

THE USE OF DOCUMENTARIES TO IMPLEMENT ENVIRONMENTAL
EDUCATION: A STUDY IN ITANHANDU-MG

*O USO DE DOCUMENTÁRIOS PARA A EFETIVAÇÃO DA EDUCAÇÃO AMBIENTAL:
UM ESTUDO EM ITANHANDU-MG*

*EL USO DE DOCUMENTALES PARA IMPLEMENTAR LA EDUCACIÓN
AMBIENTAL: UN ESTUDIO EN ITANHANDU-MG*



José Pinto de SOUZA NETO¹
e-mail:jose.neto@aluno.unincor.edu.br



Letícia Rodrigues da FONSECA²
e-mail:leticia.rodrigues.vga@gmail.com

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¹ Vale do Rio Verde University Center (UNINCOR), Três Corações – MG – Brazil. Master in Sustainability in Water Resources.

² Vale do Rio Verde University Center (UNINCOR), Três Corações – MG – Brazil. PhD in Administration and Professor of the Master's Program Sustainability in Water Resources/UNINCOR.

ABSTRACT: The Alto Rio Verde hydrographic basin directly benefits 15,000 inhabitants of the municipality of Itanhandu and, indirectly, another 500,000 people in cities downstream, located in the state of Minas Gerais. However, several actions carried out by citizens and arising from some economic activities are compromising its preservation. Given the above, this study sought, as its main objective, to investigate how the perceptions provoked in the citizens of Itanhandu through a documentary are related to the preservation of the Alto Rio Verde watershed. For this, applied research was carried out that enabled the recording, editing and availability of a documentary on the YouTube platform. In the end, reports were obtained from individuals who watched this documentary through semi-structured interviews and which showed that they understood the importance of this water resource, in addition to their concerns regarding degradation actions.

KEYWORDS: Hydrographic basin. Environmental education. Documentary. Audiovisual resources.

RESUMO: A bacia hidrográfica do Alto Rio Verde beneficia diretamente 15 mil habitantes do município de Itanhandu e, indiretamente, outras 500 mil pessoas em cidades à jusante, localizadas no estado de Minas Gerais. No entanto, diversas ações executadas pelos cidadãos e provenientes de algumas atividades econômicas estão comprometendo a sua preservação. Diante do exposto, este estudo buscou, como objetivo principal, investigar como as percepções provocadas nos cidadãos de Itanhandu por meio de um documentário estão relacionadas com a preservação da bacia hidrográfica do Alto Rio Verde. Para isso, realizou-se uma pesquisa do tipo aplicada que possibilitou a gravação, edição e disponibilização de um documentário na plataforma Youtube. Ao final, foram obtidos relatos de indivíduos que assistiram tal documentário por meio de entrevistas semiestruturadas e que evidenciaram que estes compreenderam a importância deste recurso hídrico, além de suas preocupações em relação às ações de degradação.

PALAVRAS-CHAVE: Bacia hidrográfica. Educação ambiental. Documentário. Recurso audiovisual.

RESUMEN: La cuenca hidrográfica Alto Rio Verde beneficia directamente a 15.000 habitantes del municipio de Itanhandu e, indirectamente, a otras 500.000 personas en ciudades aguas abajo, ubicadas en el estado de Minas Gerais. Sin embargo, diversas acciones realizadas por los ciudadanos y derivadas de algunas actividades económicas están comprometiendo su conservación. Dado lo anterior, este estudio buscó, como objetivo principal, investigar cómo las percepciones provocadas en los ciudadanos de Itanhandu a través de un documental se relacionan con la preservación de la cuenca del Alto Rio Verde. Para ello se realizó una investigación aplicada que posibilitó la grabación, edición y disponibilidad de un documental en la plataforma Youtube. Al final, se obtuvieron informes de personas que vieron este documental a través de entrevistas semiestructuradas y que demostraron que entendieron la importancia de este recurso hídrico, además de sus preocupaciones con respecto a las acciones de degradación..

