Chapter 12
Technology and Digital Content:
Promoting Learner–Centered Pedagogy

Maureen N. Short
North Carolina Central University, USA

ABSTRACT

This chapter offers a comprehensive review of the integration of digital content and learning technologies into the curriculum to enhance the educational experiences of culturally and linguistically diverse students and students with disabilities. It addresses the challenge of how teachers can best use digital technologies to create interactive and engaging learning experiences and provides helpful considerations for working collaboratively with other stakeholders to meet the needs of all students.

INTRODUCTION

Digital technologies have revolutionized how people find and use information and expanded the scope of literacies for students and teachers. Digital literacy is consequently essential for both teachers and students to enable them to access and use these dynamic tools. Coupled with the changing technological landscape is the make-up of today's classrooms. Whereas schools are charged with the responsibility of educating an increasingly complex and diverse population of students. Teachers have the challenge of meeting the individual needs of students who represent a wide range of diversity in abilities, learning styles, cultural and linguistic backgrounds, exposure to digital content, technology and early education. To accomplish this effectively and efficiently, teachers need to know the content they teach, have a repertoire of pedagogical strategies for connecting students with content and know how to integrate technology into pedagogy to achieve the desired outcomes.

This chapter examines how digital technologies applied to learner-centered pedagogy have transformed teaching and learning. It commences with a brief review of public policy and federal initiatives aimed at promoting digital literacy and twenty-first century work ready skills among students at all levels. This is followed by a discussion of learning theories that support digital and learner-centered pedagogies and an overview of the concepts of digital technology, digital literacy, and learner-centered pedagogy. Finally, some recommendations based on current research and conclusions are made. The goals of the chapter are:

1. To identify possible ways to integrate technology in the classroom.
2. Identify digital literacy skills that teachers and students need to be prepared for the future and be work ready.
3. Articulate how digital content and learning technologies promote and support learning of all students including students from culturally and linguistically diverse backgrounds and students with disabilities.
4. Describe how learner-centered pedagogies provide opportunities for students to explore content and promote learning.

BACKGROUND

Public Policy and Federal Initiatives

The pace of change in human societies around the world, driven by science and technology, has increased rapidly over the past two centuries. In the 21st century, this pace has increased even more dramatically as scientific and technologically-driven change remakes nations, lifestyles, and challenges even our ability to continue to live on earth. Now, more than ever, nations, states, multinational corporations, and non-governmental organizations need people who can respond effectively to change, to develop and implement policy that will effectively deal with these challenges. Now, a new generation of leaders are being sought who have the critical knowledge and skills to evaluate and enhance the value of science and technology for societies around the globe (Maynard, 2016).

The Every Student Succeeds Act of 2015

The Elementary and Secondary Education Act of 1965 reauthorized as the Every Student Succeeds Act (ESSA) of 2015, includes significant technology provisions for all students. Title IV Part A promotes increasing the capacity of individual states, local educational agencies and local communities to expand the use of technology in order to boost the academic achievement and digital literacy of all students (ESSA, 2015). The legislation also includes a considerable state block-grant program intended for technology and other uses, opening up more opportunities to train teachers in new technologies, invest in technology innovations, and fill the gaps in technology accessibility for students. States can use these funds to support innovative technology-based strategies to personalize learning and provide teachers with professional development. ESSA also allows for the use of computer-adaptive testing in state and local assessment systems, which was previously not allowed under the No Child Left Behind Act (NCLB).

The National Education Technology Plan (NETP), 2016

This is the leading educational technology policy document for the United States and provides a five year educational technology plan. The 2016 NETP goals include:

1. All learners will have engaging and empowering learning experiences in both formal and informal settings that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society.

Related Content

Philosophy and Psychology as Influences on Gifted and Talented Education in the 21st Century Education
Britt Tatman Fergusonand Maximilian G. F. Napier (2020). *Handbook of Research on Software for Gifted and Talented School Activities in K-12 Classrooms (pp. 20-42).*
www.irma-international.org/chapter/philosophy-and-psychology-as-influences-on-gifted-and-talented-education-in-the-21st-century-education/239637

The Mechanism of Flipped Classroom Based on Cognitive Schemas
Wangyihan Zhu (2023). *International Journal of Technology-Enhanced Education (pp. 1-12).*
www.irma-international.org/article/the-mechanism-of-flipped-classroom-based-on-cognitive-schemas/325077

A Systematic Review of the Potential Influencing Factors for ChatGPT-Assisted Education
Chuhan Xu (2024). *International Journal of Technology-Enhanced Education (pp. 1-19).*
www.irma-international.org/article/a-systematic-review-of-the-potential-influencing-factors-for-chatgpt-assisted-education/339189

Effect of Computer Assisted Instructional Package on Students' Learning Outcomes in Basic Science
Simeon O. Olajideand Francisca O. Aladejana (2019). *International Journal of Technology-Enabled Student Support Services (pp. 1-15).*
www.irma-international.org/article/effect-of-computer-assisted-instructional-package-on-students-learning-outcomes-in-basic-science/236071

System of People-Computer: On the Way of Creation of Human-Oriented Interface
Anatoly Korikovand Oleg Krivtsov (2016). *Handbook of Research on Estimation and Control Techniques in E-Learning Systems (pp. 458-470).*
www.irma-international.org/chapter/system-of-people-computer/142459