

Chapter 11

Impact of Classroom Technologies on Individual Learner Attitude:

A Case Based Analysis of Introducing IT within the Qatari Education Sector

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ABSTRACT

The study aims to uncover the influence of classroom technologies (i.e. a variety of audio-visual and online equipment) on an individual's (i.e. student's) learning attitude. The antecedents that were considered relevant in the early post implementation phase were: (1) experience with Information and Communication Technologies, (2) enhanced communications, (3) learner independence and (4) ease of technology use. The original concept for the research was derived from Technology Acceptance Model (TAM) which has been a source of numerous studies exploring user attitude towards technology. The outcome indicated a positive and significant relationship between learner independence and individual learner attitude; enhanced communications and individual learner attitude and ease of technology use and individual learner attitude. However the relationship between ICTs experience and individual learner attitude was non-significant. The study outcome implicated that use of classroom technologies, in the introduction stage, does increase with the degree of perceived and encountered ease of use and extended capacity for self-directed learning.

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RESEARCH BACKGROUND

State of Qatar has grown exponentially economically and technologically. A particular and vigorous emphasis has been placed on Information Technology (IT) developments especially within the domain of infrastructure improvements. The Qatari government sector has been proactive in bringing IT based initiatives and IT driven changes which are permeating numerous public and private areas. Prime example is the establishment of *Hakoomi* (an Internet platform) which contains information related to ministries, councils and authorities; it contains economic data about businesses and enterprises; it has channels for paying utility bills and traffic violations; it has facility to apply for online visa and may other similar initiatives. *Hakoomi* is often labeled as virtual government as it provides a number of federal and public services. Another area receiving considerable attention is education. A distinct example of these efforts is establishment of *education city* where world renowned universities (such as Weill Cornell Medical College, Carnegie Mellon University, Texas A & M University, Georgetown University) have set-up their branch campuses. These universities display some of the most advance and cutting edge educational technologies in the world. However within this rapid pace of IT developments, the impact of this change on the user has been seldom evaluated. Key questions such as ease of technology use, frequency of use, quality of experience, degree of independence, nature and level of post implementation support service have been somewhat ignored. Within the presented case study, the emphasis will be on educational technology (especially smart classrooms) and how it is perceived and received by the users. Our specific area of study will be the Qatari public education sector as it is being transformed by the introduction and application of up-to-date and modern technology with the prime aim of giving more control, and choices to the users which will help them to enhance and enrich their learning

experiences. Is this really the case is what we will endeavor to explore in this study.

In today's teaching (and learning) age, an instructor equipped with a textbook and a blackboard is no longer the sole source of educational experience. In particular, technological advancements made post 2000 provided educators and learners with new tools to support in-class instruction and coursework. Hence integrating technology into classrooms is a growing initiative that is becoming an important part of educational culture and university life (Bratina, 2002; Wiley 2001). For instance, California's educational budget provided a total of \$433 million in 2003 to increase the use of technology in schools and universities. In 2008 United States provided \$273 million funding to secondary and high schools to support the deployment and integration of educational technology into classroom instruction. Classroom Technology is the collection of software, hardware and processes which facilitate learning (and teaching) and thus impact (mostly positively) learner's attitude and performance (Govindasamy 2002; Khan 2000). Similarly, learner attitude is defined as the impact or influence of classroom technology on student's disposition towards learning and this can be positive, negative or neutral (meaning no change).

From September 2007 to September 2008, a public University in Qatar was fitted with classroom technology with the prime aim of creating an interactive and conducive learning environment. Within this context the issues that were considered pertinent in initial post-implementation stage, as far as learner attitude was concerned, were:

- experience with basic Information and Communications Technologies (ICTs) and their effect on learner (Liaw et al., 2007).
- broadening of classroom technology initiated communications channels and its impact on learning and absorbing abilities of students (Urden & Weggen, 2000).

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