Education and sustainability in times of covid-19 pandemic

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Abstract

COVID-19, a disease caused by the coronavirus was first identified in China in December 2019. At the end of January, the World Health Organization declared the epidemic to be a Public Health Emergency of International Importance and on March 11, 2020, a pandemic. The global pandemic generated by COVID-19 and the consequent mandatory population confinement measures implies unforeseen events and challenges for education systems. The objective of the article is to reflect on this issue from a sustainability perspective. Thus, what are and should be the functions of the school, in view of sustainability, in the context of the current COVID-19 pandemic; as well as in supposed future waves of emerging and re-emerging diseases? It seeks to discuss the importance and challenges for the insertion of proposals in Education for Sustainability in the school environment. These issues are at the center of the Sustainable Education debates, and thus the article seeks to reflect on this subject from an educational and sustainable approach. To this end, it is not necessary to conduct a brief review of the functions of educational systems indicated by sustainability in Education, as well as their repercussions and meanings in terms of environmental, social and health development (personal or collective). The research was conducted through literature review and theoretical discussion; of an exploratory and descriptive nature, of a qualitative nature. The results corroborate that the pandemic, by causing a serious global health problem, also extending to a global economic crisis, led the planet to a great recession that directly threatens the achievement of Sustainable Development objectives. Thus, it is up to Education, whether at

a distance in this context of distance/social isolation, or even after this situation in a classroom manner, to include an agenda of transversal contents on sustainability in the curriculums of all systems, modalities and educational spheres in Brazil.

Keywords: Education; Sustainability; Health; COVID-19.

1. Introduction

COVID-19, a disease caused by the coronavirus, was first identified in China in December 2019. The clinical spectrum of infection is very broad, ranging from a simple cold to severe pneumonia. People with COVID-19 develop signs and symptoms, including mild respiratory problems and persistent fever (LIMA, 2020). According to the Ministry of Health, transmission occurs by touching contaminated hands; droplets of saliva; sneezing; coughing; phlegm, and contaminated objects or surfaces, which makes the use of masks and alcohol 70 % very important.

According to BBC Brazil, in July 2020 there were more than 18 million people infected worldwide, with more than 700,000 deaths. COVID-19 imposed on the world population new challenges in the sanitary, social, economic, and educational contexts, severely exposing to the world the weaknesses of the greatest economic powers and confirming the impotence of those economically underprivileged.

For Dovers and Handmer (1992) sustainability is the ability of a human, natural, or mixed system to resist or adapt to internal and external change indefinitely. For Elkington (1994) sustainability is the balance between environmental, economic and social. Sustainable Development has sustainability as its goal. The term Sustainable Development was widely disseminated from the publication of the report Our Common Future in 1987, with interpretations ranging from the conciliation of economic growth with the environmental variable, of capitalist bias, to more radical visions that defend ecological integrity, favorable to the development of sustainable social practices (HERCULANO, 1992 apud CARLETOO et al., 2006). The way we live, based on capitalism, on the unbridled purchase of goods needs to be rethought, COVID-19 demonstrates the fragility of this system, in relation to human life and the need for a sustainable development, based on human, animal and, above all, environmental well being.

The widespread closure of all educational centres at the classroom level raises a fundamental question: What is the school for in terms of sustainability? What are and should be its functions, in view of sustainability, in the context of the current COVID-19 pandemic? As well as in supposed future waves of emerging and re-emerging diseases?

The purpose of this thought session is to discuss the importance and challenges for the insertion of proposals in Education for Sustainability in the school environment. These issues are at the center of the debates on Sustainable Education and, in this way, the article aims to reflect on the subject from an educational and sustainability approach. To this end, it is not necessary to conduct a brief review of the functions of educational systems indicated by sustainability in Education, as well as their repercussions and meanings in terms of environmental, social and health development (individual or collective).

Also, the impacts of the current situation on the exercise of sustainability and a reflection on its multiple repercussions in terms of educational opportunities are discussed. Therefore, the theme is presented in order

to mark the role of the school as a specialized institution in the construction of deep, relevant and meaningful knowledge for each learner.

2. Methodology

It is a qualitative study of exploratory and theoretical depth, supported by literature review and critical discussion. The qualitative approach aims at deepening a subject in question, describing information instead of measuring it (source). The literature review is a synopsis that summarizes different investigations and articles that present the current state of the issue to be investigated and allows a critical evaluation of other research on the subject (GIL, 2017).

