

## Chapter 8

# Aspectual Analysis of Digital Transformation and New Academic Professionals: A Case of Saudi Arabia

**Alaa Abdulrhman Alamoudi**  
*Prince Nourah University, Saudi Arabia*

### ABSTRACT

*Higher education institutions (HEIs) are currently developing a significant research interest in transferring from traditional to novel practices in teaching and learning through the use of modern technological tools and platforms. The integration of digital technologies in higher education has tended to focus on improving academic professionals in developing countries like Saudi Arabia. This chapter was driven by a desire to understand ICT implementation in higher education institutions (HEIs) by professionals using digital transformation in Saudi Arabia. This chapter discusses the implementation of digital transformation in teaching and learning at HEIs in Saudi Arabia. This aim is achieved throughout several objectives, beginning by reviewing the related literature and presenting theoretical frameworks. The literature review will provide the possibility of identifying the focal trends related to the topic.*

### INTRODUCTION

Delivery of contemporary high education is based on modern views of learning. While most of the effective research in learning was school-based, higher education has currently developed a significant research interest in transferring from traditional to novice practices in teaching. Integration of digital technologies in higher education has tended to focus on improving academic professionals in the developing countries such as Saudi Arabia.

The rationale of this chapter is to understand the current state of ICT implementation in higher education institutions (HEIs) using digital transformation. Hence, the aim of this article is to discuss implementation of digital transformation in teaching and learning at HEIs in Saudi Arabia. This aim is

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achieved through the literature review and development of the theoretical framework for future work. The literature review identifies focal trends of the topic for emergence of new academic programs. This chapter contributes to substantiating the conceptual discussion on digital transformation and ICT to enhance design of the higher educational systems in Saudi Arabia.

## **LITERATURE REVIEW**

### **Overview of Technology Integration in Saudi Arabia**

With an increasing attention to higher education in Saudi Arabia, higher education institutions and universities rely on technologies to provide a high-quality of learning and teaching experience. Among the technological tools used in HEIs in KSA, there are collaborative eLearning, ICTs (information and Communication Technologies), and CTS (Correspondence Tracking System) for monitoring student enrolment at universities and administrative procedures. The modern learning and teaching trends are mandatory to support faculty members with IT skills to overcome the new challenges. With the Kingdom's 2030 vision, Saudi Arabia implements the National Plan for Information Technology (NPIT) to empower Saudi with e-learning in lifelong education. To this end, the Kingdom established the National Centre for E-Learning & Distance Learning (NCeDL) in Riyadh (Mirza, 2007).

The use of computers at universities in Saudi Arabia began in the 1996. The Ministry of Higher Education (MOHE) established the Computer and Information Centre (CIC) that provided ICT services for educational institutions. MOHE started the project in 2000 that sought to provide schools in KSA with e-content to facilitate learning and teaching (Oyaid, 2009). This project was followed by the establishment of WATANI Schools' Net project in 2001, to connect educational directorates and schools KSA-wide with the wide area network (WAN). With the partnership of Intel, Semanoor – a local software company – created an electronic curriculum, Semanoor browser, e-classroom systems, digital library for all government K-12 public and private schools.

In addition, Al-Khalifa (2009) points out other projects such as Obeikan Education with the web platform “Skool” for over 250 interactive lessons for K-12 students. The Jehazi project targets at enhancement of teachers' technological competence in KSA and provision of teachers with laptops. In 2008, MOHE in Saudi Arabia launched the initiative of Google Educational Program which equipped 1,200 schools and 20,000 teachers with personal emails to access office applications programs and personal websites. Moreover, MOHE along with Intel and Microsoft launched various educational, training and e-learning projects for Saudi students and teachers. Consequently, KSA became the largest ICT market in the Middle East, with a special focus on science and mathematics (Al-Asmari, 2005).

### **Emerging ICT in KSA**

To cope up with the trend of higher education digitalization in KSA, the universities incorporated e-learning and launched all curricula online. For instance, the universities of King Saud University (KSU), King Abdul Aziz University (KAU), Al-Baha University, Taiba University, Qassim University, King Khalid University (KKU) and Madinah Islamic University agreed with the NCeDL to incorporate e-learning in study curricula (Al-Khalifa, 2009).

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