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ENVIRONMENTAL EDUCATION IN BRAZIL: CRITICISM ABOUT THE TRANSVERSALITY OF ENVIRONMENTAL EDUCATION

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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: Thinking about meeting the needs of the present without compromising environmental for future resources generations is the praxis (action-reflectionaction) of dealing with the environment. If the act of teaching brings learning a consequence, most probably the as Environmental Education, if inserted in the educational levels, would bring about changes in fact, in the way of life and socially aware the learners. If we do not see certain changes today, we conclude that in some way the educational practice of environmental awareness is not functional. It requires a deeper analysis on the means and paths for an effectively qualitative environmental education. Thinking about the environment today means thinking in a prospective and complex way, introducing new variables into the ways of conceiving the globalized world, nature, society, knowledge and mainly the modalities of social relations, in order to act in a solidarity and fraternal way, the search for a new model of development.

**Keywords.** Environmental Education, transversality, Sustainability.

# INTRODUCTION

In Brazil, Environmental Education only became known from 1970 onwards, through major events that aimed to discuss existing environmental issues on the planet. Carvalho (2001, p. 298) states that it was only in 1980 that Brazil began to set up its own space for Environmental Education.

But, until today, how has this EA been? It is known that in Brazil there are laws that apply and laws that do not, and the law alone does not solve anything, depending on political, social and economic actions so that they can be applied in a practical way. However, the reality experienced in Universities today is totally contradictory to Federal Law 9795/99, where several factors hinder the application of EE such as: the historical departmentalization of knowledge, the lack of qualified professionals for the insertion of EE in Universities and little interest from Universities in the sense of incorporating environmental issues into their curricular and institutional structures.

What has happened in Brazil is the creation of EE disciplines, mainly in Biology, Geography and natural sciences courses, leaving the other courses unrelated to EE, thus making it impossible for future educators to work in a transversal way, when insertion of the same in Elementary and Secondary Education. Education, as a means of sensitizing people to environmental problems and holding them accountable as interactive beings, capable of positively or negatively modifying the environment in which they live, is an effective way of instilling people's perception, making them reflect on an ecologically just ethic.

Educating for citizenship involves the teacher's task of favoring the student, in an adequate way, the understanding of his reality, evidencing essential values for the good life in society, enabling him to act in the school routine and outside it. Environmental Education is of paramount importance for the formation of citizens concerned with the environment, however, the educational process stipulated by the law contradicts reality, as the teaching-learning process is systemic.

As the professionals who acquire knowledge in the academies who will later be educators of Elementary, Middle and even Higher Education will be able to apply EE transversally if in their academic training they have never heard of Environmental Education.

# THEORETICAL REFERENCE

non-formal However, environmental education, with regard to solid waste, enables the exercise of citizenship and motivates people to participate in the system through selective collection. The school is identified as the way to give meaning and relevance to effect a behavioral change in society, breaking paradigms. However, in order to have a sustainable process, the participation social, governmental, institutional of non-governmental institutions and (communities, churches, companies, etc.) is necessary, developing a real sustainability in this process. (ABDALA; RODRIGUES; ANDRADE, p. 4, 2007)

There are great challenges to face when looking for actions to improve living conditions in the world. One of them is related to the change of attitudes in the interaction with the basic patrimony for the human life or basic conditions for a good survival. In this perspective, it is possible to observe that this problem has been increasing for a long time, given that this increase is proportional to the growth of the population, and this approach is worrying.

The problematization and understanding of the consequences of changes allow us as something produced by the search for jobs, in certain situations, the historical context has been differentiating different forms of destruction, from the consequences that unemployment has been causing, so a plan was designed where the debate in school can include in the educational dimension, to understand what is happening with our planet.

In this context, it can be seen that the definitions complement each other, because in this concept deforestation in the Amazon is given as a process through which people learn how the Amazon forest works, how they depend on it and how they affect it by acting in a different way. inappropriate with nature.

Furthermore, this concept must awaken in individuals a critical understanding that elevates values and develops participatory attitudes so that there is an improvement in the quality of life, without the occurrence of environmental disasters, causing the imbalance of nature.

This way, Environmental Education in regular education is a prerequisite for the formation of citizens who are aware of environmental weaknesses and the real alternatives for overcoming ecological problems. It is essential that each student develop their potential and adopt personal attitudes and constructive social behaviors, contributing to the construction of a socially just society, in a healthy environment. For this, Environmental Education must be approached in a systematic and transversal way, at all levels of education, ensuring the presence of the environmental dimension in an interdisciplinary way in the curricula of the different subjects and school activities.