PALABRAS CLAVE: Cuenca hidrográfica. Educación ambiental. Documental. Recurso audiovisual.

Introduction

The indiscriminate use of natural resources that transforms landscapes and notably affects the water cycle has been causing socio-environmental tension generated by the scarcity of a vital resource, water, referred to by scholars as the “water crisis”. It is noteworthy that, from the 1970s onwards, the global concern with water scarcity became irrefutable, gaining greater space in the discussions of the United Nations (UN) to guarantee access to this resource for society (Bacci; Pataca, 2008).

It is noteworthy that the extent of the water crisis is not restricted only to the decrease in water availability because society, with its dynamic and complex and constantly growing economy, causes severe and varied disturbances in natural cycles, mainly in the hydrological cycle, altering, also, water quality. Therefore, it is necessary to establish actions for the rational use of this resource to alleviate its already growing shortage. Within the scope of this discussion, the Alto Rio Verde hydrographic basin is mentioned, which directly benefits 15 thousand inhabitants of the municipality of Itanhandu in Minas Gerais and, indirectly, another 500 thousand people in downstream cities. It should be added that the Rio Verde has great historical, tourist and cultural importance, being listed as Natural Cultural Heritage of the municipality in several sections.

However, the occupation of the basin area that occurred at the end of the 19th century, with the arrival of dairy farming and timber, transformed the forest from one of the greatest biodiversities on the planet into a grass monoculture, in addition to starting the cutting of trees for energy use and civil construction, impacting the basin's hydrological cycle and compromising water infiltration into the water table. Therefore, the springs lost their longevity and, currently, the river has only a small fraction of the volume previously produced by the basin. Thus, due to the importance of water, mentioned previously, this situation presents itself as a limiting factor for the socioeconomic development of the region, making it necessary to establish strategies to reverse this situation in order to ensure that future generations can enjoy water to meet their needs (Ferreira; Limberger, 2017).

In this perspective, Critical Environmental Education (EAC) is cited, which can be understood as a process of human formation aimed at building knowledge capable of sensitizing people about the importance of natural resources, to provide a more harmonious interaction between man and these resources. It should be added that for EAC, awareness is treated as an instrument of behavioral change in relation to the environment since, through this, it is possible

to obtain a predisposition of individuals to change their behaviors, which could lead to better attitudes towards their relationships with the environment (Ramos *et al.*, 2019).

Given this context, this work, which originated from dissertation research in a professional master's program in environmental sciences, set out to offer answers to the following research problem: how to sensitize the residents of Itanhandu about the importance of preserving the river basin of the Upper Rio Verde. Considering this problem, the main objective was to investigate how the perceptions provoked in the citizens of Itanhandu through a documentary are related to the preservation of the Upper Rio Verde watershed.

Sustainable Development and Environmental Education

The term environmental, when associated with education, has historical representation and was developed to enable the establishment of solutions to environmental crises in conjunction with new ethical values that emerged related to sustainability (Souza, 2020). When it could be offered to society, associated with the term education – the then Environmental Education (EA) – it brought the promise of helping individuals in instrumented coping with reality through reflective actions on social phenomena in the search for sustainable development (Pinheiro; Oliveira Neto; Maciel, 2021).

Environmental epistemology implies a politics of knowledge that aims at sustainability above all, which aims to change the relationships that men establish with the thinking/knowing/knowing tripod. In short, it is a political epistemology of the living and existence of men, given that, according to Leff (2003), it is a type of knowledge that goes beyond the field of scientific knowledge and is established in the order of rationality.

Defining sustainability is not an easy task, as many concepts have been formulated with associated terms over the years (Henke; Silva, 2022).

The conception of the concept dates to the early 1980s, with Lester Brown, founder of the Worldwatch Institute, when he understood a sustainable community as one capable of meeting its own needs without reducing the opportunities of future generations. Later, with the 1987 Global Agenda, the Brundtland Report understood sustainable development as that which meets the needs of the present without compromising the ability of future generations to meet their own needs. In 1997, Jacobi attributed to the notion of sustainable development the need to redefine social relations between man and nature, that is, a substantial change in the civilizing process itself. Later, Sachs in 2002 understood the term from five dimensions, one of them

being the cultural dimension related to specific changes in each socio-ecological context (Gadotti, 2008).

