

Sustainable Globe Project's Statement on Challenges for Sustainability

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ABSTRACT

This text is a short overview of the Sustainable Globe Conference 2021, the special issue of the International of Environmental and Science Education and new challenges for the idea of sustainability and its education.

Keywords: Sustainable Globe Project, challenge, sustainability

INTRODUCTION: OVERVIEW OF THE SUSTAINABLE GLOBE PROJECT

How to make our world sustainable? Of course, this question could not be answered by a single and simple solution, which fits all requirements in all places of the world. The complexity of the task challenges us in very different situations, in a great variety of means to tackle local, regional and thus, finally, global change. A challenge is that the local people everywhere should be involved in these programs because without people's commitment, a change would be not sustainable. Thus, not only technical or administrative changes are required, but also programs to convince people, e.g. by education.

The Sustainable Globe Project started through the collaboration of and with international doctorate students at the University of Halle in Germany. Over the last ten years, we have been working on questions of education for sustainable development in Nepal, Ecuador, Colombia, South Africa, Eswatini, Egypt, and other countries. This collaboration created the idea to combine our local and regional research concerning the local experience and the local cultural and spiritual background (Regmi et al., 2022).

THE SUSTAINABLE GLOBE CONFERENCE 2021 AND THE SPECIAL ISSUE

One of the objectives of the Sustainable Globe Project is to convene experts and practitioners of sustainable processes from around the world. In this process, the Sustainable Globe Conference emerges. Our Conference was held online in

September 2021, showing the similarity of the global challenges. It created a common ground to exchange in the search for solutions. It also motivated the experience of being together despite belonging to different regions such as tropical forests, deserts, mountains, and farmlands.

Furthermore, the Conference linked Northern and Latin America, Africa, Europe, and Asia, communication was enabled by translation, and the online format allowed also overcoming time shifts throughout the continents. As a result, we all had the opportunity to join and compare efforts at our home places and the research outcomes on their effects. We all had the impression of working with our local means at the same global challenge of a sustainable future.

The first step to ensure a broader impact of the Conference is the publication of the contributions presented in the education section. The documents, initially in English, Portuguese, and Spanish, were developed by the authors as papers in English for a special issue of the International Journal of Environmental and Science Education. We are combining twelve authors in eight articles from universities in Brazil, Colombia, Germany, Mexico, and Portugal. The articles comprehensively address various aspects of environmental education in different countries.

An essential article tries to find the sources of the problems of the global south: Felipe Rojas Vasques, Iury Lima Nakaoshi, and Ivan Fortunato, at universities in Brazil and Portugal, analyse the complex reasons for the current situation, based on historical and colonial traditions. The North and South imbalance is a logical consequence of colonialism and imperialism. Based on Paulo Freire's idea Pedagogy of the Oppressed (Portuguese: *Pedagogia do Oprimido*), published in 1970, the authors formulate various aspects of new education for sustainable development concerning the need to develop

the historical founded imbalance into a reflected, self-determined, and liberating process.

What could be more authentic than taking into account indigenous knowledge, especially in biology? Castaño Cuellar and Bravo Osorio researched the knowledge of indigenous people in Southern Colombia to find ways of teaching Biology as a cultural practice. In this context, the definition of truth is a crucial point: is it only defined by the western way of creating scientific outcomes, or is a naturalistic view, based on the experience of many, also allowed? How much does people's everyday life influence epistemology, dialogue, and searching for the truth, a cultural practice? As people have lived in that area for a long time, their knowledge of communities, in which health, education and welfare are developed locally, their knowledge should be considered to have an identical value to the West's biology.

Seeing traditional knowledge as a value, losing it is a severe negative situation. Marisol Encarnación Galindo observes this loss in a Mexican community, driven by migration, the influx of infrastructure and a lack of understanding, especially among young people. The knowledge of environmental history is a crucial factor in formulating an environmental education process, and by forming learning communities between many participants, the author seeks to overcome the loss. By understanding and managing cultural elements, opportunity to change environment in a way everyone agrees is enforced. Traditional knowledge thus meets innovation; however, it respects the relationship between humans and nature.

When you see this approach under ethical aspects, the way of teaching is crucial. Anne Lindau and Miriam Kuckuck analyse the textbooks for geography teaching in Germany. They found a clear ethical framework but a lack of hints for collective actions. The focus mainly lay on the individual level of students as consumers. Social and political perspectives are seen as a fruitful and necessary prerequisite for sustainable action. However, the individual perspective alone will not be able to deal with all the ethical demands of education for sustainable development.

In a more detailed aspect of the integration of antinomies into teaching sustainable development, Jochen Laub explains his research on pre-service teachers. He identifies two types of argumentation in their way of dealing with the antinomies in education for sustainable development. First, the pre-service teachers' texts are characterised by different degrees of integration of values, ethics and reflection. The taking over of responsibility is seen as a crucial point. However, the teachers' practice is indispensable to understanding and materialising the sustainable educational processes. Claudia Marcela Puerto Layton systematises an educational experience in the school/home garden contributing to the teacher practice field. In a post-COVID-19 school in Colombia, the teachers motivated the students and community to address crucial topics such as food security through the school/home gardens in the biology class. The learnings around the experience are an insight into community engagement, critical thinking, and interdisciplinary and intercultural cooperation.

After all the studies, reflections, theories and proposals, a question arises—how to guide teachers in a complex practice of

environmental education? Julio César Tovar-Gálvez offers us a set of models to drive the articulation of disciplines and cultures around the individuals' interpretation of reality. The author identifies educational experiences to show to teachers how to lead more and more complex understandings of the environment. The study and reflections presented by Wesles Sedano Aguilar on citizens in a rural region in Colombia help us understand people's interpretation of environmental reality. Lastly, the author provides information and analyses that let us know the connection between different epistemologies and people's ideas on global warming.

CHALLENGES FOR SUSTAINABILITY

The special issue represents the various levels of environmental and science education that challenge sustainability and its education. The authors refer to the overarching principles of ethical, sociological and political embedding of environmental education. Thus, it is not a topic for the individual person or the individual teacher. Instead, it is part of a future orientation of our societies, regardless if they are located in the North or South, or the West or East.

The need to reformulate the scientific basis of the Western view of the world by local communities in the South is a clear example of gaining ownership of sustainability. It is evident that this is necessary for a different culture in indigenous societies, but it is also essential to be acculturated in the countries of the north. Gaining ownership is a need for all people, not only students, to be dedicated to working on a sustainable future and to keep up with every day's challenges to develop new ideas, new competences and new tools in the local environment—including the neighbours.

Challenges of these kinds are obvious in multicultural situations but need to be seen and create awareness in more homogeneous societies. The so-called scientific method is a reliable tool for interpreting the world. However, it requires local adaption and the creation of consent in the individual situation. This appropriation of sustainability and its education seems to be a future task for all our participants in the first Sustainable Globe Conference in September 2021.

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