




REVIEW

# Education and Climate Change: The Role of Universities

Fernando M. Reimers, Switzerland: Springer, 2021

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Climate change is one of the global challenges facing us today and will be even worse in the future if no efforts are made to address it. As illustrated in the title, this book presents the role of universities in implementing strategies to deal with climate change within universities. The first chapter states that universities have an important role in Climate Change Education (CCE) because universities can reach everyone from teachers, entrepreneurs, industry players, and civil society. This book presents how the climate change curriculum is implemented in various places to support students to become aware of climate change so they can take positive actions to overcome problems in their surrounding environments. This book also focuses on discussing the implementation of curriculum innovations in CCE, the roles that students, teachers, and institutions play in creating a better implementation of the CCE curriculum. This book consists of seven chapters written by authors from various backgrounds such as researchers, educators, social activists, and consultants, who explore CCE in various countries.

The second chapter presents the innovation of the climate change curriculum to form leaders and provide young people with opportunities to take real action in overcoming the problem of climate change. The authors choose Jordan, Palestine, and Israel as the contexts to explore these issues. The authors also suggest that the implementation of curriculum innovation needs to involve various important parties who play a role in the world of education, such as students, teachers, and institutions. The design of the curriculum also provides direction to shape every aspect to be able to play a role in forming students who can undertake systems thinking and have concern for the environment and take meaningful action to tackle climate change. In this chapter, Rhodes and Wang explain in detail how the curriculum implementation process for each party has a role in achieving the goals of the climate change curriculum innovation that has been designed.

Meanwhile, the third chapter explores how Guatemala is dealing with climate change and how to provide education to equip its people to adapt to it. This chapter has succeeded in providing solutions in equipping the community by implementing various curricula as a basic reference for teachers in applying environmental awareness to negotiate climate change. Some of the solutions provided include early literacy in Indigenous languages on environmental themes, fostering environmental responsibility, and imitating countries that have the same climate as Guatemala to implement an appropriate curriculum for the Guatemalan context.

The fourth chapter describes an educational program using radio in Haiti. The authors explain that the country's economic condition is still low, causing the quality of education to be uneven and many people are illiterate. Then the authors finally take the right step to choose radio as a means of education about climate change (in Haiti, climate change is present as increased typhoons and severe storms). This chapter explains that this educational radio program is structured in such a way that it can affect the lives of the Haitian people in dealing with climate change.

The details of the fifth chapter are the four phases of the climate change curriculum for out-of-school children, based on data from academic research and programs that have been undertaken in the same geographic area, and outlines how to create a curriculum to be an example for out-of-school adolescents in Badin (Pakistan). Then it explores the level of climate change knowledge in Pakistan, the unique threats Badin faces, why educating out-of-school adolescents is such a difficult task, and the pedagogical strategies utilized to build a curriculum that would fulfill these demands. Based on the author's responses to the questions posed, it may be inferred that the author has identified a solution for establishing a suitable curriculum for out-of-school youth, but not for places along the Arabian Sea coast that are affected by climate change. Furthermore, one of the author's challenges in educating out-of-school teenagers is how to grow their curiosity by applying it to the experiences they face, because growing curiosity about climate change is not only about developing adaptation and migration strategies but also about raising awareness to take a role in tackling the problem of climate change.

The sixth chapter discusses the implementation of the climate change curriculum in the university environment, where this curriculum aims to make postgraduate students as partners in realising solutions to the many challenges of climate change. Students who will play an important role in the world of education will later be able to bring about this more advanced educational change seen from five perspectives, namely cultural, psychological, professional, institutional, and political.

In the last chapter, Reimers discusses how an approach was used to provide postgraduate students in having the real experience to design a climate change curriculum and implement the curriculum in a real condition. This pedagogical approach to teaching CCE produces three outcomes: (a) capacity building of schools and non-formal education institutions to develop CCE programs that are appropriate to the context, as a result of assistance provided by graduate students and reflected in the programs presented. In this book, (b) students gain skills to advance CCE, and (c) increase academic knowledge about CCE when students and faculty conceptualise and theorise about this practice-based work, as this book does.

Overall, this book is recommended to anyone interested in the role of universities in tackling the problem of climate change. The authors have successfully implemented the innovative climate change curriculum directly (e.g., in collaboration with teachers, students, local communities, and institutions). This book is structured clearly and systematically, starting from the problems, curriculum design, innovation, implementation, and the results of its implementation. The design and the innovation of the curriculum according to the conditions of the various regions where the curriculum is implemented are clearly presented. Meanwhile, this book has implemented curricula in different countries (e.g., Pakistan, Jordan, Palestine, Israel, Haiti, Guatemala, and the USA), but with the need for other contexts to be explored in terms of how educators in those countries go about tackling climate through curricula reform. In particular, the representation from countries that are disproportionately impacted by climate change (e.g., Kiribati). This book is highly recommended for educators, researchers, and education activists so that they can innovate curricula in their respective areas, adapting to existing conditions. Thus, several curricula that have been described in this book can be used and developed to deal with climate change problems in various contexts.

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