Silva and Teixeira (2019) link sustainability to the search for discussion and proposition of means for harmonizing the objectives of environmental conservation and economic development, this conception being based on the United Nations World Commission on Environment and Development (CMED). This harmonization was the starting point for establishing the concept of sustainable development prevailing in society, understood as development that meets the needs of today's people without the needs of future generations being compromised or threatened.

Ramos *et al.* (2019) agree with Hencke and Silva (2022) regarding the consideration that, in contemporary times, the concept of sustainability is associated with environmental issues, however, it cannot be reduced to just this scope. Considering that the theme is linked to culture, society and the human being himself, this needs to be related to social commitment and the participatory process of individuals for the construction of society.

At this core, the concept of sustainability is characterized by recreating human relationships in their most varied spheres (political, economic, cultural, environmental, social and educational) and goes through the process of reinventing the human being in which, aware of the consequences of If you interfere/act in the world, you need to conduct your action in a reflective, critical and responsible manner. It should be added that such a process of reinventing oneself will only be possible through truly educated individuals (Ramos *et al.*; 2019; Hencke; Silva, 2022).

Therefore, the importance of Education for Sustainable Development (EDS) cannot be ignored, which will provide the necessary support and subsidy for EA and which will allow meeting the principles of sustainability through the interventions of individuals who make up a society (Silva, Teixeira, 2019).

Critical Environmental Education as a Strategy to Enable Sustainable Societies

Freire (1999), in his studies on education and change, stated that problematizing actions emphasize praxis (a process that involves the movement from theory to action – that is, a proposed connection between theory and practice), in the space in which the Subjects search for solutions to the realities in which they live, becoming capable of transforming them at the same time as they are transformed. Therefore, it is correct to state together with Loureiro (2019) and Machado and Agostini (2019) that Critical Environmental Education (EAC) will contribute

to building more sustainable societies only if its social actors are grounded in the theories and practices of transformative education and criticism.

Theoretically, the predominance of EA on the national scene is critical, oriented towards reflective and collective actions with content inserted in the socio-environmental reality, summarizing in an education that can transform the individual and social reality of everyone through the results of their collective struggles. (Guimarães, 2006).

EAC is treated in Brazil through education based on transformative elements in the social field, such as: dialogue, citizenship, empowerment of individuals, understanding the world and overcoming capitalist dominance (Loureiro, 2012). In this context, values arising from the way society organizes itself, produces and interacts in the environment are evident. In this way, environmental issues are configured in a field of knowledge in which relationships are established with the complexities of social structures constituted by socio-environmental nature (Ramos *et al.*, 2019).

EAC is based on awareness-raising actions that involve critical skills, assimilations of diverse knowledge and active transformations of reality. Loureiro (2012) defines it as “cultural and informative, but fundamentally political, formative and emancipatory, therefore, transformative of existing social relations” (p. 37, our translation). Therefore, it is important to highlight the emancipatory and reflective character of this EE, associated with continuous critical and self-critical processes, aiming to break current standards in society to impose processes that allow individuals to put themselves in the shoes of their neighbors to establish experiences formative. It should be added that such formative experiences allow for problematizing reflections on reality, subsidized by conscious and political actions.

Therefore, EAC is also called Emancipatory Environmental Education or Transformative Environmental Education, whose essence is to understand that all relationships are necessarily social relationships. This refers to reflective processes about life and nature so that individuals can understand that their relationship with the environment occurs in a structured way through education (Loureiro, 2019).

In this context, Guimarães (2006) states that EAC needs to understand society from the perspective of complexity, in which each of its individuals (or each of its parts) influences society (the whole), at the same time that the Society (the whole) influences its individuals (or each of its parts) and for changes to be significant, they must happen in both directions (from the parts to the whole and vice versa). Loureiro (2019) believes that it is through this proposal that criticality is sought in EA, recognizing that relationships happen through social actions.

