

# Computer Skills, Technostress, and Gender in Higher Education

**Sonya S. Gaither Shepherd**

*Georgia Southern University, USA*

## INTRODUCTION

The creation of computer software and hardware, telecommunications, databases, and the Internet has affected society as a whole, and particularly higher education by giving people new productivity options and changing the way they work (Hulbert, 1998). In the so-called "information age" the increasing use of technology has become the driving force in the way people work, learn, and play (Drake, 2000). As this force evolves, the people using technology change also (Nelson, 1990).

Adapting to technology is not simple. Some people tend to embrace change while others resist change (Wolski & Jackson, 1999). Before making a decision on whether to embrace technology or not, people may look at the practical and social consequences of accepting change. Therefore, the technology acceptance model, the accepting or resisting of technology is considered to be a form of reasoned behavior (Wolski & Jackson, 1999).

## BACKGROUND

Technology changes the way people work and learn. As the role of technology is being defined and technology is constantly being improved, change is inevitable (Brand, 2000; Davis-Millis, 1998). As a result, those involved in higher education have to find ways to adapt to technological change. Administrators, faculty, academic librarians, and students should define the role of technology for the purposes of (1) sharing new ideas and techniques for teaching and learning; (2) encouraging enthusiasm and innovativeness; and (3) learning about opportunities and challenges, and how to deal with them (Landsberger, 2001).

In fact, college faculty are spending more time with those from the business sector to ensure what

is taught in the classroom is applicable in the workforce (Gavert, 1983; Katz, 1999; Lynton, 1984). This partnership is providing opportunities for faculty to remain current in rapidly changing technical disciplines because both are collaborating on curriculum that meet education standards and job related skills required in industry (Gavert, 1983; Katz, 1999). And the researcher presumes that professors in Colleges of Business Administration are more adept and comfortable using technology than those in other colleges within universities. On the other hand, other disciplines such as liberal arts have had less need to adapt as quickly, and perhaps have been more reluctant to change (Miller & Rojewski, 1992).

Likewise, education faculty are preparing future teachers, counselors, and administrators to go into elementary, middle, and secondary schools. These teacher programs may or may not require their students to obtain and use technological skills. Similarly, there may or may not be an expectation among the education faculty to obtain or utilize these same skills. Some education faculty and students may only learn and use technology because they wanted to and not because there was an expectation (Miller & Rojewski, 1992).

University library staff also has had to adapt to a wide variety of technological demands unimaginable just a few years ago (e.g., processing library materials and teaching research skills online). Other disciplines such as liberal arts have had less need to adapt as quickly, and perhaps have been more reluctant to change. All, however, are faced with the necessity to change. Therefore, in all likelihood, all faculty and librarians are experiencing some level of technological stress.

Furthermore, the rapid growth in technology over the last three decades has been well documented. Accompanying that growth has been an equally rapid increase in the struggle to keep up with technology. The way services are provided by society

and to society (e.g., fast, instantly, remotely) is changing. While virtually all facets of society are affected by technology, its impact can be clearly seen in the way higher education clientele have been served. Colleges and universities are being changed in multiple and profound ways, ways almost unrecognizable to students, faculty, academic librarians, administrators, and alumni.

The move to the Information Age, with its changes and need for adaptation to technology, has been rapid and stressful for many people. While many people have increased their technology use and are comfortable with it, many others still do not use much technology and are not comfortable using it when they must do so. For those who are not amenable to change, who find it difficult to adapt, there are often a variety of responses or results. One such response is called technostress. Technostress is the inability to adapt to or cope with new computer technologies which reveals itself in one of two ways: (1) computer users struggle to accept the technologies or (2) computer users over-identify with the technology (Brod, 1984).

Studies relating to technostress have been fairly limited. Those conducted have sought to determine correlations between such variables as personality type, academic performance, self-concept, and why certain faculty decided to use technology while others do not. Study participants have included people from the business industry, students majoring in business and education, and a limited number of faculty members and librarians. However, there are few studies that look at the severity of stress for various types of computer users (e.g., faculty, academic librarians) in postsecondary settings based on the computer users' gender.

For example, differences between females and males regardless of discipline were identified in the way they accepted or resisted technology. Even though Sievert, Albritton, Roper, and Clayton (1988) and Ballance and Ballance (1992, 1993) found computer-related stress was not related to computer experience and sex, other researchers found a relationship. For instance, females experienced technostress or resisted information technology (IT) more than males (Fine, 1979; Elder, Gardner, & Ruth, 1987; Hudiburg, Brown, & Jones, 1993; Ogan & Chung, 2003). Additionally, Heinssen, Glass, & Knight (1987) believed the less computer experi-

ence a female had the more computer anxiety she experienced. Murphy, Coover, and Owen (1989) revealed men were better able to perform certain computer skills more successfully than females. Similarly, Reed and Overbaugh (1993) found men to have less computer anxiety as their computer experience increased. According to Baroudi and Levine (1997), "women were generally more scared of computers ..." (p. 178). Finally, females rated information technology as the fourth cause of stress while men rated IT as the fifth cause of stress (Sax, Alexander, Korn, & Gilmartin, 1999).

Male and female faculty members and librarians also identified the IT they used as well as certain coping skills to help them handle the increased stress. The information technology identified included e-mail, spreadsheets, the Internet, statistical software, presentation software, and multimedia software (Groves & Zemel, 2000) where e-mail, spreadsheets, and the Internet were highly used. They suggested eating, relaxing, staying healthy, having a positive attitude, managing time, setting realistic goals, and seeking additional training as ways to cope with their stress as they continued to use information technology (Hickey, 1992; Kupersmith, 1992; McKenzie, Davidson, Bennett, & Clay, 1997).

With this, the intent of the current study was to explore the relationship between technology skills and the possible causes of technostress among academic librarians, and education and business faculty. The exploration looked at the role, if any, of how gender may have also made a difference in this relationship between technology skills and technostress.

## **FUTURE TRENDS**

### **Research Method**

This study was originally designed to answer the following question based on several demographics: Do computer skills relate to the levels of technostress among faculty in the Colleges of Business and Education, and academic librarians? However, the main focus of this article is on the gender of faculty in the Colleges of Business and Education, and academic librarians and the relationship between

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