According to the PCN's (2001, p.30) "it is important that the teacher works with the objective of developing in the students, a critical attitude towards reality, information and values conveyed by the media and those brought from home [...]".

> To change the economic model, the political model, as it is practiced, will be useless if a civic model is not installed. (...) Society is more than the economy. Society is also ideology, culture, religion, institutions and organizations, formal and informal, territory, all these entities as active forces. (...) The interference of other entities that form the body of the nation color, governs or deforms or simply modifies the intentions of economic planning, superimposing social reality (SANTOS, 1987, apud BORTOLOZZI; PEREZ FILHO, 1994, p. 42).

Environmental Education works as a support for the formation of the individual,

as it opens a range of diversity of knowledge in which he will become a natural being and, in turn, a social being. Having knowledge of the facts that are happening on our planet due to the action of man on it is one of the tasks that the school must demonstrate to its students. It is this school that we want where knowledge, information, teaching-learning comes above all and the student really learns the importance of each subject.

> The desired school is the one that allows the active participation of the student, in the first instance, and later, of the entire community in the construction of knowledge, seeking to find alternative solutions for their particular environmental problem. A school in which the criteria of integration and interdisciplinary become a reality, based on participatory projects that allow the development of values and attitudes in individuals not only, but around them, that influence the construction of a concept of environmental management. [...] (PROFORMAR, 2004, p. 48-49).

It is understood that Environmental Education is important in the process of educational formation, in the reformulation of pedagogical and didactic activities, in the formation of attitudes and values. It is seen as the solution to current problems, as it allows each citizen to understand their actions with the medium, based on reflective and critical knowledge of their reality.

In Bortolozzi's opinion; Perez Filho (1994), environmental education in Elementary and High School must be more practical and critical, no longer the one that educators apply only to sensitize the student to environmental problems, not offering alternatives to new ways of thinking and use of natural resources.

Educational action in schools must be based not only on alarm, but on mitigating actions for the unleashed problems, which make students think, question interventions, including those that can be worked through transversally. This action must not increase distances, but bring people closer to the environment.

This way, since man is the great producer of changes in the environment, and, on the other hand, having the education process as a propelling vehicle to effect behavioral changes in human beings, it becomes opportune and intelligent to use methodologies aimed at environmental education, aiming at the transformation of society with an effective paradigm shift in the feeling related to consumerism and environmental depredation in society. The main focus on environmental education must be reported leading to the awareness of communities in search of sustainable economic development, improving the quality of life of living beings and the preservation of the planet's ecosystems (ABDALA; RODRIGUES; ANDRADE, p. 10, 2007).

It is necessary to encourage the school to awaken reflections on environmental issues beyond their biological, chemical and physical dimensions. As it differs from traditional education, structured in terms of discipline, presenting itself as transversal knowledge, Environmental Education innovates; but it also bears certain methodological and functional difficulties.

It is often seen that in elementary education, it happens through some extracurricular projects, characterized by a voluntarist and peripheral dynamics to the school system (CARVALHO, 1998).

The point is to establish EE with the knowledge of looking at nature, understanding it scientifically with creativity and interdisciplinarity.

> There is a great need to emphasize environmental education focused on the awareness of individuals, recovering the concept of integral education and a democratic, ethical and solidary pedagogy, updated with ecological contributions.

Environmental education must work primarily with human integrity. The simple fact that human beings learn to save, recycle, share, preserve and accept differences can represent a revolution in the body of the social system (GADOTTI, 2000, p.30).

In this conception, the author (2000, p.21), we are all teachers and students faced with the task of relearning these values, with a deep existential flavor that unites nature and culture.

Care is the basis for environmental educational practice, according to Boff (1996). From this, it is understood that the educational practice at school can start from caring for the closest environment, respecting school employees, throwing garbage in the right place, not wasting water, not tearing books or notebook pages. There are numerous important actions to be worked on, involving the interests and needs not only of humanity in general, but also of the school community.

It is necessary that the school proposes to work with attitudes, with the formation of values, with the teaching and learning of skills and procedures that lead to awareness of the importance of the environment. The teacher's role is essential in the transformation of students when they build in them a critical attitude towards the "values" conveyed by the media and those brought from home.