Together, Guimarães (2006) and Loureiro (2019) list some of these social actions: promotion/understanding of socio-environmental problems, understanding the environment as a set of interrelations (natural world and social world); contribution through fairer, sustainable and supportive actions towards life and nature; formation of ecological attitudes sensitive to the identification of problems that impact the environment; educational actions such as proposals for solving or improving problems.

The success of such social actions makes EAC viable, promoting educational environments and means mobilized by interventions in problems related to socio-environmental reality, in which subjects and citizens, through active citizenship, can aim for major transformations of socio-environmental crises (Guimarães, 2006; Loureiro, 2019).

This understanding of the world and the environment as an emancipatory movement and education for sustainability brings to EAC the responsibility of integrating different aspects of materiality that make up the environment and its interfaces with the planetary crisis. It also brings the need to articulate knowledge (or epistemology) and technologies to promote the necessary changes (Rocco; Kataoka; Affonso, 2023).

Epistemological technologies are constituted from conceptions, methods or theories and practices in general, with the aim of supporting emancipatory educational actions based on the EAC to provide knowledge about a given object (environmental), about its properties (sustainable) and about its (social) reality to be transformed (Rocco; Kataoka; Affonso, 2023).

Documentaries can be cited as an example of epistemological technology for promoting EAC and as a resource for emancipation and social transformation (Ferreira; Limberger, 2017; Panagassi *et al.*, 2017; Matta; Rocha, 2017; Flores; Oliveira; Santos, 2020; Pinheiro *et al.*, 2022; Caetano *et al.*, 2022).

The Use of Documentary as an Epistemological Technology for the Effectiveness of Critical Environmental Education

According to Panagassi *et al.* (2017), documentaries present a representation of some reality, including environmental ones, reproducing collective memories of certain spaces, landscapes, places or environments. It is then defined, according to Penafria (1999), as a source of information with records of facts. And, according to Nichols (2016, p. 37, our translation), “we talk about situations and events that involve real people who present themselves to us as themselves, in stories that convey a plausible proposal or point of view about the lives, situations and events”.

Furthermore, according to Nichols (2016), also treated as a genre (not just as a methodology), the documentary can take on one or more versions in relation to its proposition, namely: expository documentaries – in which they prioritize the concern with arguing what is being exposed; poetic documentaries – in which the aesthetics of what is being exposed are concerned; participatory documentaries – which are concerned with promoting the interaction of those who are watching the exhibition; observational documentaries – which are concerned with recording the facts themselves; reflective documentaries – in which they are concerned with promoting the reflection of a certain group. It should be added that from the 1980s onwards, documentaries began to be used for educational purposes, being promoted through mixed concerns and characterized as reflective, observational and participatory (Silva, 2021).

The first recorded documentary in history was in 1926, entitled 'Nanook do Norte', about a family of Eskimos living in a traditional and rudimentary way in an inhospitable environment (Gonçalves, 2019). Therefore, it is stated that since the first use of the term, the ends and purposes of sustainable development and the desire for a more sustainable society have always been present in history (Barbosa; Bazzo, 2013; Nichols, 2016).

Within the scope of its technological proposal, the documentary was designed to record events or movements and, therefore, constitutes a source of historical records of finished facts (Penafria, 1999), and is also conceived as a record of objects with the potential to be rethought so that intervention actions can be motivated (Nichols, 2016). Therefore, it can be considered as a methodology for promoting EA (Pinheiro, 2022).

Pinheiro (2022), states that documentaries are characterized by representing reality in a broad format and their imagery resources are the starting point for promoting critical-reflexive actions. Silva (2021) adds that documentaries are tools for breaking the use of traditional educational methodologies when they call upon the student for whom they are intended to take emancipatory and transformative actions – and are then active in their educational process to act, being the starting point for the transposition of theory into practice (action).

