

## Chapter 9

# A Conceptual Reference Framework for Sustainability Education in Multilingual and Cross-Cultural Settings: Applied Technology, Transmedia, and Digital Storytelling

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### ABSTRACT

*This chapter focuses on the area of education for sustainable development (henceforth, ESD) and presents an overview on the design and initial development of a funded research project called ©ESDIGITAL, an international network on education. One of the aims of this project is to create a conceptual reference framework to explore the use of technology enhanced content and language integrated teaching and learning as a methodological approach for ESD. The chapter discusses some of the main field challenges identified by UNESCO and explores the use of applied technology, transmedia, and digital storytelling to examine their impact in bilingual education and in cross-cultural multilingual settings. With an emphasis on creativity, critical thinking, and innovation, this network is committed to enrich the quality of higher education and teacher training to guarantee citizens' social, economic, and cultural development.*

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## **INTRODUCTION**

Current education policies and systems identify major target areas and define strategic objectives aiming to achieve just, inclusive, peaceful and sustainable societies. However, for this development to take place, it is essential to engender a major change in the way citizens think and act. Education plays a crucial role in bringing about this change since it can empower citizens to take action and cooperate in meeting current and emerging confronts in an increasingly interconnected world. In this sense, UNESCO (2014) recognizes the need to train better qualified teachers and educators to face present and future challenges. In similar terms, the Organization for Economic Co-operation and Development (OECD, 2017) in its project on the future of education and skills (Education2030) considers globalization, technological innovations, climate and demographic changes are creating both new demands and opportunities that individuals and societies need to effectively respond to. They target school education and recognize the importance of learning progressions and a life-long learning continuum.

This background provides us with the motivation to establish our goal within the context of teacher and higher education. This chapter explores the use of applied technology and digital storytelling as an educational approach to provide students with competencies, skills and strategies to raise their awareness towards current social challenges. Our goal is to present a conceptual reference framework based on data-driven interdisciplinary educational experiences using digital storytelling, among other technological resources. Within this framework, both language and narration become the articulatory axis of learning. More specifically, our aim is to build, bridge and expand an interdisciplinary science and technology research community to further investigate on and extend the potentiality of transmedia and digital storytelling and applied educational technology to enhance education of sustainability, health education, global citizenship, as major social challenges identified by UNESCO (2017) and multilingualism in teacher and higher education.

## **BACKGROUND**

In an interdependent world where knowledge and innovation are major drivers of development, good quality education and learning are becoming even more important determinants of the well-being of individuals, the progress of countries and the quality of humanity's common future. The opportunities offered by developments such as applied technology and the knowledge revolution, increasing capacity for innovation and closer global cooperation for overcoming obstacles to progress have never been greater. One of the educational areas involved in this chapter is related to education for sustainability which for decades provided the main reference for environmental education. Since the early 1990s, international organisms, academic societies and field experts have generated concepts and ideas on the environment that constitute the current compromise and sensitivity towards the knowledge and vulnerability of nature. Environmental education has promoted the understanding of the interrelationships and interdependence among living beings and between them and nature. The concept of sustainability has its origin in this social concern to find a balance between current and future demands and the capacity to protect life on earth and preserve natural resources.

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