According to Loureiro (2004), the construction of a proposal for an emancipatory and critical Environmental Education, for a model of sustainable development committed to the exercise of citizenship, requires the explanation of assumptions that must base its practice, not distancing itself from the themes foreseen in the PCN's, transversality.

For this, emancipatory Environmental Education is combined from a matrix that comprises education as an element of social transformation inspired by dialogue, the exercise of citizenship, the strengthening of subjects, the creation of collective spaces for establishing the rules of social interaction, in overcoming forms of capitalist domination, in understanding the world in its complexity and life in its entirety (LOUREIRO, 2004, p. 15).

Studies show that there are several factors that make it difficult to develop an environmentally critical awareness. We can mention some of them: a) the lack of domain and knowledge about science and technologies in environmental education systems; b) immediacy of results; c) threat to economic interests; d) apathy and insensitivity to the negative effects of the education system; e) limitation of professors in the work environment; f) lack of didactic material, subsidies and appropriate equipment; g) lack of research and governmental programs oriented towards the theme of environmental education.

The great challenge of teaching that permeates environmental education is to be the mediator of a new pattern of society, based on critical and revised political, social, economic, cultural and environmental aspects. This implies taking the students to an understanding that their immediate reality suffers the reflexes of the social reality, at the same time that the individual actions will be added to the actions of other men composing a social fabric.

> Consequently, educational strategies must be developed that seek the involvement of all social actors with the issue of environmental education, contributing to the strengthening, rooting and decentralization of community programs and actions, encouraging teamwork, strengthening interpersonal relationships and fostering the exchange of experiences and local initiatives. (ABDALA; RODRIGUES; ANDRADE, p. 8, 2007).

It is important to highlight that the educational process is not built from the acquisition of information, but, above all, through active learning, understood as the construction of new meanings and connections for life. It is a process that involves transformation in the learner subject and changes his identity and attitude towards the world. The internalization of an emancipatory ecologist ideology is not just a rational conviction about the urgency of the environmental crisis, but, above all, it implies an affective link with the ethical and aesthetic values of this worldview.

Cross-cutting themes often include socioenvironmental problems with practical approaches that generally seek solutions to problems, passing through the process of individual and collective awareness.

The main transversal themes mentioned by the PCNs (BRASIL, 1997; 1998) are: ethics, environment, work and consumption.

Busquets (1998, p.35), understands that transversal themes must be the center of curriculum concerns, due to their importance for social transformations. She defends that school contents must not be treated as an end, but as a means for reflection on major social problems.

> The transversal themes are intended to overcome some perverse effects – those of which current society has become aware that, along with others of great validity, we have inherited from traditional culture. Must these questions occupy a secondary place in teaching just because they were not part of the concerns of classical science? If we did that, we would be giving more importance to the concerns of the past than to those of the present, that is, we would be living and educating with a backward look. (BUSQUETS, 1998, p. 36).

For Araújo (1998, p. 104), the discussion about transversal themes in education arises from questions made by some politically organized groups in several countries about the role of the school within a plural and globalized society, and the priorities that we must address in class. This way, questions arise about how and what is relevant to be taught in school.

Why are some school subjects, such as Portuguese and Mathematics, more privileged? What is the origin of the content? Would there be other possibilities to think about school?

In this perspective Busquets (1998, p.36) states that:

Introducing the most acute concerns of today's society into teaching does not mean displacing curricular subjects, although the validity and adequacy of many of its contents will undoubtedly have to be revised, in some cases because they are of dubious formative value and in others because against ¬clearly state the principles underlying the cross-cutting themes.

It is necessary to approach the transversal themes in the curricula of the disciplines. It is important to highlight that the discussions that permeate the transversal themes can and must be linked to the contents that compose them, that is, the themes, the cultural elements and the social elements (DARIDO et al. 2001).

For the PCN's, Environmental Education is considered a cross-cutting theme. It is intended to put the school in tune with the current realities of society and the needs that students face on a day-to-day basis.

The subjects covered for the first four grades of Elementary School are: Portuguese Language, Mathematics, Natural Sciences, History, Geography, Art and Physical Education, all these areas of knowledge must be available to Environmental Education in individual training.

