A Comparison of Learning Styles with Student Comfort and Satisfaction in Online and Traditional Learning Environments

Gerri Hura
State University of New York College at Buffalo, USA

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Abstract: This study looked at students' learning styles and their comfort and satisfaction with traditional and online learning environments. The purpose was to determine the impact learning styles and age have on student comfort and satisfaction for a graduate population.

Motivation to enroll in online courses is high for the adult learners (Clarke, 2004) with 33% growth in enrollments for online courses (Pethokoukis, 2002). But is the students' comfort level and satisfaction with this format equally high? What educational interventions could be employed if there are issues with comfort and satisfaction? A growing number of research studies are being conducted analyzing the learning styles of adult learners as well as the age groups of adult learners and their comfort and satisfaction levels with the distance learning or online (OL) environment versus the traditional, face-to-face (FTF) learning environment (Altun & Cakan, 2006; Bocchi, Eastmas, & Swift, 2004; Brooks, 2003; Oh & Lim, 2005; Stumpf, McCrimon, & Davis, 2005; Wu, Tsai, Chen, & Wu, 2006). These studies could provide insight to administrators and educators as we try to attract and retain the growing adult population.

The purpose of this AERC Roundtable Session is to review the initial results of a 2007 research study and to discuss intervention strategies and future study implications. Questions and issues discussed during this session will include: enculturation strategies to increase comfort and satisfaction with non-traditional aged students, methods to develop learning objectives or learning goals with learning styles and mixed-aged student populations, instructional preparation and online strategies, and adapting teaching styles for student learning styles and comfort with the online environment. With the rise of students taking online classes, and specifically non-traditional aged students, it becomes critical that teaching methods and relationships with students address the students' comfort and satisfaction with the online learning environment.

To analyze the online versus face-to-face learner, non-traditional aged students were studied using several assessments to see if there was statistical significance in the ages of students and various learning styles or preferences and student comfort and satisfaction levels in online versus face-to-face learning environments. The assessment tools used in this study were the Group Embedded Figures Test (GEFT) developed by Wilkins (2002) which looked at field dependence and field independence in the learner; the Kolb Learning Style Inventory (LSI) developed by Kolb (1999) which looked at learning styles based on experiential theories, a 22 statement Computer Attitude Questionnaire (Knezek, Christensen, & Miyashita, 1998) and a 10 statement assessment focusing on online learning. The sample for this study consisted of 36 graduate students enrolled in online (n = 11) and traditional (FTF) courses (n = 25). Of the 36 participants 9 were males and 27 were females. The ages of respondents ranged from 18 to 57 years old. The instructor in this study utilized methods and assignments that were comparable in the online and face-to-face environments.

The results from the sample found that for the Accommodating learning style (LSI) there was one statistically significant result that indicated students in a face-to-face class prefer to study with a teacher. For the other three learning styles (Diverging, Converging and

Assimilating), there were one or two statements that statistically indicated online students had a higher level of comfort or satisfaction than face-to-face students regarding computer work or usage. Results for the GEFT assessment were eliminated since few students (n = 14) completed the assessment. (In addition, this assessment could not be delivered online which eliminated any students who were not locally accessible.) When ages of students were analyzed, 13 out of 32 statements had statistically significant results for students over the age of 41 years old. These results indicated that students over the age of 41 expressed dissatisfaction or a lack of comfort with the online or computer environment. No statements showed significant results by students under the age of 41 years old. Finally, students who selected the online class environment expressed a higher level of satisfaction and comfort with that environment for 10 out of the 32 statements.

These results begin to indicate that learning style is not a major indicator of comfort and satisfaction with the online environment. The results do suggest however that the age of the students in relation to their comfort and satisfaction with the online environment is a significant factor.

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