

Comparing to Virtual World and Web Based Learning Environment With Regard to Student Academic Achievement and Motivation

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Extended Summary

Purpose

Learning process occurs through learner's acquisitions as a result of various interactions. Distance education enables the learner to have learning interactions. Today, alternative distance education environments such as virtual worlds together with classic distance education environments have begun to appear. Learning environments based on virtual worlds has a great potential towards online distance education (Warburton, 2009; Perera, Allison, Nicoll, Sturgeon and Miller, 2010). The purpose of the study is to compare the differences in academic success, learning styles and motivation between e-learning environment based on virtual world and designed in accordance with first maturity level and e-learning environments based on web.

Explanatory design out of mixed methods in which qualitative and quantitative are used was used in this study. Post-test comparative pattern design in which measurements were carried out to evaluate both two groups after treatment (Kıncal, 2010) was used in quantitative phase of the study. Besides, qualitative study parallel with quantitative study was conducted via semi-structured interviews.

Freshmen studying in 2011-2012 academic year were included in the scope of base information technologies course in the study. Students groups were randomly chosen to use Virtual World (VW) and Web Based (WB) learning environments. Data were collected from 17 male and 99 female students. 54 participants were included in VW learning environment, 62 in WB learning environment.

VW based learning environment was prepared on virtual world named Second Life. WB learning environment is on learning management

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system. A live class using Adobe Connect platform was created in order to help students in control group to participate in synchronous learning activities.

In this study, students were asked to fill out learning styles inventory and motivation survey online. Telephone calls were used for all of the interviews. Achievement test was conducted through a nationwide exam in the first weekend after treatment under observation. Percentage, frequency, means, standard deviation, t-test and correlation analysis were carried out on quantitative data. In the research, significance level was accepted as .05 for each statistical test. Quantitative data was divided into code and themes by researchers.

Results

The study shows that students participating in the research are more successful than others. No significant difference is observed in terms of academic success between groups. It is indicated that VW based learning environment has a positive effect on success and self-sufficiency and students focus on learning technology rather than information given in the course. However, students in WB learning environment express that it is boring and monotonous although it has a positive effect on academic success. Most students in VW and WB learning environment have different learning styles. There seems no significant difference between groups in terms of styles and success. While there is no statistical difference, separated students in both groups are more successful. There seems no significant correlation between motivation and academic success in terms of motivation. Students in VW learning environment think that a course which they can manage is valuable. They also state that environment makes the access to content easier and has a positive effect on motivation level. Students in WB learning environment finds easier to use this environment. However, they feel unsure about whether technical problems negatively affect their motivation.

Discussion

These are the results regarding VW and WB learning environment in variable level when findings obtained from the study are analyzed;

There seems no significant difference between academic success levels in both learning environments. This finding supports the idea that distance education activities designed in accordance with a structure

in first maturity level have similar effects on academic success of both two groups.

There seems no significant difference between learning styles and academic success of students in both two groups. This situation indicates that learning style has no effect on difference of academic success. However, students in separated group are more successful than others while there seems no statistical difference.

There seems no significant difference between motivation levels and academic success of students in both two groups. This finding indicates that both environments have similar effects on motivation level. Qualitative findings show that learning interactions are more observed in VW based learning environments than WB learning environments. This finding indicates that VW based learning environments are more effective in creating interactions for teaching and maintenance of educational interactions.

In the practice conducted with the same content, while students enjoy more and learn in VW based learning environment, other students in web based learning environment find it boring and monotonous. This situation supports the idea that VW based learning environments have a positive effect on teaching.

WB learning environments are more preferable in terms of self-learning activities and self-study. This situation shows that web based learning environments provide more appropriate environments for self-learning by leveling down other interactions except learner-content interaction.

Conclusion

To sum up, it is not possible to say VW based learning environments prepared in accordance with first maturity level and WB learning environments are not superior to each other. However, VW based learning environments seem to be more effective in learner interaction and fun while WB learning environment is preferable for self-study and prevention of undesirable interactions between learners.