The research was carried out at the Capes Periodical Portal, where we inserted as keywords the term "Sustainable Education" and found 3,108 articles published between 1992 and 2020, the vast majority published in English (2,022) and Portuguese (1,784). We filtered the search for articles published between 2018 and 2020, in the Portuguese language, finding 341 articles, we also refined for articles in Brazil, having a total of 64 articles, we selected the first 10 journals to use in our analysis.

3. Results and discussion

3.1 The gaps in unsustainability practices in education

For Dovers and Handmer (1992) sustainability is the ability of a human, natural, or mixed system to resist or adapt to internal and external change indefinitely. For Elkington (1994) sustainability is the balance between environmental, economic and social, Sustainable Development aims to promote sustainability. The context of confinement has made explicit the multiple gaps that cross our educational system and systematically place social groups at a greater disadvantage at school. In addition to the differences within the public school itself, we highlight the difference with respect to the private educational system, whose technological conditions of the school and the students are different from those of the public educational system, whether municipal, state or federal.

There are still an insignificant number of articles, specialized reports or other scientific papers that have been published recently on this issue. However, in view of the referred authors, they present the gaps in the area of health, education, as well as the economic, social, cultural, emotional and technological issues that are evidence of the need to develop education for Sustainable Development, the COVID-19 pandemic demonstrates the urgency for new methodologies and debates within the school aiming at a development based on sustainability, that is, on the balance with the environment. The reality presented and amplified by the lack of sustainability reveals citizens alone, disoriented and distressed. Also, families have been left without work all over the world, increasing the number of people in situations of socioeconomic vulnerability. The pandemic is demonstrating the economic fragility and the lack of preparation of the governors and people in general to deal with it. It is a global and economic health crisis, and in some countries a political crisis as well.

Before wondering what is expected of the world after the pandemic, it is worth reflecting on what humanity has been experiencing. According to Silva and Pontes (2020), the crisis highlights the problems of society that have been present for many years, such as the precarious health system, inequality in access to water,

social inequalities, devaluation of the countryside and agriculture, insecurity in employment and the privilege of capitalism instead of taking care of life.

One of the Ministry of Health's actions was the provision of new means of care to the population, such as the Coronavirus-SUS application and the WhatsApp. The guidelines since the beginning of the pandemic have consisted of washing hands with soap and water or sanitizing with alcohol gel, covering the nose and mouth when sneezing or coughing, social distancing, not sharing personal objects and maintaining the habit of ventilating environments. From April 2020, the Ministry of Health started to guide the population to use cloth masks to act as a barrier to the virus (LIMA, 2020, p. 2).

Currently, "washing hands" or "staying at home" are not acts to which everyone has access. This new situation has allowed society to become more aware of its interdependence with all people in a complex and delicate network of relationships, as well as with other forms of life with which beings coexist. Washing hands is basic and prevents a number of diseases that precede COVID-19, but it has never been so encouraged and stimulated. According to the G1, communities like Chatuba de Mesquita, Camarista Méier and Complexo do Alemão, which are located on the outskirts of the city of Rio de Janeiro, were long without water during the coronavirus pandemic, without assistance from governments [1], which demonstrates the lack of development, especially in poor communities, since water is an indispensable resource for survival.

Therefore, the pandemic has generated uncertainty and fear because it is known that it cannot be controlled. However, fear and confinement have become an opportunity to reflect and, at the same time, to forge hope that this situation will allow citizens to rethink the importance of including sustainability concepts strongly in the school curriculum in order to deal more effectively with scenarios like this. Although social isolation is recommended, a large part of the population has not been able to comply with this measure, due to socioeconomic vulnerability or because they work in sectors considered indispensable, such as the market, pharmacy and hospitals.

The world faces a new disease and a situation considered unusual, which requires radical changes in behavior at individual and community levels. All should follow the guidelines of health authorities, based on available scientific evidence and aligned with the recommendations of the World Health Organization, respecting quarantine and travel and social contact restrictions (LIMA, 2020, p.5). Even with the disclosure of case numbers and deaths by COVID-19, at the global, national and even local levels many people continue to disrespect protection measures, one of the consequences of the unrestrained disclosure of fake news.

In this regard, it is recommended, based on Filho (2020), that transversal themes, linked to the concept of sustainability, be inserted in the educational curriculum, privileging solidarity, responsibility and awareness of the impact of our actions as a species. In this trajectory, it is believed that a different system may emerge in which life is privileged over the economy, in which access to health, the conditions of medical personnel and health institutions are improved in the national territory, as well as in all countries.

