International Journal of Human Sciences Research

Acceptance date: 07/05/2025

A THEORETICAL DISCUSSION ON FIELD CLASSES AS A METHODOLOGY FOR TEACHING GEOGRAPHY IN BASIC EDUCATION

Ione dos Santos Sales

Master's Degree in the Teaching of Environmental Sciences from the Professional Master's Degree in the National Network for the Teaching of Environmental Sciences - PROFCIAMB - State University of Feira de Santana/UEFS and teacher at the Bahia State Department of Education. https://orcid.org/0009-0007-9238-2526

Raquel de Matos Cardoso do Vale

Retired Professor - State University of Feira de Santana/UEFS http://lattes.cnpq.br/6710190531751211

Carlos Cesar Uchoa de Lima

Professor at the State University of Feira de Santana/UEFS https://orcid.org/0000-0002-1688-5187



All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).

Abstract: This chapter deals with the theoretical basis for discussing the application of field classes as a teaching methodology in Geography. Initially, the teaching and learning process in Geography will be addressed, because thinking about methodologies that seek to develop meaningful practices in this process requires knowledge of its foundations, considering education to be a liberating and constructivist process. The theoretical discussions will then focus on the integrated analysis of the geographical landscape, a method geographers have long known for analyzing geographical space. The possibility of reflecting spatial organization through integrated landscape analysis, i.e. what we see and feel, has long been realized. Next, we'll look at the Study of the Environment as a method aimed at developing students' critical view of their reality, which includes fieldwork as one of its stages.

TEACHING AND LEARNING IN GEOGRAPHY

Education plays a substantially important role in the formation of citizens. And when we talk about education, it includes not only formal education, but beyond that, it includes the various ways of transmitting knowledge. Education is in the cultural foundations of the family, in different social contexts, it is in the "initial formation of the human being" (Angelini, 2021, p. 220).

When thinking about formal education, the various ways of teaching stand out, considering learning to be the goal of the entire educational process. Each human being learns in a different way, so we are heterogeneous and unique. However, some methodologies tend to make the teaching-learning process more interesting and stimulating. These are motivating methodologies based on meaningful learning, proposed by David Ausubel, an American psychologist and physician, in

1963. In Brazil, there are many studies involving this theory, as well as renowned thinkers such as Paulo Freire who have dedicated many years to studying and discussing educational dynamics.

Moreira (1999) discusses the Theory of Meaningful Learning and points out that, after Ausubel, Joseph D. Novak was the one who perpetuated and refined studies on the subject. Meaningful learning, based on Ausubel's theory, encompasses a process in which new information is related to a relevant, specific and pre-existing knowledge structure in the individual, in a substantive and non-arbitrary way.

Ausubel focused on day-to-day learning in schools, considering what the student already knows to be the most important factor in learning, and this would be the teacher's starting point (Moreira, 1999; Moreira, 2006). Meaningful learning contrasts with mechanical and traditional learning, where there is little or no interaction between new information and relevant concepts that already exist in the student's cognitive structure, so the new information is accommodated arbitrarily (Moreira, 1999).

For Ausubel, two conditions are necessary for meaningful learning to occur: the first is the material to be learned, which has to be related to the learner's cognitive structure in a non-arbitrary way, making it potentially meaningful. The second condition depends on the willingness of the learner to relate the new, potentially significant material to their cognitive structure in a "substantive and non-arbitrary way" or "intentionally transform the logical meaning of educational materials into psychological meaning" (Moreira, 1999 p. 156, Moreira, 2006, p. 2).

One condition depends on the other. If the student is willing, but the material is not relatable, there will be no meaningful learning. If the content is relatable, but the learner only intends to memorize it, both the process and the product will be mechanical.

Novak collaborated with Ausubel's theory and went further, bringing broader concepts to the field of meaningful learning with his so-called Theory of Education (Novak, 1981, apud Moreira, 1999). For Novak, "education is the set of cognitive affective and psychomotor experiences that contribute to the enhancement of the individual to deal with daily life." (Moreira, 1999, p. 167)

Considering five elements: learner, teacher, subject matter, context and evaluation, Novak proposes that "any educational event implies an action to exchange meanings and feelings between teacher and student" (Moreira, 1999, p. 169), accompanied by an affective experience, which is "positive and intellectually constructive" (Moreira, 1999, p. 171), thus promoting meaningful learning.

Ausubel's theory dialogues with the educational theories of the great Brazilian educator Paulo Freire, who dedicated his life to the educational complexity arising from the various social contexts of its actors. Ausubel brings the meaning of meaningful learning from what the student already knows, from what makes sense to them. Freire discusses education that liberates through reflection on one's place in the world, one's context.

In his book Pedagogy of the Oppressed (1987), written in 1968 and published in Brazil in 1974, Freire talks about liberation. In the first instance, it starts with the oppressed who are committed in "praxis" to their transformation; in the second instance, when one ceases to be oppressed and becomes the pedagogy of men in constant liberation. Thinking about oppressed and oppressors makes us associate students and teachers in the teaching-learning process. For Freire, the act of liberation must start with the oppressed, so that the oppressors can also be liberated, and he adds that "the latter, as the class that oppresses, neither liberate nor liberate themselves" (Freire, 1987, p. 28).

Wouldn't this be the same as Ausubel's second condition for meaningful learning, which is that it depends on the teacher's willingness to relate new content in a non-arbitrary way to the learner? Isn't the one who is going to learn, at some point, the oppressed? There is a connection between these two meanings, and it is possible to emphasize the need to make learning enjoyable, so that students feel motivated and seek to build their knowledge.

Vasconcelos and Brito (2014), when discussing Freirean theories, report that it is necessary to grasp content in order to learn. However, this apprehension must take place in a substantive and non-arbitrary way and be meaningful, based on knowledge that already exists, so that the student has meaningful learning (Moreira, 1999, 2006, 2011).

Freire (1987) criticizes the narration of content from a narrator, a subject, to a listener, who in this situation would be a patient object. This narration therefore implies mechanical memorization of the content. Here there is a confluence between Ausubel's mechanical learning, which is opposed to meaningful learning, and Freire's (1987) conception of banking education, where "education becomes an act of depositing, in which the students are the depositories and the educator the depositor" (Freire, 1987, p. 37).

