According to UNESCO, “Education should be a means to empower children and adults alike to become active participants in the transformation of their societies. Learning should also focus on the values, attitudes and behaviors which enable individuals to learn to live together in a world characterized by diversity and pluralism” (n.d.).

There is no doubt that only civilizations that had high regard for education, had a far-reaching and lasting influence on the shaping up of the way of life as we know it. As the torch of knowledge and illumination was handed from one civilization to another, and as new milestones and discoveries were achieved, the world was celebrating the intellect and brilliance of mankind in exploring the purpose of their very existence, and in developing and adopting the values of discovery and wisdom to ascertain human dignity and gratification.

What we are witnessing today in the modern world is merely the outcome of the strenuous efforts and the creativity of the unknown soldiers who laid the principles of education and research from all origins and nations and creeds, as no one nation alone can claim the credit for the prosperity, affluence, and technological advancement that we are enjoying the fruition of today. What we enjoy and take for granted is the end result of enormous collaborative efforts, contributed by the Chinese, the Indians, the ancient Egyptian, the Greek, the Romans, the Persians, the Moslem Arabs, and in recent eras the Europeans and Americans.

Today, information and communication technology is continually and creatively introducing new concepts, models, and applications that have a far-reaching impact on individuals, communities, and organizations, and rapidly redefining the way we live, travel, entertain, learn, educate, and do business. The nature of new ICT and Internet Web applications have boosted connectivity and speed, and improved efficiency and performance, leading to substantial cost reduction. These inherent features of the technology have appealed primarily to business organizations as tools to fasten and optimize business processes and integrate business functions as a recipe cost cuts and financial gains.

The rapid acceptance of ICT applications in the industry over the past few decades, coupled with major breakthroughs in both information technology and communication technology, have made it feasible to release new software applications and tools targeting new sectors such as government, transportation, entertainment, health, and education.

No one can deny that technology tools and systems —especially those which were designed specifically based on proper understanding of the education environment and requirements— represent effective solutions to many of the persisting problems in different sectors including education. On this rationale, ICT applications and systems have become key item in the annual budget of organizations of different types and sizes.
As a result of the political situation in the Arab region and the unfortunate waste of local resources, the Arab education system has suffered for many years from aging educational facilities, obsolete curricula, and unproven pedagogical models and instructional techniques. As would be expected, these inadequacies have reflected on students’ performance, research status in universities, and the low ranking of Arab educational institutions compared with their international counterparts.

Concerned about this appalling state in their education sectors, different Arab governments – with aid of international organization or local private institutions – embarked on serious and ambitious initiatives to introduce reform and improvement to different aspects of their education systems. Interesting enough, all such initiative have endorsed ICT adoption and utilization as the main vehicle to leverage the positive change and to provide facilitate suitable solutions and emphasized the need for competent resources to manage the technology.

Consistent with its impressive record of investment in both human development and ICT, the United Arab Emirates government announced in 2005 its intent to launch a decade long project for comprehensive reform of the school education system with a budget of around USD 13 Billion. The scope of this major initiative included the following education aspects: curricula, teaching methods, assessment methods, use of ICT, libraries, school culture, facilities, teachers competences, school system, and school budgets. One of the main priorities in the implementation of the reform was to integrate ICT with learning, managing schools, and evaluating the system.

Anticipating the need for competent human resources from within the education sector to participate in this major initiative, Abu Dhabi University has developed a Master’s program of Education in Educational Leadership to prepare teachers, administrator and educators with the appropriate skills and competences to take active roles as resources to the reform project. The program offers a number of courses and has included a dedicated course to ICT; (EDT519) Information Systems in Education.

This inception of the idea of this book was in one of the EDT519 classes as the class discussion was indicating the need for a textbook and a reference to be authored by Arab academics, educators, and educational leaders to capture the status of ICT applications in different Arab states and to develop an insight into the issues, challenges, and lessons learned.