To do so, it is necessary to redefine what it means to live well, to share with the family, to be healthy, to belong to a community; that is, to change the concept of well-being, which many human beings have,

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[1] Available at: https://g1.globo.com/rj/rio-de-janeiro/noticia/2020/03/17/moradores-de-comunidades-do-rj-sofrem-com-falta-de-agua-em-meio-a-pandemia-de-coronavirus.ghtml. Access on July 20, 2020.

linked to the economy, production and consumption and, consequently, in the opposite direction of sustainability.

3.2 Education, Sustainability and the COVID-19 Pandemic

Education for sustainability emerged in the mid-1980s, from the global conferences, becoming a hegemonic current in the field of education through the recommendations of UNESCO after Rio-92, with the central objective of contributing to sustainable development, because it assumes that economic development is inseparable from the conservation of natural resources (ANTUNES et al., 2018, p.265). It is necessary for the school, together with the family, to educate for rational consumption and for the reduction of residuals and waste, because the preservation of the planet needs to be collective (MIGUEIS, 2014, p.2).

Sustainable development emerged as an alternative to overcome the installed environmental crisis, an alternative related to economic, social and cultural issues, and is explicit in the five dimensions of sustainability: social, economic, ecological, spatial and cultural. Capitalism is based on an unequal and exclusive economic model that disregards the environmental and social costs of production (CARLETTO, et., al 2006).

COVID-19, a pandemic that has shaken the world's structures, demonstrates the urgency for an education that makes individuals rethink and reflect on how they relate to the environment. The accelerated pace of life, the individualism characteristic of modern society, the lack of quality relationships and the lack or little concern with the environment, show the need to combine education with sustainability, through principles of ecology, personal and collective health, solidarity, reciprocity, cooperation, empathy among other factors (SAPIRO et al., 2020).

Today, technology takes on new meanings whether in the continuity of education classes or in the role of interconnecting the communication of loved ones. In this sense, it is inferred that technologies and new media are creative and innovative ways to bring people in isolation together and, in this way, could help to create a society that is a little more solidary in which there is mutual care and ways to support each other (CECCON & SCHNEIDER, 2020).

According to the above-mentioned authors, through technology, it is possible to gather information and acquire knowledge as pertinent to moments such as the current one, such as epidemiology and collective health studies, through this knowledge tool that allows breaking down systemic barriers and thus can be listed as a sustainability partner, if properly used.

It is also worth mentioning, according to Filho et al. (2020), that the pandemic is also an appeal to governments, not only to reassess and improve investments and programs related to education, science and technology, but also to question the content and impact of such programs mainly on education.

With regard to education for sustainability, it is important to stress that technological developments point to the same market that decides what is being researched and what the priorities for technological development are (GALLELI, 2018). In other words, there is a need for a change in this direction, to face possible new waves of contamination after the pandemic, or even to better fight the supposed new endemics and pandemics, besides a greater concern with prevention. The lack of sustainability affects everyone in society in the short or long term, situations such as this one experienced due to COVID-19 demonstrate that there is much to be done to improve the living conditions of the world population. Capitalism preaches

social inequality, which in times of crisis massively affects the most economically vulnerable populations. According to Henrique and Goebel (2020), it is also important to reflect on the curriculum - a device that sustains knowledge - that educational institutions are extending to students, who in a standardized way reproduce diagrammed concepts about how the world is perceived and how society interacts with it. Therefore, the importance lies in rethinking the educational system, because that is where the basic knowledge is usually acquired so that individuals can relate to the world and to their peers in a sustainable manner.

If it is a desire to address the impacts of this pandemic, as well as of other diseases to come, it is time to rethink education, starting with the way knowledge is accessed, and also to reflect on the quality of the information received and on one's attitude towards the information that arrives. It may be the time to find ways to feel-think from an educational point of view and to promote a dialogue of knowledge, oriented towards a more sustainable and solidary life.

3.3 Lessons not to be forgotten

From an epistemological point of view, the pandemic shows us the need to diversify knowledge and to have better strategies for the social and sustainable appropriation of science (MARTINS et al., 2020). Due to the rupture in the social fabric that the measures against the coronavirus impose, changing the forms of coexistence, it is not enough just decrees of rulers recommending quarantine and isolation, but mechanisms of awareness that produce meaning to the population, aiming to ensure the adoption of practices by society (CECCON; SCHENEIDER, 2020).

