

Chapter 89

Pandemic! And now? Banned bodies: Virtual museum of sustainable experiences

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ABSTRACT

This work aims to highlight the importance of using social media in the transmission of scientific knowledge in the context of social isolation/distance. Based on the premise of inseparability between teaching, research, and extension in universities, it is understood here that extension activities and the

sharing of scientific knowledge must be reinvented and made possible through social media – WhatsApp, YouTube, Instagram, and Blog, among others. The current pandemic context of Covid-19 initially stalled individuals who are in constant search for new forms of readaptation in face of this reality. Sustainable experiences via virtual museum is another way in which the extension project “Creativity with Sustainability: exchanging experiences in a virtual format” aspires to spread environmental education with demonstrations of its actions with the reuse of solid waste.

Keywords: Solid Waste, Environmental Education, Social Media.

1 INTRODUCTION

This work aims to highlight the importance of social media in the transmission of scientific knowledge in the context of social isolation. This is a part of the extension project Creativity with Sustainability – exchange of experiences in a virtual format in progress at the Federal Rural University of Rio de Janeiro – UFRRJ. With initial weekly and face-to-face execution, the current virtual format is due to the pandemic context.

With the advent of the 2019 new coronavirus (Covid-19) pandemic, the project group remained in contact through social media – WhatsApp, Instagram, and E-mail – exchanging ideas and proposals throughout 2020. In other actions, mainly focused on the needs imposed by the current scenario, such as volunteering in the project to make face masks. In the meantime, we proposed the activity “A garden in each box”, when Members with their waste and in their homes cultivated their gardens; making photographic and video recordings, and exchanging experiences through WhatsApp media.

In line with the original theme – reuse of solid waste, giving it survival, avoiding early and inappropriate disposal, and the addition of scientific knowledge about the waste used – in 2021, still in the pandemic context, the project was restructured, adding its title new character: “in the virtual format”. At

this time, he already had the media Instagram and YouTube, helping to publicize the actions and exchange of experiences. Finally, a Blog was created, initially designed to host a “Virtual Exhibition” of the products and their scientific texts, as well as future events.

To this end, a “Bank of Workshops” was created with its specific objectives and academic content with the construction of booklets on reused materials, for weekly posts, both on the Blog and on YouTube and Instagram media to disseminate extensionist actions and scientific knowledge.

They are social media such as those used in the viability of a new format of the extension project treaty that we propose to highlight.

2 THEORETICAL FOUNDATION

2.1 THE PANDEMIC CONTEXT

The disease caused by Covid-19 had its first record in the province of Wuhan (China), in December 2019 (WHO, 2020), and was declared a pandemic in March 2020 (WHO, 2020). As of October 5, 2021, 235,673,032 cases and 4,814,651 deaths from this disease have been confirmed worldwide (WHO, 2021). In Brazil, until October 6, 2021, 21,516,967 cases and 599,359 deaths from Covid-19 were confirmed (Ministry of Health, 2021). The etiological agent of Covid-19 is the severe acute respiratory syndrome virus associated with coronavirus-2 (SARS-CoV-2) (Wiersinga et al., 2020).

The transmission of SARS-CoV-2 occurs mainly through close contact of the mucous membranes of the nose, eyes, and mouth with droplets containing the virus expelled by infected individuals, during coughing, sneezing, and speech (Chams et al., 2020). Transmission through indirect contact on surfaces contaminated with the virus is not ruled out, as the virus can remain viable on inanimate surfaces (Marquès & Domingo, 2021).

Another problem is the fact that studies indicate that asymptomatic individuals are capable of transmitting the virus to family members and close contacts. Thus, early detection becomes necessary to cut the transmission chain (Bai et al., 2020; Gao et al., 2021).

In Brazil, to date, four vaccines against Covid-19 have been approved by the National Health Surveillance Agency (Anvisa), and as of October 7, 2021, approximately 96,366,365 people have been vaccinated with both doses. or single dose, which corresponds to about 45.25% of the total vaccinated population (Ministério da Saúde, 2021). In any infectious context, to achieve a state of herd immunity, a high rate of immunized people is needed, which requires a minimum of 70% to 80% vaccination coverage (Fontanet & Cauchemez, 2020; Kadkhoda, 2021). However, factors such as population characteristics, pathogen stability (high mutation rates), and public health policies influence the effectiveness of vaccination coverage and, consequently, collective immunity (Mallory et al., 2018). In the current pandemic context, this effective coverage has not yet been achieved.

Studies have shown that although masks in general reduce the risk of exposure to viruses, N95 and surgical masks are the most efficient as physical barriers against the virus, both in transmission by the sick

individual and in protecting the healthy user (Van der Sande et al., 2008; Kim et al., 2020; Hemmer et al., 2021). The social distancing strategy has already been used in other pandemics, such as those caused by Influenza viruses, and has proven to be a strong measure for reducing transmission and mortality rates (Petersen et al., 2020). Furthermore, studies carried out with 508 soldiers in Switzerland showed that social distancing can curb the spread of SARS-CoV-2 and that it probably helps to reduce the risk of developing more serious conditions in infected individuals (Bielecki et al., 2021). In this way, it is possible to understand that social distance is an important tool in the fight against pandemics, bringing positive impacts in the reduction of viruses, and possibly favoring the reduction of clinical manifestations in infected individuals (Zhao et al., 2021).

