

Enhancing Student Productivity Using a Creativity Tutorial

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“The future belongs to a very different kind of person with a very different kind of mind—creators and empathizers, pattern recognizers and meaning makers. These people—artists, inventors, designers, storytellers, caregivers, consolers, big picture thinkers—will now reap society’s richest rewards and share its greatest joys.” —Dan Pink, A Whole New Mind

INTRODUCTION

Survival in the 21st century marketplace often depends on the creativity of organizational employees (Beckett, 1992; Hermann, 1993; Johnson, 1992; Kanter, 1982). Many historians attribute the emergence of the United States (US) as a twentieth century superpower to the creativity of its population (Florida, 2005; Ehrlich, 2007). They warn that the United States may be losing its dominance due to declines in the ability to attract and sustain human capital including the creative talent critical for innovation (Florida, 2004; Florida, 2005; Ehrlich, 2007). In his Harvard Business Review article, *America’s Looming Creativity Crisis*, Richard Florida of Carnegie Mellon describes the importance of creativity to the wealth of a society: “Today, the terms of competition revolve around a central axis: a nation’s ability to mobilize, attract and retain human creative talent.” In other words, nations and their citizens depend on the creativity of their residents to ensure their economic prosperity.

Due to the criticality of creativity, it is imperative that educational institutions help their students

to maximize their creative potential. Unfortunately, critics contend that many teachers, in the US and other nations, actually inhibit the creativity of their pupils (Fleith, 2000) and some relate US K-12 education to a demise in student creativity (Craft, 2005). To help students, organizations and nations succeed in an increasingly competitive international arena; educational programs must find ways to help their students realize their creative potential.

This article reports the results of a study using quick, low cost remote creativity training that could be easily used by educational programs to enhance student creativity. Since the study was conducted on the Internet, the creativity training could be readily adopted for the online environment. The study results provide a preliminary indication that implementing a simple, inexpensive, online creativity tutorial might improve student creativity in the online distributed learning environment (McNair, 2008).

BACKGROUND

For decades, academics in the IS field have researched using information systems to improve group creativity and productivity (Couger, 1995; Couger, Higgins, & McIntyre, 1993). However, not much research has focused on using information technology to maximize individual cognitive processes (Elam & Mead, 1987; Young, 1983, Nunamaker, Applegate & Konsynski, 1987; Nunamaker, Dennis, Valacich, Vogel, & George, 1991).

Studies in the information systems field on individual creativity have examined the impacts of several types of creativity training on the creative performance (Mead and Elam 1990, Marakas and Elam, 1997, Massetti, 1996, 1998). Some studies have focused on the effects of problem-solving process training (Marakas and Elam, 1997). Other studies, such as the one reported in this paper, have focused on the effect of providing creativity training, including general information on creativity and on problem solving (Massetti, 1996, 1998, McNair, 2008).

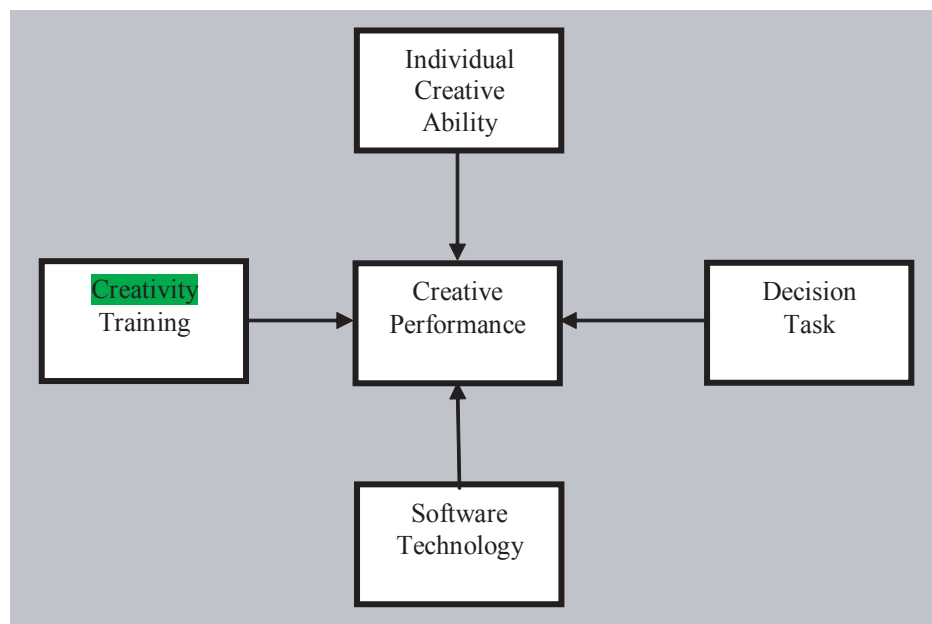
In her 1996 and 1998 studies, Massetti provided respondents with generic training about creativity by lecture to a MIS class. The lecture explored the importance of creativity to business decisions, included examples of how organizational creativity has allowed them to be more successful, described the creative process, and warned of creativity bias along with tips for overcoming it. Following the lecture, exercises in brainstorming and elaboration were given to the participants. Massetti did not control for either the effects of creative abilities, or for the effects of use of a creativity tool (brainstorming and elaboration).

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Researchers have found that creativity can be expressed in distinct ways and to varying degrees by almost anyone (Nickerson, 1999). While a person's natural creative potential is biologically set early in life, this innate creativity as a trait without reinforcement varies little over time in its affect on his or her creative performance (Amabile, 1991; Cox, 1983; Torrance, 1988). However, through creativity training, an individual's creative performance can be enhanced (de Bono, 1983; van Gundy, 1992; Walberg, 1988). Creative training evokes the individual's past knowledge and developmental history concerning his or her creative behavior (Couger, 1995; Finke et al., 1992; Jacobs, 1989).

Marakas and Elam's (1997) research proved additional evidence of the effect of problem solving training and the use of software technology. Modified treatments from the Elam and Mead (1990) study included using software and the use of problem-solving process training to increase creativity performance. The software with creativity training produced results

Figure 1. Model of creative performance. Adapted from "An Empirical Examination of the Value of Creativity Support Systems on Idea Generation," by B. Massetti, 1996, *MIS Quarterly*, 20(1), p. 85.



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