Chapter 16

Users' Perception of Internet Characteristics in the Academic Environment

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ABSTRACT

This paper examines the characteristics of internet that motivate faculty members of Imam Muhammad Bin Saud University (IMSU) in Saudi Arabia to utilize the Internet in their research and instructional activities. The framework of the study was the attributes of innovations offered by Rogers. A modified instrument was adopted to collect the data and measure the attributes. The result revealed that the majority of IMSU faulty members used the Internet for research and academic activities twice a month or less, indicating a low Internet adoption rate. Multiple regression analysis showed that all attributes of innovation individually predicted Internet adoption. The combination of all attributes indicated the model could predict Internet adoption among faculty.

INTRODUCTION

Adopting new innovations is one of the major areas in information technology that has been researched extensively in order to determine the primary factors influencing people to accept technologies and implement them in their activities.

Among different types of technology, the Internet as a research tool has remained the most valuable source of information. In academic environment practically, researchers from different disciplines have become aware of the potential benefits of the Internet not only as a research tool but also as a communication medium. Multiple communication applications provided by the Internet inspire scholars and professionals to keep in contact with

each other regularly and exchange information in a short period of time. To conduct their research studies, scholars and university faculty members have access to a wide variety of services, including information sources, electronic mail, file transfer, interest group membership, interactive collaboration, and multimedia displays (Cohen, n.d.) Moreover, Web 2.0 applications have added new ways for faculty members to obtain and organize information. These applications include but are not limited to blogs, wikis, Webcasts, podcasts, RSS feeds, social networks, tags, and AJAX. Hence, the diffusion of Internet adoption can be considered as the most important event of the late 20th century (Vadillo, Bárcena, & Matute, 2006).

In spite of the increasing contents of scientific information published on the Internet, Saudi Arabia as a developing country was late in connecting the Internet to the public compared to other countries. As a result, IMSU was provided with Internet services at a later period, and the faculty, until a short time ago, was unable to access the Internet through the university. Therefore, it is important to study the effect of this delay in adopting the Internet for academic and research purposes and to understand Internet characteristic encouraging or preventing faculty members from the adoption.

Butler and Sellbom (2002) state many factors and predictors affect users' decisions and the rate of adoption, including an innovation's characteristics and economic, sociological, organizational, and psychological variables. The current study focuses on innovation attributes as they appear in diffusion of innovation theory created by Rogers to determine Internet characteristics impacting IMSU faculty members' decision to adopt or reject the Internet in their research activities.

Two core research questions can be formulated to explore the situation concerning this issue including:

1. To what extent do faculty members at IMSU adopt the Internet for academic purposes?

2. Do the attributes of innovations: relative advantage, compatibility, results demonstrability, ease of use, image, visibility, voluntariness, trialability, as perceived by faculty members predict their Internet adoption?

Previous Work

The region or the country where people reside plays a major role in accepting new innovations. For example, a comparative study of home computer adoption in the United States, Sweden, and India showed that Indian households are still behind those of the United States and Sweden (Shih & Venkatesh, 2003). The reason for the difference in use might be attributed to the various infrastructural and cultural factors in countries' communities. Cultural differences around the world result in both divergent attitudes toward technology and culturally distinctive ways of implementing and utilizing technologies (Tully, 1998).

Among other institutions, universities sector particularly between countries differs in the abilities and support regarding technology tools provided to their faculty members. Research revels that the type of support to faculty members has a big influence on their attitude toward accepting the technology. In the United States, Dewald and Silvius (2005) surveyed business faculty members to assess their satisfaction with Web information compared with subscription database usage. The survey measured five factors of user satisfaction: content, accuracy, format, ease of use, and timeline. The study reported significantly higher levels of Web usage than subscription databases usage; however, faculty members were not satisfied with free Web information sources for their own professional research. In another study, Al-Asmari (2005) investigated the use of the Internet by teachers in Saudi Arabian. The result confirmed the existence of a positive correlation between teachers' level of use of the Internet and independent variables including computer and Internet expertise, place of accessing the Internet, perception of the advan-

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