Thinking about education, Freire (1996) systematizes the knowledge necessary for the education of the future and in this context points out that "teaching requires respect for the knowledge of the students", knowledge that has been socially constructed and is fundamental for the formation of citizens. This reality of which students are a part can and should be associated with school content, because knowledge is derived from man's relationship with himself and with the world (Freire, 1996, p. 15). In the same material, the role of the teacher in relation to their practice is pointed out, and they should take a critical

stance on what they can and should do in the process of mediating knowledge.

Therefore, meaningful learning is that which promotes liberation through meaningful teaching, with methodologies that motivate and with strategies that bring students closer to their daily lives and that are capable of promoting reflection on their context, enabling them to recognize themselves as agents of transformation of their own reality

According to Fortuna (2015), Freire discusses "praxis", which is the act of acting/reflecting and from this comes reflecting/acting, in other words, from the action there is a reflection and after reflecting, there is a new action, or "the subject from theory goes to practice and from his practice arrives at the new theory, thus, theory and practice are made together, perpetuated in praxis" (Fortuna, 2015, p. 64). Therefore, it is essential that in the teaching-learning process scenarios are created so that students are aware of their reality and can then reflect on their role in this environment, starting from the local to the global, in an integrated way.

Praxis (Freire, 1987), within the pedagogical process, at the same time as producing knowledge, instigates educator and student to constantly research, based on a pedagogy that investigates, transforms and educates (Fortuna, 2015). For Freire, theory and practice are not separate; reflection on action promotes education for freedom. "Praxis, however, is the reflection and action of men on the world in order to transform it. Without it, it is impossible to overcome the oppressor-oppressed contradiction" (Freire, 1987, p. 38).

When you consider Ausubel's theory, which is based on what the student has already learned, Novak's theory of the exchange of meanings and Freire's theories of autonomy, reflection/action and education for freedom, it becomes clear that these foundations correlate with the need to establish an associa-

tion between what you want to pass on to the student and their context, their surroundings and their daily lives. After all, through our lived experiences full of affective meanings, we recognize what makes sense to learn. Based on daily practices that contribute to the construction of the individual's education, the foundations are created to give the necessary meanings to what motivates us and interests us affectively, thus being able to create meaningful cognitive knowledge. The relationship between theory and practice is therefore a path to meaningful learning.

GEOGRAPHY TEACHING AND THE IMPORTANCE OF FIELDWORK

Geography plays an important role in citizen education based on Critical Geography and Constructivism. As Moreira (2011) points out, quality teaching must be constructivist, based on the student, provide conceptual change and contribute to meaningful learning. In the teaching field, it is up to the Geography teacher to provide the basis for promoting critical reflection on the student's reality, as well as fostering their autonomy as a social subject and agent of the environment. The teaching and learning process is complex and requires criticality, planning and organization. As a mediator of knowledge, it is up to the teacher to look for strategies that provide meaningful learning for the student. There are many paths that can lead to this result, as long as the student is the protagonist

In Geography teaching, the geographical content is of great importance in the dialogical relationship between those involved. In order to understand society and the world contradictions we face, as well as our place in the geographical space, we need to engage in dialog and consider all the elements of this space in their entirety, thus contributing to the formation and transformation of the individual.

Historically, geography has always been part of people's experiences and way of life. Knowing how natural phenomena occur has always been of interest. As a science, Geography emerged at the end of the 19th century with the Germans Alexandre Von Humboldt and Karl Ritter (Lacoste, 1988; Andrade, 2008). Throughout its consolidation process, Geography has gone through different theoretical conceptions, with different objectives and methods. Initially, there was the division of Traditional Geography, based on the geographical determinism of Friedrich Ratzel and the possibilist school of Vidal de La Blache, and in the second half of the 20th century, Pragmatic and Critical Geography (Santos, 2018).

While traditional geography focuses on describing places, critical geography opposes this and focuses on the "relations between society, work and nature in the production of space" (Straforini, 2004, p.67, *apud* Santos, 2018).

For Lacoste (1988), since the end of the 19th century there have been two geographies: the Geography of the Major States, the oldest, used as an instrument of power, based on a variety of information about space, and the Geography of teachers, the most recent, in which the "strategic importance of space-centered reasoning is unconsciously masked" (Lacoste, 1988, p. 14). This gap is also due to the distance between research in universities and teaching in schools. The latter has a major social role to play in influencing people from a young age (Lacoste, 1988).

In Brazil, the institutionalization of Geography at the beginning of the 20th century, both in schools and academia, reflected the tendencies of the traditional approach to the description and memorization of places (Cavalcante, 2008). Similarly, another characteristic of this type of teaching is the traditional method in which the student is merely a receptacle and only receives the content taught by the holder of the knowledge, in this case the teacher.

Lacoste (1988) criticizes the way in which geography has always been taught, for whom the presentation of information generates anguish, doubts and frustration about the teacher's work. This method fails to value the role of Geography in shaping citizens' criticality, as it is based solely on memorization. All of this, according to Lacoste, is intended to strategically mask the "practical usefulness of spatial analysis" for those in power (Lacoste, 1988, p. 11).

For a long time, Geography was seen as a descriptive discipline. According to Brabant (1989), this was because it was seen as an introduction to history. Another relevant factor is the lack of interest in getting students to reason about the space in which they live, limiting themselves to inventorying and describing what is part of it, thus reinforcing the importance of physical elements to the detriment of others. This has its roots in the Geography of the military, which meant that these descriptive aspects of space were repeated in school Geography (Brabant, 1989; Vlach, 2007).

Thus, teaching Geography is becoming increasingly challenging in the face of traditional education, making it essential to break down paradigms that prevent the development of a critical being, aware of their actions and understanding their role in shaping and transforming space. In this context, teaching methods play an extremely important role in this process, capable of giving new meaning to socio-environmental interaction in Geography teaching based on new teaching and learning concepts (Costa and Moreira, 2016).

It's not hard to see the contents of geography being taught in a traditional way, focused on memorizing and classifying elements, causing students to lose interest in something so important in their daily lives. After all, Geography deals with reality, the environment in which individuals find themselves and, there-

fore, is characterized by bringing to light our experiences and everything that is around us.

In this context, Lacoste was already signaling the need to include citizens in the dynamics of events, at all scales, in order to understand them.

