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CRITICAL ENVIRONMENTAL EDUCATION: PROPOSAL OF A TEACHING AND LEARNING METHOD THROUGH COMIC STORIES

Luciana Sábio Maróstica Campato
Master in Environmental Sciences by the
institution: Universidade Brasil (UB)
Fernandópolis-SP
<https://orcid.org/0000-0001-9967-175X>

João Adalberto Campato Jr.
Head Professor of the Master's Program
in Environmental Sciences at the
institution: Universidade Brasil (UB)
Fernandópolis-SP
<https://orcid.org/0000-0002-9026-5007>

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Abstract: Humans interact with the environment, sometimes putting it at risk. Environmental education is shown as an alternative to alleviate this harmful situation, especially if developed with playful languages, such as comic books. This article aims to provide Elementary School teachers with a method of teaching and learning critical environmental education based on the teacher's self-application of a guiding questionnaire that qualifies them to critically approach environmental-themed comics with students in a more politicized and less naive.

Keywords: Transformative environmental education; elementary School; environment.

INTRODUCTION

Human beings have always interacted with nature, modifying it and being modified by it. With the advent of the Industrial Revolution, in the 18th century, such interaction acquired harmful proportions, with practices that were predatory to the environment.

In this context, environmental education can contribute to the alleviation of this problem. Although respected, environmental education still suffers from the lack of material and human resources, as well as the political will to promote it. There is a lack of up-to-date, interdisciplinary, critical educational projects, with attractive and playful language, such as, for example, comics.

The theme of this article is exactly the use of comics in the teaching and learning of environmental education. The environmental education in question is critical, through which teachers will build with students contextualized knowledge about the environment, preparing them for the exercise of citizenship and the transformation of reality.

Here, a questionnaire will be made available that teachers will self-administer when planning to use comics in environmental

education classes. Having chosen an environmental-themed comic, the teacher will answer the questionnaire taking into account the chosen publication. This self-administered questionnaire helps you to better interpret the comics, producing meanings that can be shared with students through various methods, such as seminars, debates, textual productions, lectures, problem-based learning, field research, etc.

The proposal is expected to contribute to the resizing of pedagogical actions related to the environment. At the same time, the study is justified by the assistance provided to the continuing education of citizens in general and ecological citizens in particular.

Therefore, the general objective of the study is to provide the Elementary School teacher with a method of teaching and learning critical environmental education based on the teacher's self-application of a standard questionnaire that will enable him to critically approach environmental-themed comics with students from politicized and less naive way.

Among the specific objectives, the following stand out: 1) to provide teachers and students with a reflection on conservative and critical environmental education; 2) make students and teachers aware of the seriousness of environmental problems and the need to alleviate them; 3) to show that the environment is not composed only of aspects of physical nature, but of the interaction of natural and social elements. 4) clarify that respect for the environment is an act of citizenship and policy.

ENVIRONMENTAL EDUCATION

Environmental education consists of educational practices concerned with the environment and with the global environmental crisis (SAUVÉ, 2005). Strictly speaking, it is more appropriate to speak of environmental education than of

environmental education, as there are several modalities of environmental education.

The Critical Environmental Education paradigm forms an opposite segment to the conservative environmental education paradigm, as it questions the behaviorist and reductionist approaches of this current (LOUREIRO, 2004).

One of the plans of critical environmental education is to constitute a process that transforms the socio-environmental reality, guided by a thought that does not simplify or fragment reality, not deviating from its intricate relationships (GUIMARÃES, 2004). One must act and think as a whole:

We can educate ourselves for new modes of consumption, but this has to be linked to a new mode of production and, in capitalism, such activities have acquired a world scale that cannot be completely altered except in global terms. It is necessary to be clear that the specific educational action takes place in the set of relationships in which it is inserted, by which it is defined, is conditioned and/or aims to change, needing to be combined with other places, agents, knowledge and powers (LOUREIRO, 2004, pp. 74-75).

The transformation desired by critical environmental education transcends individual action, pointing to collective constructions that are at the same time local and global. Critical environmental education does not believe that changes in behavior are sufficient to form a student who is aware of the duties and rights of citizenship. Awareness-raising actions involving students affectively with environmental issues would not be enough.

Critical environmental education is inter and transdisciplinary, dealing with reality in a non-fractional way. Reality is approached in its entirety, with the variables of a global system whose elements act on each other.

Contextualized action integrates critical environmental education, clarifying that it is

not enough for environmental assumptions to be taught theoretically. There is no knowledge detached from reality and everyday life, nor from political intervention.

Environmental quality cannot be improved by being reductionist, not considering social dynamics, power relations between men, the corporate world and nations. Consumerism, for example, cannot be faced without questioning a society that encourages people to consume at an early stage, creating even false needs.

Critical environmental education wants changes in the power relations between people and nations, not to mention the proposition of new values, thoughts and less alienated and oppressive ways of life. (LOUREIRO, 2004). Aguiar (2018, p.288) has a precise view of the effects of critical environmental education, for whom environmental education helps socio-environmental justice and environmental protection, overcoming the depoliticized bias of conservative pedagogical practices.