With the scholarly contribution of 36 academics, educators, and educational leaders from different Arab countries including; UAE, KSA, Egypt, Oman, Bahrain, and Jordan, this book is excepted to enrich the understanding of the issues faced by many Arab countries in their efforts to adopt new educational technology applications and online learning models. The work will be also useful and stimulating to researchers, practitioners, and consultants from other regions to benefit from the captured experiences.

The textbook is organized in 22 chapters, covering in two parts, ICT applications and issues, and Internet Applications and related issues and challenges. Chapters 1-8 discuss various aspects of ICT applications in different Arab countries.

Chapter 1 draws a representative picture of the current status of ICT integration in the higher education in the Arab region. It presents examples of extensive Arab countries’ efforts in terms of adopting ICT in Arabian Gulf countries such as Saudi Arabia, UAE and Qatar, West Asian Arab countries such as Yemen, Jordan, Lebanon and Syria and North African Arab countries such as Egypt, Tunisia and Morocco, highlighting major initiatives and drawing on evident issues and weaknesses to formulate meaningful lessons learnt that can be used to ensure effective and successful integration of new technologies in Arab higher education organizations.
Chapter 2 suggests that effective utilization of technology in UAE schools is highly dependent on teachers’ role and ability to address the issue and challenges associated with the change. The chapter provides an overview of the net generation and computer technologies’ impact on student performance and draws on aspects of UAE government’s efforts to support educational reform and integrate technology into the K-12 classroom.

Chapter 3 presents on how UAE educational system copes with the centralized governance of education in the country and its impact on the centralized technical architecture. The chapter also reports on the Information Technology in Educational Management (ITEM) use has developed over the past decade and how it is evolving with the recent modifications towards modernization and decentralization.

Chapter 4 examines important aspects of Information and Communication technology adoption and integration in the Emirate of Abu Dhabi, UAE, to examine the anticipated gains to learning, the problems and challenges hindering the realization of such gains and the role of educational leaders to utilize the technology for enhancing teaching and learning. The chapter benefits from previous studies related to the subject and the findings of a survey.

With educational leaders in mind, the main goal of chapter 5 is to develop a better understanding of the best practices and effective methodologies associated with the implementation and utilization of Enterprise Resource Planning (ERP) systems in the Arab Education sector. It also aims to familiarize Arab educational leaders with the key ERP challenges and issues in educational institutions and how to cope with such challenges and issues to ascertain the acceptance and satisfaction of end users and stakeholders.

Chapter 6 discusses the rapid growth in use of multimedia in United Arab Emirates in recent years. The chapter presents how multimedia is perceived positively by both teachers and students alike for it makes the learning processes more comfortable and more enjoyable that leads to an improved performance. The study is also aimed at increasing educators’ awareness of the importance of multimedia technology use in classrooms.

Chapter 7 highlights the importance of admission and registration functions in higher education and discusses the main objectives and sought benefits from utilizing (ICT) applications to support the automation of admission and registration processes and functions in UAE higher education’s institutes. The chapter also suggests an effective approach to design and adopt such applications.

The interaction and dependencies between culture and technology has been recognized as an important aspect of the experience of technology adoption and utilization. Chapter 8 examines the role and impact of UAE local culture, which is both conservative multicultural, on the adoption and utilization of new information systems and technologies to enhance core educational functions and ‘enterprise’ support functions within Arab educational organizations.

Chapters 9-11 highlight and discuss issues and challenges experienced while attempting to integrate ICT in education in different Arab countries.

Chapter 9 discusses the Jordanian Ministry of Education’s reliance on both, local private sector (public-private partnership) and foreign aids, in order to accelerate its integration of ICT to meet the demands of the knowledge-based economy. The study also refers to major issues that have risen when international partners and the local private sector were involved in ICT-based education initiatives in Jordan.

