

Chapter 63

Transformative Learning and Technology in Adult and Vocational Education

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ABSTRACT

Adult learners often fear that they will be unable to find work if they are lacking in technological skills. The media, including newspapers, magazines, and advertisements for positions often emphasize the importance of the use of technology in the workplace. It is the case that without adequate skills in the use of appropriate technologies, adult workers may face challenges in finding employment. But what technologies can do is to provide powerful teaching and learning strategies. This article addresses technological applications in vocational and adult education advancement from different perspectives. Technology has the potential to support transformative learning. Technology, along with the vital role of adult educators, helps learners grow, change, and develop. Through the discussion of these, and related issues, a model titled Learners' Seeking Transformation via Web 2.0 Technologies, has emerged.

INTRODUCTION

Researchers and educators have been addressing the issue: can technology support learning and change for adult workers in vocational and adult education? There is no doubt that learners engage

in learning through technology in order to seek change in Bloom's (1956) three domains—the cognitive, psychomotor, and affective domains. Educators and researchers strive to find out whether adult learners can attribute their learning to the use technology by asking the following questions:

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- Do learners *think* differently after completing a class via technology?
- Do learners *act* differently after completing a class via technology?
- Do learners *feel* differently after completing a class via technology?

The three questions revolve around the three domains of educational objectives. Once these objectives are achieved on the part of learners, it may be possible to say that the learners are transformed. Transformative learning is defined as a shift deep in perspective resulting in a frame of reference that is more open, permeable, discriminating, and better justified (Mezirow, 2012). The potential for transformative learning exists; however, the question remains as to who or what contributes to transformation—educators, Web 2.0 technologies, the learners themselves, or a combination of all three. We now examine these three facets of the teaching and learning process.

Course Instructors

Course instructors in an online environment usually have the highest degree in their specific discipline. Then, based on their knowledge base and instructional experience, they are hired by universities or colleges to teach adult learners through the use of technology. Their success depends at least in part on the body of knowledge they possess. In Western cultures, an instructor's teaching is constantly evaluated by students. If instructors keep receiving low ratings from students, they may be asked to participate in instructional development related to teaching and learning or further training in their subject area, but this is always voluntary. In rare cases, some unqualified instructors' employment may be terminated. Those who remain in the academy based on consistently good teaching evaluations are considered knowledgeable in the field or at least have the ability to impress their students enough to warrant a good review of their teaching abilities. In addition

to their knowledge of their discipline and their knowledge about teaching, effective instructors develop rapport with their learners and relate to them in ways that inspire learning and possibly transformative learning. There has been considerable literature on how course instructors can set up an environment in their classrooms that fosters and supports transformative learning for adult learners (Smith, 2012).

Technology

Can technology foster transformative learning for adults? Although there is little empirical research on this question, scholars' perceptions range from a belief that technology contributes greatly to transformative learning to the point of view that technology provides only teaching and learning tools—it is learners who are responsible for such change. Most likely, both of these perspectives are valid, depending on the context, the subject area, and the way that instructors work with learners. Smith (2012) reviews the literature in this area, coming to the conclusion that transformative learning theory may provide a useful framework for understanding online learning, but we do not have much detail about fostering transformative learning online. Perhaps too many exaggerations regarding the power of technology have been heard in vocational and adult education. Some have become rather clichéd, such as “technology will replace human beings,” “technology will lead to the demise of instruction inside four-walled classrooms,” and “intelligent computers will replace classroom teachers.”

Prior to the existence of online teaching and learning, programmed instruction—paper and pencil modules—and mechanical teaching machines existed in the early 1960s. The early computer-assisted instruction in the 1960s and 1970s was comprised of reading text and responding to questions. The research of that time rarely found significant differences on student achievement with computer-assisted instruction, though learners

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