# Chapter 26
# Technology–Enabled Learning Environments

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## ABSTRACT

*In today's learning environments, students are encouraged to take a lead in controlling and managing their learning. In their process of learning, students are increasingly become independent of time and space. This changed students learning process has resulted in development of various tools, techniques, and strategies to facilitate the new ways of students learning. At the same times, faculty is challenged not only to master various teaching strategies but also to become proficient in the use of constantly evolving technology to support their teaching strategies. This interaction of technology, teaching, and learning is a complex phenomenon. This chapter explores state-of-the-art of today's technology-enabled educational environments to help educational institutions enhance existing quality learning environments and create new ones.*

## INTRODUCTION

The term learning environment refers to a place and space (e.g. a school a classroom or a library). A learning environment in today's interconnected and technology-driven world can be virtual, online or remote. These learning environments can be considered as support systems that provide the condition in which humans learn best. These environments are able to accommodate the unique learning needs of every learner to provide effective learning. These learning environments provide the structures, tools, and communities that students and educators can use to attain the knowledge and skills required to succeed in 21st century. 21st century learning must take place in environments that promote interaction and a sense of community that enable formal and informal learning.

The role of education in the knowledge society is changing and educational facilities, which provide innovative learning environments for learners are becoming more important than ever. New and exciting ways are being developed to support core concepts in education such as lifelong learning, inclusion, integration, sustainability, connectivity, and quality. These concepts have become cornerstones of educational policy in many countries.

The concept of school, as it stand today, doesn't capture the purpose and functions of the rich technology-enabled learning (also called Technology Enhanced Learning) environments needed for today's learners. A school can be a space center, a vocational training center, or a place for communities to get together and perform certain activities. A school, through information technology (IT), can provide a learning environment that links communities in isolated areas, create virtual learning communities, and exemplify the creative vision of students, which is the necessity of teachers and the basis of community enthusiasm.

The objective of this chapter is to explore the state-of-the-art of today's technology-enabled educational environments to help educational institutions enhance existing quality learning environments and create new ones.

## CHALLENGES OF LEARNING ENVIRONMENT DESIGN

Rapidly evolving demands of the new knowledge society are posing serious challenges for designs of learning environments. Some important challenges include how to design learning environment to best meet the demands of 21st century learners and educators, how can new and existing environments best accommodate increasingly diverse technologies, are governments/schools investing in building new technology-enabled learning environments, and how can existing learning environments can be transformed to achieve future educational goals.

### Flexible Environments for Flexible Learning

Today's interactive learning environments place students and teachers at the center of educational process. Design of learning environment plays an important role in facilitating innovative learning pedagogies. Learning environments must be sufficiently flexible to accommodate range of teaching and learning scenarios and technologies.

To best facilitate flexible learning environments, new and existing facilities must consider providing various types of spaces such as space for individual and group learning, open and multipurpose spaces, and specialized spaces. Spaces for group learning are used to facilities group work/cross-curricular learning. These spaces also cater to students with different learning styles. The individual learning space is to cater to individual learning. Specialized spaces cater to specialized activities such as performing art.

Electronic whiteboards, broadband access, laptop computers, and wireless networks have already significantly altered the way students learn and teachers teach. In many parts of the world, these new technologies have been integrated into new and existing educational facilities. However, the ability of schools to continue to respond to the development and integration of new technologies in society and the educational process is still uncertain.

### Transforming Existing Educational Facilities

Transforming existing learning environments to accommodate new pedagogical techniques is a major challenge for many schools whose buildings are about a century old. Remodeling existing facilities / buildings is one of the practices of modern schools. Buildings of today's schools contain large flexible spaces divisible into individual workspaces and classrooms that can be used after schools and at weekends to pride a community facility.

## ROLE OF IT IN LEARNING

The IT is changing the way we live, work, teach, and learn and at the same time challenging the

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