

ACTIVE LEARNING IN ONLINE COURSES: AN EXAMINATION OF STUDENTS' LEARNING EXPERIENCE

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Abstract:

This study examines students' perception toward their learning experience in an e-learning environment where active learning through regular and routine graded discussion activities/assignments is expected. Attention was given to the variables of age; gender; increased experience with online courses; and increased proficiency with the course management system. Gender was found to be a significant factor in regards to students' perception toward their learning experience in online courses. Discussion is carried out based on the results of the study. The discussion then shifts to a focus upon strengthening active learning in online courses and common ways in which active learning can be used effectively in online courses. Conclusions and recommendations for future research complete the paper.

The purpose of this study was to examine students' perception toward their learning experience in an e-learning environment where active learning was expected and encouraged. Four research questions (RQ) stemmed from the study's purpose:

- RQ1: Is there a difference between students' age and their perception with learning experience in online courses?
- RQ2: Is there a difference between learners' gender and their perception with learning experience in online courses?
- RQ3: Is there a difference between learners' increased experience with online courses and their perception with learning experience in online courses?
- RQ4: Is there a difference between learners' increased proficiency with the course management system and their perception with learning experience in online courses?

STUDY DESIGN

Instrumentation

The instrument (See Appendix A) was designed specifically around active learning associated with weekly activities/assignments in online courses of an IT program. . The instrument consisted of 12 items. The instrument used a Likert-type scale that included the following scoring strategy: strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, and strongly disagree = 1. The items of the instrument specifically related to student active learning within the e-learning environment as described in the setting of this study. The content validity of the instrument was determined by a panel of experts consisting of three professors. The panel of experts determined that the content of the instrument was appropriate to measure what it intended to measure. Furthermore, the instrument was tested for reliability using 19 students who were enrolled in an online IT course. This sample was independent of the sample used in the actual study. The calculated Cronbach's alpha ($\alpha = .93$) indicated that the instrument is reliable enough to measure students' perception of their learning experience in online courses.

Sample Population & Procedure

After receiving permission from the IRB, the survey instrument was administered to 121 students who were enrolled in a four-year Information Technology program in a medium-sized

higher education institution located in the southeast United States. Subjects were males and females with their age ranging from 18 to over 41. Of the 121 students, 115 completed the survey. Twelve of the completed surveys were not usable, thus eliminated. The final sample population included 103 usable surveys.

Data Analysis

Collected data were analyzed via SPSS, a popular statistical analysis software. In addition to descriptive analyses, four separate one-way analysis of variance (ANOVA) procedures were conducted to answer the research questions. ANOVA procedure tests differences between means of two or more groups and uses the F statistic to test the statistical significance of the differences among the means. The predetermined level of significance was 0.05.

RESULTS

Results - Descriptives: The results show that students had positive perception toward their learning experience in the e-learning environment where active learning was expected and encouraged.

Results for RQ1: There was no significant difference among the levels of age and students' perception with learning experience in online courses. Overall, all students in this category expressed high perception towards their learning experience in online courses.

Results for RQ2: There was a significant difference between males and females in regards to their perception with learning experience in online courses. Male students significantly scored higher in regards to their perception with learning experience in online courses than female students did.

Results for RQ3: There was no significant difference among the levels of increased experience with online courses and students' perception with learning experience in online courses. Overall, all students in this category expressed roughly equally high perception towards their learning experience in online courses.

Results for RQ4: There was no significant difference among the levels of increased proficiency with the course management system and students' perception with learning experience in online courses. Overall, all students in this category expressed roughly equally high perception towards their learning experience in online courses.

DISCUSSION

Discussion will be presented based on the results of the study during presentation. Limitations will be discussed and recommendations will be given for future research.

Keywords: e-learning, active learning, online education, learning experience.

Remarks: Full paper is in a research stage and will be published after the discussion at the MakeLearn 2012 conference presentation.