

## Chapter 9

# Technology Satisfaction in an Academic Context: Moderating Effect of Gender

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### **ABSTRACT**

*In the 21st century wireless internet technology has been extensively extending and contributing to various aspects of human lives. However, technological assessment and evaluation have been rarely taken place, especially to investigate the satisfaction among students in using wireless internet for learning and research purposes. As such, this study validates the Technology Satisfaction Model proposed by Islam (2014) in an academic context for estimating students' satisfaction and the moderating effect of gender in using wireless internet. The findings of SEM analyses attested that students' satisfaction was directly influenced by perceived ease of use and usefulness in using wireless internet and it was also indirectly affected by computer self-efficacy mediated by usefulness and ease of use, respectively. Additionally, computer self-efficacy had a significant direct influence on ease of use and usefulness. The results of invariance analyses also discovered that gender was not a moderating variable for technology satisfaction in an academic context.*

### **INTRODUCTION**

Scientists have been discovering, updating, spreading and implementing the innovative communication technologies throughout the world, where internet technology is one of them playing an imperative role to maximize the human-computer interaction. According to the recent statistics of International Telecommunications Union (ITU) carried out in 2010, the internet penetration reaches 30.1 per hundred residents (ITU 2010). However, the substantial disparity between developing and developed countries in terms of internet penetration has also been uncovered through the same study, where a large proportion of 71.6% residents in developed countries turn out to be internet users, while no such high figure has been perceived in developing countries (Afacan, Er & Arifoglu, 2013). Comparing with the situation

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in 1968, the US Department of Defense used only one computer to link its four sites. Available figures show that usage of internet has increased dramatically around the globe from West to East. Researchers provided a parameter of economic and social benefits of internet usage by identifying the contribution made by internet in:

- Increasing job productivity,
- Technology updates,
- Social networks (Gaudreau, Miranda & Gareau, 2014; Hamid, Waycott, Kurnia & Chang, 2015; Dutot, 2014; Lichy & Kachour, 2014; Dineva & Koufteros, 2002),
- Information access (Islam, 2016; Bouzaabia, Bouzaabia & Capatina, 2016; Islam, 2014; Islam 2011a; Islam, 2011b; Dineva & Koufteros, 2002; Zejno & Islam, 2012; Nwagwu, Adekannbi, & Bello, 2009; Ani, 2010; Zamani-Miandashti, Memarbashi & Khalighzadeh, 2013) and
- The effectiveness of learning and research outcomes (Islam, 2014; Islam 2011b).

Their findings demonstrated that Internet contributes immensely for economic, social and educational development. According to Ani (2010), as a contemporary worldwide tool, the internet plays a role in reaping a better educational outcome of diverse nations, especially in developing countries. Furthermore, with the arrival of information era, the innovation of education has been brought up following the utilization of information technology in educational area. Thus, as an essential educational instrument, internet has been investigated and utilized by researchers and teachers in numerous countries in recent years (Chun, 2014). Despite these benefits received from internet, there are huge social problems created arising from its usage (Hashim, Alam & Siraj, 2010). Subsequently, cautious steps are needed to ensure more benefits are received through the use of the internet by reducing its negative impact. On the other hand, Nwagwu, Adekannbi & Bello (2009) claimed that the difficulty of slowness of access to internet information is a common scenario, primarily because of low bandwidth.

In line with this technological development, International Islamic University Malaysia (IIUM) has also provided the infrastructure of wireless internet to its community, thereby helping the learners in getting access to their subject related materials and keeping up with the current information updates. On the other hand, students can surf the internet and get its access through their laptops, desktop computers, mobile phone and personal digital assistant (PDA). Though widely adopted, there are many aspects of the usage and implementation of this technology that need to be studied and empirically documented. While wireless internet access has been provided for quite some time now at IIUM, there are still many barriers that limit the successful integration and usage of this emerging educational technology within its environment. Especially, technology satisfaction is one of the vital issues which limit students' success in using wireless internet for their learning and research purposes in higher education. Along this line, researchers recently stated that student satisfaction is commendable of examination because it is critical to academic achievement and success (Kuo, Walker, Schroder & Belland, 2014). As such, the purpose of this study is to validate the Technology Satisfaction Model (TSM) proposed by Islam (2014) in an academic context for estimating students' satisfaction and the moderating effect of gender in using wireless internet for learning and research purposes in higher education.

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