

# The Use of Social Networks in Brazil for Non-formal Environmental Education: A Case Study of Frying Oil

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**Abstract:** The social networks have assumed a prominent position in the current social interactions that elapse through the use of the internet. The capacity to propagate informations and reach publics of different social classes makes them important tools in the construction of new teaching-learning strategies of non-formal Environmental Education. In this regard, this work investigates, preliminarily and qualitatively, how the social networks *Facebook*, *Instagram* and *YouTube* have been used as platforms of non-formal Environmental Education for the socioenvironmental problem related to residual frying oil. From this prior qualitative assessment, it is suggested the transposition for social networks of projects and programs related to the subject of residual oil, providing a more formative approach and not just a commercial one.

**Key words:** social networks, reuse, residual frying oil, environmental education, Brazil

## 1. Introduction

With the appearance of the internet as a global public sphere generating and propagating knowledge with a strong capacity of interconnection from varying branches of human activity, many unprecedented changes happened in the types and forms of communication in the everyday life. Ever since, communications in a presencial way in interpersonal relationships have been competing more and more with communications through technological devices with access to the internet. Such changes led to constant changes in the sharing of information and work processes. The social networks, for instance, in the extent of communication media linked to the internet, nowadays have been assuming a central role both in the forms of virtual communication as in the propagation of knowledge/content [1]. This fact enables the use of these platforms of virtual communication and modern social interrelationships as powerful tools of non-formal

education on knowledge that can be of interest common to the social workers (individuals, institutions and groups) that makes use of them.

The use of the expression net in *websites* of virtual interconnection from social workers — the social networks — can be considered a metaphor that subsidizes the understanding of the relationships built in these digital platforms and to its repercussion in the social processes of the society [2]. Among the many possibilities of intersocial interactions pertinent to social networks, it can be highlighted the enormous potential to non-formal education that these platforms can render, and this can be consolidated from a crescent number of studies linked to the use of the same ones in non-formal education [1-3].

In what concerns the understanding of non-formal education, it is worth to remind, above all else, that through the generations the concept of non-formal education itself, almost always, was interlaced with the one of the schools, to the point that, in good measure, they are used even as synonymous terms. In the current context on the other hand, it is the result of a temporal evolution of the understanding of the process of

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teaching and learning, the concepts of education being redefined through the search of new pedagogic practices and new educational spaces [4]. In this perspective, it is frequently observed from (re-)discussions of the process of teaching and learning a clear amplification of the education concept that includes the transposition of the limits of the school itself and the adherence to new dimensions and social spaces, including the virtual ones, classifying them as a non-formal education [2].

In that context, the construction of the democratization and of the environmental understanding through non-formal education can be elaborated using different methodologies from different social spaces, seeing that there isn't an unique methodology, nor a rigorous model for such. Several educational atmospheres and a wide range of pedagogic activities can be used seeking not only the reproduction/divulgence of knowledge, but the construction of a conscience and of environmental ethics, collective and individual, through the socialization and even the generation of knowledge.

Among those possibilities of new educational spaces for the practice of non-formal education, the social networks have been getting a special prominence. Among the social networks and programs of instantaneous message exchanges more used in Brazil are *Facebook* (83%), *Whatsapp* (58%), *YouTube* (17%), *Instagram* (12%) and *Google+* (8%) [5]. To understand the reach of the main social networks, the research *Digital in 2016*, of *We Are Social*, made along the last quarter of 2015, displays that we have today in Brazil an average of 49% of the population participating in all types of social networks [6].

In numbers, *Facebook* possesses 1.94 billion active users daily. In Brazil, 102 million Brazilians are connected in that platform [7]. *Instagram* possesses 300 million active users daily. The social network registers 4.2 billion of "likes" all over the world daily. *YouTube* possesses more than 1 billion users. The hundred main global marks used the platform for

announcements in "*TrueView*" video in 2015.

