Chapter 15
Digital Education Strategy

ABSTRACT

This chapter analyzes and discusses key strategies for digital education. The chapter begins by examining and defining several key concepts, including global citizenship, digital citizenship, computational thinking, informational thinking, and systemic thinking. Next, the chapter analyzes the role of leadership in the age of digitalization and advocates for panoramic leadership. The chapter then discusses strategies and tools for teaching the digital humanities and compares STEM-based education with STEAM-based education. The virtual classroom is then analyzed, followed by a discussion of why Finnish schools excel in digital education. The chapter concludes by analyzing and discussing the architecture for digital schools and universities.

INTRODUCTION

The transformation of the world after the fall of communism in 1992 took place relatively recently and in a short time. China's economic liberalization since the 1980s, the development of democracy in South Korea since the 1980s, and the development of free trade treaties in the early 1990s introduced half of the population of 3.4 billion people previously locked in their national economies to the global economy. Harvard economist Richard Freeman calls it a "big doubling" of the global workforce because outsourcing has been a product of Asia, especially China. In the late 1990s, Internetization accelerated these global integration processes. The results are staggering. In the 1970s, bicycles were the primary method of transport in China, while now, in the 2020s, China is the largest vehicle manufacturer in the world. Who at that time imagined the use of the Internet would grow exponentially around the world?

The challenge of globalization in the 21st century has reached education, which has the task of preparing graduates for the smooth functioning of the global economy. The concept of training young people has begun to focus on developing global citizens based on *digital citizenship*. However, this trend has led to a mismatch, since "the world is flat" (Friedman, 2005). Because globalization is leveling the borders and privileges of developed countries, production, and services (*online*) should be invested where the labor force is cheapest. This has led to a radical reduction in the middle class in Western civilization (Targowski, 2014b) and an increase in the anti-globalization movement, especially during Donald

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Trump's presidency (2017-2020) in the United States. The 2020 pandemic has reinforced the trend of anti-globalization because the virus has limited international connections. In addition, the blame for the virus's spread is attributed to China, which has caused a rapid reduction in the globalist strategy and has resulted in restricted trade with this World Factory.

The globalization and Internetization of the countries, societies, and organizations of the world have strongly influenced the paradigms of teaching, for graduates need to be prepared in terms of knowledge and wisdom as well as qualifications for the challenges of this kind of world—one in which Western civilization has evolved into a Global Civilization (Targowski, 2014a), which in turn is transforming into Virtual civilization (Targowski, 2015). The repercussions of these civilization processes have impacted the mode of teaching both at primary and secondary schools and at universities. Certain professions are abandoned, new ones are born (see the chapter *Strategic Digital Informing and Its Challenges in the 21st Century*), and most professions require a new way of thinking and new knowledge, wisdom, and qualifications, which will be discussed in this chapter.

GLOBAL CITIZENSHIP

Global Citizenship Education (GCED) is UNESCO's response to these challenges. It works by empowering students of all ages to understand that these are global rather than local problems and by pushing students to become active promoters of more peaceful, tolerant, inclusive, safe, and sustainable societies. GCED is based on three areas of learning – cognitive, socio-emotional, and behavioral:

- **Cognitive**: knowledge and thinking skills necessary to better understand the world and its complexity.
- **Socio-emotional**: values, attitudes, and social skills that enable students to develop affective, psychosocial, and physical traits that enable them to live with others with respect and peace.
- **Behavior**: behavior and performance needed for practical application and commitment.

The key learning outcomes, student attributes, topics, and learning goals suggested in GCED are based on the three learning domains mentioned above. They are linked and integrated into a learning process. UNESCO's work in this field is guided by the Education Agenda 2030 and the framework for action, in particular Objective 4.7 of the Sustainable Development Goals (SDG 4 on Education), which calls on countries to…

provide all learners with knowledge and skills to promote sustainable development, including, inter alia, through education for sustainable development and sustainable lifestyle, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship and recognition of cultural diversity and cultural contribution to sustainable development.

The concept of GCED pedagogy is given in Figure 1.

This pedagogical model of global citizenship should permeate most all school subjects.