

Ecoexperience learning: learning strategy for critical environmental education*

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Abstract

The following article has the objective to diffuse Ecoexperience Learning as a Critical Environmental Education (CEE). Its learning proposal has been applied in an interventional research which constitutes in PhD thesis subsidies. This article argues that Critical Environmental Education conceptions are able to be epistemologically enriched when intertwined along with: Affectivity which is a determinant of one's relation with the world; Ecoexperiences being assumptions to attentive experiences within one's environment; Emancipation which can set forth stimulating ways of learnings which will guide students in making decisions with critical sense. Results reveal that Ecoexperience Learning promoted the eco-training of students when dealing with such ecoexperience proposals which made this research a milestone in their life. An emerging battle cry in name of saving and preserving land for cultural purposes as well as for means of survival has at last been heard. It is concluded that the objectives were achieved since data source in its broad and varied presentations of expression validate Ecoexperience Learning as a Critical Environmental Education learning strategy.

Keywords: Learning Strategy. Critical Environmental Education. Ecoexperience Learning.

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Pedagogia ecovivencial: proposta pedagógica de educação ambiental crítica

Resumo

O presente artigo tem por objetivo difundir a 'Pedagogia Ecovivencial' enquanto estratégia pedagógica de Educação Ambiental Crítica (EAC). Aplicada em pesquisa de intervenção que se constituiu em subsídio de tese de doutoramento, argumenta que concepções de EAC podem ser enriquecidas epistemologicamente quando entrelaçadas à: *Afetividade* como determinantes de outra relação com o mundo; *Ecovivencialidade* como pressuposto para uma vivência atenta com o seu meio; *Emancipação* como norteadora de aprendizagens estimuladoras de tomadas de decisão com senso crítico. Como resultados, constata-se que a Pedagogia Ecovivencial promoveu a ecoformação nos sujeitos diante das ecovivências propostas, trazendo para a pesquisa o momento histórico em que vivem, a voz emergente de luta na terra pela preservação da sua cultura e pela fonte de sustento e de vida. Conclui-se que os objetivos foram alcançados, visto que as diferentes fontes de dados, nas suas variadas formas de expressão, convalidam a Pedagogia Ecovivencial enquanto estratégia pedagógica de EAC.

Palavras-chave: Estratégia Pedagógica. Educação Ambiental Crítica. Pedagogia Ecovivencial.

Pedagogía ecovivencial: propuesta pedagógica de educación ambiental crítica

Resumen

El presente artículo tiene por objetivo difundir la 'Pedagogía Ecovivencial' como propuesta pedagógica de Educación Ambiental Crítica. Aplicada en investigación de intervención que se constituyó en subsidio de tesis de doctorado, argumenta que las concepciones de Educación Ambiental Crítica pueden ser enriquecidas epistemológicamente cuando se entrelazan a la: *Afectividad* como determinantes de otra relación con el mundo; *Ecovivencia* como presupuesto para una vivencia atenta con su medio; *Emancipación* como orientadora de aprendizajes que estimulan la toma de decisión con sentido crítico. Como resultados, se constató que la Pedagogía Ecovivencial promovió La ecoformación de los sujetos ante las ecovivencias propuestas, trayendo para la investigación el momento histórico en que viven, la voz emergente de lucha en la tierra por la preservación de su cultura y por la fuente de sustento y de vida. Se concluyó que los objetivos se ha alcanzado, ya que las diferentes fuentes de datos, en sus variadas formas de expresión, convalidan la Pedagogía Ecovivencial como estrategia pedagógica de Educación Ambiental Crítica.

Palabras clave: Estrategia Pedagógica. Educación Ambiental Crítica. Pedagogía Ecovivencial.



1 Introduction

Mankind has currently taken to reflect on the need of changes as to actually see and understand nature, society and organizations as well as education. Discussions are based on preserving the present whereas we look upon sustainability for generations to come. For Maffesoli (2005), it is premium relations which come before so many other issues which have been diagnosed on our planet. In parallel to such reflections, the paradigm of culture has been fragmented and labeled anthropocentric, outlining and feeding on the crisis of values and sustaining societies where the lack of distribution of assets and services prevail. Is mankind sinking in insights as Capra (2011, 2012) has highlighted?, or is it actually an environmental pseudo-crisis? Whatever answer that might pop up to these questionings, we shall certainly come across methodological and theoretical fragility, according to MAKNAMARA; MAHFOUD (2009).

Incidentally, plenty has been said and done in the past decades by environmental activism, however the values which were defended and daily behavior are at so many times in disagreement. In the case of Environmental Education (EE), the question is if it has been transforming enough, if it transports perception and awareness, if it points out what changes should be made concerning postures and taking up new qualitatively behavior which can be applied to ecological citizenship. After all, one of the principal challenges of EE is to develop a critical perspective (LAYRARGUES; LIMA, 2014). Currently, there is a diversity of suggested denominations concerning EE: Humanist, Conservationist, Systematic, Problematic, Naturalist, Scientific, Moral, Bi-regionalist, Sustainable, Critical, Vital, Ethnographic, Feminist, among other possibilities in contexts, both Nationally and internationally (SAUVÉ, 2005).

What is perceived in fact is that many of EE practices are based on conservationist assumptions, assuming conceptions which carry a study concerning preservation of natural environment, isolating the day to day sphere which makes up global space, despite theoretic affiliations assumed. This practice is way too present in informal educational circles, means of communication and in public EE policies, due to the conception of untouched nature plus man's control and domination which continue strongly rooted until this very day and make us only think of manufacturing with awareness. (LOUREIRO, 2011).

