will begin to change many things, including valuing and making humanity truly valued as it is: a cluster of cultural differences, ethnicities, religions, knowledge, skills, learning rhythms, etc. , which is precisely one of the characteristics that define us as human beings (Imbernón, 2000, p. 86).

For these purposes to be achieved and changes to occur gradually, it is necessary for the institution to generate an attitude of self-control, allowing the exchange of ideas, experiences and proposals. The principles of coexistence based on freedom, exchange of experiences, dialogue, reflection and responsibility, stimulating human dignity based on solidarity and mutual respect, social and political awareness, must be recovered within the institution. Unfortunately, what happens in school spaces is that the contents are still being transmitted in a fragmented, disjointed, neutral, meaningless way and the construction and reconstruction processes are far from being part of this educational process. The inconsistency presented between theory and practice is very large, since there is an overvaluation of activities that are concerned only with repetition and memorization and not with understanding and understanding.

This educational process, as stated by Gebran (2002), contributes to the paralysis of the student's critical attitude and increasingly reinforces the inability to establish relationships between acquired knowledge, without highlighting the socioeconomic, cultural and historical conditions of social reality. Teaching becomes alienating, as it does not allow the effective participation of the student in this educational process and in the process of building knowledge, nor does it question, problematize or criticize the knowledge that is transmitted to it. Thus, what would be the main objective of education is lost, favoring a creative and innovative process for the student, where the construction, organization and transmission of knowledge would be intrinsically linked to the transformation and development of critical sense.

Knowledge, while merely informative, became the commodity itself and science became something that is actively developed by capital itself for its incorporation as a productive force. What is defined as school knowledge becomes a private and arbitrary selection from a much wider universe of possibilities and the great educator becomes capital (Gebran, 2002, p. 59). Garrido (2001) points to the teacher's role to articulate the construction and formation of critical thinking in the teaching and learning process,

The mediating role of the teacher can contribute significantly to this learning. It requires skills to: create a climate of search and mutual respect; stimulate the student's expression and follow his reasoning closely, helping him to verbalize it; encourage the class to examine and clarify the partner's point of view or doubts; asking instigating, destabilizing and significant questions that encourage the reexamination of ideas and promote the relevance of dialogue; evaluate the debate, resuming the paths taken, providing the group with a vision of synthesis and a feeling of intellectual achievement (Garrido, 2001, p. 131).

Therefore, the educators, subject-actors of this process, must prepare the student for apprehension and conscious analysis of reality, in a practice of permanent and continuous reflection. Thus, it is essential to analyze and reflect on current educational practices that involve a process of reorganizing the pedagogical action present in school environments. Hence the importance of recovering pedagogy of the question and not just the answer,

favoring learning based more on dialogue than on the monologue. We talk about imagination, capacity, stimulation, etc. which is precisely one of the characteristics that define us as human beings (Imbernón, 2000, p. 86).

The role of education would then be to review its entire structure, its agents, forms of administration and, mainly, to facilitate and favor the participation of all those who, directly or indirectly, are involved in this process. It is necessary to review the role of the school institution and its role in the education of citizens and, for that, it is necessary to use imagination in the search for alternatives. It becomes evident that the school urgently needs to review its educational practice with a view to adopting educational proposals that consider the notions of freedom, equality, human dignity, democracy, morality, and social responsibility, thus starting to value the importance of training the individual who is aware of his rights, critical, active and transforming reality. School institutions urgently need to adhere to new social transformations and prepare students to face the conflicts that are part of everyday life. For this confrontation, however, they need to be equipped with skills that are important, such as critical awareness, debate, joint work and flexibility, which will allow the construction of a thought capable of selecting relevant information, arguing and questioning, making decisions, etc.

Final Considerations

The elaboration of this study involving the formation and development of critical sense is consolidated with the contextualization of themes involving the relationship between man, society and nature, bringing students and teachers closer to their own reality, contributing significantly to the formation and development of critical and their criticality in relation to problems related to the environment. Thus, in research, we seek to conceptualize the critical subject, portraying the relevance of educational practices that favor the formation of active subjects on social and environmental issues. We understand that criticality is based on convincing arguments, on the precise assessment of facts, events, subjects, in short, the critical subject speaks and makes use of thinking, explores and reflects. All critical awareness is based on curiosity, searching, critical analysis and verification of what is being observed.

It is noteworthy that this critical formation has not been provided many times in school environments, since the training present today in the areas of our society is conformist, homogeneous, traditional and favoring passivity. It appears that educational institutions urgently need to review current educational practices and prepare our students for life, to face the present social, educational, political, cultural reality. Thus, it is emphasized that there must be a concern to establish, in the educational context, an understanding of respect for society with a focus on the perspective of social transformation and on the formation of critical, humanized and emancipated students and, thus, fostering a new model in the process teaching and learning and a new posture that seeks the critical and scientific construction of the knowledge produced, that is concerned with their socialization in an equal way and that students can be guided in the construction of knowledge that will be provided through daily exchanges among the subjects involved in the process.

In this sense, the teacher assumes an essential role in the process of building knowledge and forming a critical sense, as he is responsible, the facilitator and the mediator, who will offer students conditions for their human, intellectual, reflective, critical, autonomous growth. By acting as a mediator of the educational process, he lets his experiences emerge, inquiries about the knowledge to be transmitted, its value and its importance, teaches students that education is a human, participative process, permeated by discoveries, contributes to the formation of the subject, its transformation and for the humanization of students in a perspective of critical and transforming social insertion. In this sense, this process will become possible when educational environments organize their space in order to transform the classroom into a space in which students can experience situations that lead them to search, compare, and criticize thought and actions.