Critical environmental education proposes – in addition to overcoming the naive view – the formation of the so-called ecological subject (CARVALHO, 2004, p.19), guided by a deep feeling of environmental justice.

THE STORIES IN COMICS

Comics are a narrative text in two languages: verbal and visual (iconic). As for the structure of the comics, the balloon, the caption and the ellipse stand out. (COSTA, 2009; RAMOS, 2010).

The comic is the rectangular framed space in which the action of the comics takes place. The balloon has a round feature, enclosing the characters' lines and thoughts. The caption is rectangular in shape, appearing in the upper or lower corner of the frame, representing the narrator's voice.

The ellipse is a gap that the reader must fill with imagination, connecting the images

separated by different comics. Among the types of comics, there are the cartoon, the cartoon and the strip. It is the latter that matters here. The strip is a short comic strip, arranged in a single horizontal strip, with three or four frames, with fixed characters or not.

Not so long ago, comics were cursed by parents and teachers. This scenario changed from the 1970s as a result of studies on the mass media, which showed that comics taught and entertained at the same time, helping teachers. (VERGUEIRO, 2010).

The main censorship of comics originated from teachers for whom children who read comics became passive and lazy intellectual readers. According to Abrahão (1977), many believed that comics delayed the children's abstraction process, who would have difficulty detaching themselves from concrete elements (figures or comics) and reaching symbolic and abstract representations of language.

The best answer to this problem is the ellipsis, as the child adopts an active posture, having to imagine what happens in the void from one comic to another, filling in the plot gaps. It is observed, therefore, that the reading of comics favors the children's abstraction process.

Finally, some reasons why comics contribute to teaching are summarized (VERGUEIRO, 2010, p. 21-25): a) comics are part of children's daily lives; b) words and pictures teach more efficiently; c) comics enrich students' vocabulary; d) the elliptical character of this language forces the reader to think and imagine; h) comics can be used at any school level and with any theme.

A LITTLE METHOD

The present study adopted a qualitative design and bibliographic research, plus the following procedures:

1) Establishment of a guiding questionnaire

- anchored in critical environmental education
- to which teachers will respond considering environmental-themed comics chosen for work in the classroom.

2) Example of use of the proposed method, taking as reference a strip from Maurício de Sousa Produções.

RESULTS AND DISCUSSIONS

A questionnaire is proposed that the teacher will apply to himself on a comic book with an environmental theme chosen as the object of study. Once the questions are answered, he will have gathered reflections, which will later be developed with the students according to various didactic techniques (seminars, debates, problem-based learning, etc). Here is the questionnaire:

1) In this comics, how is the interaction of verbal and imagery relevant to the discussion of the environmental issue?

2) Does the modality of space portrayed in the comics have a direct relationship with the environmental issue discussed?

3) Are environmental issues portrayed in the comic in predominantly emotional or rational terms?

4) In what historical-social and environmental circumstances was the comic under analysis created? Does the comics make any kind of reference to the empirical (real) world?

5) In the comics, is the relationship between the natural element and the social and cultural element of the environment clear?

6) In the comics, are environmental problems addressed in their multiple dimensions and as if they were a system in which all elements are integrated?

7) In the comics, are the environment, environmental preservation, environmental problems or environmental education naively idealized or simplified?

8) Predominantly, does the HQ adopt

a conservative or critical environmental education stance?

9) In the analyzed comic, does the idea that environmental problems are solved only by raising the awareness of the characters, or just by changing the characters' behavior or just by transmitting correct knowledge, without any deeper transformations in society?

10) In the comics analyzed, is it explicitly perceived that power relations and the opposition of social forces explain the genesis and development of environmental problems?

11) Does comics exemplify interventions in reality with the purpose of trying to solve, with some effectiveness, environmental problems?

12) Does HQs contribute to the formation of citizenship in general and the environmental citizenship of students?

13) Does HQs adequately address consumption and sustainability issues?

The questionnaire, when self-applied and answered by the teacher, encourages your analytical thinking, favors your reasoning, presents you with analogies, instigates an interdisciplinary vision and reminds you of concepts that perhaps did not come to the fore when preparing and deliver the class.

Here is the strip (Mauricio de Sousa Produções, 2000) object of the questionnaire:



Figure 1: Environmental-themed strip

Source: <http://www.monica.com.br/comics/tirinhas/tira195.htm>

By asking some of the questions in the questionnaire and working with possible answers, an eventual teacher will be able to

arrive at a content of information, which will base his classes and pedagogical activities.

The environmental theme is constant in Maurício de Sousa, noting that it appears frequently in the stories of Chico Bento or the Indian Papa-Capim. Perhaps this reproduces the conservative and erroneous idea that environmental problems are exclusive to the countryside or the forest.

Zé Lelé approaches Chico Bento, who is planting a tree. Asked what kind of fruit the seedling was, Chico replies: “Di isperança”.

Applying question 3 of the questionnaire to the strip, the teacher observes that there is a strong affective appeal in the story, especially because of the word “hope”, which occupies the center of attention by breaking the expectations of readers and Zé Lelé himself, who hear the unexpected and are touched by it.