The PCNs justify the Transversal Themes taking into account that:

education for citizenship requires that social issues be presented for students' learning and reflection, seeking a didactic treatment that contemplates their complexity and dynamics, giving them the same importance as conventional areas. (Brazil, 2004, p. 25). According to Lucini (1995, p. 29) Transversal Themes are educational contents essentially defined by three key characteristics:

> They are contents that refer to reality and social problems. [...]. They are related, fundamentally, to values and attitudes. [...]. These are contents that will be developed within all Curricular Areas as part of them, inserted in them, not as an artificial addendum, but as a consubstantial part of their planning and of the teaching and learning processes that arise from them, serving as a bridge with social realities and problems.

The environmental issue associated with other areas of knowledge can be worked from thematic axes and/or school projects that give students the opportunity to get to know the theme and involve them in solving problems of their realities.

## METHODOLOGY

To give scientific support to the work, the bibliographic research was of paramount importance because it gives theoretical sustainability to the construction of knowledge regarding the exacerbated and unconscious degradation of many, in addition to giving a minimum knowledge about reality.

In understanding the of such Minayo, (1994, representations, p.21), says that qualitative research answers very particular questions. It is concerned, in the social sciences, with a level of reality that cannot be quantified. In other words, it works with the universe of meanings, motives, aspirations, beliefs, values and attitudes, which corresponds to a deeper space of relationships, processes and phenomena that cannot be reduced to the operationalization of variables. Such research emphasizes that "social representations as common sense, ideas, images, conceptions and worldview that social actors have about reality are an

important material for research within the Social Sciences"

In this context, through participant observation, we sought to collect data on the involvement and interaction existing between the different social actors, making use of participatory research in this study. Neto (1994, p.59) "declares that the participant observation technique is carried out through the researcher's direct contact with the observed phenomenon to obtain information about the reality of social actors in their own contexts".

The author also emphasizes that "the importance of this technique lies in the fact that we can capture a variety of situations or phenomena that are not obtained through questions, since, directly observed in reality itself, they convey the most imponderable and elusive in real life." (p. 59-60).

## **RESULTS AND DISCUSSION**

EE will never reach its objective of transforming man in his attitudes and behaviors if these nuances are not resolved and the "ecological subjects" as Carvalho (2001, p72-75) treats will never be able to exercise the social practice of education for and with the environment.

Although Environmental Education has not permeated the scope of Higher Education in a satisfactory way, the insertion of the environmental dimension in the academic environment goes through a continuous process of reformulation of environmental knowledge, which also implies the reformulation of the university's performance both internally and internally. externally in the face of environmental complexities.

Thinking about the university environmentally is to make the relationship of this thinking with society, providing the transformation for which Environmental Education was designed. University institutions are invited to assume the application of EE in a reflective and critical position in order to build a way of thinking and acting that transform traditional scientific paradigms and promote new knowledge and integration of different knowledge, with the participation of society.

But how can we think about this, if EE is not inserted in the academic context, how can we think about children who are aware and concerned about the environment and the problems associated with them, in addition to developing reflective and active capacity in relation to knowledge, ability, attitude, motivation and commitment to work individually and collectively in the search for solutions to existing problems and the prevention of new ones as stipulated by the Environmental Education goal of the Belgrade Charter?

It is noted, however, that the university has a fundamental role in the application of EE in formal and non-formal education. It is these educators who seek knowledge in the academies that, in turn, will multiply such knowledge in elementary, secondary and higher education in joint action with society.

Of course, there are difficulties for knowledge related to Environmental Education, but as previously mentioned, the education process is systemic. If our future teachers in their learning process are never introduced to EA, logically our children will not learn in school.

Children are the targets inside the school, and the other people who are outside it, must have access to the information necessary to understand a subject of great relevance, a role that society as a whole must interact, whether the Universities with research projects and extension, whether any type of social or environmental movement, and the public power, which, in addition to being a supervisory and normative agent, must provide information that makes it possible to understand the true meaning of Environmental Education.

An education, as a means of sensitizing people to environmental problems and holding them accountable as interactive beings, capable of positively and negatively modifying the environment in which they live in order to instigate their gaze, making them reflect on their action. ecologically balanced.

The school, after the family, is the institution that will complement critical knowledge in students. Their participation in this process involves social, political, ethical, moral and intellectual aspects. The school must and can exert a beneficial influence on the educational life of each citizen, since it is through it that social rights and duties will be known. It would be ideal to start working on EE from the base, that is, from Elementary School. It is at this stage that the child arrives anxious, curious and with a fertile mind to acquire new knowledge. It will be up to the school to develop environmental awareness in the student. It is up to the school to show the importance of the links between education and life, as well as the evolution of the degradation of the environment, working for an implementation of the Brazilian educational policy. Whether the child is informed from an early age about the importance.

