Overcoming Computer Anxiety: A Three-Step Process
for Adult Learners

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Many adult learners returning to school later in life have discovered that technology is heavily embedded in the learning environment. Learning both course contents and technology in unison can be a daunting task for students who feel intimidated by technology. Computer anxiety is a term that describes resistance, fear or anxieties towards computers. Uncovering ways to not only help adult students dispel their computer anxiety, but also help students attain greater computer self-efficacy is a challenge for educators. This article proposes a three-step process for helping adult learners overcome that anxiety, purpose, positive environment, and provides support. Institutions of higher learning that employ this three-step process should be able to provide both a successful and meaningful experience for adult learners.

Keywords: computer anxiety, technophobia, adult learners, older students, technology integration, existential, educational psychology

Introduction

The pressure to implement technology as a learning and teaching tool is often felt by educational institutions, whether K-12 or higher education. The technology usage has become increasingly ingrained in our daily lives. Communication tools (such as smartphones) and social networking sites (such as Facebook and twitter) are ubiquitous in the urban culture of the US. Technology is advancing at a rapid pace, which is providing an opportunity to reach out to a larger student population, and educators are striving to integrate these advancements into their teaching practices. In an effort to endure, some educators were teaching general computer skills in addition to course content (Johnson & Heritage Foundation, 2000).

Young students now entered schools with the expectation that technology would be used in the classroom as a teaching tool and many students have already possessed the necessary technological skill sets that would assist with their class work (Mooney & Bergheim, 2002; Zemsky, Massey, & Odel, 1998). In higher education, non-traditional students, oftentimes older or working adults, are looking for ways to earn their first degrees or return to school for a graduate degree. Advances in technology have made it possible for institutions to offer online courses and/or degree programs, which is a feasible opportunity for adult learners. With the use of the Internet, the distance-learning degree has become a viable and valuable option for individuals who may not be able to enroll full-time in a traditional brick-and-mortar institution. Many adult learners at higher education

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institutions want courses of study that utilize traditional methods (i.e., in-class lectures and note taking); however, the advent of technology provides an alternative type of instruction. Today, most college courses utilize course management systems, such as Blackboard or Moodle to provide materials and information to students. Assignments are turned in using these systems, making handwritten homework outdated. These uses of technology can lead to a decrease in face-to-face interaction with faculty and peers, which puts many adult learners in an unfamiliar learning environment (Czaja, 1988; Robinson & Birren, 1984; Stems & Patchett, 1984).

As these adult learners take classes, they find themselves not only learning the course content, but also surviving the technological environment in which the course is taught. For students who feel intimidated by technology, learning both course contents and the technology in unison can be a daunting task. In addition, some students state that they "spend more time figuring out the course management system" than learning course contents. Students new to technology may experience risk factors, such as stress, due to learning in an unfamiliar medium.

> In order to better meet the needs of the learners, educators and trainers need to have a good understanding of the factors that affect a learner's computer attitude, and thus, be able to identify high-risk learners that may need extra intervention. (Johnson, n. d., p. 6)

This article will discuss the anxiety about the computer use and propose a three-step process for helping adult learners overcome that anxiety.

Computer Anxiety

Anxiety is one of the most common forms of human emotions. Most people feel some levels of anxiety on a regular basis. The innate response of anxiety in the presence of threatening stimuli is often considered adaptive (i.e., fight or flight) (Barlow, 2002). When anxious, a person may feel the sensations of a racing heart, blushing, chest pain, trouble breathing, shaking, difficulty swallowing, nausea, sweating, panicky thoughts, and feeling lightheaded, agitation and nervousness. However, if the anxiety becomes persistent, the person worries about the performance and embarrassment occurring, the situation is avoided or endured with dread, and interferes with the person's daily routine and occupational/educational/social living, then it may be time to address the source of anxiousness (American Psychiatric Association, 2000).

While technology integration is attractive to certain sets of students, others struggle with this medium. "In a world where an overdose of technology is considered normal, the idea of technophobia, fear of computers and related technologies, sounds almost alien and unnatural. Yet it is an issue that affects many people" (Gupta, 2001, p. 4). Computer anxiety or "technophobia", is a term that describes resistance, fear or anxiety towards computers that transcend age and other demographic boundaries (Ben-Jacob & Liebman, 2009; Rosen, Sears, & Weil, 1993). Regardless of the term used to label the condition (computer anxiety, technophobia, performance anxiety, transient social anxiety, etc.), "Scientific research indicates that individuals with such adverse psychological reactions to computing technologies will generally under-utilize computing-intensive environments or avoid interacting with computing technologies" (Vician & Davis, 2002, p. 51).