In order to help citizens where they live to become aware of the fundamental causes that determine the worsening of the contradictions they directly suffer, it is first necessary to analyze these contradictions in concrete and precise terms, as they manifest themselves at the local level, in workplaces and everyday life, without forgetting the ecological conditions, which are often a factor in their worsening. It is then possible to show precisely that these local contradictions, which can be completely exceptional, stem from a "regional" situation of wider spatial complexes that are characterized by contradictions, which should be taken into account in more abstract and general terms. It is then possible to move on to national and international analysis, where the contradictions must be expressed at an increasingly advanced level of abstraction, while remaining solidly linked to the analysis of contradictions at the regional and local level, of which people have, at least in part, concrete experience (Lacoste, 1988, p. 95).

In general, the importance of the dimensions of geographical discussions is not discussed. It is the science of criticality and this is how it should be understood and taught. Currently, there is an attempt to reduce the scope of geography due to its critical nature; it is not in the interest of public authorities¹ for young people to become critical thinkers and actors in society. Allied to this are the large capitalist corporations that are looking for and investing in public education to become increasingly technical, thus meeting the demand for specialized, low-skilled and cheap labor.

It is well known that certain geographical themes require abstraction and prior knowledge in order to be developed. However, the context of Brazilian education has made it difficult for a long time to implement diversified methodologies, as they require more resources. Another important factor is that there were often no professionals trained in the specific area, especially in places further away from the capitals, which meant that subjects that were "easier" to teach were "chosen" and those that required more theoretical and practical input from the teacher were excluded from the planning.

This reality lasted for many years, gradually changing. From the first decade of the 21st century, the federal policy of internalizing public universities brought higher education courses, especially undergraduate courses, to many previously isolated places.

Even so, it is not difficult to see geography teaching being marginalized and reduced to a mere exposition of content. For Lacoste, the so-called "teachers' geography" that refuses epistemological reflection needs to be combated. In his words, "we need another Geography that is a theory of spatial sets and a praxis of the articulation of different levels of analysis" (Lacoste, 1988, p. 94).

In this way, the role of the geography teacher is essential for the development of teaching that prioritizes the formation of the individual at all levels and in all senses. Geography teaching plays an important role in the formation of the citizen. The teacher is the mediator between knowledge and the student. Based on this, according to Vlach (2003), it is up to the geography teacher to define or redefine certain teaching stages:

^{1.} The New High School clearly demonstrates this intention, a learning model that reduces the workload of common core curriculum subjects, such as Geography, and inserts new diversified core curriculum components. In practice, Geography classes have been reduced from 2 classes a week to 1, with a consequent reduction in syllabus content.

(1) the methodological approach to teaching Geography that will guide their work in the classroom; (2) the curriculum content, paying attention to changes and innovations in (and on) the world; (3) the resources (starting with the textbook), and the teaching procedures for using them from the perspective of a mediator of knowledge; (4) out-of-class activities, ranging from going to the cinema to studying the environment in the community (or region); and valuing dialogic language, because it is in the dialogue between teacher and student that the exchange between learning and teaching takes place, so that learning to learn brings both into the investigation of the "new world" that is emerging at the beginning of the 21st century (Vlach, 2003, p. 11). 11).

In this sense, it is worth highlighting the last topic mentioned by Vlach: out-of-class activities, especially field classes. According to Pin (2014), field classes in natural environments can lead to the debate of different ideas and the triggering of new cognitive conflicts. In this way, the teacher's work can benefit from the possibility of organically interrelating the senses to the knowledge worked on in these environments, for example, allowing students to relive knowledge from their experiences outside of school.

Field classes as part of the Study of the Environment (Pontuschka, Paganelli; Cacete, 2007) within Geography teaching are shown to be a positive methodology, capable of bringing students closer to the object studied, this object being the very environment in which they are inserted. From this study it is possible to promote reflection on their reality, correlating the geographical content with their experiences, in other words, with the knowledge they have already built up.

In fact, the didactic use of field classes in Geography teaching contributes positively to the construction of concepts relevant to the geographical dimensions of space-time and society-nature, boosting cognitive and scientific gains for the student. Gains relating to the social and affective dimensions are also acquired, providing students with improved self-esteem and a sense of personal and collective responsibility in terms of building citizenship (Costa *et al.*, 2014).

Similarly, non-formal teaching spaces are attractive alternatives in the learning process (Flôr *et al.*, 2016). In addition, they are a motivating space for students to become active subjects of their learning, as they will be able to relate theory to practice in an interdisciplinary way during the field trip, as well as having a broader view of geographical science (Kennedy *et al.*, 2018). This also opens up the possibility of creating new conceptions based on what has been experienced, providing autonomy and transforming them into subjects of the educational process (Freire, 1996).

Fieldwork has long been used to gain a better understanding of geographical space and its transformations. As Geography advanced, new fields of the discipline, such as geology, geomorphology, population, among others, incorporated fieldwork into their methods of analysis. In this way, Geography is characterized by discussing a variety of themes, even though it is only one discipline, giving teachers the possibility of using different materials for each theme, resulting in a more enjoyable lesson (Oliveira, 2019).

Fieldwork as a teaching methodology is capable of making learning more meaningful and integrating geographical content, as well as studying the environment as an interdisciplinary methodology (Pontuschka, 2013; Lopes; Pontuschka, 2009), breaking with fragmented teaching (Radtke, 2019). Pontuschka (2004) points out that any place chosen for the study of the environment can reflect Geography, as long as one knows how to dialogue with the landscape and perceive the problems that exist there for those who are part of the place, always relating what can be verified to the student's daily life.

INTEGRATED LANDSCAPE ANALYSIS IN THE STUDY OF GEOGRAPHY

Considering that the teaching/learning process in Geography requires an integrated approach to geographical space, Landscape, as a synthesis of this whole, is materialized in space and has an evolutionary, temporal and spatial history. This topic therefore takes a look at the landscape in geographical studies.

Geography is a broad science whose etymological meaning is the study of the Earth and its phenomena, the geographical space in all its perspectives (De La Blache, 2001). Springer (2010, p.159) points out that Geography is made up of the dimensions of society, nature, space and time, where nature is "a key concept within each culture (society), making it possible, through it, to better understand the social and socio-natural relationships that characterize them".