Another aspect which deserves being registered here is all the observation time taken when teaching and referring to the behavior of those being taught who originally come from rural areas. When exposed to environmental activities, these learners show resourcefulness, pleasure, bonding and mainly their relation with the soil. Such behavior was not observed in urban learners at the start. Very much on the contrary, these urban learners showed just how awkward they found dealing with soil and how annoying it was having to walk on it and in it, as well as having to handle it. Comparing both attitudes in the same group of learners made teachers ponder on how important it is to stimulate and nurture eco-experiences in environments offering healthy, natural and no restrained teaching.

Feeling at loss of such approach which embraces such complexity and takes into account thematic elements such as affectivity, living ecologically, emancipation, un-



dertaking efforts to research, experience and understand the intertwining of practical experiences within teaching methods. That being said, the challenge which was taken on in this text is to disseminate a teaching proposal in CEE – Critical Environmental Education, applied for the very first time in an intervening research which was developed in the city of Bananeiras in the state of Paraíba, Brazil, between 2011 – 2013. This research was carried out on doctoral thesis grants from Federal University of Paraíba in the year 2014.

2 *Ecoexperience teaching sources*

Partaking with Bachelard (2013, p. 158) where the autor states that “energy comes from the source and imagination never quite takes tributaries into account”, epistemological sources were selected for teaching eco-experiences. When dealing with emotion, he anchored on ‘A Biologia do Amor’ - The Biology of Love (MATURANA, 2001, 2008, 2009, 2011). For the aspect of ecoexperience, he based himself on Eco-Teaching (GUTIERREZ; PRADO, 2008). As for emancipation, Critical Conception of Education (FREIRE) became theoretical data. All above aspects will be duly explained in the following three topics.

2.1 *Pleasureable Work In Enchanted Gardens¹*

In order to contemplate the thematic aspects of emotions, theoretical input from Maturana's teachings and his ‘A Biologia do Amor’ - The Biologia of Love - were used. In the authors viewpoint, love is the emotion that constitutes the domain of actions attitudes so that human beings can be “*Homo Sapiens, Homo sapiens aggressans, Homo sapiens arrogans or Homo sapiens amans*” (2001, p. 197). In this way, emotions define the relationship with the world and determine the way life is lived, how one is legitimately accepted in living together with others, or in other words, a fundamental posture for a sustainable society.

That being said, it is duly understood that educational environments are spaces of actions, reflection and working together which are based on emotions. One of the has to do with the strict spatial of and teaching practices which focus on the technical means of transmitting contents based on the principle of how much is being learnt, contemplating only the an educational system in the result, in a culture of fragmentation (GENTILLI, 1995), where healthy social relations are denied while teaching with loving² and caring is not part of the picture.

1 Enchanted gardens is how possible spaces for learning were metaphorically named due to their affectivity, loving and caring way of showering so much ecoteaching.

2 Freire states that love and care come about when embracing the sense of educating which is recovered when younger generations are embraced and brought into our culture. Education itself alone is an act of love, a feeling which makes men and women see one another as unfinished beings, therefore the feel free open themselves to learning. It is not impossible for the world to announce the act of creation and recreation, if there is no love for founding it. In this way, in the author's viewpoint, the teaching relation should be touched by affectivity, love and care, as well as dialoguing which offers opportunities to develop education as a practice of freedom and humanization.



Thus, the concept of EE defended here anchors itself in the critical view of education which seeks transformations in the students involved in the process as well as the changes that they see themselves adopting new postures and behavior. To do so, two aspects for changes: the relation of students with one another which is scarred by the lack of solidarity, cooperation and respect; their relation with the environment that is ruled by the mercantilist-exploratory logic, consuming and these are individualist relations with no connection with, with others and with the universe as a whole through³ few feel, very little shared and much less lived/experienced.

Regarding this topic, Maturana and Rzepka (2008, p. 85) state that “we do not take part in an evolutionary history which is centered on aggression as emotion guide as of what is to become of us but we are able to cultivate aggression”, therefore life is nothing more than living in a great big workshop. If in one workshop the culture is solidarity, the individuals shall live ethically amongst themselves and shall learn to be solidary by demonstrating how well they are socially connected. On the other hand, if the culture is competition, the attendees shall not live ethically and therefore shall learn to compete and deny the importance of being social, therefore, there shall be no collaboration. As such, ethical principles not only take into account reasoning or common sense but also have to do with emotion and the concern for the effects of our actions on others.

If schools, as social institutions, have an explicit objective towards affective dimension besides developing physical, cognitive potentials, we can only inquire in which “workshop” are students and society actually living. How can we expect ethical feelings for caring, watching over others, cooperation and solidarity if one was educated and continues being educated in a way of feeling without actually feeling (MATURANA; REZEPKA, 2008) and forgetting that we belong to the present of a loving and caring history and not one of either oppression or competition. From this understanding comes an urgent need of paying more attention to the atmosphere within educational environments and to what emerges from the participants. This brings on the need of creating spaces which are emotionally fit and healthy which stimulate ecoexperience⁴ - one of the principles of Ecoexperience Teaching, and that they be more receptive, loving and less competitive. Spaces where one is accepted as he/she really is; spaces used for correcting what is done wrong and not to correct the way one is (MATURANA; VERDEN-ZOLLER, 2011); spaces where the ambience inspires students to learn and where one can do/make things, build and reflect on their own, a different atmosphere which offers solidarity and cooperation.

3 Pineau (2008a, 2008b, 2010) defends human development as being tripolar: between the individual's actions with himself/herself (SELF FORMATION), the individual's actions with others (HETERO TRAINING FORMATION) and the individual's actions towards environment (ECO FORMATION).

4 One of the aspects of eco-living teaching comes from two words *oikos* (which means home in Greek) and *livingness* which is relevant to the way of living and means feeling or experimenting something with intensity (SCHULZ, 2014).



