A Qualitative Assessment of Arab Culture and Information Technology Transfer

Carole E. Hill
Karen D. Loch
Detmar W. Straub
Kamal El-Sheshai

Georgia State University, USA

Information technology transfer is not an easy task, and seems to be particularly daunting for developing countries. As most technology is designed and produced in developed countries, it is culturally-biased in favor of those developed countries’ social and cultural systems. This bias creates cultural and social obstacles for developing countries to transfer technology into practice. Based on focus groups, interviews of Arab-American business people, and a field study conducted in five Arab countries, this paper presents the findings of a qualitative progressive study to systematically examine the linkage between information technology transfer and sociocultural factors that support or impede a successful transfer.

In many countries, organizations experience difficulty and even failure in transferring information technology (IT) into practice. Despite receiving billions of dollars in products and information, this problem seems to be even more severe in developing countries (Atiyyah 1989; Knight 1993, Cuningham & Sarayrah, 1994). Why would this be the case? Much of the technology designed and produced in industrialized countries is culturally-biased in favor of their social and cultural systems; consequently, developing countries encounter cultural and social obstacles when transferring technology into practice. Cultural and social factors are a powerful explanation for why westerners, who attempt to implement technology transfer, are often challenged in terms of their own ideas, beliefs, and values about how technology “should” be utilized in developing countries, as the initiatives result in failure1. The intent of this paper is to report the progression of a study examining the role of culture in the transfer of information technology to Arab countries.

The study began with a series of focus groups of recently arrived Arab young adults living in a large metropolitan area in the U.S. Subsequently, structured interviews were conducted in the Arab-American business community using an instrument with closed-and open-ended questions based on the findings of the focus groups data set. The structured interviews, coupled with a critical literature review of key social-cultural components of Arab society, allowed us to delineate some salient features of Arab culture that supports or deters the transfer of technology. Finally, a larger sample of Arabs were interviewed in five countries using both qualitative and quantitative instruments. This paper will focus on the qualitative aspects of these research endeavors by reporting the respondents’ ideas about the relationship between information technology transfer (ITT) and the sociocultural context of the Arab world.

Culture and Information Technology Transfer

The body of literature which considers culture and technology transfer is disparate2. Much of the work has focused on economic factors that influence the transfer of technology (Contractor and Sagafi-nejad, 1981; Bond and Hofstede,
1989), or the organizational characteristics of the recipient organization rather than the characteristics of national cultural and their interplay with the transfer of technology (Cunningham and Sarayrah, 1994; Contractor and Sagafinejad, 1981). Kedia and Bhagat’s study (1988) presented a conceptual model that advanced the field in that it 1) examined technology transfer across nations and 2) explicitly included societal culture as a key factor. However, the next logical step of delineating the sociocultural variables that foster and impede the adoption of new technology is not taken.

Ein-Dor et al (1992) conducted a meta-analysis of the extant literature to create a list of national cultural variables affecting information systems and to propose a framework for future global information systems research and implementation. The fundamental questions of their work related to the “degree to which the specific characteristics of the adopting countries influence the desire to adopt and the success or failure of adoption, and to what extent do those differences render incorrect or irrelevant those models and prescriptions accepted in the technology-orienting countries” (1992: 34).

The concept of national culture is complex. They proposed a reasonable categorization of culture according to the degree of stability of the individual factors. Factors inherent to the culture over time, tending to dominate the culture and very resistant to change, are classified as ‘constants’. Examples include geography, language, currency, social norms and traditions. Factors which are more readily changed include GNP, technology, employee morale, education level, and were termed ‘changeables’. Ein-Dor et al. (1992) state that the constants are not within the control of IS designers. Accepting this as fact, the study of the sociocultural factors, termed cultural constants, and their role in ITT becomes even more vital as the trend in globalization marches forward.

Two more recent studies (Burn, 1995; Mahmood and Gemoets, 1995) both take steps in the right direction. Burn’s work focuses on the transference of a specific technology, EDI, to a specific geographical region, Asia. While she discusses the interplay of cultural values with ITT, it is not the essence of the work nor is the phenomenon empirically examined. Mahmood and Gemoets (1995) posit that Mexico is a very attractive and likely receptive host for IT transfer. They argue that the economic, political, legal, and social environment of Mexico makes it ripe for such activity. They do not deal with the sociocultural elements, however, beyond the acknowledgment of their complicity in successful ITT.

It is true that the general issues and conflicts involved in information technology transfer to developing countries and regions, such as the Middle East, are being discussed in the literature more frequently. Two studies (Abdul Ghani and al-Sakram, 1988; Khan, 1991) examined the transfer of technology in Saudi Arabia and Bahrein respectively. While geographically of interest to us, these studies focused on organizational culture and structure issues rather than cultural values and beliefs. Atiyyah (1989) did find that ITT is often hampered by technical, organizational, and human problems in Saudi Arabia. Cultural conflicts between the organization and management style of western and Arab institutional leaders and workers have impacted the system development process and produced unsuccessful approaches to computer use and policy (Ali, 1990; Atiyyah, 1989; Goodman and Green, 1992). Furthermore, Al-Meer (1990) points out that differences in motivation of workers in the Arab world and the Western world is an important component for predicting organizational commitment to technological changes in Arab countries. All of these studies serve as examples of instantiations of sociocultural factors in Middle East countries impacting the diffusion of technology.

Our study is unique in that it 1) Focuses on the complex sociocultural construct, categorized as cultural constants by Ein-Dor et al. (1992), thereby extending previous research in this line of inquiry. 2) Is qualitative in nature, using focus groups, semi-structured interviews and field study methodology to gather data. Ein-Dor et al (1992) found that almost all of the studies in their analysis were limited to survey methodology which limits the ability to probe the participant for underlying explanations and the like. 3) Affords an in-depth look at the cultural phenomenon in multiple Middle East countries, allowing comparison within the developing region as well as to developed regions, and 4) Is empirical, moving beyond frameworks and propositions to offer tangible insight into the dynamic relationship between culture values and beliefs and ITT.

Social and Cultural Characteristics of Arab Society

In this section we attempt to provide the reader a thumb nail sketch of some of the key characteristics of culture and society in the Arab world. We acknowledge as well the theoretical and geographic pitfalls of generalizing about an area of 5.25 million square miles that encompasses 21 states inhabited by a mostly young population expected to number over 200 million before the end of this century.

Barakat (1993), in his recent book on the Arab world, delineates a number of features of their culture and society. An abbreviated list of his synthesis includes such social characteristics as: (1) social diversity; (2) hierarchical class structure; (3) patriarchal relations, particularly in the family; (4) primary group relations (5) continuing dependency and underdevelopment.

Barakat (1993) furthermore, identifies a number of value orientations that, according to him, reveal conflicts among the various groups that makeup Arab society: fatalism vs. free will (Patai, 1973) conformity vs. creativity, past-oriented vs. future-oriented, culture of the mind vs. culture of the heart, collectivity vs. individuality, open vs. closed-mindedness, obedience vs. rebellion, charity vs. justice, and vertical vs. horizontal values.

These conflicting value orientations are a major indicator of the complexity and contradictory nature of Arab culture. Barakat (1993) argues that these conflicts are what makes Arab culture what it is today (181-205).

There are two other characteristics which receive a great