Landscape is one of the categories for analyzing geographical space and has therefore always been part of the field of study of Geography, with nuances from different historical and cultural contexts of the relationship between society and nature. Landscapes are reflections of spatial dynamics (Brito; Ferreira, 2011). Its concept is polysemic, and brings with it a variety of meanings and content, but it was in the context of romanticism, as a cultural movement, that the concept of landscape was based on its formation in Geography, because observation was also experimentation, which allowed knowledge to be achieved and led to reflection. For Kant, it was nature that represented beauty and not the work of art and, in this way, Physical Geography would be the revelation of natural beauty (Vitte, 2007, p. 74).

According to Christofoletti (1976), discussions about what landscape is began in German geography with the concept of "Landschaft", for which nature could be conceived of as visible. This concept is more of an artistic

conception, based on observation. Brito and Ferreira (2011) complement the information on the formation of this concept and point out that its construction was influenced by the German, French, Russian, North American and national schools, pointing to different landscapes and different results. These authors go further and point out the variety of approaches, conceptions and aspects that have been incorporated into the concept. Sometimes static, sometimes dynamic, abstract, as a result of the interaction between capital and labor, and sometimes holistic.

Historically, landscape has been seen as an expression of the relationship between nature and culture, based on the work and techniques that society produced. But landscape cannot be seen in this dualistic way, even though it is intentionally thought of as a concept of totality. Totality cannot be achieved by separating nature and culture, nor space from time.

In general, landscape has always been associated with the visible, cultural appreciation, but always surrounded by different methods and concepts, and under different schools of thought. Thus, little by little, human activity over time has come to be interpreted beyond description. According to Salgueiro (2001), landscape came to occupy a prominent place in Geography when it was established as a scientific discipline in Germany in the 19th century, but the concept was still imprecise.

As geography became more specialized and branched out, the concept of landscape also changed and the terms natural landscape, cultural landscape and forest landscape emerged, as seen in the works of Otto Schlüter (1872-1952) (Claval, 1999; Capel, 1982 *apud* Vitte, 2007). However, for some geographers, landscape already had an "integrative concept", as it manifested the interactions between the physical elements of nature/landscape and human groups, and there may even be very few natural landscapes in the world (Salgueiro, 2001, p. 42).

From the 1970s onwards, there was a noticeable growth in discussions about the landscape. At this time, man's relationship with nature and man with man, based on domination and irrational use of resources, began to cause a constant imbalance in the environment and became the target of concern. Man's relationship with nature becomes an object of study; in other words, landscapes can be analyzed. In any case, there is still a naturalist tradition on the one hand, which understands landscape from an ecological perspective, and on the other, the so-called humanist geographers, for whom "landscape is mainly a mental construction based on perception and experience in the territory" (Salgueiro, 2001, p. 44).

As well as the variety of concepts, the methodological aspects of landscape analysis are also diverse. Bertrand, seeking to integrate different methodologies, proposed the GTP paradigm (Geosystem-Territory-Landscape), bringing contemporary conceptual contributions. This is made up of three hybrid categories or three times: geosystem time, territory time and landscape time, considering the complexity of relations between society and the environment based on the interaction of landscape, territory and geosystem, with a systemic view, i.e. not isolated. In this case, two interactive coordinates are taken into account: material coordinates and the investigation of landscape actors. In any case, what can be seen in current landscape studies is the appreciation of the subjective aspects of people's relationship with the environment (Brito; Ferreira 2011).

Landscape, therefore, is the result of the dynamics involved in man's actions in geographical space. It is possible to analyze through the landscape the different relationships that man establishes with the environment and, in different contexts, we will have different landscapes, all of which can be analyzed.

For Milton Santos (1988), the landscape goes beyond what is visible, beyond what our vision can reach, it is perception and also contemplates our senses, and is always heterogeneous. According to Ab'Saber, based on the concept of physiology, landscape is the result of the relationship between past and present processes. Through the actions of society, space is created and transformed, giving rise to different landscapes. Landscape is therefore a representation of space (Vitte, 2007)

Still on this subject, Christofoletti (1976) conceptualizes landscape "as being composed of geographical elements that articulate with each other, whose elements may be from the natural, human, social or economic domain" (Christofoletti, 1976, p. 11). In the current context, the concept of landscape, as a synthesizing category of geographical analysis, must encompass environmental and aesthetic issues, with man and his actions, direct or indirect, in space (Brito; Ferreira 2011)

As an object of Geography, the landscape reiterates the concept of a science of synthesis when it is seen as a combination of diverse phenomena, based on the description of the elements of the landscape from the perspective of morphological analysis and the functioning of the landscape, its dynamics. From the perspective of studying the physiology of the landscape, the elements that form it interact, maintaining the link between the natural and the social, as in the words of Moraes "Geography is a science of contact between the domain of nature and that of humanity" (Moraes, 2005, p. 7).

Paul Vidal de La Blache highlighted the object of Geography as the relationship between man and nature, from the perspective of landscape, and emphasized "man as an active being, who suffers the influence of the environment, but who acts on it, transforming it". He also included field observation and landscape induction as one of the approaches to ge-

ographical analysis (Moraes, 2005, p. 24). In the same vein, in humanist geography, Dardel points out that "Landscape presupposes the presence of man, even where it takes the form of absence. It speaks of a world where man realizes his existence as a circumscribed and busy presence" (Dardel, 2015, p. 30). Thus, man is in the landscape and is part of it, interacting with and influencing its aspects.

According to Ruy Moreira (2009), Geography was for a long time defined only as knowledge dedicated to describing the landscape. However, theoretical-quantitative geography has sought to analyze the patterns of organization of space. Thus, in order to analyze the landscape, geographers synthesize knowledge from other sciences, use cartographic bases of the earth's surface and much more. The landscape is thus an "inexhaustible source" for the researcher, drawing on the natural sciences and the social sciences (Claval, 2014).

The study of landscape requires systematization. As Baldin (2021) points out:

Studying the local landscape throughout the first and second cycles means learning to observe and recognize the phenomena that define it and its characteristics; describing, representing, comparing and constructing explanations, however approximate and subjective, of the relationships that are imprinted and expressed there (Baldin, 2021, p. 7).

From this, the emergence of geographical science is marked by the study of facts on the spot, "in loco". Alexander Von Humboldt, one of the fathers of Geography, during his travels around the world, endeavored to collect data on vegetation, climate, population, among others, in search of knowledge of the spatial dynamics of these places based on the description, analysis and interpretation of phenomena (Neves, 2015 *apud* Oliveira, 2019).