2.2 Moving On With A Purpose

In order to base the ecoexperience theme which has been specified here in the article as intense livingness with ones own environment in the sense of developing attitudes of observing the real necessities of analysing interpretations and reflecting towards a collective action and individualist transformation. (SCHULZ, 2014), Gutierrez and Prado Eco Teaching was chosen. The choice was made due to the function involving

a teaching method which promotes the sense of learning from our daily routine, and this does not only happen by the truths that are transmitted and the speeches given, but mainly by the experiences being lived by the participants (GUTIERREZ AND PRADO, 2008, p. 24).

Among its outstanding features, Eco-Teaching courses hold an every day teaching demand, considering CEE as a change of thinking in relation to quality of life associated to seeking establishments of a healthy and well balanced relationship with the context, with one another and with environment which is set in this research (SCHULZ, 2014).

To Gutierrez and Prado (2008, p. 24), “we found the meaning of progress when experiencing this very progress. Living the process of starting new progresses and not only observing these progresses. That is why it has been named democratic and solidary teaching. Therefore, the term does not come about merely from either theoretical ecological propositions or environmental activisms and media, but originates from dynamic happenings when seeking satisfactory elements to relieve or even solve diverse interests which act within society. Thus, through popular participation, it shall be based on a unique individual or group, for whomever is working on setting a direction for their lives and their day to day living, gets to acquire political power and therefore gets to participate in the construction of a civil society.

Otherwise, it will consist in what Gutierrez and Prado (2008) have named Teaching Process Demand. There are four aspects which have different focuses that must be present when proposing to develop an CEE. These focuses are the social political dimension, technical scientific dimension, teaching dimension and temporal-spatial. In the social-political dimension where each participant is asked to put his her knowledge into practice by articulating their apprehension from insights acquired from participating in situations which hold instrumental CEE characteristics. In order to provide equitable use of such techniques as well as reviews, the technical scientific dimension must be materialized by seeking solutions and feasible, possible satisfactions. When taking teaching dimension into account, one must believe it pervades all other dimensions intervined because when a need and or a problem is sensed in the objectivation of a reality to fully understand it and attribute importance to analyzing its possible causes and consequences, and finally in the proposition of positive elements. The spatial-temporal dimension is determined when it is presumed that there is no process without time because education consumes a great deal of time. An individual's or a group's historicity is not determined previously, but is done so with results from established dynamic processes which have been constructed and transformed.



Since it is possible to observe, Eco-Teaching does not simplistically claim that everything has to be redone or that new ideas should be invented. However, we must take CEE presumptions that value the reasonableness of experiences and contemplate the possibilities of changes which start at school. Eco-Teaching inserts itself as a movement in the evolution of the ecological moment as a doctrine as well as an attitude towards life. (GUTIERREZ, PRADO, 2008). According to Gadotti, (2000, p. 132) Eco-teaching intends to re-educate one's outlook and not just a new way of looking at reality. Re-education encourages the flow of ecoexperience learning which brings about collective action and individual transformation which are brought to one's lifestyle and how his/her life is lived from day to day conducted by CEE which is a teaching ecoexperience assumption.

2.3 The Emancipating Role of Critical Environmental Education – CEE

When seeking to overcome the superficiality of practices named in Environmental Education, dialogues were also established in the perspective of CEE (CARVALHO, 2004, LOUREIRO, 2000, LAYRARGUES, LIMA 2014). Therefore, experiences were defined and they also stimulated transforming and emancipating actions. In order to do so, the dimension of decision must be developed as well as that of responsibility and the struggle for fundamental ethical principles such as respect for the life of mankind and that of the animal kingdom and the lives of our rivers and forests as well. This respect should be present in every educational practice whose character is critical or liberating.

It is in this direction where we come across Freire, (2011a, 2011b, 2013 and 2014) whose vast benchmark anchors the emancipation aspect theme. Freire (2011b) states that individuals come together when they respect one another's differences and also due to the consistency of what is done as well as to what is said. As a teacher Freire not only sought out to understand educational issues within Brazilian society but within the world as well. Freire proposed an educational practice in order to solve these issues: by dialoguing, facing issues together with one another and caring about those around us. Emancipation therefore means the process of allowing others or allowing oneself to move on in an autonomous manner. In other words, it is important to not oppress and we should be thankful for education holding such a fundamental and caring role. This in return contributes to the individual being liberated from the oppressor who externally limits one's freedom. Yet, according to Freire, when emancipation is achieved, man comes closer to satisfying his wish of 'Being More Complete' so he can retrieve that sense of having humanity back.

Therefore, emancipation and freedom would be duly achieved according to the author's viewpoint due to being fully aware of this oppressing relationship where individuals struggle among different social classes which hold material assets or not. In this context, it is therefore fundamental to dig in deeper into political foundations when discussing environmental issues and detailing the commitment towards individuals who are less privileged for they are the ones who have been greatly harmed with the aggressions in local environments. These individuals who are collectively organized will therefore unveil their world in a transposition manner. They will go from naive awareness to critical awareness and will be able to transform their concrete existences by liberating



themselves. The true nature of knowledge requires one's curiosity in Freire's viewpoint. One must be the doer of the process and not the object because an active citizen cannot be made from his/her technical skills alone when dealing with ecological matters, in other words, only knowledge can do so.

Loureiro (2004, 20011) regards Paulo Freire the reference frame for educators who project the "thinking process" in rural areas, in CEE and in turn emancipating in a perspective where it is possible to name eco development in a world whose references are based on Freire's teachings. This education can be branded as popular teaching, mainly because it is applied in mass education and classrooms and directed towards social transformation which stems from humanist principles.