The documentary enables audiovisual interpretations based on the attribution of multiple meanings considering the experience, the forms of relationship, the interaction and the creation of a bond between the spectators and the space or environment in which it is represented and, therefore, according to Panagassi *et al.* (2017), can be understood as an emancipatory methodology for social transformation. Matta and Rocha (2017) also understand documentaries, when used in favor of EA, as a methodology for disseminating scientific results that are of interest to a certain group. Therefore, it can be understood as an instrument that aims

not only to transfer knowledge about a certain subject that advocates sustainable development, but also as one that promotes emancipatory social transformation due to its ability to promote critical reflections.

Watersheds: importance and impacts

The watershed of a river at a given point can be defined as the surface limited by a contour, in which all the precipitated water, when not evaporated, infiltrated or retained, flows towards the point. Due to the importance of the basins, their preservation is provided for in Federal Law n°. 12.651/12 (Forest Code), in addition to establishing the marginal strips of watercourses that are considered Protected Environmental Areas (APPs). This law discusses vegetation cover around APPs that reduces the transport of substances into the water body, reducing the silting of rivers. In its Chapter II, Sections I and IV, the limits for the marginal strips (APPs) of any water course and springs or water holes in rural or urban areas are established, considering a minimum width of thirty (30) meters for water courses that are less than ten (10) meters wide and with a minimum radius of fifty (50) meters for areas surrounding springs and perennial water holes, whatever their topographic situation.

APPs are areas that aim to protect the integrity of water resources, geological stability, landscape and biodiversity, facilitating the gene flow of fauna and flora, protecting the soil and ensuring the well-being of human populations (Brazil, 1997). It should be added that human occupation in APPs causes severe environmental impacts which, due to the removal of forests that are fundamental to the hydrological cycle of the river basin, reduces infiltration and recharge of aquifers, accentuating evaporation and favoring surface runoff in rainy periods, causing a greater concentration of runoff, increasing floods and increasing erosion processes.

In a detailed survey of the condition of degradation of river basins to determine actions to recover natural environmental conditions, it was found that it is essential to carry out mapping to protect APPs with fencing, if necessary, and interventions in erosion, in addition the development of an environmental education program for the community residing in the river basin (Santos *et al.*, 2000).

Diffuse pollution causes soil contamination and, consequently, water, and the discharge of untreated contaminated effluents into nature, resulting from human actions, degrades natural resources, compromising their quality and quantity, thus reducing the water resource available to the population of the river basin.

It is also noteworthy that the direction of economic development is associated with the supply of water available for anthropogenic use. Poor management of natural resources in river basins has generated an increase in economic costs due to scarcity or loss of water quality. Therefore, the management of these water resources must be administered by all hierarchical levels of the federation. Public sanitation companies and civil society must act at each stage of the process, developing soil management and conservation practices in river basins.

The degree of conservation of the river basin influences the costs of a water treatment system. It is estimated that the costs for making water safe in Brazil vary between ten and fifty cents per cubic meter, with this variation resulting from the class of water that determines the type of treatment, among other factors. The degradation of supply sources is also related to the use and occupation of land in the river basin, influencing treatment costs.

Methodological Procedures

This research can be characterized as applied because it allows, through theoretical foundations and certain technological tools, to develop a technical-technological product to solve a problem and meet specific needs, in this case, raising awareness among society about the importance of preserve the Upper Rio Verde watershed. It is added that applied research uses the scientific method to solve a problem or eliminate a circumstantial doubt, “[...] highlighting specific facts by understanding localized situations and enabling the search for solutions through the proposition of alternatives” (Marconi; Lakatos, 2017, our translation).

It can also be characterized as exploratory and descriptive as it seeks to obtain evidence about the effectiveness of the technical-technological product developed in relation to its training purpose, through the evaluation of reports from members of the community, the locus of this investigation, obtained through of semi-structured interviews and analyzed using the coding technique (Godoy, 1995). It should be added that this research, as it involves interaction with human beings, was evaluated and approved by a Research Ethics Committee (CEP).