An aversion to computers can stem from a lack of basic understanding of how a person can manipulate the technology to suit their purposes. Usually, these particular students either had no prior desires or needs to use computers or never had access to personal computers. Research conducted by Bohlin and Hunt (1995) showed that lack of experience with computers fosters anxiety, lack of confidence and negative attitudes towards

computers. Affected students commonly use statements, such as "I am afraid to mess something up" or "I don't know enough about computers to change anything". For students who verbalize these types of fears, computers often intimidate and cause intense apprehension, dread and embarrassment.

Previous research on this topic has attempted to determine the factors that cause computer anxiety, develop screening tools and provide suggestions for technology integration. Worthington and Zhau (2000) stated that the existing literature has not addressed the existential elements to computer anxiety, or evoked by the consideration of the broader implications of computer use for conceptions of the self, society and culture.

> Using the lens of existentialism, we can conceive of computer technology as a challenge to an individuals' world view, where she once lived and worked productively in an environment that did not involve the use of computer technology, the introduction of such technology into this environment forces her to revisit and attempt to re-justify her beliefs and assumptions about the world. (Worthington & Zhau, 2000, para. 9)

According to Frankl (2006), as humans we might be limited by the circumstances we are put in, but we have the capacity to take a stand against them. Giving people a task to fulfill helps relieve their despair. Despair causes suffering in people who can or could not see any meaning; however, if people were shown a means with which to broaden their horizons, it would help to ease the suffering. Above all, meaning could be found in accepting the unavoidability and by doing so turn it into a challenge (Frankl, 2006). Fabry (1994) stated that Logotherapy, or principles founded upon the belief that the most powerful motivating force is the striving to find a meaning in one's life, can be viewed as a form of education. "It strengthens our assurance that we have choices, that we are unique, and hat we have the power to defy limitations by overcoming them or changing our attitudes that limitations cannot be overcome" (Fabry, 1994, p. 17).

Regardless of the etiology, as technology became an integral part of education, adult learners who lacked computer skills found the learning process laden with anxiety and frustration (Bohlin & Hunt, 1995). Willingness to use computers, the effectiveness of that use, and familiarity with computers sharply reduced this anxiety and reluctance (Bohlin & Hunt, 1995). "When individuals have experiences that build their mastery of IT (instructional technology) applications and are in an environment with positive situation support, they tend to have higher levels of computer self-efficacy. Higher computer self-efficacy, in turn, is associated with usage" (Fagan, Neill, & Wooldridge, 2003, p. 101). As adult learners become aware of the importance of computers in the modern education system, it is necessary to identify and address the anxiety surrounding technology use. Assisting these students with adequate resources and trainings is essential to their educational success. The challenge for educators is uncovering ways to help adult students dispel their fears and anxieties of using computers and attain greater computer self-efficacy.

Three-Step Process for Helping Adult Learners

Various ways exist for helping adult learners overcome the fear and anxiety of using computers. Some approaches are more hands on, while others are less involved. The resources available at each individual institution will determine the methods. The three steps, as outlined in the following paragraphs, are one way to help students overcome computer anxiety. One can easily remember the process as the three P's: purpose, positive environment and provide support. The first step is recognizing the purpose behind the computer usage, the second step is creating a positive and nurturing learning environment and the last step is providing a support system for students. These steps are interdependent making it a process rather than a linear sequence of events.

Step 1: Purpose

The first step is recognizing the purpose behind the computer usage, and orienting students to the benefits of knowing how to use computers in an efficient manner. This step captures the benefits of learning basic computer features so that adult learners will not be frustrated and waste time trying to figure out the technology, while procrastinating to learn the course contents.

> If you are technophobe, then life at work can be stressful and anxiety-driven. While the rest of the world appears to be moving ahead, there is a sense of rapidly being left behind and the idea of playing catch-up leading to more frustrations, anxieties, and despairs. (Gupta, 2001, p. 4)

The goal is to convince the student that one does not need to be a computer expert to take an online course, or complete and turn in assignments.

Instructors must make the class relevant to the students (Rutherford, 2004). "Adults, especially the old adults, need a direct correlation with their lives to maintain interests" (Bean, 2003, p. 21). To start, adult learners should be taught the multitude of purposes in using computers for personal, work or school projects.

> Common sense tells you that personal computers should save your time. A PC (personal computer), after all, lets you plan and budget far more effectively than a calculator or table, keep track of people and things far more easily than a roster or a list, communicate far more effectively than a typewriter of telephone, and tap into far more research sources than the largest collection of periodicals or books. (Goldsborough, 2007, p. 10)

These uses include conducting Internet and online searches for research papers (almost all libraries on college campuses have online presence), using Microsoft Office to complete homework assignments, or creating and making presentations using multimedia features (such as movie maker or photo editing tools). Mayhorn, Stronge, McLaughlin, and Rogers (2004) suggested that instructors "demonstrate the practical uses of computers for older adults and strive to reduce initial anxiety by introducing positive experiences early in training" (p. 193). If a student, especially an adult learner whose time is valuable, sees the gain in knowing how computers can make their lives more efficient, they will be more receptive to getting over their initial fears of technology.