The resolution of environmental problems in the XXI century combined with a wide process of environmental education to move ideas and actions, critical capacity demands, subversive actions to the degradation of natural resources, as well as formal and non-formal education mechanisms that disaggregate the prevailing logic of the cultural maximization of consumption [8]. In this sense, the use of cyberspaces of personal interconnection, like the social networks, for the process of non-formal environmental education can be configured as a fruitful alternative in discussions, information and proposals of solutions for environmental problems.

In a perspective of environmental education under non-formal focus there is, along the last decades, the development of emanated social projects, above all starting from ONG's, which promote actions of sensitization of the population to the environmental problem that is the direct and inadequate discard of the residual frying oil in the environment [9]. The critical glance over the administration of that residue appears mainly due to the high consumption of vegetable oil for cooking in Brazil. Three billion liters of frying oil are consumed annually. In some areas the consumption is quite accentuated, as it is the case of Espírito Santo, where the consumption is of approximately 150 million liters of vegetable oil a year, due to the culinary culture of the area [10]. However, in spite of these punctual actions, it is unfortunate that the reuse of the residual frying oil still didn't possess a simple logistic and a large socioeconomic reach in Brazil. Yet, for the goal of better preservation of the local environment, it could be constituted, by the volume that is produced and consumed, as one of the main slopes to the country's environmental public politics.

The reuse of residual frying oil as raw material potentiates the elaboration of paints, oil for gears, soaps, varnishes, among other alternatives industrial and/or craft [11] that could strongly promote the visibility of the need of the reuse of the residual frying oil if they

were published thoroughly. Despite that, the social projects of environmental preservation, already mentioned, which debate about the reuse of the residual frying oil, usually have their divulgation quite limited to the own communities that they assist. In this sense, the use of social networks as mechanism of communication/popularization of projects of this nature could be able to, in good measure, serve as non-formal education platforms and to greatly amplify the reach of the formation of an idea of environmental conscience wanted by the majority of these projects. Besides, it would potentiate the capillarization of information from reverse logistics of collect and reuse of the oil to a public of great social and economical plurality that, certainly, would bring a larger visibility and inspiration for these actions in the national scenery. In line with this perspective, this work seeks to discover the use of social networks in Brazil as platforms of non-formal environmental education about the needs and advantages of the reuse of the residual frying oil.

## 2. Material and Methods

In order to understand the current use of the social networks for the divulgation and popularization of the importance of the reuse of residual frying oil, a census was accomplished using as base the indexers *Scientific Electronic Library Online* (SCIELO) and *Periódicos Capes* and additionally, a consultation on the social networks *Facebook*, *YouTube* and *Instagram*.

The investigation of the contribution of the social networks in the popularization and in the solution of the problem of the reuse of the residual frying oil intended to evaluate the use of the social networks from the point of view of users. In this sense, at the beginning it was defined the terms used for search, such as: "recycling of frying" oil, "reuse of residual frying oil" and/or "echo oil." In the searches, it took place the mapping of the interactions, besides the popularity and audience of the pages. The searches were accomplished between 27-29 July, 2017.

In the *Facebook* platform, in the field of the search, it was initially inserted one of the terms "residual frying oil", "recycling of frying oil" and "echo oil". The group of searches was limited for the modality of Pages. In total, thirty three pages were found being the same ones analyzed about the available content, purpose and popularity (number of users that liked the page).

In the *Instagram* platform the search was accomplished through the use of hashtags. A hashtag is one of the main tools of interaction and search in Instagram, and it works as a keyword or term associated to an information or a certain subject. The following hashtags listed, as well as their respective number of publications associated with the term, were inserted in the search field: #oleodefritura ("fryingoil", 238 publications), #oleodefriturausado ("usedfryingoil", 3 publications), #reciclagemoleovegetal ("recyclingvegetableoil", 5 publications) and #reciclagemdeoleodefritura ("recyclingfryingoil", 0 publications).