Characterization of the Upper Rio Verde Basin

The Alto Rio Verde watershed occupies areas of the municipalities of Itanhandu and Passa Quatro, in the south of the state of Minas Gerais. It is located between latitudes 22°17'26.60"S and 22°25'51.94"S and longitude 44°55'50.85"W and 44°48'13.45"W, measuring approximately 116.05 km², with a maximum altitude of 2798.06 meters, at the peak

of Pedra da Mina. Studies of the Alto Rio Verde watershed began in 2014 by the project management unit formed by the NGO - Instituto Superação, Prefeitura Municipal de Itanhandu, Universidade Federal de Lavras, Emater-MG, ICMBio and the Mantiqueira Alimentos Group.

The technicians provided by these institutions formed a group to study the river basin, recording on maps and images all land use in the basin, its occupants and its degradation processes. Completed in 2016, the analyzes of this study carried out by UGP describe that this basin is in a process of degradation due to the causes mentioned above, however, it still has a preserved environmental heritage that maintains the perpetuity of the Rio Verde.

The Documentary

The documentary entitled “I Want My Green River” sought to describe the importance of the river basin and the environmental impacts that could compromise it, with the aim of raising awareness among society about the importance of its preservation. Filming began at the water collection point for the municipality of Itanhandu-MG (the most downstream point of the basin), following the river upstream, recording the entire area within the limits that are its water dividers, ending at the headwaters Green River. It should be added that a drone was used to film the aerial with the aim of providing a more comprehensive analysis of the aforementioned and transmitting a broad and detailed perspective on the environmental conditions of the basin.

This documentary also presents testimonials from residents of Itanhandu-MG about the place, including those known for their life story, their artistic talent as musicians and for knowing the area well, as in the case of trail guides and rural producers. It also included testimonies from the Mayor and Secretary of the Environment of Itanhandu-MG and the CEO of the Mantiqueira Alimentos Group.

Image processing and editing were carried out using the editing programs *Adobe Premiere*, *Adobe After Effects*, *Adobe LightRoom* and *Adobe Photoshop*. It should be added that this documentary is available on the YouTube platform (<https://youtu.be/w4vVdxa6f1Y>) and was published on the website “Queromeurioverde.com.br” which supports environmental education, recovery and preservation initiatives in the highlands region of Mantiqueira.

Evaluation of Reports from Residents who Watched the Documentary

The documentary in question was released to the population of Itanhandu-MG in free access events that were held during World Environment Week and in the municipality's Basic Education schools. Publicity also took place through social networks such as *Facebook* and

Instagram. In order to obtain evidence about its effectiveness in terms of Critical Environmental Education, semi-structured interviews were carried out with some residents of the region. The results of the analyzes of these reports are presented below.

1. Perception about the documentary

Initially, we sought to identify the perception of those who watched the documentary. The interviewee identified here as E1, is 72 years old and works as a food retailer. According to this resident, the documentary made it possible to remember pleasant moments experienced there, as well as to reflect on the transformations that compromised the Alto Rio Verde watershed and that require awareness-raising actions to reverse the situation:

So, I thought the documentary was excellent, very cool, very well done, you know? You covered what had to be covered now, for those who lived the Rio Verde as I did. There comes a point where you want to cry, you know? So I think that raising awareness among this generation that is coming, these kids, is a good way to go.” (Our translation)

It can be seen, through this report, that the resident valued the initiative to highlight the human interventions that are compromising the preservation of the basin, as well as highlighting that actions like this are important to raise awareness and bring about the behavioral changes necessary to reverse this especially by the new generations.

The next report is from a university student identified as E2 and who is 19 years old. According to, the documentary allowed us to discover the place where the sources of the Rio Verde are located and which is unknown to many residents, in addition to identifying how the quality of the water is compromised when it arrives in the municipality:

My opinion about the documentary “Quero o Meu Rio Verde” is that it is an essential documentary so that everyone can really get to know the sources of the Rio Verde, where it begins. We only see where it ends, and everything is almost destroyed. But there is still a chance if everyone is aware that we can do our part to make a difference. (Our translation)

Therefore, according to this resident, it is necessary to raise awareness among the population so that everyone can “do their part”, that is, so that each citizen can put into practice actions that help preserve this water resource. Therefore, this position demonstrates that the person in question was touched by the situation covered in the documentary and that she believes that awareness can lead to changes in behavior that favor the preservation of the river basin.