In the 1970s, two important documents were published pointing to the mode of production and consumption as the cause of

major environmental problems, thus placing man at the center of the environmental context. One of these documents, published in 1972, was "The Limits to Growth", also known as the "Meadows Report". In the midst of all the discussions and criticism, this document made it clear that "a new way of life and a new relationship between human beings and the world" was needed (Dickmann, 2021, p. 55). In this way, the fragmentation of knowledge that should be conceived in its integral totality for the understanding of environmental issues, which is the relationship between man, nature and culture, became evident.

It is therefore necessary to rethink man's place in the environment. Man must be seen as an integral part of nature and not as a superior being separated from it, for whom nature is just a supplier of resources. According to Leff (2012, apud Da Cruz; Sola, 2017, p. 209), it is precisely this domineering thinking that is responsible for the crisis of civilization and, for Quintas (2009, apud Da Cruz; Sola, 2017, p. 209), this crisis of society is the same environmental crisis of a social order.

This highlights the need to consider the whole and no longer the parts, to make an integrated analysis in order to understand environmental issues. Ludwig Von Bertalanffy's General Systems Theory (GST), proposed in 1950, "in which the whole is always greater than the sum of the parts" (Diniz *et al.*, 2015, p. 52).

In the 1960s, Viktor Sotchava brought GST into the field of geography. In addition to the relationship between living beings, geosystemic theory considers the physical environment, historical evolution and human activities. Thus, even within the scope of Physical Geography, GST is concerned with anthropogenic interference in the environment (Diniz *et al.*, 2015).

Within the geosystem discussions, the integrated analysis of the landscape in Georges Bertrand's studies in the 1960s stands out. The landscape must be seen holistically, in a global context, from its marks over time and space, with a great influence from Tricart on the time-space scale (Diniz *et al.*, 2015; Bernardino *et al.*, 2018).

For the study of landscape, Bertrand conceptualizes it as:

Landscape is not the simple addition of disparate geographical elements. It is, in a given portion of space, the result of the dynamic and therefore unstable combination of physical, biological and anthropic elements which, reacting dialectically to one another, make the landscape a unique and inseparable whole, in perpetual evolution (Bertrand, 1968, p. 141).

In his text, Bertrand clarifies that it is not just a question of the "natural" landscape, but also of the landscape that includes the consequences of human action, in other words, the total, integrated landscape. He also established the taxonomy, dynamics, typology and cartography of landscapes as a problem of method (Bertrand, 1968).

According to Bertrand, the evolution of the interaction of all the components of the landscape makes up an integrated dynamic, because the landscape is a global entity, whose systems can be individualized and characterized based on the predominance of an element and, using this criterion, be classified into geomorphological and anthropic systems, (Diniz *et al.*, 2015).

MEDIA STUDY

When discussing the dynamics and history of the integrated study of the landscape, one realizes the link between this method and the Study of the Environment, which is an inter-disciplinary teaching method based on the study of the landscape in a critical and investigative way through fieldwork as an analysis of a given reality.

In order to approach the application of field classes, it is necessary to initially present the context in which this methodology emerged in teaching and also in the science of geography. This work focuses on the debate on Critical Geography for teaching in basic education as a way of broadening environmental education. It is through criticality that it is possible to expand one's horizons and analyze one's surroundings, placing oneself as a subject of the environment, being able to interact with it, being influenced by it and perceiving oneself as capable of modifying it. Beyond knowledge of the elements of the environment is an understanding of the power of social interactions in its construction.

Based on this assumption, it is necessary to discuss what Environmental Studies is and its relationship with field classes. According to Lopes and Pontuschka (2009), the Study of the Environment represents a teaching and research methodology that aims to "provide students and teachers with direct contact with a given reality, any environment, rural or urban, which is dedicated to study and investigate" (Lopes and Pontuschka, 2009, p. 174).

The study of the environment emerged in Brazilian education in the 20th century under the influence of Francisco Ferrer y Guardia (1859-1909) and Célestin Freinet (1896-1966), of the Modern School, aiming to bring learning closer to students' daily lives, based on proximity to the reality being studied, whether natural or social (Radke, 2017; Pontuschka, 2004)

The context in which this methodological proposal emerged is linked to the anarchist movement promoted by workers, who aimed for an education geared towards rational teaching based on "observations, discussions and the formation of a critical spirit about the surrounding environment or the social context around the school" (Pontuschka, 2004 apud Lopes and Pontuschka, 2009, p. 176). However, this teaching proposal was only

consolidated in the 1960s by the New School movement (Pontuschka, 2004 *apud* Lopes and Pontuschka, 2009 p. 176).

Considering the pedagogical proposals of the Study of the Environment, these were the first activities in basic education that came close to current fieldwork, and today they are related to what we know as Libertarian Pedagogy (Radtke, 2017). Fieldwork comprises one of the stages of the Study of the Environment, considering that it goes beyond that (Pontuschka, Paganelli; Cacete, 2007). Therefore, when we refer to Environmental Studies, we mean that this is an interdisciplinary methodology, based on collective work and research, systematized in stages with a defined objective. In this way, this method seeks to understand the dynamics of a space, considering that it will be in constant transformation and thus, in this process of discovery, the student produces new knowledge (Pontuschka, Paganelli; Cacete, 2007)

These authors point out that during field research, the various experiences lived by the researcher must be recorded in various ways, whether through interviews, which are associated with observations, transcription and categorization of the interviewee's speeches and the return to the classroom, the latter being the elucidation that the field classes correspond to only one stage of the Study of the Environment

It is clear, therefore, that the process of education is broad, complex and requires systematization for its development, and that all the possibilities of experiences for its realization must be explored, after all, students are diverse beings who are constantly developing.

It should be noted that Environmental Studies are capable of instigating a critical and investigative look at a reality that sometimes goes unnoticed, based on dynamic and meaningful teaching and learning processes, as students recognize themselves as actors in the environment in which they are inserted. However, they cannot be confused with any experience outside the classroom. This methodology must be preceded by systematic planning and be based on clear objectives of theoretical deepening and critical reflection for its formative and educational value (Lopes; Pontuschka, 2009).

Venturi (2010) points to three essential stages in the research process - the office, the field and the laboratory - all of which are interconnected. Therefore, the office must be preceded by fieldwork in order to plan what will be done, and the laboratory is necessary for systematizing the information obtained in the field. For the author, it is in the field that primary data is generated and secondary data is ratified and/or improved, based on real experiments.

