Chapter 1
A Comparison of Saudi and United States Faculty Use of Information and Communication Technology Tools

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ABSTRACT
Research related to differences in how Saudi and US faculty use Information and Technology Communication (ICT) tools is discussed as well as their perceptions of ICT applications and ICT use. Saudi faculty from six universities in KSA and US faculty from five US universities completed a questionnaire designed to identify the ICT tools most frequently used and their perceptions toward the use of these tools. In addition, a path analysis based on Davis’s (1993) Technology Acceptance Model was conducted to investigate the relationships between faculty attitudes toward ICT applications and actual ICT use. Findings from this study suggest that both Saudi faculty social media most often while US faculty use productivity tools more often. Both Saudi and US faculty and would benefit from training in the use of these applications for use within a Learning Management System.

INTRODUCTION
A diverse range of new and existing Information and Communication Technology tools now support collaborative interactions that were limited by time and space. In particular, these ICT tools have been integrated into schools and universities in efforts to support and enhance instruction. However, educational organizations are struggling to overcome the difficulty of effectively utilizing appropriate tech-

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nologies that are designed to support instruction (Daher, 2014). According to Daher (2014), “teachers
and professors need to adapt in order to better connect with their students and more effectively lead their
classes” (p. 42). Access to technologies that support the use of audio, video, web conferencing, and the
Internet are providing many learning opportunities that were not available to students in the past. The
vast amount of information accessible with a simple mouse click allows teachers and students to access
and experience information from countless resources.

While the use of Information and Communication Technologies such as online learning management
systems and social media are being used internationally to support learning, there are few ICT supported
learning resources available to students in Saudi universities. According to Al-Shawi and Al-Wabil (2013),
The widespread adoption of Internet applications in Saudi Arabia started in the late 1990s. Universities
were among the first adopters of the technology and years later the Internet witnessed an unparalleled
spread across campuses. Despite increased Internet connectivity in Saudi Arabian higher education in-
stitutions, there is little empirical research investigating the factors associated with the use of the Internet
by faculty in teaching, research, and communication. (p. 81)

It is clear that the United States, as well as in other developed countries, have well-established ICT
systems that support university degree programs available to most postsecondary students (Anderson,
2008). The use of ICT tools to support online coursework provides numerous benefits for students, in-
cluding the convenience of accessing the courses at any time and place to engage with their instructor
and other learners, both asynchronously and synchronously. In addition, ICT systems support a more
meaningful learning environment by providing students with opportunities to gain knowledge and skills
situated within the context of their work or other personalized environments. For instructors, tutoring
can be done at any time, materials can be updated immediately for learner access, and learning activities
can be more customizable based on individual needs.

The Saudi Ministry of Higher Education (MHE) has “encouraged the use of information technol-
gy (IT) for teaching and learning among its faculties and students” and the Ministry is continuously
developing projects to “provide adequate IT infrastructure as well as content development for higher
education students” (Alebaikan & Troudi, 2010, p. 49). The Ministry is striving to integrate web-based
and traditional instruction across Saudi universities. Despite support from the MHE, and the fact that
there are many new technologies available to support learning, there are few studies that have inves-
tigated how university faculty in developing and developed countries use ICT tools such as learning
management systems, social media technologies, and other productivity software to support learning
in higher education.

This chapter reports on results of a descriptive study conducted by the authors to identify the differ-
ences and similarities in the types of Information and Communication Technology tools used by university
faculty in the United States and Saudi Arabia to support learning. In addition, results investigating the
relationships between actual use of ICT tools and faculty attitudes toward their use will also be discussed.
Davis’s Technology Acceptance Model (1993) was used as the model for investigating these relationships.

Although a developing country technologically, Saudi Arabia has the resources to provide new
technologies, including interactive classroom management systems and social media, which can en-

The demand for higher education and cultural differences contribute significantly to
the differences in access to educational opportunities (Hamdan, 2014).