In addition, it is necessary and fundamental that a reflection be made on the teaching process and on personal and collective choices as well as on our responsibilities towards current and future generations, since there are many uncertainties and insecurities causing reluctance and divisions. So, this discussion around the formation of critical sense with a teaching tool must go beyond the bureaucratic walls and reach the classrooms quickly, and this cannot happen only through the work of a teacher or a group, or school or network, these discussions have to leave the State Policy and reach the entire education system. It is necessary to restructure the teaching and learning process as well as the continuing education of teachers so that there are changes in methodological strategies that favor the critical, participatory, autonomous, creative formation of students. For the most part, classes do not promote situations for thinking about values and decision criteria in the face of the world, in the face of human relationships, the facts that permeate reality. Knowledge often becomes something static, out of context and the teacher ceases to assume his role in the face of the critical formation of the student, who ends up becoming a mere spectator of the teaching-learning process.

In this sense, school education to contribute significantly to the formation of the critical and participative citizen needs by itself to put into practice situations that promote the development of autonomy of thought, initiative, and participation in decisions. In this way, teachers need to rethink their practice and be concerned with the intellectual emancipation of their students. With diverse procedures, strategies and attitudes, this culture of criticality can become part of the educational process in a more comprehensive way. For this, educators, collectively, must enable the development of critical sense with more dynamic classes based on their reality with reflective and dialogued classes, readings and discussions of texts in a reflexive and critical way, coordinated debates, guided research, projections of videos and films with scripts for reflection and debate, field practices, always articulating with the reality in which the student is inserted and with the reality in which he will act. Highlighting for a practice favors interdisciplinary work. Thus, the present day requires turning theory into practice and leaving the discourse and entering into the effective concretization.

References

- Badaró, CE (2005). *Epistemology and Science: reflection and practice in the classroom*. Bauru, SP: Edusc.
- Busquets M. D. *et al.* (2000). *Cross-cutting themes in education: bases for comprehensive training*. São Paulo: Attica.

- Calado, S. S; Ferreira, SCR (2005). Document Analysis: Data Collection and Analysis method. Research Methodology I. Department of Education, Faculty of Sciences, University of Lisbon.
- Carragher , D. W (2011). Critical sense: from day to day to the humanities. 9. ed. São Paulo: Pioneer.
- Castanho, M. E (2006). Creativity in the university classroom. In: VEIGA, IPA CASTANHO, MELM (Orgs.) University pedagogy: the class in focus. Campinas: Papirus, p. 75-90.
- Flecha, R.; Tortajada , I. (2000). Challenges and educational solutions at the beginning of the century. In: Imbernón , F. (Org.) Education in the 21st century: the challenges of the immediate future. 2. ed. Porto Alegre: Artmed, p. 21-36.
- Garrido, E. (2001), For a new school culture: the mediating role of the teacher between the student's culture and the elaborated knowledge. In: SEVERINO, A. J .; FAZENDA, ICA (Orgs.) Knowledge, research and education. Campinas: Papirus, p. 125-142.
- Gebran , R. A (2002). Space and citizenship: the social construction of geographic knowledge. In: FERRI, LMGC Education, society and citizenship. Londrina: [sn].
- Gramsci, A. (1981). Dialectical conception of history. 4. ed. Rio de Janeiro: Brazilian Civilization.
- Gramsci, A. (1999). Introduction to the study of philosophy. Benedetto Croce's philosophy. Rio de Janeiro: Brazilian Civilization.
- Higgs, J; Cherry, N. (2009) Doing qualitative research on practice. In: HIGGS, J; HORSFALL, D; GRACE, S. (Eds.). Writing Qualitative Research on Practice. Rotterdam (NE): Sense Publishers , p. 3-12.
- Imbernón , F. (2000). Wide and deep look: education yesterday, today and tomorrow. In: Imbernón , F. (Org.) Education in the 21st century: the challenges of the immediate future. 2. ed. Porto Alegre: Artmed, p. 77-94.
- Ludke , M; André, M. (2015). Education research: qualitative approaches. Sao Paulo, EPU
- Marques, R., & Xavier, C. (2018). Analysis of Critical Sense in a Didactic Sequence in Environmental Education. REMEA - Electronic Journal of the Master in Environmental Education, 35 (1), 132-150. Available at: <https://periodicos.furg.br/remea/article/view/7430>
- Padua, EMM (1997). Research methodology: theoretical-practical approach . 2. ed. Campinas, SP : Papirus.
- Regis Morais, JF (2004). Creativity as a human foundation. In: VEIGA, IPA; CASTANHO, MELM (Orgs.) University pedagogy: the class in focus. 4. ed. Campinas: Papirus, p. 51-74.
- Vigotski, L. S. (1998). The social formation of mind. São Paulo, Martins Fontes.

Author Information

Ronualdo Marques

 <https://orcid.org/0000-0001-6681-9914>

Federal Technological University of Paraná
Brazil

Contact e-mail: ronualdo.marques@gmail.com

Claudia Regina Xavier

 <https://orcid.org/0000-0001-6346-648X>

Federal Technological University of Paraná
Brazil