

## Chapter 8.3

# The Changing Demographics: The Diminishing Role of Age and Gender in Computer Usage

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### ABSTRACT

As the changing demographics of the workplace influence how organizations operate, the need to reexamine relationships between these demographic variables and their effect on the organization continues. This study provides an empirical examination of the effect of two demographic variables, age and gender, and any moderating impact anxiety, enjoyment, and/or peer pressure may have on computer usage. Based on our analysis of 292 knowledge workers, we identified no significant difference between men and women and/or young and old regarding their computer usage in the workplace. Therefore, the findings from this study do not seem to support earlier research regarding age and gender, which indicated that these variables did impact computer usage. However, the moderating construct (anxiety) did appear to be significant in the employees' computer usage.

### INTRODUCTION

The use of information technology within an organization can have a dramatic effect not only on the success or failure of the organization, but also on the overall work life of its employees. There are at least two issues associated with organizations investing in information technology. The first issue is whether employees will accept the technology. The second issue is whether employees will be more productive with the new technology. While many studies have examined technology acceptance (Davis, 1989; Gefen & Straub, 1997; Szajna, 1996) and have attempted to focus on how particular variables impact technology acceptance, few have looked at the implications concerning the changing demographics (i.e., age, gender, education level, position, organizational training, and organizational pressure to use technology) in the U.S. workforce.

As the workforce has changed over the past decade, so has the use of computers (Igbaria,

Parasuraman, & Baroudi, 1996) and the level of sophistication embedded in their software applications. However, only limited research has been conducted to examine how the changing demographics of the workforce have affected computer usage within the organization. As the number of women in the workforce has increased and the average age of workers has also increased (Census, 2000; Greco, 1998), earlier studies may no longer accurately reflect the current dynamics within the modern organization. With the proliferation of computers into the home, older employees may have become more comfortable with basic software packages (White, McConnell, Clipp, & Bynum, 1999). Therefore, by looking at the changes that have occurred in the workforce demographics and the current usage of information technology in the workplace, we should be able to develop a better understanding of what is currently affecting the usage of information technology within the modern organization.

The following study examines data collected using multiple validated instruments, compares the results to current literature, then attempts to show the effect of age and gender on the usage of technology and the modifying effect of perceived pressure and enjoyment. The perceived pressure to use technology may be best explained, from Compeau, Higgins, and Huff's (1999) work, as the social influences of encouragement by others, others' use of IT, organizational support, and personal anxiety.

## **LITERATURE REVIEW**

Traditionally, research in the information systems and/or information technology areas have focused on the technology (the system) being implemented (Brown, 2001; Yang & Moore, 1995). Individual studies have looked at the user regarding perceived satisfaction in the use of IT (Robie, Ryan, Schmieder, Parra, & Smith, 1998; Simmers & Anandarajan, 2001), acceptance of technology

(Davis, 1989), learner behavior (Brown, 2001), gender and discriminatory practices (Truman & Baroudi, 1994), gender and learning (Arbaugh, 2000), age and the use of the Internet (White et al., 1999), previous computer experience (Thompson, Higgins, & Howell, 1994), and motivational factors to use computers (Pintrich & Schunk, 1996). While not all of the previously mentioned articles are exclusive to the IS and IT arena, they all hold relevance to the current research project due to the findings that each study has provided.

Brown (2001) found, through a study of technical employees at a Fortune 500 manufacturing firm, that age is a factor affecting the speed at which computer training can be presented and the quality of its retention. Older employees were found to exhibit less interest in and have a less positive attitude toward computers than younger employees. Additionally, Brown found older employees had lower learning outcomes than younger employees do. Brown concluded that an increase in age may be associated with greater resistance to computer usage. However, the Brown study did not use a control group and did not report separate findings for its male and female subjects.

Progressively over time the workforce has changed (e.g., a greater number of women, a higher average workforce age, and a higher level of education; Census, 2000); the sophistication of IT has increased as has the demand placed on the end user. Simmers and Anandarajan (2001) found that age is an important factor in user satisfaction and that younger workers generally had higher satisfaction than older workers. Therefore, due to these findings by Simmers and Anandarajan, the limitations expressed by Brown (2001), and age emerging as a barrier to the placement of individuals who are looking for employment (Gibson, Zerbe, & Franken, 1993), age is an important and viable variable for further research to see if there is a correlation with computer usage.

Gender no longer seems to be a factor in job placement or level of placement (Truman &

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