Chapter 13
Dynamics of Teaching in the Era of Climate Change Education

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ABSTRACT

This chapter addresses the dynamics of teaching in the era of climate change education. It equally looked at encounters of mobile schools and teaching and facilities in mobile schools in mitigating climate change. It necessitates that the education researchers engage in inquiry and involvement of other stakeholders. Two methods were used, partial relevant literature review and qualitative assessment of teaching methods. The study targeted policy makers, curriculum and instructional designers, faculty, administrators, teacher educators, and other stakeholders interested in averting the impact of climate change and promoting sustainable development in Kenya and beyond.

INTRODUCTION

Ordinarily, Education for Sustainable Development (ESD) is all about encouraging behavior that promotes a sustainable future in the era of climate change. According to UNESCO (2009), ESD is based on five types of learning: learning to know; learning to do; learning to live together; learning to be and learning to transform oneself and society in the context of climate change. When dealing with ideologies of practice and teacher actions that influence effective teaching of numeracy, the work of Muir (2008) linked the dynamics of teaching in the era of climate change

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education to the observable performance of teaching acts, involving interacting effectively with students through questions and probes, answers and reactions, and praise and criticism that would be an ideal for this era of climate change crisis.

In schools and teaching, it is more of behavior change. In this regard, Mbah, Shingruf and Molthan-Hill (2022) opined that in the case of climate change, the relationship between variables influencing pro-climatic behavior and the role of knowledge seem to be even more complex and multi-faceted. In the same vain, analyses by Lehnert, Fiedor, Frajer, Hercik and Jurek (2020) confirmed that there is a weak or no correlation between climate change awareness/knowledge and the willingness to act in favor of climate protection. Interestingly, other studies by Stevenson, Nils-Peterson and Bondell (2018) found the link between climate knowledge and behavior to be significant. This therefore, calls for a pro-active teaching and equipping teachers and educators with dynamics of teaching in the era of climate change education.

Since in our schools and educational institutions normally have both gender that should be made more aware of climate change education, some educative information by Kolenatý, Kroufek and Cinˇcera (2022) revealed that the analyses of survey data showed that girls exhibited significantly higher levels of climate change concern and willingness to act than boys (in both pre-test and post-test), but there was no significant difference between girls and boys with regard to climate change knowledge and self-efficacy. This gap on climate change knowledge and self-efficacy is explored in this chapter.

The chapter proposes recommendations for effective teaching using modern technology that would lead to increased student achievement and mastery and comprehension of course material provided. This sentiment is supported by Barrick (2011) who opined that when the subject matter to be learned possesses meaning, organization and structure which is clear, then learning proceeds more rapidly and what is eventually learnt is retained longer by students. On the contrary, teachers would strive to do their best to teach, however, the key problem is that the higher authorities of the schools have to decide what the schools need to achieve. This could be possible by arranging plans for schoolwork which will eventually attain the desired ends. More importantly, teachers should be involved in making some of these decisions. In dynamics of teaching in the era of climate change, more participants should be reached with climate change informative education. This is because early ‘information-deficit’ models assumed that if people were well-informed about the causes and consequences of environmental problems, which are likely to be caused by climate change, then they would adopt pro-environmental behavior to remedy the situation effectively (Kolenatý et al. 2022).

Due to the fact that change is a process, dynamics of teaching in the era of climate change education cannot be realized in isolation. Involving other ardent

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