Many of these activities can be accomplished during technology workshops (which will be addressed further in step 2) or in introductory technology courses, which are now required by most institutions to acclimate students to unfamiliar technology. "Using computers to practice specific skills assisting in keeping the student's interest, thereby motivating them" (Mann, 2001, p. 1). Thus, this first step is imperative for students who have computer anxiety in understanding that learning how to use a computer will not just help them in getting through the subject matter, but also in time enhance their quality of life.

Step 2: Positive Environment

The second step is creating and nurturing a positive learning environment. Computer lab is a great place for adult learners to learn how to use technology, but only if done correctly. Simply having a computer lab with 20 computers will not help anyone learn how to use those computers. "Computers allow individualized extra attentions that the teacher may not be able to provide during classroom hours" (Mann, 2001, p. 1). What will help is having a computer lab where workshops are held on a regular basis on different aspects of the computer—a method that will go a long way in helping students become acclimated to using computers. Workshops should be conducted by staffs that have positive attitudes towards students, especially adult learners, who do not know how to use computers. Workshops absolutely can not and should not be staffed by people

who insensitively think that those who lack basic computer knowledge are unintelligent or have learning disabilities, which will only worsen the users' apprehension. "To be successful, we believe programs should focus on reducing anxiety and building efficacy and feature lessons phrased optimistically and encouraging formats" (Cody, Dunn, Hoppin, & Wendt, 1999, p. 281).

An initial step towards a nurturing environment is to acknowledge the anxiety present (Ben-Jacob & Liebman, 2009). If an instructor notices a student being hypersensitive to criticism, has difficulty being assertive, avoids class participation, and seems unsure of their performances, then the instructor may ask the student questions such as "how comfortable are you with using the computer?". Follow-up questions could assess how the student avoids technology and how the student feels distressed by technology. By maintaining the right disposition and creating a safe environment, staff can allow non- or less savvy technology users to ask questions. It is important for instructors to allow and encourage students to ask questions during the instruction (Jones & Bayen, 1998). Give reassurances to the adult learners that they cannot damage the computer. "Encourage people to experiment, and approach computers as a field to be explored rather than a minefield to be avoided. With the right attitudes, people learn and grow from their mistakes" (Goldsborough, 2003, p. 19). Creating an environment that does not intimidate but provides an invitation to participate, take risks, and learn is a critical ingredient to develop confidence and competency, each of which diminishes the effects of anxiety.

Step 3: Provide Support

The last step is providing a support system for students in the form of a dedicated go-to person or staff member. The instructor can also spend addition one-on-one time with students in need of assistance at the computer and be available outside of class to answer students' questions. Due to financial constraints, many institutions offer supports through Web tutorials, which can be frustrating to some students with computer anxiety. One way to aid the students, when the instructor is not available or other methods (i.e., Web-based tutorials) are not effective, is to hire and train fellow students to supervise computer labs. There are two advantages of this strategy: It allows adult learners to work with peers, thus creating a comfort zone for them to ask questions and this opportunity also allows student workers to be mentors and teachers to adult learners, thus giving them a positive feeling while providing a great learning experience.

Peer mentoring is a reciprocal way of learning that allows students to develop skills (Mann, 2001; Jones & Bayen, 1998; Beasley, 1997). "Having one-on-one mentors means having someone available for questions, help with note-taking, assistance with reviewing demonstrations, and facilitating self-pacing" (Shedletsky, 2006, p. 37). It is an enormous asset if institutions are able to hire student workers who are of the same degree major as those students who use a particular computer lab, as this would foster greater comfort and familiarity in the learning environment. "Educators, parents and other professionals note that the key to successfully integrate isolated students into academic environments is creating informal peer supports and friendships" (W. Stainback, S. Stainback, & Wilkinson, 1992). Providing a support system is important to maintain the newly learned technological skills.

Conclusions

Many adult learners are entering schools with apprehension at the thought of an encounter with technology. Educators need to strive to understand computer anxiety in order to better meet the needs of the students. If older students are guided in the right direction and encouraged to recognize the value behind learning how to

use a computer, then they will be more inclined to learn. The three-step process of purpose, positive environment, and provide support, is one way for educators to help students attain computer self-efficacy. One must see the purpose of the technology use. Creating a positive learning environment is essential and having a support staff aids in the learning process.

Technology can be used to empower students as lifelong learners in an information-rich environment (Barr & Tagg, 1995). Learning how to overcome the anxiety of using computers is not an easy task which is a process that requires patience and persistence of the teachers and the learners. Institutions of higher learning which employ this three-step process will be able to provide a successful and meaningful experience for adult learners.

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