Chapter 1

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

Art Bangert
Montana State University, USA

Mabark Fayaz Alshahri
Imam Mohammed Ibn Saud Islamic University, Saudi Arabia

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-

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 institutions, 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, including 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 technology (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 investigated 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 differences 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 enhance their educational systems at both the K-12 and university level. However, there are still barriers to online learning that puts Saudi postsecondary students at a disadvantage (Al Mulhem, 2014). These barriers likely contribute to the significant gap between educational opportunities in Saudi Arabia and the United States. The demand for higher education and cultural differences contribute significantly to the differences in access to educational opportunities (Hamdan, 2014).

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