Although collective protection was not achieved, in March 2022, the Government of the State of Rio de Janeiro decreed the use of non-chemical measures as optional, such as the use of masks, isolation, and social distancing, both in open and closed places (Secretary of Health, 2022). The justification for this decision is the high coverage of the complete vaccination schedule in adults, and the heterogeneity between municipalities, since some were still experiencing the fourth wave generated by the Ômicron variant (Secretaria de Saúde, 2022). However, the WHO has not yet taken a position on the optional use of masks and is reformulating a new technical guide (WHO, 2022).

2.2 UNIVERSITY EXTENSION IN THE VIRTUAL AGE

Before the National Extension Plan (BRASIL, 2001), university extension integrates educational, cultural, and scientific construction, inseparably fitting teaching and research, enabling a transforming relationship between the university and society.

When we think of extensionist practice, we envision physical proximity contact between individuals, however, in the present world situation, new perspectives are needed for numerous practices, including those of university extension.

Faced with the pandemic manifestation of Covid-19, the ban on being in public places (one of the WHO guidelines), constitutes effects - and one of these effects is materialized by the search for other paths, among them, the digital one (Venturine and Fernandes, 2021: p. 3). People, commerce, small and large businesses, States and Nations, as well as sports activities, have reinvented themselves and are in constant search of new forms of social approximation, despite being physically distanced by the imposed isolation. The incredible resilience of human beings in adapting to new realities has been put to the test since the beginning of this isolation. As a diffuse example, artists began to present their art virtually – music, theater, dance – as a demonstration of this adaptation added to solidarity with others.

Thus, university extensionist practices, like everything else, reinvented themselves to maintain themselves, aided by the “Digital Technologies of Information and Communication” – TDICs – already constant in the daily lives of a large part of the population, if not the majority.

According to Bedin and Barwaldt (2014, p.2), social media have a social importance of use, sharing, and connection, a way of relating scientific knowledge to cultural knowledge. Perpetuated by current students, according to the authors, it is up to teachers to take advantage and channel them, so that students interact with each other and, in collaboration, develop the skills and abilities provided by the subject programs. In this direction, the authors conclude, pointing to the expansion of the media in a prosperous way, building collective educational knowledge, corroborated by Berino (2018, p. 160) when stating that the media now allow us another look at life in schools and their characters, the As even mobile devices have TDICs capable of transforming the way of producing instant records and disseminating these images.

In this context of the wide use of TDICs and their media, the period of social distancing still makes active extensionist actions possible, aiming to disseminate sustainable actions. According to Bedin and Barwaldt (2014), these have become mechanisms for leisure and the teaching and learning process. And why not go further, as a tool to strengthen relations between universities and their community and/or society?

Because of the above, we ask in what ways could Environmental Sustainability be disseminated through actions, in social media, with the potential for communication of environmental education aimed at transforming human beings from generators of various household or non-domestic waste into conscious and responsible consumers.

We realize that environmental sustainability in the digital age can accelerate the growth of intellectual and scientific production both theoretically and practically through environmental education via social media and university extension. Considering that the exchange with the other, before the circulation of ideas and understandings through the media, promotes awareness and mutation, with each participant being an organic learner, a natural learner/learner type (Bedin and Barwaldt, 2014, p.2) who, even at a distance, encompass characteristics of the face-to-face educational process, characterized by ideas, discussions, debates and other contours for the construction of knowledge in the face of dialogue and exchange of experiences, as well complemented by Bedin and Barwaldt (2014) when quoting Harasim (2005).

Faced with this perception, the “Virtual Museum of Sustainable Experiences at UFRRJ” appears, which in the format of a Blog is one of the reinventions of the extension project Creativity with Sustainability: exchange of experiences in a virtual format. Seeking to disseminate sustainable actions in a practical and theoretical way, sharing knowledge, not allowing bodies interdicted by social distancing/isolation to stop sharing science in the academic context. In this regard, we understand that university extension is configured as a channel for exchanging experiences between universities and the society that sustains them, through teaching and research carried out with students, thus functioning as a two-way street (Salvaterra Magalhães, 2021, p.20).

2.3 SOCIAL MEDIA AND THE OUTREACH PROJECT

According to Barz et al. (2020, p.1), social media are online channels that connect people around the world by allowing communication, relationship, and content sharing between users. Communication through DICTs has developed rapidly in the 21st century (Magalhães and Costa, 2016). According to Neri (2015, p. 1), in July 2013 WhatsApp reached 250 million users, and in 2015 the mark of 700 million monthly users, became a worldwide fever and a distraction problem in public school classrooms and private in Brazil. According to Santos et al. (2021), it is estimated that the level of 1 billion users of this application has already been reached and that in Brazil alone it already has around 120 million users.