In general, what has to be clear and objective is the systematization of the field, even bearing in mind that this moment is subject to the dynamics of the reality present there and is therefore not static, it can generate new ideas. Finally, it's in the laboratory that you deal with what was collected/observed/described in the field and planned in the office.

These three stages are in fact very important for scientific research. Chart 1 summarizes what can be done in each of them, according to Venturi (2010).

Pontuschka, Paganelli and Cacete (2007) also systematized the stages for field research, but based on Environmental Studies, as a methodology for Basic Education, for understanding social, physical and biological space. These authors defined five moments and their respective actions for an environmental study project (Chart 2):

- 1 Meeting social subjects;
- 2 Preliminary visit and choice of route;
- 3 Planning;
- 4 Preparation of the field notebook e;
- 5 Field research that reveals life

Stages	Description
Office	Mapping and bibliographic survey of the study area, definition of observation points according to the theme and objectives of the research, establishing contact with interlocutors (guides, community leaders), arranging meetings for interviews, checking the safety conditions of the stopping points, consulting weather forecasts, obtaining permits to enter Conservation Units.
Field	Generation of primary data (soil collection, marking of points for a location map and topographic profile, application of a questionnaire, interviews, photographs of land use), confirmation or adjustment of secondary data (analysis of data based on existing data in bibliographies).
Laboratory	Analyzing soil samples, tabulating questionnaires, transcribing interviews, improving photographs, editing videos, correcting cartographic products based on empirical observations, simulating phenomena (testing soil porosity and permeability, simulating water balance, testing climatological and geomorphological models).

Box1 - Stages of scientific research through fieldwork. **Source:** Adapted from Venturi, 2010.

Moments	Actions
1 - Meeting social subjects	Moment number 1 begins at the school, where the subjects are interested in carrying out research, with a view to interdisciplinary training for the student, given that the Environmental Study method involves dialog and collective work. The place to be studied is chosen. It is up to Geography to inform colleagues about the possibilities and limits of studying the chosen place.
2 - Preliminary visit and choice of route	Collective choice of the location to be studied based on the educational curriculum, with prior preparation, definition of the tools and tasks to be carried out. Consideration should be given to travel time, the type of transport needed, the duration of the field lesson, the bibliography and authors needed for the discussions.
3 - Planning	Objectives of the Study of the Environment that should be raised in the classroom: a) Consolidation of an interdisciplinary teaching method called study of the environment, in which research and teaching interact; b) verification of testimonies from different times and spaces: transformations and permanence; c) survey of social subjects to be contacted for interviews; d) observations to be made in the different places listed for the production of sources and documents: written notes, drawings, photographs and films; e) sharing of the different perspectives present in the fieldwork through the different views of the social subjects involved in the project; f) collection of data and information specific to the place, its inhabitants and the relationships they maintain with other spaces; g) emergence of disciplinary and interdisciplinary curricular content to be covered in the program; h) production of evaluation instruments in a participatory work; i) creation of teaching resources based on the records and; j) dissemination of the processes and the result.
4 - Drawing up the field notebook	A survey of the instruments needed, the information-gathering practices, the different records (interviews, drawings, places) to be photographed, the distribution of responsibilities and tasks for each person or group. The field notebook can contain: the cover, field research script, texts, interviews,
5- Field research reveals life	A moment of dialog with the space, with history, with people, with colleagues and their knowledge.

Box2 - Moments and actions for an environmental study project. **Source:** Adapted from Pontuschka, Paganelli and Cacete, 2007.

In any case, what is clear is the need to plan the field class based on dialog within the school unit so that this activity is truly collaborative and interdisciplinary, following up with a survey of possible needs and actions to be carried out during the field.

Due to the variety of topics covered in geography in teacher training, it is not uncommon to see fragmentation in the teaching and learning process, specifically during field lessons. Generally, the sub-areas of Geography, such as regional, human, physical and instrumental, are seen as distinct and treated as such. This fragmentation tends to be reproduced in basic education teaching. The difficulties in making integrated/holistic analyses of a given space are evident, and the physical-natural field is often distinguished from the social field.

Although fieldwork has always been present in Geography, in recent years we have seen a reduction in this practice associated with teaching due to advances in technology, which provide contact with digitalized information and resources that enable remote research, from an office for example. There are also difficulties encountered by basic education teachers in systematizing this technique so that it can be applied satisfactorily.

According to Cavalcanti (2011), changes in society, such as in politics, the economy and the sciences, have affected scientific knowledge. In the field of Geography, there was an overemphasis on philosophical, epistemological, theoretical, methodological and critical aspects, in order for its scientific legitimacy to be recognized. Census data sources, thematic maps, aerial photographs and satellite images were overvalued as new ways of understanding space and gathering new information.

Thus, fieldwork as a methodology for observing and understanding the landscape is no longer as necessary (Cavalcanti, 2011). However, according to the author, this was only a phase, and there has been an increase in the number of publications on this subject in recent years. It should be noted here that the technology and resources available on spatial analysis are allies in fieldwork, as well as the information provided as a database on a given location, since, as part of fieldwork, there is a need to validate the data collected in the field with that already available in order to produce increasingly substantial information.

Still on the difficulties encountered by basic education teachers in carrying out field classes, especially in public schools. In addition to the precariousness of resources for travel and pedagogical and methodological difficulties in knowing how to systematize educational practice, there are also difficulties in terms of the analytical approach to the lesson with regard to the physical-natural components of the space, where these are inseparable from the social aspects and need to be worked on as such (Morais; Lima, 2018 apud Radtke, 2019; Radtke, 2019). Thus, Radtke (2019) stresses the importance of these difficulties relating to pedagogical and content knowledge being worked on from teacher training courses, so that it is perpetuated for basic education teachers from the early years.

Thinking about the formative role of the school, of developing a critical sense in the student and recognizing themselves as agents in space, it is of fundamental importance to discuss didactic knowledge for teaching and learning in the development of field classes, so that complex issues are worked on in an integrative and meaningful way for the student. Field classes are therefore important for overcoming geographical fragmentation, as they integrate theory and practice, local and global scale, research and teaching in favor of meaningful learning, when all these aspects are also considered by the teacher (Radtke, 2019)

In this context, field classes, as a stage in Environmental Studies, provide a meaningful look at reality, at students' daily lives, because they start from their context, to promote knowledge that is specific to Geography, being worked on in an integrated way (Pontuschka, 2013; Lopes; Pontuschka, 2009, Radke, 2019).