We can therefore state that Freire's teaching is a theory of humanization due to its dealing with relationships between people in their oppressing and dominating aspects where humanization goes against all odds and struggles against dehumanization. Both, "[...] in history, in real, concrete and objective context, allow man to draw possibilities as inconclude beings and make them aware of their inconclusion" (FREIRE, 2011b, p. 40). The dehumanization is a historical fact whereas humanization is a human vocation. Man is projected to be so much more. If the existing order does not allow so, it is not in agreement with human nature, therefore it is unfair. The path towards human emancipation by recovering its true humanization is a historical task of mankind's and is found in a social context and concrete objective involving real people and communities.

Therefore, the teaching of the oppressed could be nothing but a critique of EE, and at the same time a proposal of constructing in a different manner of understanding and practicing knowledge, learning and schooling which is CEE. How dare speak of such popular ecological teaching if not of this so called teaching of the oppressed.

Thus, the principles published by Freire, (2011b) respect and only want the learners' well being because it is understood that when reading the world of each individual as a bridge which liberates and gives autonomy to being a thinker who participates and is proactive in his/her own development which holds posture in any educational method be it a critical or liberating character.

The way of thinking about education, according to the authors who are cast in this research, agree with the strong features which are proposed in Ecoexperience Education as teaching strategies for CEE. They are inseparability between ecoexperience in the environment we are part of along with the posture of being kind towards others and at the same time having a critical view which seeks transformation and emancipation of individuals. This insight embeds concepts such as daily routine, experiences, environmental perception, sensing livingness, sustainability - for the aspect of ecoexperience, autonomy, criticality, awareness, identity, liberation - for the aspect of emancipation, lovingness, self-education, attention, eco-education, emotion, hetero-formation - for the aspect of affectivity or kindness.



3. Practicing ecoexperience teaching: methodological outlining of the intervention research

In this topic, the outlining of the intervention research was tackled (SCHULZ, 2014) as seen in Figure 01, the preparation and attention given to the steps that were given in order to “seek structurally stable soil with a strong wish in having stability” (BACHELARD, 2003, p. 244). The awareness that was developed with this model of investigation was of qualitative nature (MINAYO, 2008), sustained in Anthropological Phenomenology or based on Merleau-Ponty’s embodiment technique (MERLEAU-PONTY, 1994). The research was carried out in October 2011 and extended until May 2013. Thirteen individuals took part. Eight of them were from rural regions and five came from urban areas. All thirteen were students who were taking courses such as Teaching, Agroecology Bachelor’s Degree, Undergraduates in Agriculture and High School Technical Courses in Agriculture of the Center of Human Social and Agricultural Sciences of Universidade Federal de Paraíba (Colégio Agrícola Vidal de Negreiros – CAVN) in Bananeiras, Paraíba.

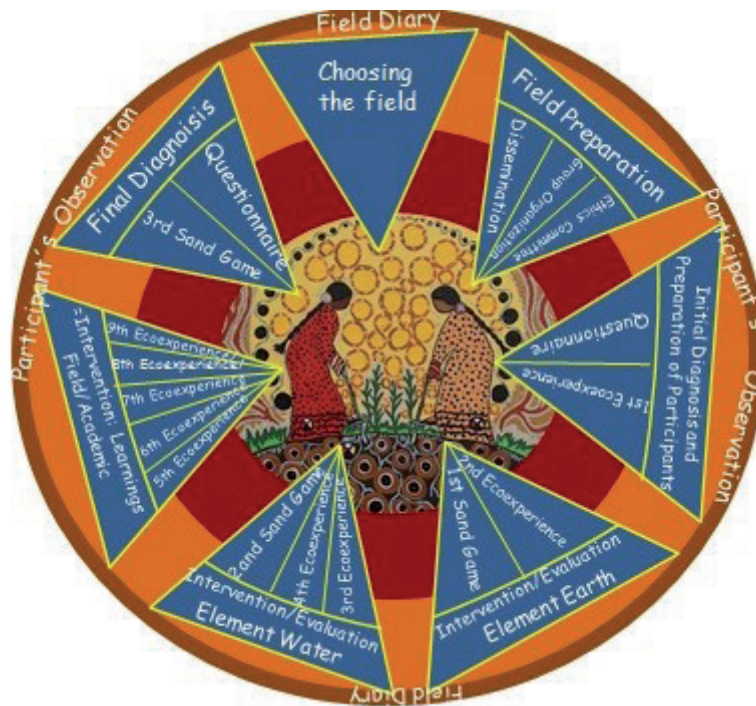
The data collection instruments used for collecting empirical material were the following: a ‘semi-open’ questionnaire, the Sandplay, field diary, monitoring by participants, recordings and photographs. The ‘semi-open’ questionnaire (LAVILLE; DIONNE, 1999), with objective and subjective questions, was applied at the beginning (initial diagnose) and at the end of the interventions (final diagnose).

Another instrument used was the Sandplay (KALFF, 1980; WEINRIB, 1993; SCOZ, 2011) as a source of generating diagnosis which monitors the affective dimension within the environment which was applied in three distinct moments (beginning, during and end). This technique was developed by Kalff (1980) in England as a therapeutic method which was incorporated in various educational areas by Cavalcanti (2010), Scoz (2011) and Schulz (2014).

The first time the Sandplay was registered was during the first encounters with the students under investigation. The objective was to obtain a diagnosis of the students’ perception regarding the earth and the problematic question: “What is the importance of the element earth to you” The application of the second Sandplay came about with the emerging topic in that period when there was a lack of rain and the beginning of the drought in the region in 2012 which lasted for many months and which was considered the worst drought in the dry and barren Northeast in recent times. Thus, the problematic question was: “How important is the element water to you”. The last application of the Sandplay occurred at the end of the ecoexperiencing which aimed at evaluating and the comprehension of the contributions of Ecoexperience Teaching for students under investigation who were asked: “What does the contribution of Ecoexperience Teaching mean to your self-formation as an individual and as a professional” When facing each one of the questions, the scenarios changed at every moment in which the individual faced new experiences and he/she was able to develop new knowledge regarding the aspects considered relevant during the encounters.