The school is the right environment to foster responsible attitudes and environmental sustainability, because it offers citizens educational actions and develops collective and individual conduct, but it needs the entire community to be involved in the action, and to have a democratic management, with a commitment to educate for rational consumption and the reduction of residues and waste (MIGUEIS, 2014, p.6).

Following this line of thinking, epidemics and pandemics could lead citizens to take more seriously the need to ensure sustainability, for example, in order to be better prepared for future crises. The socially practiced food system reflects high levels of consumption, production and marketing of essential products from long supply chains. Educating for sustainability makes a positive contribution to improving the quality of life on the planet as a whole, but few schools are yet concerned with practices aimed at sustainability, due to a lack of structure, democratic management, dialogue and community involvement (MIGUEIS, 2014, p.14).

Therefore, it would be possible to reduce certain vulnerabilities in scenarios generated by human action and its impact on the planet. According to Henrique & Goebel (2020), it is time to understand that ecosystems support the economy and health, not the other way around. Treating nature disrespectfully has consequences for all human beings. Through sustainability, society, represented in its individuals, can acquire a new awareness of relationship and interrelationship with nature and, thus, one can think less individually and give value to the collective.

It is paramount that education can work on the impact of individual behaviour on social dynamics and the well-being of others. To do so, society, during and after this pandemic, needs to focus its efforts and energies on the well-being of the population, by virtue of the solidarity we must build as a species (GÓES et al.,

2020).

This is a call to work from sustainability, at last solidarity and empathy as a society where everyone can and should have access to the essentials of life. It is about converting what are today privileges into rights. Comprehensive health and quality education should be a right for all as a society. The planet has been put on hold and now we hear in a different way from nature. Without planning it, we are taking care of the environmental recovery and it is in our hands to start building forms of coexistence in solidarity with the environment. Education for sustainability is already being practiced in some schools in Brazil, but in a very timid way, with few supporters, the pandemic that we face demonstrates the emergence of an education focused on sustainability, so that we can maintain, or rather, create a balance with the environment, and promote social equality. The pandemic has demonstrated several problems that have been latent for a long time in our society, such as the lack of water, sanitation and economic security, it has demonstrated that we are susceptible to new pandemics and that we need to rethink the way we live.

4. Conclusion

As COVID-19 dramatically changes lives and livelihoods around the world, the policy debate needed to contain it is increasingly broadening, highlighting a number of multilateral solutions to alleviate the pandemic. In this regard, the commitment of Education to achieve the objectives of Sustainable Development emerges.

Therefore, Education has the prerogative to achieve progress that will help the world overcome the health emergency through Sustainability, including the discovery of a vaccine. A better reconstruction of educational strategies is therefore necessary; since, although the virus affects everyone, it has not affected them equally, but has exposed and exacerbated inequalities in societies and the lack of sustainable practices combined with an education concerned with collective health and social responsibility.

These disparities exacerbated in times of pandemic can serve as a catalyst and a call to rebuild a school curriculum that has sustainability practices based on personal and collective health practices, human rights and specific measures in each country as its flagship should take into account the incidence of special situations, such as poor hygiene and sanitation conditions found in a wide range of developing countries.

Following this trajectory, COVID-19, as well as others that may emerge, like the pigs in China as a new global pandemic, with a new subtype of H1N1, a consequence of a "genetic rearrangement" with the virus that caused the pandemic in 2009. It has managed to move from pigs to humans, but there is still no record of infection among people (G1)[2]. Highlights the need to encourage Sustainable Education, still little practiced in Brazil, with emphasis on understanding multilateral cooperation, governance in health and, above all, global solidarity. In the context of the current picture, it can be observed that the Sustainable Development objectives ventilated by Education can serve life and livelihoods all over the world, as well as support governments in combating this unprecedented crisis in terms of health and the socioeconomic sector.

Finally, responding to the survey's objective, it is emphasized that the pandemic, by causing a serious global

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[2] Available at: https://g1.globo.com/ciencia-e-saude/noticia/2020/06/30/novo-virus-com-potencial-pandemico-achado-em-porcos-na-china-tem-elo-com-h1n1-que-causou-mortes-em-2009.ghtml. Access on August 07, 2020.

health problem, also extending to a global economic crisis, has led the planet to a great recession that directly threatens the achievement of the objectives of Sustainable Development. Thus, it is up to Education, whether at a distance in this context of distance/social isolation, or even after this scenario in a classroom manner, to include an agenda of transversal contents on sustainability in the curriculums of all systems, modalities and spheres of education.

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