

*Chapter 4*

**THE EFFECTS OF TECHNOLOGY  
IN 21<sup>ST</sup> CENTURY EDUCATION**

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**ABSTRACT**

Technology seems to be the most prevalent teaching aid and central focus in 21<sup>st</sup> century educational activities to succor learning processes in the schools so as to increase learning outcomes. Additionally, it saves time by suiting the theme of the class. This chapter deals with the effect of technology in 21<sup>st</sup> century education.

**Keywords:** 21<sup>st</sup> century education, effects of technology

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## **INTRODUCTION**

Over the last half century, the information technology (IT) industry has evolved greatly with exponential progress in memory capacity and processing power, which have made IT hardware not only faster but also lighter, smaller, easier to use and cheaper so as to enhance teaching/learning processes. Student-centered learning generally encompasses techniques of teaching that modify the center of attention and instruction from the teacher to the student.

Technology is by far the trendiest topic in 21<sup>st</sup> century education and greatly supports education. The position of technology in pedagogy is based on, among other aspects, various factors and questions concerning effectiveness, time-saving, and increased outcomes. Therefore, the rationale of this chapter is dual in nature: The proper and improper way to permeating technology in education. The former is in relation to how to put into practice technology efficiently in a convenient and sensible way, while the latter focuses on tackling some of the fallacy out there in regards to technology (Utkarsh, 2013).

## **EFFECTS OF TECHNOLOGY IN 21<sup>ST</sup> CENTURY EDUCATION**

The use and function of technology in education is not obligatory if the teacher fails to be aware of its merits, and vice-versa. As a coin has two sides, technology is a mixture of both negative and positive features. It is this approach that is the root cause of problems in terms of scoring people and giving technological tools a dire standing in the classroom. Therefore, Santosh (2013) highlighted that the proper and improper ways of integrating technology in 21<sup>st</sup> century education are as follows:

## **The Proper Way**

The proper way to deal with technology is to not reflect on its incorporation in anticipation of the class lesson. All efforts should be put forth by teachers informing the lessons that will best meet the educational aspirations and are appealing to the students in the classroom. When this is done, the teachers must determine the available and best-suited technology for their needs. Consider the following steps: from the simple to complex and from abstract to concrete, the teacher introduces this technology into their lesson plans. 21<sup>st</sup> century teachers are incredible not for the technology they have in their classrooms, but because of the lessons they have designed. Some of the best lessons were designed yesteryear and did not entail technology; teachers put into practice those lessons and modify them to include the fundamentals of technology so that certain portions run smoother. Thus, this approach of reworking lessons has permitted teachers to have an immense impact on students.

## **The Improper Way**

One has to be certain concerning the proclamation of “why” before “how”, which is why the wrong way to utilize technology is to view it as a tool and organize lessons around it. In some cases, administrators compel the teachers to make use of a particular tool in a particular lesson. This is not the proper way to use technology and can prove unsuccessful, as some tools do not work for certain lessons, and this is to be implicit by decision makers; occasionally, they are not required and can immediately cause more disorder than anything else. As such, tools are not straightforwardly replaced for all lessons in all subject areas. This notion needs to be implicit by all stakeholders involved in educational institutions when it comes to integrating technology into the classroom for teaching and learning in the 21<sup>st</sup> century.

For technology to be pertinent, constant funding has to be made for that technology and its constituents. Some of the effects of technology in 21<sup>st</sup> century education include:

1. The principal feature of the 21<sup>st</sup> century is to promote student-centered learning (Mustapha, 2016).
2. The fundamental element of 21<sup>st</sup> century education is that technology can be used to heighten analytical thought and cognitive skills, appraising the authenticity of online content (Johnston & Barker, 2002).
3. An influential point is the application of technology for teamwork among teachers and students to share thoughts (Gibson, 2001).
4. The predominant and most thrilling aspects of technology in education is its use for scheming creative content in 2-Dimension (2D) and 3-Dimension (3D), audio, writing, and video, so as to create animation, music, text, videos and conduct experiments in order to present ideas either in person or online (International Game Developers Association (IGDA), 2014).
5. Technology can be made known at each grade of education, from early childhood education to tertiary education by making learning dynamic (Anderson, 2010).

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