

Chapter 6

Towards a Theory of Learned Technological Helplessness

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ABSTRACT

This research attempts to lay the groundwork for the establishment of a proposed theory of Learned Technological Helplessness (LTH) in female adult learners. The theory posits that females' technological ability and technological self-efficacy (TSE) are impacted by socialization into traditional gender roles. Analysis of the intercorrelations between the individual's gendered characteristics (as measured by the Bem Sex Role Inventory or BSRI) and the participant's computer self-efficacy (as measured by the General Computer Self-Efficacy score) indicates that several masculine characteristics are statistically significant predictors of TSE. The qualitative results demonstrate that women consider men to be more adept at using technology. This feminist emancipatory study provides useful information to adult educators interested in how females perceive their technological ability and capacity to learn using technology, and provides the groundwork for other researchers interested in exploring LTH.

INTRODUCTION

It is well documented that the United States has not been able to keep its technological edge by relying on the products of its own educational system (National Center for Education Statistics, 1997; National Science Foundation, 2006; Science, Technology, and Global Competitiveness, 2005). The issue is compounded for females, who

complete certain science, technology, engineering, and mathematics (STEM) degrees at rates significantly lower than their male counterparts. According to the National Science Foundation (2008), although women earned more than half of all science and engineering degrees in 2006, they earned only 28% of the degrees in computer science, and 26% of the degrees in engineering and physics. One way that the U.S. could begin to rectify this imbalance in specific STEM subject areas is to start orienting females to embrace *tech-*

DOI: 10.4018/978-1-61692-906-0.ch006

nology from an early age and continue promoting the value of embracing technology throughout their entire formal educations.

Encouraging females to embrace technology would not only help to reduce the deficit in the U.S. technology sector, it would also be a start in reducing the ongoing pay disparity between men and women, as women moved into the relatively high paying field of information technology (IT); but perhaps even more important than relying on American workers to fill American jobs and creating pay equity for women, encouraging women to embrace technology will improve their success and productivity in virtually all areas of their daily lives as it necessitates that they become more *autodidactic*. In order to move more women from a state of technological dependency to one where they are self-taught, it is important to first understand what factors impact women's ability to use technology as a tool for problem-solving and personal productivity.

The primary problem facing female adult learners in the digital age is that current social structures are maintaining the status quo of helping to keep them ignorant of technology (Rosser, 2006). Some feminist scholars believe that "technology and society are bound together inextricably" (Wajcman, 2006, p. 83) and that it is almost "impossible to imagine a woman-centered perspective in the absence of patriarchy" (Rosser, p. 31). Others claim "women who enter and remain in IT do so under extremely trying circumstances, which are almost entirely cultural" (Ramsey & McCorduck, 2005, p. 1). If these scholars are correct, then it could help explain why many women are experiencing *learned helplessness* (LH) when using technology.

Past studies on gender and technology have focused on workforce dynamics and not on women as users of technology (Rosser, 2005). This research helps fill this void in the literature, as it examines the correlation between socialization and learned helplessness in female adult learners as they interact with technology. The purpose of the research is to lay the groundwork for a proposed theory of

learned technological helplessness (LTH), which posits that technological ability and *technological self-efficacy* (TSE) are impacted by socialization into traditional gender roles. The research findings are presented and suggestions are made for adult educators who wish to help female learners become more self-actualized users of technology.

BACKGROUND

It is a widely held belief among 21st century educators that all persons above the age of three need technology skills, as evidenced by the National Educational Technology Standards. These national standards outline what children should know and be able to do with technology at all ages. Following is a list of the technology standards for Pre-K through 2nd grade:

1. Illustrate and communicate original ideas and stories using digital tools and media-rich resources
2. Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution
3. Engage in learning activities with learners from multiple cultures through e-mail and other electronic means
4. In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area
5. Find and evaluate information related to a current or historical person or event using digital resources
6. Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals
7. Demonstrate safe and cooperative use of technology
8. Independently apply digital tools and resources to address a variety of tasks and problems

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