Chapter 10 examines issues and challenges that hinder the effective integration of ICT in Arab education and suggests that most governmental programs focus largely on the technology itself, placing little emphasis on the practical implications of the use of ICTs to meet broad educational objectives.
Chapter 11 discusses some of the most important issues pertaining to information systems’ adoption and implementation in the Arab education organizations. The study suggests that a proper attention to security, ethical, and cultural issues is critical to the success of integrating ICT into UAE education sector.

Chapters 12-21 discuss different Internet applications, tools, and social networks such as Wikis, discussion boards and blogs and how they can be used for educational purposes. It highlights new learning models such as online learning, e-learning, and blended learning;

Chapter 12 reflects the findings of a study to investigate the levels and patterns of use of the Internet among secondary school students in Al Ain City, UAE and attempts to assess the levels of parental supervision at home. The study recommends that the use of the Internet be monitored and guided by school authorities and parents, so as to prevent the misuse of this facility and to direct it towards teaching and learning improvement.

Chapter 13 documents two case studies in higher education institutions in the Gulf, one in Saudi Arabia and another in the United Arab Emirates. The studies show how the use of computer-assisted language learning (CALL) positively affected Arab students’ language skills and their attitudes towards learning English with technology.

Highlighting the value of blended learning by combining the advantages of technology enhanced face-to-face instruction and electronic supported learning, Chapter 14 offers an overview of the influence of technological development on the post-secondary Distance Education sector, and presents the advantages of the blended learning approach. The study is supported by evidence from a UAE e-learning University case study.

Chapter 15 discusses a model of evaluating a group of adult students learning resulting from using an online social constructivist tool, using a discussion board for sharing and co-constructing knowledge. The case study discusses a model for understanding the students’ learning experience and the authors’ approach to assess an individual’s level of engagement in critical thinking.

Chapter 16 examines the e-learning sphere in the Arab World. The author discusses the status and quality of e-learning in Arab Universities located in the Middle East. The study provides an analytical overview of the use of e-learning and the quality of electronic courses and learning objects in these universities, and draws into solutions for improved adoption of the e-learning technology. The study is supported by the results of a survey of the universities web sites in the region plus a survey into e-learning courses.

To introduce intelligence to e-learning solutions, Chapter 17 describes a framework for building automatic recommendations in e-learning platforms of two modules: an off-line module which preprocesses data to build learner and content models, and an online module which uses these models on-the-fly to recognize the students’ needs and goals and predict a recommendation list.

Chapter 18 proposes an adaptive system of personalized semantic search and recommendation of learning contents on the E-learning Web-based systems with a huge potential in the Arab region. Semantic and personalized search of learning contents is based on the expansion of the query keywords by using of semantic relations and reasoning mechanism in the ontology. Personalized recommendation of learning objects is based on the learner’s profile ontology to guide what learning contents a learner should study.

Chapter 19 provides a description of how Wikis can be used to develop the writing performance of English as Foreign Language (EFL) prospective teachers. Wikis have gained popularity by educators because of its potential to provide a collaborative environment which encourages its users to engage effectively in the writing process and to develop their writing performance.
Highlighting yet another Internet application, Chapter 20 explores the opportunities and challenges associated with using Internet Online Learning Communities to complement and aid conventional classes and enhance learning outcomes in UAE schools. The study accounts for the use of online forums to support English language classes in Al Foah Primary School, weighing its pros and cons and identifying lessons learned.

Chapter 21 reports on a study which invited school teachers and university academics in Egypt, as a developing and Arabic-speaking country, to cooperate in establishing a learning object repository to store, locate, and share quality learning objects for class teaching and e-learning programs.

The book concludes with a very interesting chapter that discusses how one university in the United Arab Emirates is addressing the evident gap of suitable courses in Enterprise Information Systems that equip graduates with the appropriate competences and skills for the industry, by providing a curriculum and courses that set out to develop local graduates that will be highly valued by organizations seeking to extract full value from their own EIS’s.

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REFERENCE