Figure 01: Ecoexperience Teaching – Teaching Methodology Outlining Scheme of Research



(Research data, 2014).

Many ecoexperiences were also developed with the participating students under investigation assuming that understanding the world cannot be achieved through mere meanings of the subjects shared while working together as well as from their experiences, their exchanging of glances, their own practice within that environment (SCHULZ, 2013).

The ecoexperiences were planned and applied at the request of demands which arose during the process of interaction among participating subjects, therefore it is a true reflection of a unique style of inquiring and communicating which goes on during the whole investigation. Three axes were organized:

- **Ecoexperiences with the element Earth:** - Who are we What are we after Presentation Awareness; - Yielding to the beauties of the earth : preparing the soil and the agroecological mandala; - The self-reflexivity and the element earth in the Sandplay.
- **Ecoexperiences with the element Water:** - The ways to understand the environment: getting to know the regional hydrous bodies – Bananeiras River in the urban area (Bananeiras, Paraíba); getting to know the hydrous bodies of the region – Roncador Waterfall in the rural area (Borborema, Paraíba); - Self-reflexivity and the element water by using the Sandplay.
- **Ecoexperience with the learnings from the rural areas:** - Exchanging popular learnings and academic teachings – visiting Bom Sucesso Farm (Solânea-Paraíba); - The beauty of the semi-arid region: the transplanting and propagation of seedlings of succulent plants; - My friend, my guide – a reflective hiking track; - Sowing dreams with saplings of yellow Ipês; - Personal and self-formation: a process under construction by means of Ecoexperience Teaching.

In all axes, dialoguing was sought out in the light of the adopted epistemological aspects, experiencing it all as a loving and caring way of dedication, joyful and productive while being aware of constructive collective insights or findings by participants. During the ecoexperience, participants used their peripheral observation⁵ as to seize latent senses from the happenings which are able to be observed in this permanent process of inquiring, reflecting and comparing. The field diary is also present in this collected data as well as photographs and audio recordings. The data analysis was made according to appropriate assumptions from the Bardin's analysis content (2011) and consulting existing categories of the Natural Environment of Sauv  (2005), Ab lio and Florentino's Environmental Teaching (2011), the daydreaming of the bachelardians and the four elements (BACHELARD, 2001; 2003; 2008; 2013) and the concept of Pineau's Eco-formation (2008a, 2008b, 2010).

4 Practicing Ecoexperience Teaching: Empiria Analysis Resulting From Intervention

The transformation of empirical material in data research and the materialization of Ecoexperience Teaching suggest an analogy on the element fire, symbolizing the burnings, the vibrant energy, "the desire of changing, hastening time, making life following one's own terms, moreover [...], because destruction brings about more than change. It brings on renovation" (BACHELARD, 2008, p. 25). Regarding the elements which were analysed, Ecoexperience Teaching has been materialized through various means which were found and described as having emerged and were organized accordingly to the three axes of the study: affectivity, ecoexperience and emancipation.

4.1 The Affectivity Dimension

Due to one's own experiencing, it is known how emotions have an important, regulatory role in the organism and how it allows the conservation of life. Besides that, emotions are responsible for guiding the flow of human behavior and will trigger one's character to respond to it (MATURANA; REZEPKA, 2008). Bachelard (2008, p. 58) states that primitive phenomenology is a phenomenology of affectivity". For this reason, the affectivity of the subjects was analyzed along with the environment and how they identify themselves with it.

Seeking to contemplate the nature of emotional affection, experiences and learnings acquired in the relation with their natural environment, one of the questions in the questionnaire reported the possibility of the student being a planet which blooms in the semiarid region, in the biome 'Sert o' in which all research subjects are inserted. The choosing of their own nicknames also preserved the identity of the subjects throughout the investigation.

⁵ The peripheric observation of the participant consists on the the observation with a certain degree of involvement due to believing in a more intense implication that can block the necessary gap to the possibility of analysis (MACEDO, 2004).



In this manner, no strangeness came about and the accession was complete. The nicknames chosen were those of typical semiarid vegetation in the ‘Sertão’ such as the Yellow Ipê, Macambira, XIQUE-XIQUE, Jurema, Mandacurú, Juazeiro, Palma, Cacto Branco (White Cactus), Coroa-de-Frade, Girassol (SUNFLOWER). Each nickname was duly justified by each participant. Almost all justifications for choosing these plants focused on the fact that they are all very resistant. All plants could have been abstracted for several different reasons, yet only two subjects chose to do so: Yellow-*Ipê* highlighted the color of the tree’s flowers and *Girassol* (Sunflower) emphasized the movement of the flower.

There was identification among the others such as being a resistant and primitive being that has learned to accumulate energy in order to resist and stay alive, as was observed in the following speeches: Because it is primitive and so beautiful (MACAMBIRA, Research data, 2014); Besides its medicinal power to cure, it has a primitive aspect which reminds one of the Northeast’s countryside and rural region (JUREMA, Research data, 2014); Its flower symbolizes the rain that falls in the dry wilderness named ‘Sertão’ and in its dry climate (MANDACURÚ 1, Research data, 2014); Due to the drought season, it is quite resistant and offers us such lovely flowers (MANDACURÚ 2, Research data, 2014); With the passing of time, it learned how to store water. We certainly should learn from it (Xique-Xique 2, Research data, 2014).

This interaction was fundamentally highlighted due to its being historically set in the context of the investigation and it is also essential to be aware of the subjectivity and how the researcher stands when dealing with the certain situations during the research. As affectivity is defended as one of the thematic aspects in this study, the mutual ‘contamination’ of the investigator and reality became an indispensable condition in order to achieve the understanding of the change of meanings (SACRISTAN; GÓMEZ, 1998).

