# Chapter 18
# Technology Management Through Artificial Intelligence in Open and Distance Learning

**Serap Uğur**
*Anadolu University, Turkey*

**Gulsun Kurubacak**
*Anadolu University, Turkey*

## ABSTRACT

*Technology management is a management discipline that evaluates the potential of the cutting-edge technology integration to maintain the competitive institutions, and seeks ways to use these potentials for the benefit of the organizations. The technologies that use in open and distance learning institutions for learner enrollment and course follow-ups, software that teachers use both in content presentations and evaluation stages, etc. They need to use technology in many different services and processes in the managerial dimension. In this chapter, which is conducted by using interpretive phenomenology method from qualitative research methods, it was questioned how to integrate artificial intelligence in open and distance learning systems determined within the scope of technology management for a technology-driven international university. Suggestions were made for artificial intelligence applications in the management of open and distance learners.*

## INTRODUCTİON

Changes in the people's development level through the known human history have been affected by technology. Many technological developments ranging from the discovery of fire and invention of the wheel in the Stone Age, paper to the computer, nanotechnological products to robots in our day had an impact on human life. Major developments in the field of technology, especially from the second half of the twentieth century onwards, have also influenced economy as well as the society, and such influence caused this period to be referred to as *the age of technology*. Informatics and communication technologies

DOI: 10.4018/978-1-5225-6255-9.ch018

become increasingly important in many sectors from economy to health, food to education. In this age, technological inventions and developments not only make human life easier but they also significantly change the social structure.

Learning about technologies, besides, with technologies and for technologies must be one of the most important focuses of future. Not only can technology management radically change human learning habits, but also artificial intelligence for learning practices. The foundation of a revolutionary transformation on human learning will be established for the new social networks in Open and Distance Learning (ODL). Thus, technology management through artificial intelligence in ODL must be sustainable, and be transforms humans through flexible and individual learning environments. In this context, the main focus of this paper is to discuss how the primitive technologies transform via artificial intelligence, and also this radical changes how transform ODL environments in the future.

## THE BACKGROUND OF THE STUDY

Technology can be described as inventing a new way of doing something for any need. A new technology may only become widespread when it is beneficiary for people who will apply or use them (Albert & Hahnel, 1994: 265). Technology enables products and services to be produced in higher quantities with fewer resources and cost. These products, which are produced with better quality and more beneficially, can be introduced to the society by using the technology again. No matter from which need or motivation the technologies emerged, the society tends to use technology as a component of competition and development. Thus, technology becomes widespread, is learned by the individuals and masses and continuously develops with new information.

### Technology Management From Primitive Technologies to AI

According to the definition by the US National Research Council in 1987, technology management is the process of planning, organizing, managing and controlling the development and implementation of technological competencies in order to coordinate operational and strategical goals of an organization and to achieve these goals.

Badaway, (1996) defines technology as "as a field of study and a practice concerned with exploring and understanding technology as a corporate resource that determines both the strategic and operational capabilities of the firm in designing and developing products and services for maximum customer satisfaction, corporate productivity, profitability, and competitiveness."

As may be understood from the above definitions, technology management essentially evaluates the potential of technologies. It seeks the way of using such potentials to the good account of institutions and organizations. Technology management is a management discipline in nature and is a management approach that aims to optimize the flexibility and transparency of productive and entrepreneurial systems with technological dynamics. Technology management, configured to adapt to the technological evolution in a flexible manner from a passive perspective, contributes to the different types of technical progress from an active perspective (Chanaron & Grange, 2006). Technology management requires active use of technical information and competencies for not only producing products and improving processes but also developing current technology and generating new information and competences in the competitive