As never before in history, common destiny calls us to seek a new beginning. Such renewal is the promise of the principles of the "Earth Charter" agenda 21. To fulfill this promise, we must commit to adopting and promoting the values and objectives of the Charter as we advocate (BOFF, 2000), below:

- Respect and care for the community of life;

- Care for the community of life with

understanding, compassion and love;

- Build democratic societies that are just, participatory, sustainable and peaceful;

- Guarantee the bounty and beauty of the Earth for current and future generations;

- Protect and restore the integrity of the Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life;

- Preventing damage to the environment as the best method of environmental protection and when knowledge is limited, take the path of prudence;

- Adopt patterns of production, consumption and reproduction that protect the Earth's regenerative capacities, human rights and community well-being;

- Advance the study of ecological sustainability and promote open exchange and a broad application of acquired knowledge;

- Eradicating poverty as an ethical, social, economic and environmental imperative;

- Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner;

- Affirm gender equality and equity as prerequisites for sustainable development and ensure universal access to education, health care and economic opportunity;

- To defend without discrimination the rights of all people to a natural and social environment capable of ensuring human dignity, bodily health and spiritual well-being, paying particular attention to the rights of indigenous peoples and minorities;

- Strengthening democratic institutions at all levels and providing them with transparency and accountability in the exercise of government, inclusive participation in decision-making and access to justice; - Integrate into formal education and lifelong learning the knowledge, values and skills necessary for a sustainable way of life;

- Treat all living beings with respect and consideration;

- Promote a culture of tolerance, non-violence and peace.

Environmental awareness is currently structured on real and reliable facts, whose importance has been accepted even by the business classes of developing countries.

When we coexist, when we live together, when we communicate with the most immediate realities, we need to feel our fundamental connection with this totality that is the world, because our existential way permeates our entire being, where we need the ability to maintain the multidimensional balance between man and man. nature, reinforcing the sense of mutual belonging.

According to Illich (1989):

The crisis can turn into a catastrophe of apocalyptic dimensions, but it can also be a unique chance to define a convivial use of technological instruments in the service of the preservation of the Planet, the wellbeing of humanity and cooperation between peoples.

"Special care deserves our Planet Earth, we only have it to live and live in" (BOFF,1999, p.133).

The author also states that since the beginning of industrialization, in the 18th century, the world population has grown more than 8 (eight) times; only production, based on the exploitation of nature, grew more than 100 (one hundred) times. The worsening of this situation was to increase the threat and, consequently, the need for special care for the future of the Earth.

#### FINAL CONSIDERATIONS

Man in his historical and developmental process excelled in developing himself without taking into account the consequences of his impactful and disturbing actions towards the environment, unbalancing his sources of energy and production in such an intense, degrading and catastrophic way, not allowing the resilience that nature needs to restore itself and keep itself alive.

The research was important because it allowed the unveiling of reality so that the understanding of such problem is necessary as an alternative to present proposals that provide conditions for a balanced relationship between man and nature, understanding that their position in the face of interventions is whatever. the ecosystem, and whether negative or positive, will affect their own lives.

It is therefore essential for individuals to awaken a new understanding and sensitivity to the degradation of the environment and the consequences of this process for the quality of human life, for the future of the species as a whole, paying attention to the socalled ecological conscience. In these terms, Environmental Education is a very important tool, considering that, through access to information, it provides the opportunity for changes in behaviors necessary for an act that meets the common good, or in the formation of a new being, of an ecological subject, who prime for development that guarantees the enjoyment of the benefits that nature can offer, enabling the guarantee of enjoyment for future generations.

#### REFERENCES

ABDALA. Willer José dos Santos. RODRIGUES, Francisco Mendes, ANDRADE João Bosco Ladislau educação ambiental e coleta seletiva: importância e contextualização no mundo atual travessias número 02 revistatravessias@gmail.com ISSN 1982-5935, 2007. Disponível em: <a href="http://erevista.unioeste.br/index.php/travessias/search/authors/view?firstName=Jo%C3%A3o%20">http://erevista.unioeste.br/index.php/travessias/search/authors/view?firstName=Jo%C3%A3o%20</a> Bosco&middleName=&lastName=Ladislau%20de%20Andrade&affiliation=Ladislau%20de%20Andrade> Acesso em: Acesso em 28 de junho de 2014.