Another aspect which highlighted the presence of affectivity was the relation of learning with pleasure found while carrying out tasks, living in the rural area, in the interpersonal relationships which were noted in the following recorded talks: The Eco-experience Teaching project, together with CAVN made me learn to love agriculture (JUAZEIRO, Research data, 2014); I learned a practice day by day during this project which any citizen should be able to practice such as the importance of working in groups (XIQUE-XIQUE, Research data, 2014); I made new friends during the project. The times I did not return home I attended the project out of sheer respect for the project and because I yearned to learn more and more. I learned how good it feels when we help others (XIQUE-XIQUE, Research data, 2014). Or according to *Cacto*’s speech:

We shared precious moments of learning while debating, experiencing livingness, hikes and mainly with the emotions we had. In relation to the consequences of the livingness which we experienced, we discovered feelings we had never experienced before and learned to be creative. Everything we had discovered was brought to our reality (Research data, 2014).

All these reflections respond fully to the thinking of Maturana and Verden-Zoller (2011, p. 43). They point out that “the flowing of our being emotionally moved (by our desires, preferences, aversions, aspirations, interests, choices ...) guides our ac-



tions towards mutual circumstances of our life making all our actions become part of this culture”.

4.2 The Ecoexperience Dimension

Under such assumptions that Gutiérrez and Prado's Eco-Teaching (2008) proposes starting with the day to day routine where one can perceive a problem and the objectification of a reality as one traces a comparison between initial diagnosis and final diagnosis when observing changes in various concepts, such as Natural Environment and Environmental Education.

In the thematic Natural Environment there was less mentioning of nature whereas answers were basically focused on aesthetics, as Tuan (2012) highlights. An increase regarding local category frequency was noted, plus the emerging of new categories such as biosphere and problem. The concept Environmental Education has brought on an observation concerning Abílio and Florentino's general categorization (2011) which was not present for the 'knowledge' thematic besides the rise in the frequency of the categories: preservationist, conservationist and awareness which suggested greater reflection and more knowledge of the role which Environmental Education holds although it is not on a more complex level which would be that of the Socio-Environmental-Cultural category. This category considers a Social and Cultural Environment inserted in the Natural Environment through training and information activities and the development of critical awareness concerning environmental issues which Abílio and Florentino (2011) defend. That is why this category is so desired in CEE processes.

The changes which were observed come along with the learning of the meaning of things, not from the truths which are transmitted, but from every day life as Gutierrez and Prado (2008) propose. They indicated that the intervention with Ecoexperience Learning promoted a conceptual increase on the subjects since most of them do not regard natural environment as something isolated and without the presence of mankind, but as their living environment together with other beings and creatures which can bring on impact likewise.

Another relevant point was that while investigating how students related to their natural environment by using the questionnaire and the Sand Game, only water and earth emerged directly involved in working the field. Most subjects pointed out earth as the exogenous element to the body as its support likewise, as perceived in the Palma speech: while some lay back, others are sowing seeds and duly working to earn their daily bread (Research data, 2014). Water, however, is seen as both endogenous and exogenous, as vital for man as it is the core in the division of environmental circumstances: prosperous area with life versus unproductive area with no life. The Mandacuru speech is illustrative due to its emanating expertise and fundamental knowledge on how to use water properly and responsibly:

Water is an element which cannot lack either for man or nature. Without water we cannot survive. There would be no life on the planet. [...] saving water has been one of mankind's concerns for it is necessary to economize this element which is very rich and vital (Research data, 2014).



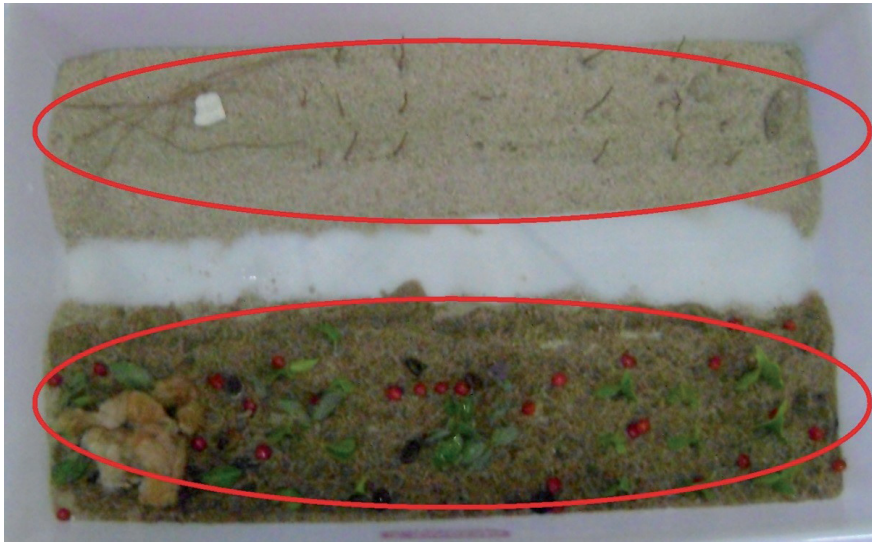
Fire and water most likely did not appear because within the research's environment students have no issues concerning pollution matters due to their air being pollution free. They have no understanding of what pollution is, not even contextualized by urban polluters. Therefore, if there is no restriction, there is no problematization and the elements of air and fire are not aimed at, nor converted into social objects or objects of reflection. As Freire states (2013, p.39), "through problematization of man-world or man and his relations with the world and together with mankind, it is possible that there be a heightening of their awareness of reality and the one to which they belong". Due to their being directly implicated in the making of and working in rural areas, the elements earth and water emerge in a very explicit way in the speeches of the subjects.