Santos et al. (2021) expose that the WhatsApp application, which is widely used in the classroom, as a pedagogical tool for recording classes, not only by the teacher but also by the student, becomes a facilitator in the assimilation of content through images and/or instant texts, capable of future comparisons with notes. He adds that as it is an immediate and long-distance communication tool, it facilitates the search in research, illustrative images for work, and the creation and editing of videos, among other activities.

2.4 METHODOLOGICAL PROCEDURES

For the construction of the contents of the media and of this article, we used bibliographical research through the Google Scholar database with the keywords environmental education, solid waste, social media, and university extension.

The creativity of the participants and their personal experiences with the theme presented the workshops to be worked on.

Methodologies developed for the use of the used media were necessary for the development of the proposals. Thus, integration and the method of exchanging experiences among the group have been extremely important for the project's survival.

3 ANALYSIS AND DISCUSSIONS

3.1 WHATSAPP AND INSTAGRAM

Atualmente, o projeto aqui apresentado – *Criatividade com Sustentabilidade: troca de experiências em formato virtual* – utiliza tal aplicativo como ferramenta principal na troca de ideias, sugestões e propostas, fotos e filmagens dos trabalhos individuais dos extensionistas, que foram impulsionados a desenvolver um “Banco de Oficinas” que são gravadas para serem expostas nas mídias sociais do projeto. Assim, utilizamos o aplicativo *WhatsApp* internamente entre os membros do projeto e demais mídias como *YouTube*, *Instagram* e *Blog* na divulgação e interação com o meio externo a este, completando assim a rede de relacionamento proposta pelo projeto de extensão.

A mídia *Instagram* tem sido utilizada pelo projeto como meio de difundir as ações realizadas, sendo divulgadora das demais mídias.

3.2 YOUTUBE AND THE BANK OF WORKSHOPS

The YouTube virtual platform is used in the virtual form of the project to disseminate the knowledge exchanged to the academic and general public.

The proposal is to use this “Bank of Workshops” to make weekly posts. The works presented are most common, however, we seek as a differential the induction and stimulation of environmental education through scientific knowledge about each constituent element of the articles produced with solid waste.

The practical workshops are filmed step by step, without text, by the workshop leader. Then, the recording is prepared: each instructor/workshop builds the technical sheet referring to the work produced with information about the theme, proposal, main reused waste, negative impacts on the environment when incorrectly disposed of, advantages and disadvantages, and applied techniques. In another stage, the workshop person records the text he produced, and, finally, all the material goes to editing. A video editing committee was constituted for this moment of the project.

The workshop workers are responsible for producing a booklet about their workshop to have the project end up with the “Sustainable Experience Exchange Workshop Notebook” in E-book format.

3.3 THE BLOG AND THE VIRTUAL EXHIBITION

As the collection of articles produced grew, the need arose to disseminate all the material in another way – a virtual short film exhibition. The opportunity arose with the possibility of being presented at SCNT – National Week of Science and Technology – at UFRRJ. Along with the opportunity came the question: where and how to exhibit? After a brainstorm via WhatsApp among the participants of the group, a consensus was reached on the creation of a Blog called “Virtual Museum of Sustainable Experiences UFRRJ”. Faced with some setbacks, the proposal was not implemented promptly for the SNCT, being transferred to the XI EIA “Meeting of Environmental Initiatives internal and external to UNIRIO 2021”.

The virtual short film exhibition is in the finalization phase. It consists of photos of the products, videos with a description of their functionality and the material used, and a short speech by each artist who authored the articles presented. The exhibition is being structured in spaces called “rooms”. At the time of writing this article, we will have rooms, which will be divided into PET/Plastic, Paper, Wood, CD, Organic Waste (compost), Recycled, Aluminum Can, Coffee Filters, Glass, Tetra Pak Packaging, Fabric, Cardboard, and Coconut. In each room, visitors will have access to photos, videos, artists' speeches, and texts with the impacts of reused material on the environment. Each room will be available for visitors to access via a link.

The purpose of this reuse, in the first place, is to prevent the incorrect disposal of waste, giving it a functional survival and the dissemination of this work on the Blog.

4 CONCLUSION

The project is in progress, but still in a slow way. However, in face of the readaptation to the new, virtual reality, the project members have been gradually encouraged, which still has certain impacts on the use of DICTs. The new virtual context, in addition to being democratic, while reducing the distance, increases the possibility for individuals to discuss, listen and make themselves heard; produce news, and receive so many others. We noticed in the new format of the project with the communication carried out through social media had a better fluidity of the work with more interesting results in terms of growth in knowledge. However, difficulties are still faced.

We can envision greater dissemination of the work being carried out and the achievement of the proposed objectives more clearly. The creation of the Blog, as the last social media of the project, leveraging the work of the extensionists. We believe that through this channel, students' work and scientific production will be more stimulated.

Although university extension is a pillar of the university tripod (teaching, research, and extension), we found that the topic of university extension in social media has scarce literature, currently being excited with the advent of the Covid-19 pandemic.

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