Considering students' experiences and context is part of an educational policy aimed at making education meaningful. The Common National Curriculum Base (BNCC) already provides for considering students' "lives and experiences" in the humanities and, including the Geography curriculum component, contributing to the development of activities such as "fieldwork, interviews, observation, the development of analysis and argumentation, in order to enhance discoveries and stimulate creative and critical thinking" (Brasil, 2018, p. 355).

Geography, whether as a science or a subject in basic education, must overcome the antagonism between its physical and social components. An integrated analysis of the landscape is necessary to understand spatial complexity and placing students in this context is essential for a meaningful and liberating education. We need to recognize and know our role in society, as well as reframing our spatial conceptions. Thus, field classes are a good way of facilitating this process.

When reporting on field classes as an educational methodology for overcoming the fragmentation of geographical knowledge, it is also worth highlighting their role as a significant methodology capable of arousing student interest in the subject and overcoming difficulties encountered in the apprehension of geographical content.

Geography plays an important role in basic education in promoting an investigative sense in students through research, while at the same time being a provocative practice, stimulating curiosity, reflection and protagonism. As explained in the BNCC, "based on observation, direct experiences, the development of various forms of expression, recording and problematization, these practices involve, especially, fieldwork". (BNCC, 2018, p. 369)

REFERENCES

ANDRADE, Manuel Correia de. **Geograia**: ciência da sociedade. /Manuel Correia de Andrade. - Recife: Ed. Universitária da FPE, 2008. 246 p.

ANGELIN, I R. de C. **Atributos aos diferentes tipos de educação: formal, não formal e informal**. Anais do II Colóquios de Política e Gestão da Educação - n.2, 2021, p.220-232.

BALDIN, Rafael. **SOBRE O CONCEITO DE PAISAGEM GEOGRÁFICA**. Paisag. Ambiente: Ensaios, São Paulo, v. 32, n. 47, e180223, 2021.

BERTRAND, G. Paisagem e Geografia Física Global: esboço metodológico. 1968. Cruz, Olga (trad.). **Cadernos de Ciências da Terra.** São Paulo, USP-IGEOG, nº 43, 1972. R. RA 'E GA, Curitiba, n. 8, p. 141-152, 2004. Editora UFPR.

BERNARDINO SANTOS DE MEDEIROS, D.; OLIVEIRA, A. M. de; DINIZ, M. T. M. **Georges Bertrand e a Análise Integrada da Paisagem em Geografia**. Revista de Geociências do Nordeste, [S. l.], v. 4, n. 2, p. 63–80, 2018. DOI: 10.21680/2447-3359.2018v4 n2ID15244. Disponível em: https://periodicos.ufrn.br/revistadoregne/article/view/15244. Acesso em: 17 jun. 2022.

BRASIL. Ministério da Educação. Base Nacional Comum Curricular. Brasília, 2018.

BRASIL. Ministério da Educação. Resolução n. 02 de 15 de junho de 2012. Estabelece as **Diretrizes Curriculares Nacionais** para a Educação Ambiental. Brasília, DF, 15 de jun. 2012.

BRABANT, J.M. **Crise da Geografia, crise da escola**. In: OLIVEIRA, A.U. de (org.). Para onde vai o ensino de Geografia? São Paulo, Contexto, 1989. p.15-23.

BRITTO, M. C. de FERREIRA, C. de C. M. Paisagem e as diferentes abordagens geográficas. **Revista de Geografia** - PPGEO. v.2, n.1, p.1-10, 2011.

CAVALCANTE, Lana de Souza. A Geografia escolar e a cidade: Ensaios sobre o ensino de Geografia para a vida urbana cotidiana. Campinas, SP: Papirus, 2008.

CHRISTOFOLETTI, A. As características da nova Geografia. GEOGRAFIA: v. 1, n. 1 (1976)

CLAVAL, Paul. A Geografia Cultural. Florianópolis: Editora da UFSC, 1999.

CLAVAL, Paul. **Epistemologia da Geografia**. Paul Claval; tradução Margareth de Castro Afeche Pimenta, Joana Afeche Pimenta. 2. ed. rev. - Florianópolis: Ed. da UFSC, 2014.

COSTA, E.S.A. et al. Trilhas interpretativas na área verde da escola como estratégia de ensino para aprendizagem de conceitos ecológicos. **Revista da SBEnBIO**, v.7, p. 1820- 1831, 2014.

COSTA, Rita de Cássia Marques; MOREIRA, Cileya de Fátima Neves. Fundamentos metodológicos e prática do ensino de Geografia. 1ª ed., Instituto Superior de Teologia Aplicada. Sobral, 2016.

DA CRUZ, Camila Aparecida; SOLA, Fernanda. **As unidades de Conservação na perspectiva da Educação Ambiental**. Ambiente & Educação-Revista de Educação Ambiental, 22(2): 208-227, 2017.

DARDEL, Éric. **O homem e a terra: natureza da realidade geográfica**. Tradução Werther Holzer. São Paulo: Perspectiva, 2015. 159p.

DE LA BLACHE, Paul Vidal. O princípio da Geografia Geral. GEOgraphia, v. 3, n. 6, p. 93-100, 2001.

DINIZ, Marco Tulio Mendonça. Proposta de classificação das paisagens integradas. **Revista de Geociências do Nordeste**, v. 1, n. 1, p. 50-65, 2015.

DICKMANN, Ivo. Educação Ambiental Freiriana / Ivo Dickmann, Sonia Maria Marchiorato Carneiro. – Chapecó: Livrologia, 2021. (Coleção Paulo Freire; 05).

FLÔR, P.R.C et al. A trilha ecológica como estratégia interdisciplinar na prática docente em ciências da natureza. Anais I CONAPESC... Campina Grande: Realize Editora, 2016. Disponível em: https://www.editorarealize.com.br/artigo/visualizar/17764. Acesso em: 20 mar. 2021.

FREIRE, Paulo. Pedagogia do oprimido. 17ª ed. Rio de Janeiro: Paz e Terra, 1987.

FREIRE, Paulo. **Pedagogia da autonomia**: Saberes Necessários à Prática educativa. 25ª ed. São Paulo: Paz e Terra, 1996. – (Coleção Leitura).