As for the visual sign, the second frame reveals a desolate image, in which a newly planted tree and numerous cut trees are opposed. The angle of the picture suggests spatial vastness, problematizing the issue of deforestation, which is already occupying an extension beyond what is acceptable. A shocking vision that only the union of word and image provides. Comments of this kind are prompted by question 1 of the questionnaire.

The visual language of comics has a special power to materialize in the minds of children what would, in fact, be a deforested space. Images have the ability to make present in people's minds what is not yet sufficiently delineated in abstract consciousness.

In this sense, the teacher obtains the adhesion of the students - so difficult nowadays - for the discussion of environmental issues. It also facilitates the projection that students establish in relation to certain “heroic” characters, such as Chico Bento. Students who project themselves into it can internalize an attitude of love for nature. This is where

question 12 of the questionnaire is applied.

The episode by Zé Lelé and Chico Bento reveals a natural, social and cultural problem, that is, socio-environmental, to be approached from different perspectives, never separating nature and man and his actions. A similar observation is stimulated by question 5.

It is necessary to show the students - and here the teacher, through question 10, encourages the critical aspect of environmental education that exists only in potency in the strip - that the trees were cut down by a cause and consequence relationship, from which few people benefit, at the same time. While many suffer losses.

Students are asked how much the government would be willing to detain companies that are important to the country's economy and that are responsible for disastrous environmental impacts. The teacher - again directed by question 10 - would highlight the power relations and the hidden reasons that explain certain facts at first sight not understood.

It must be noted that, in order to alleviate the problem, collective and political action is necessary. Although Chico Bento's isolated action and behavior are praiseworthy, this individual, empathic and disjointed action would be useless, as it would not act on the structural causes of the problem, such as the capitalist mode of production.

It is up to the teacher to point out - as requested by question 6 - that solving environmental problems depends on considering interconnected factors as if they were a system, such as environmental legislation, political will, developmental philosophies, sustainability policies, environmental education, etc.

Finally, it is up to the teacher to point out, based on this comic strip, that environmental problems involve the natural world and the social world and that such problems need to

be understood from multiple angles, one of the most relevant being politics. Such points are signals from questions 6 and 5 of the standard questionnaire.

This is the moment for the professor to emphasize - as question 10 urges - that not all countries have the same conditions to conserve and preserve natural resources and that there are nations that give in to the ulterior interests of large multinationals.

One must not hide the problems of consumption, which, in the strip, are loosely suggested. As question 13 points out, it is vital to trace cause and effect relationships between unbridled consumption since the Industrial Revolution and the increase in environmental problems. One can think of the paper industry, the furniture industry, the wood industry for the production of coal, for civil construction, etc.

Although the strip is not explicitly critical - preferring a lyrical and socially decontextualized approach - the teacher can use it as a counterpoint to signal the reasons for deforestation, floods and fires and who gains from it. In other words, to strive for an explanation illuminating the links between deforestation and the capitalist mode of production or asymmetrical power relations. A similar approach is facilitated when the teacher reads the comics and interprets it using the standard questionnaire as a guide.

As a result, students become aware that, without a political, multidimensional and collective attitude (which goes beyond sporadic tree planting campaigns), the environment remains threatened. It is not just a case of educating about the need for reforestation. It is also about educating to reflect on the values of the world, on the historical context, on the particularities of the modes of production, on exaggerated consumerism, on why there is no more incisive legislation on the issue, etc.

FINAL CONSIDERATIONS

By itself, the strip does not fully illustrate critical environmental education, as it does not explicitly put on the spotlight the power relations and interests that are the hidden origin of environmental imbalances. So, it is up to the teacher to use the answers and the direction of the questionnaire and offer conditions to the students so that they know that deforestation is based on a particular historical, social and economic framework.

It is necessary to show that, without a critical view, there will be no changes in favor of the conservation of the environment, since it is distorted capitalism that stimulates the creation of unnecessary needs in man.

Added to this is the political reflection that social inequality reinforces environmental inequality, reaching more the poor, who lack basic sanitation, selective garbage collection, etc. It is the responsibility of the teacher to explain - with the students already motivated by the comics - that the environment constitutes a system of interrelationships between nature and man.

Chico Bento lacked, therefore, to situate Zé Lelé politically, informing him that they can transform reality, with collective political-social participation. Only with empathy or changing specific behaviors little is resolved. The lack of Chico Bento can be repaired by the teacher, who will ask students to critically fill in the ellipses in the comics.

Finally, wanting environmental education teachers to have a more political and less naive view, the guiding questionnaire emerged, highlighting how the problem of the environment is linked to political and social aspects. It is clear that the questionnaire is an element that acquires full force only if it is integrated into a larger system of actions, based on public policies, with contributions, also, from the private sector and the third sector.

The questionnaire has an open character, receptive to the contribution of teachers. Its merit lies in internalizing in teachers – and in students – a critical attitude towards environmental issues, which is never totally transparent or simple.

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