A CARTA DE BELGRADO. 1. Uma estrutura global para a Educação Ambiental. 13 a 22 de outubro de 1975. Disponível em: <htp://www.ufpa.br/npadc/gpeea/DocsEA/A%20Carta%20de% 20Belgrado.pdf>. Acesso em 2 de maio de 2014

BOFF, Leonardo. Ethos Mundial: um consenso mínimo entre os humanos. Brasília: Letraviva, 2000.

\_\_\_\_\_. Saber Cuidar: ética do humano – compaixão pela terra. Petrópolis, RJ: Vozes, 1999.

\_\_\_\_\_. Dignitas terrae – ecologia: grito da terra, grito dos pobres. São Paulo: Ática, 1996.

BRASIL. **Constituição da República Federativa do Brasil**: promulgada em 5 de outubro de 1998, 35. ed. São Paulo: Ed. Saraiva, 2005.

\_\_\_\_\_. Ministério do Meio Ambiente (MMA). A Educação Ambiental: informe geral. Brasília: Diretoria de Educação Ambiental, 2000.

\_\_\_\_\_. Lei nº 9.795, de 27 abril de 1999. Dispõe sobre a Educação Ambiental, institui a Política Nacional de Educação Ambiental e dá outras providências. **Diário Oficial {da} República Federativa do Brasil**, Brasília, DF, 27 abr. 1999.

\_\_\_\_\_. Secretaria de Educação Fundamental. Parâmetros Curriculares Nacionais: Meio Ambiente e Saúde. Brasília, 1997.

CAPRA, F. A teia da vida. São Paulo. Cultrix, 1996.

\_\_\_\_\_. O ponto de mutação. São Paulo. Cultrix, 1989.

CARVALHO, I. C. M. **A Invenção ecológica**: narrativas e trajetórias da Educação Ambiental no Brasil. Porto Alegre: UFRGS, 2001.

\_\_\_\_\_. **Cadernos de Educação Ambiental**. Em direção ao mundo da vida: Interdisciplinaridade e Educação Ambiental. Brasília: Ipê – Instituto de pesquisas Ecológicas, 1998.

DIAS, Genebalde Freire. Educação Ambiental: princípios e práticas. 9ª. ed - São Paulo: Gaia, 2004.

GADOTTI, Moacir. Perspectivas atuais da educação. Porto Alegre: Artes Médicas, 2000.

LEFF, E. Saber ambiental: sustentabilidade, racionalidade, complexidade, poder.Rio de Janeiro: Vozes, 2001.

LOUREIRO, C.F.B. Educação ambiental e movimentos sociais na construção da cidadania ecológica e planetária. Educação ambiental: repensando o espaço da cidadania. São Paulo: Cortez Editora, 2002, cap. 3, p.69-107

MELO, A.; TAVARES F.; RODRIGUES F. Gestão Ambiental e desenvolvimento sustentável. Manaus: UEA, 2006.

MIRANDA, Alair dos Anjos Silva de et al. Educação Ambiental: estudos numa perspectiva para uma sociedade sustentável no município de Manaus. Manaus: EDUA, 2004.

MORIN, Edgar. **O método 5**: a humanidade da humanidade/ Edgar Morin; trad. Jurimar Machado da Silva. 2ª ed. Porto Alegre: Sulina, 2005

\_\_\_\_\_. Saberes globais e saberes locais: o olhar transdisciplinar. Rio de Janeiro: Garamond, 2002.

\_\_\_\_\_. Cultura de massas no século XX: o espírito do tempo - II: necrose. Rio de Janeiro: Forense-Universitária, 1975.

REIGOTA, Marcos. O que é Educação Ambiental. 2ª ed. São Paulo: Brasiliense, 2009.

\_\_\_\_\_. Os ecologistas. Santa Cruz do Sul: EDUNISC, 1999.

\_\_\_\_\_. A floresta e a escola. São Paulo: Cartaz Editora, 1998.

SATO, Michele. Educação Ambiental. São Carlos, RiMa, 2004.

\_\_\_\_\_. Formação em Educação Ambiental –da escola à comunidade. In: **Panorama da educação ambiental no ensino fundamental**. Brasília: MEC; SEF, 2001.

SANTOS, Milton. O espaço do cidadão. São Paulo: Nobel, Técnica espaço tempo. Globalização e meio técnico - 1996.

VICTORINO, C. J. A. (2000) Canibais da Natureza:educação ambiental, limites e qualidades de vida. Petrópolis: Editora Vozes.