The search of videos and channels in the platform *YouTube* for the insert of the terms "recycling frying oil" or "reuse of residual frying oil" in the field destined to the research/search supplied a total 715 and 278 videos, respectively.

## 3. Results and Discussion

Verification in the bases of the indexers *Scientific Electronic Library Online* (SCIELO) and *Periódicos Capes* didn't indicate, until the moment, any study about the use of social networks as non-formal education platforms on the reuse of residual frying oil. Fact this that raises, in beginning, a significant lack of investigation about the potentialities of these channels of personal interconnection as tools of non-formal environmental education for the environmental problem linked to the subject of the discard and reuse of the residual frying oil.

The counting of the pages verified starting from *Facebook* — thirty-three pages — indicated a reduced

number of recycling actions and/or reuse of the residual frying oil published in this social network. Besides, the mapping of the interactions of the type “like” of these pages also suggests that this theme, unfortunately, has little immersion among the users, having in mind, above all, that these interactions frequently oscillate from few dozens to few hundreds of “likes” in the visited pages. Another aspect worthy of note is the main objective linked to the pages, of the thirty three found pages and accessed in the period of the research only five of them had, as main correlation, educational ends linked to the socio-environmental cause of the discard and reuse of the oil. The other pages are strongly linked to the withdrawal of the oil for commercial reasons, being constituted of companies that render the collection for resale and biodiesel producers. In other words, there isn't, in general, a dedication to non-formal Environmental Education in a direct way for the great majority of the investigated pages. An exception worthy of note is the Ecóleo Program that maintains a page entitled Ecóleo. The page has updated content to the ecological problems, socio-environmental discussions and the subjects regarding the reuse of residual frying oil that is rendered, under our view, as a good proposal of non-formal Education Environmental in a virtual non-formal space. However, it is still an isolated example front to the great potential that platforms such as the social networks can offer to the process of non-formal Environmental Education.

The evaluation of the posts visualized on *Instagram* is already in line with the general perception foregoing for *Facebook*. For the most part the publications are linked to collection companies and/or oil recycling and they use the social network as a platform of popularization of its recycling work, above all emphasizing the collection service. But without a wider educational approach. The largest number of postages is linked to the profiles in the network of the companies GraxsalORG, Ambiental, Katu Oil and Óleo Verde.

For *YouTube*, the search for the terms “recycling frying oil” or “reuse of residual frying oil” presented the largest volume of publications among all to verified social networks. A total of 993 videos were found in total for searches of the two terms mentioned. These videos approach themes such as the collection, recycling of frying oil, recycling techniques and some possibilities of reuse of the residual frying oil. Most videos were short, but informative. Besides, the majority of these videos are not linked to systematized channels of Environmental Education, which makes the information of this theme quite scarce digitally. In spite of that, it is worthy of note a channel entitled “*Grande Rio Reciclagem Ambiental*” that is focused in an approach of Environmental Education about collection and the appropriate destination to the residual frying oil.

#### 4. Conclusion

The social networks in the beginning of the XXI century were constituted as one of the main strategies of the social workers' interconnection in the modern world. The transmission capacity, reach and replication of information of almost all natures, experiences through them conditions that before were difficultly observed by other mechanisms of printed or electronic media. This capacity, when channelled for the process teaching-learning of Environmental Education, can represent a significant improvement in the formation of the participants of these networks interested by themes associated to it. In this sense, we glimpsed here, mainly through direct search of information in three social networks (*Facebook*, *Instagram* and *YouTube*), that these networks as platforms of non-formal Environmental Education are used below of their formative capacity. Due to that, our current efforts are configured in the extrapolation of the project of extension “Good oil is used oil...”, now too called “CiclaÓleo”, for non-formal spaces such as the social networks. This project is an action of university extension approved by UFPB, and of which we are part.

We believe that the transposition of this and of other projects of this nature for the social networks can give a larger reach to the educational process related to the environmental problem and the logistics of reuse of residual frying oil, multiplying the target publics and socially capillarizing even more the key informations related to this subject.

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