Following this same position, interviewee E3, who is 54 years old and works as a councilor for the municipality, reported that the interventions that the river undergoes during its course compromise the quality of the water and stated that engagement is needed on the part of the community in favor of preservation and mitigation of the environmental damage already caused:

Thank God the Rio Verde is alive and we feel and see its difficulties, which is to continue coming down here in the city. I think that if everyone does their part, if everyone gets involved and does something to benefit the river, we will be able to preserve and improve the damage that has already been done. (Our translation)

Interviewee E4, who is 48 years old and works as a banker, claimed that he was touched by the script and the images from the documentary that allowed residents to see where the Rio Verde originates, as well as understand that in this place nature is practically intact, starting the degradation of the river when it approaches the municipality:

I thought it was beautiful, full of images that show the purity of the water. And not to mention that that's just what we see. So, through the documentary, we imagine feeling, there, the fresh air, the sound of the water, the waterfall... And the entire look, the entire work. It's beautiful! Unfortunately, the same cannot be said when we see the state of the river when it arrives in our city. (Our translation)

The environment boils down to a systemic set that needs to be perceived and understood in its full complexity. Therefore, the EAC must be linked to citizenship, seeking social actions that aim to build a sensible and ecological society, fair and culturally diverse, correct, economically accessible and political. It is through EA that society will understand the situations that compromise the preservation of natural resources, which will cause the necessary awareness to establish actions that alleviate or reverse the situation, a situation that is evident in the reports of residents who watched the documentary (Guimarães *et al.*, 2006).

For Loureiro (2019), EAC, as a social practice, moves towards the construction of cultural history to favor actions to transform reality, therefore, it needs to be supported by an environmental rationality, subsidized by critical reflections, considering the local problems so that actions can be promoted. Arrais and Bizerril (2020) ensure that this rationality must be based on principles of equity, diversity and democracy. Likewise, Reigota (2014) states that such rationality must be based on interests, convictions, knowledge and utopia of radical changes in the relations between humanity and nature; but never dissociating itself from criticality.

2. Learning Acquired through the Documentary

Subsequently, we sought to identify the knowledge acquired by residents after watching the documentary, because, according to Gregolin (2007, p. 16, our translation): “[...] the media play the role of mediation between their readers and reality”, favoring learning and awareness about the topics covered.

In this context, the response from interviewee E5 stands out, who is 58 years old and works as a businesswoman. According to this resident, after watching the documentary she understood how water is extremely important for the survival of individuals, therefore, it is necessary to preserve it to ensure that the communities benefiting from the Rio Verde can enjoy this water resource. However, for this to occur, the entire population needs to be involved so that the recovery and preservation of the river basin occurs:

Water is life. Therefore, we need to help preserve the springs so that new generations can enjoy this wealth. If everyone donates to this cause, everything becomes easier. United, success is a fact. (Our translation)

Interviewee E6, who is 28 years old and works as a programmer, claimed that he learned that the Rio Verde does not have just one spring, but several, and that both need to be preserved so that the population continues to consume quality water:

We have always heard that there is only one source of the Rio Verde, but in this documentary, it was discovered that there are several sources that form the Rio Verde basin. I also understood that they need to be preserved so that the water does not run out. It is necessary to keep these springs, these mines intact. (Our translation)

The concern regarding the continuous availability of water for consumption was also addressed in the report of interviewee E7, who is 72 years old, retired and witnessed all the transformations that took place in the Rio Verde that passes through his backyard. According to this resident, through the documentary it was possible to understand that preservation actions are emergency to ensure that quality water is always available:

So, I'm worried, for myself and for those close to me who will be here when I'm no longer there. When these children reach adulthood, with this pollution, will they have water to drink? We need to protect this because the business is chaos. Those who lived through the Rio Verde before even cry when they see the Rio Verde at Ponte da Santa Casa in the documentary. (Our translation)

Likewise, interviewee E8, who is 49 years old and works as a teacher, mentioned that the main knowledge acquired refers to the precarious conditions of the river when it arrives in

Itanhandu-MG. Even though it is a small municipality, many residents are unaware of the springs that have clean water because they have not undergone significant human intervention:

It is necessary to keep these mines intact, in a way that does not degrade. The documentary was very impactful! I was impressed when I saw the mines, because we have a view of the river from here in the city. Therefore, I understood that we cannot harm nature so that in the future everyone can have a good quality of life, as we need these natural resources to survive. (Our translation)

Loureiro (2019) highlights that the EAC seeks an alignment between social systems and natural systems, which is important for a realistic understanding of how the world works and for carrying out interventions in reality in favor of preserving natural resources, mainly, aiming to enable future generations to be able to meet their own needs. When analyzing the speeches obtained about the learning acquired through the documentary, it is clear that the interviewees understood the importance of water for society and the need for emergency actions to preserve the Rio Verde, which highlights a reflection/awareness that refers to the first result coming from the EAC.

It is added that the EAC presents itself ethically-politically through multiple practices, values and visions, seeking behavioral and individual changes and the necessary transformations to face not only environmental crises, but current social crises, as only in this way can structural, social changes and emancipation of the subjects involved will be achieved (Layrargues, 2011).

Therefore, EA for emancipation is configured as a practice that exceeds the instrumental function and the purpose of behavioral changes, with the intention of being viewed as a social practice, ontologically based on the recognition of human beings as social beings, since that promote historical movements in the contexts in which they are inserted with the awareness that problems related to the environment are intertwined with existing social problems (Loureiro, 2019; Machado; Agostini, 2019; Arrais; Bizerril, 2020).

According to Souza (2020), categorically inserted in the EAC, praxis has been established as a concrete activity – and, therefore, not technical or instrumental –, in which the subjects involved in its practice, through reflection in action, has been asserting itself in the world, knowing and recognizing the problems inherent to its realities and modifying itself through reflection and action in the relationships between theory and practice. Thus, through this documentary, it was possible to begin an EAC process by seeking to promote reflection on the part of society about the degradation of the Alto do Rio Verde hydrographic basin with the

aim of favoring its emancipation that will allow the establishment of actions to solve environmental problems that also impact the social sphere.

Final remarks

At the end of this investigation, it was possible to meet the main objective, which consisted of understanding how the perceptions provoked in the citizens of Itanhandu through a documentary are related to the preservation of the Upper Rio Verde watershed.

When analyzing the residents' reports, it was found that through the documentary the residents developed perceptions about the environmental damage caused to the river basin and that they highlight the awareness caused by reflection and critical analysis of the facts covered in the documentary, and that it is necessary so that actions are established and applied in practice in favor of preserving natural resources and meeting the needs of society, in accordance with the principles of Critical Environmental Education.

The EAC, whose purpose is human emancipation, emerges philosophically to seek to reorient the premises of freedom of thought and human action, according to the perspective of transforming concrete situations that improve the living conditions of subjects. It will act, therefore, as an alternative for the construction of knowledge and practices that allow all involved subjects to have critical interventions in reality (Ferrari; Maestrelli; Torres, 2014).

Therefore, for emancipatory educational proposals to be constructed ethically and with commitment, the existence of a process (or methodology) in which the entire development of human life (that is, needs, conflicts, tensions and contradictions, including those of an environmental nature) is configured as the starting point for conscious reflections and constructions, capable of providing support for the transformations of reality (Silva, 2021). In this sense, the documentary developed presented itself as a methodology/technology to fulfill this purpose. As future research, we intend to investigate whether in fact the actions aimed at preserving the Alto do Rio Verde River basin were implemented under the influence of the documentary in question, to affirm that the critical EAC managed to meet its purpose in this case.

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