Another aspect present in most scenarios involves the fragmented vision, dichotomy, which responds to the statements of the authors where water is the core of this dichotomy. It is observed in Figure 02 and in Macambira's speech:

Our objective was to show the contrast of handling soil properly and in the wrong way. Handling soil properly is where the social part comes in and the cultural part as well where there is the farming process, where native plants are found and a dam down yonder where plants grow along the riverbank (Research data, 2014).

These findings refer to the concept of education banking which Freire states (2011a, p. 87), "implying various aspects which involve the false view of men, explicit at times, and not at others, in its practice. This suggests a non-existing man-world dichotomy. Men in the world and not with the world and with others".

Figure 02: Xique-Xique and Mandacurú's scenario entitled 'Wisdom' which highlights the dichotomy perspective



(Research data, 2014).

Bringing innovation stemmed from ecoexperience didactically stimulated by the intervention study in question which emerged from transcribed speeches in relation to earth with water, a perspective which was named systemic according to Figure 03 which is conveyed by the Bachelard an universe which points out that "water's real eye is the

earth” (BACHELARD, 2013, p. 33). In other words, it is a vision directly involved with the doings, working and living in the rural area and reflecting on the changes of habits and attitudes in relation with the environment in which the live and how it is realized in Coroa-de Frade’s speech:

We folk represented the soil as a live organism and we pictured the farmer as the core responsible for a venture of crops as well as livestock [...]. There is always space in the farming family’s backyard for the herbs mother wishes to plant. Here in this corner, I am using the owl to represent the wisdom of the earth, the knowledge which every farmer has and we folks must know how to duly respect. We have also used the windmill as our eolic energy and animal manure as biodigestor as to not use electrical energy in order to achieve sustainable improvement in agriculture” (Research data, 2014).

Besides this systemic category of the element earth with water, the earth was looked upon as a living being which is caring, friendly, and cyclic whose thematic category was named Mother Earth and validated as Ecoexperience Teaching which was noticeable in the following speech excerpts: It is our mother who feeds us (XIQUE-XIQUE, Research data 2014), it is a living being, a living environment which should be duly respected (COROA-DE FRADE, Research data, 2014); It is where I walk upon as if it were my mother who bore me. It helps me take my stand nurturing me, giving me life and in whose land where I shall be buried (SUNFLOWER, Research data, 2014). The Earth is so important because it is with the earth that we involve with (MANDACURÚ 2, Research data, 2014).

Figure 03: Scenario by White Cactus (Cacto Branco) entitled ‘Respect’ and highlights the systemic vision



(research data, 2014).

The situations presented here contribute to Pineau’s notes, (2008a, p.53), the earth is the symbolic element extremely loaded with ambivalent experiences: “the earth, the closest matter which are feet touch and walk upon, that are hands touch and our eyes can see [...], the sensitive earth, soil-earth which shapes bodies and feelings, no matter if



less or more, perhaps even greater yet and we get to mold it". This symbolism was noted mainly in the subjects who are directly engaged with farm work and whose day to day is responsible for bringing about the problematization and the necessary objectification to the formation of elements in social objects.

4.3 *The Emancipation Dimension*

As Maffesoli (2005) states, in order to perceive within the environment, it is extremely necessary to look upon one's very self. The perceptions of the researchers concerning environmental issues in the Sertão's semiarid regions makes the soul of the rural region emerge because "home, the locus of reminiscences and the environment where making a living is made" (TUAN, 2012, p. 136). Due to most subjects coming from rural regions, they are immersed in the soil. Therefore, one of the questions asked in the questionnaire was about environmental issues which came about due to their day to day attitudes. It was noticed that most of them did not personally imply but showed themselves somewhat vague and detached, "men in the world and not with the world, men who are viewers and only expect, who do not recreate" (FREIRE, 2011a, p. 87), as was noted in the following speech excerpts: *I try my very best to relieve damages and losses which already exist. I try to encourage others to do the same* (WHITE CACTUS, Research data, 2014); *At every movement that a human being makes, something in nature is being harmed* (Sunflower, Research data, 201); *I have re-educated myself by working on my attitudes as a human being as well as a living being within my environment* (COROA-DE-FRADE, Research data, 2014).

Pineau (2008a) calls our attention to the simple utilitarian way of relating with the elements and making the organism be used, automatized and creating stuff, dulling awareness and brutalizing the person. Thus the difficulty why most students do not find themselves partly responsible, be it in their simple attitudes such as having appropriate garbage disposal at home, wasting too much water and their relation with themselves, with others and with their environment. According to the author, it is necessary to transform "the relations of daily routines into daily reflections which allows one to be aware of his own doings and that of the universe which brings on an awakening in relations" (PINEAU, 2008a, p. 50).

However, if many of those students continue to be evasive even after taking part in coexperience and the Sandplay, others have sent out signs of change, as it is possible to note in the speech excerpts: *I do not always put my garbage in the garbage which causes environmental problems* (PALMA, Research data, 2014); *Be aware that motor vehicles emit polluting gases, I focus on that constantly and avoid using my car so much* (XIQUE-XIQUE 1, Research data, 2014); *I waste water and dispose of my garbage in the wrong way when I know I should not* (XIQUE-XIQUE 2, Research data 2014); *Being aware since the first bath of the day and how much water we use and how much water we actually waste* (SUNFLOWER, Research data, 2014); *On my grandfather's property it is common to burn waste and what is left over from harvesting the fields. Knowing that it is harmful to our health I therefore started to complain* (MANDACURÚ 2, Research data, 2014); *When we decide to eat something which is wrapped up in some kind of material, we should carry the remains in our pocket and never litter* (YELLOW IPÊ, Research data, 2014).



