Diversity in Career and Technical Education On-Line Classrooms: Considering Issues of Gender, Race and Age

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ABSTRACT

Designers and instructors of courses in career and technical education have realized the value of on-line delivery of instruction during the past several decades. Many students enrolled in career and technical education courses are what have been labeled “non-traditional” students. On-line learning is helpful to these students because it provides the flexibility to do coursework from home, or to do schoolwork at hours when brick-and-mortar colleges are not traditionally offering classes. However, it is increasingly being realized that all students may not equally embrace, or equally succeed in the on-line environment. In this paper, the authors examine recent research studies in an effort to see if there have been documented differences in preference for, or success in, on-line learning based on gender, race and/or age.

Keywords: Age, Gender, Instructors, On-Line Environment, On-Line Learning, Race, Technical Education

INTRODUCTION

Career and technical education is a field with high potential for the use of distance learning. Zirkle (2004), in a study of CTE and distance learning, reported that career and technical education programs were increasing their use of distance education, particularly at the two-year college level. Although CTE programs continue to increase their delivery of instruction via distance learning, there are areas which need attention and research. Among these areas are issues related to the diversity of students in distance learning classes.

Issues of age, gender, and race have not been explored sufficiently related to the delivery of, and success in, on-line learning. Course designers often adapt a face-to-face course for a format and delivery suitable to on-line learning (e.g., WebCT) without considering the differences among students who might be enrolled in that course. While it is recognized that diversity occurs in the face-to-face class also, there are some particular issues related to distance learning and gender, age and race which
should be attended to by course designers in career and technical education and other fields.

Adult learners, often called “nontraditional students”, are one of the major constituents for on-line learning. They also comprise a growing number of students in career and technical education. These students express preference for on-line learning and other forms of individualized credit-bearing instruction, given their busy schedules and demands of their lives. Although they prefer on-line learning for its convenience, it must be noted, that on-line learning requires self-discipline and has a measure of “loneliness” because the learner pursues her/his learning often in a solitary setting. For these reasons, perhaps, the dropout rate for on-line learning is higher than that for face-to-face instruction – implying that some of those who register may not be prepared for the rigors and requirements of on-line learning (Wojciechowski & Palmer, 2005).

In addition, some have predicted that adult learners’ relative lack of technology experience (compared to younger students) and need for frequent communication with instructors, including assurance that they are “doing OK” (Ausburn, 2003; Ware, 2010) would make them less viable candidates for success in on-line learning situations. Regardless of these factors, the largest group of on-line learners in this decade is nontraditional (e.g., 26 and over) students studying part-time (NCES, 2007).

Recently, more interest and attention to issues of diversity has broadened research in such areas as: learning style differences between the sexes and research on differences in racial/ethnic groups in terms of learning/communication styles and preferences. Developers of on-line instruction need to consider gender and racial/ethnic differences as well as those related to age when designing courses (Sullivan, 2001; Stuck & Ware, 2010).

The authors will review literature from a variety of sources concerning gender, race/ethnicity, age and on-line learning and will focus on implications of these findings for designers of distance/on-line learning in career and technical education. In areas where research is lacking or inconclusive, additional research questions will be posed.

**GENDER**

The authors’ focus on gender is grounded in the social sciences. Gender is a social construction, consisting of one set of expectations, rights and privileges that societies have decided that females should follow, and another set of expectations, rights and privileges that males should follow or exhibit (Lorber & Farrell, 1991). As a child grows, those around her/him model behavior which is felt to be appropriate to the child’s biological sex. This constant barrage of “gender rules” from adults and peers socializes the child into behaving according to the societal expectations for her or his culturally defined gender. Social pressure by peers and adults exhorts individuals to follow these socially constructed guidelines (Stuck & Ware, 2010). Later in life, one’s gender identification contributes to one’s opportunities for education, work, family, sexuality, reproduction, authority, and the individual’s potential to make an impact on the production of culture and knowledge (Lorber & Farrell, 1991).

When one considers the social construction of gender, one realizes that within these gender constructions are often subtle limitations on what each gender is thought to be able to do, including accomplishments in education. For example, some feel females are not as spatially or mathematically able and therefore do not expect them to become architects or engineers. However, some individuals resist these constraints and go beyond the constructions and limitations for their gender (e.g., a female becoming CEO of a major corporation). In other cases, individuals follow the expectations for their gender (e.g., male becomes a pro football player; female becomes a teacher or nurse).

In the area of technology, women have been seen as stereotypically avoiding computers and machines. In a 1985 study of visual advertisements in computer magazines, Ware and Stuck found
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