KENNEDY, Francisco et al. (Orgs). A consciência prática e o ensino de Geografia: lugares da prática na formação docente – tensões e convergências. Recife, PE: EDUFPE, 2018.

LACOSTE, Yves. A Geografia - isso serve, em primeiro lugar, para fazer a guerra. Sabotagem, 1988.

LOPES, Claudivan Sanches; PONTUSCHKA, Nídia Nacib. Estudo do meio: teoria e prática. Geografia (Londrina), v. 18, n. 2, p. 173-191, 2009.

MORAES, Antonio Carlos Robert. Geografia: Pequena História Crítica. 20. ed., São Paulo: Annablume, 2005.

MOREIRA, M. A. Teorias de aprendizagem. São Paulo: EDU, 1999.

MOREIRA, M. A. **APRENDIZAGEM SIGNIFICATIVA:** da visão clássica à visão crítica Conferência de encerramento do V Encontro Internacional sobre Aprendizagem Significativa, Madrid, Espanha, setembro de 2006 e do I Encuentro Nacional sobre Enseñanza de la Matemática, Tandil, Argentina, abril de 2007.

MOREIRA, M. A. **APRENDIZAGEM SIGNIFICATIVA: UM CONCEITO SUBJACENTE.** Aprendizagem Significativa em Revista/Meaningful Learning Review V1(3), pp. 25-46, 2011. Instituto de Física da UFRGS Porto Alegre.

MOREIRA, Ruy. O que é Geografia. 2ª Edição, revista e atualizada. Editoração: Coletivo Território Livre. 2009.

OLIVEIRA, M. T. F. de. A importância do trabalho de campo para o processo de ensino-aprendizagem na Geografia. 2019. 42f. Trabalho de conclusão de curso (Curso de Geografia do Centro de Formação de Professores de Cajazeiras – PB). UNIVERSIDADE FEDERAL DE CAMPINA GRANDE – UFCG, Cajazeiras, 2019.

PIN, José Renato de Oliveira. **As trilhas ecológicas como proposta pedagógica em espaços educativos não formais.** 2014. 161f. Dissertação (Mestrado em Educação em Ciências e Matemática). Instituto Federal do Espírito Santo, Vitória, 2014.

PONTUSCHKA, Nídia Nacib; PAGANELLI, Tomoko Iyda; CACETE, Núria Hanglei. Para ensinar e aprender Geografia. São Paulo: Cortez, 2007.

PONTUSCHKA, Nídia Nacib. O conceito de Estudo do Meio transforma-se... em tempos diferentes, em escolas diferentes, com professores diferentes. In:. VESENTINI, José William (org). O Ensino de Geografia no século XXI. Campinas/SP: Papirus, 7ed, 2013. (p. 254 -259).

PONTUSCHKA, Nídia Nacib. Estudo do meio, interdisciplinaridade, ação pedagógica. In: ENCONTRO NACIONAL DE GEÓGRAFOS, 13, 2004 Goiânia. Anais... Goiânia, GO, 2004.

RADTKE, Domitila Theil. Estudo do meio: uma herança da Geografia anarquista e da pedagogia libertária - contribuições de Francesc Ferrer i Guàrdia e Élisée Reclus. 2017. Dissertação (Mestrado em Geografia) – Instituto de Ciências Humanas, Universidade Federal de Pelotas, Pelotas, 2017.

RADTKE, Domitila Theil. As contribuições do trabalho de campo para o ensino de Geografia – o papel da formação de professores. In: Revista ParaOndel?, Edição Especial -III . Porto Alegre, v.12 n.2, p.81-88, 2019. Disponível em: http://seer.ufrgs.br/paraonde. Acesso em: 02 jul. 2022.

SALES, Ione dos Santos. **Aulas de campo como recurso didático para o ensino de Geografia na educação básica**. 2024.130f. Dissertação (Mestrado Profissional em Rede Nacional para o Ensino das Ciências Ambientais – PROFCIAMB) Universidade Estadual de Feira de Santana, Pró-Reitoria de Pesquisa e Pós-Graduação, Feira de Santana, 2024.

SALGUEIRO, Teresa. Barata. Paisagem e Geografia. Finisterra, XXXVI, 72, p. 37-53, 2001.

SANTOS, Milton. Metamorfoses do espaço habitado, fundamentos Teórico e metodológico da Geografia. Hucitec. São Paulo. 1988.

SANTOS FILHO, Milton. O processo de urbanização no Oeste baiano. Recife, SUDENE - DPG. PSU - URB, 1989.

SANTOS, Neimara Costa De Lima. A trajetória do ensino de Geografia no brasil. Anais CONADIS... Campina Grande: Realize Editora, 2018. Disponível em: https://editorarealize.com.br/artigo/visualizar/50491. Acesso em: 29 jun. 2022.

SPRINGER, Kalina Salaib. A CONCEPÇÃO DE NATUREZA NA GEOGRAFIA (the nature's concept in geography). **Mercator**, v. 9, n. 18, p. 159 a 170-159 a 170, 2010.

VASCONCELOS, Maria Lucia Marcondes Carvalho; BRITO, Regina Helena Pires. Conceitos de educação em Paulo Freire. 6. ed. São Paulo: Vozes, 2014.

VENTURI, L. A. B. A **Técnica e a Observação na Pesquisa**. In: VENTURI, L. A. B. (Org.) Práticas de Campos, Laboratório e Sala de Aula. São Paulo: Editora Sarandi, 2010.

VITTE, Antonio Carlos. O desenvolvimento do conceito de paisagem e a sua inserção na geografia física. **Mercator-Revista de Geografia da UFC**, v. 6, n. 11, p. 71-78, 2007.

VLACH, Vânia. Ensino de Geografia no início do século XXI: Desafios e perspectivas. Mérida (México): **Anais do Encuentro de Geógrafos de América Latina**, 2003. Disponívelem:http://observatoriogeograficoamericalatina.org.mx/egal9/Teoriaymetodo/Teoricos/04.pdf> Acesso em: 29 jun.2022.

VLACH, Vânia. O papel do ensino de Geografia na compreensão de problemas do mundo atual. In: **IX Colóquio Internacional de Geocrítica**: los problemas del mundo actual. Soluciones y alternativas desde la Geografia y las ciências sociales, Porto Alegre, 28 de mayo-1de junio, *2007*. Disponível em: http://www.ub.edu/geocrit/9porto/vlach.htm. Acesso em: 29 jun.2022.