Today, we find ourselves facing a great ecological crises (CAPRA, 2012) which makes emerge an urgency where we must take into account historical, individual and collective construction of these relations with the environment. This movement of perceiving as a whole projects itself in an integrated manner which will come across such processes as self-formation, hetero-formation and eco-formation as proposed by Pineau (2008a, 2008b, 2010). Due to it being a slow process in building a day to day routine, we cannot expect that things just come about immediately within a concept of being 'fast' (CAPRA, 2011). Another question refers to believing in educating human beings to learn not only to adapt themselves but above all to transform their reality, to intervene in it, to recreate it as Freire defends so (2011b, p. 67). There were signs of implication from certain individuals as subjects of their own history which connoted with the importance given to education as being a transformation process which was noted in Xique-Xique: this shows that we need to start educating ourselves at a very early age so we can respect and preserve the environment (Research data, 2014) or further yet in Juazeiro's speech excerpt:

What I have come to learn in these classes I will certainly carry along with me in my professional life as well as personal life, [...] to live in a region such as we do do and which is constantly suffering from droughts and is named 'Sertão', I have always helped, but without being hopeful. However, when I go on vacation from school, my father and I are going to make the economic vegetable garden on our property (Research data, 2014).

Freire, (2011b, p. 68) reminds us that "we are the only living beings who have socially and historically become capable of learning and that is why we are the only ones to learn from a creative adventure [...], it is by building, rebuilding and recognizing so that we can change". This is the very essence which can be noticed in Coroa-de-Frade's scenario in Figure 04 where the owl symbolizes necessary needs which are acquired in education, more specifically by taking part in ecoexperiences where Ecoexperience Teaching is put into practice.

Figure 04: Scenario by Coroa-de-Frade entitled 'Respect' which highlights the owl in the upper left hand corner.



(Research data, 2014).



In the same way Juazeiro with his scenario entitled ‘Wisdom’ in Figure 05, also makes reference to his understanding the theme more clearly which therefore helped him write his final paper which was about sustainable agricultural production: his intentions are to develop a project which deals with educational landscaping using native flora species from his semiarid region the ‘Sertão’ so he can make sustainable public squares in his hometown. As he himself highlights in his speech: *I will go on living in the rural region and develop projects in my community where sustaining our land will always be a reference to others* (Research data, 2014).

Figure 05: Juazeiro’s scenario entitled ‘Wisdom’ where he highlights landscaping which will be developed in his hometown (on right side) as a source of income (on left side).



(Research data, 2014)

This subject’s story refers to the category of EE which considers social environment and cultural environment added to Natural Environment as Abílio and Florentino (2011) defend through the education-information process and the development of critical awareness concerning environmental issues. There is also the inclusion of how Gutiérrez and Prado (2008) treat this matter in a sociopolitical dimension of Ecoexperience Teaching which starts to materializes when specific groups and their diverse interests start taking on action in their society due to their taking interest in the direction their lives is headed as well as their day to day routines and their gaining political power. Ecoexperience Teaching has therefore made it possible to identify resistant profiles in students from rural regions who face adversities and restating here the idea of viability of living in rural regions where there is sustainability and in whose background education, academic knowledge and learnings from the earth endorse the concept of CEE.

5 (In) conclusions and expectations of having continuation

The text began with comments about modern theoretical denominations concerning the environment and questioning EE models and if they have been efficient enough in transforming and if they focus on practicing active ecological citizenship besides basic perception and duly raising awareness. In parallel, and with basis on the practical teaching observations of the author who took great concern in involving the presence of EE based on the conception of intact nature and the intent of seeking resilience through teachings which were given the name Ecoexperience.

In fact, this text was written with the purpose of disseminating a CEE pedagogical proposal which was applied for the first time in an intervention research drawn up by the city of Bananeiras in the state of Paraíba (Brazil) between the years 2011 and 2013.

This research emerged from a Phd thesis which was defended at Federal University of Paraíba in the year 2014. The proposal is founded on three theoretical contributions, namely: *A Biologia do Amor – The Biology of Love* ((MATURANA, 2001, 2008; 2009; 2011) to support the aspects of affectivity; *Ecopedagogia - Eco-teaching* (GUTIERREZ; PRADO, 2008) to support ecoexperience; *Concepção Crítica de Educação - A Critical Concept of Education* (FREIRE, 2011a, 2011b, 2013, 2014) to substantiate the aspect of emancipation.

The empiria brought to the body of this text suggests that Ecoexperience Teaching has achieved its objective with those subjects for whom it was devised. Since different data sources greatly vary in the way they are interpreted, they are validated at their epistemological and praxeological bases.

When concluding this text, it is possible to feel that if living means experimenting, we have certainly experimented daydreaming, being literally miles away, dreaming as well as living. It is in this dream where we fly and launch ourselves fearlessly without dreading the fall and where we acquired a variety of learnings because “when you follow a dream which is so well defined like the dream of flying, one notices that the dream can bring on ‘a chain of ideas’ as well as affective determination in its passion” (BACHELARD, 2001, p.21)

This is how the CEE approach, Ecoexperience Teaching, has been daringly formatted and tested, and it has sought out transformations in environmental problematics apart from the speeches and understanding what awareness actually means. This approach, which introduced spaces where loving and caring are tools, stimulated the students to flow along with ecoexperience propose in the eco-teaching process which brought to the research the historical in which they live and whose emerging shouts tell us of their many struggles on their land and that demand that their culture be preserved so they can have a main source of income.

The expectation placed here is to disseminate this teaching proposal by opening it up and applying it to and with others in such a way that it can be tested, reviewed and corrected in meaningful dialogues with educators in search of the which is desired for our students and planet.

It is therefore expected that this text bring about fundamental debates which will stimulate Affectivity, Ecoexperience and Emancipatory aspects found in CEE. May mankind be reintroduced into natural resources and may what is natural find its way back into man, as well as the individual within mankind, and mankind within the individual by always bearing in mind an affective, ecoexperience and emancipatory CEE.



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