Extended Summary

Learners’ Evaluation Based On Data Mining In A Web Based Learning Environment

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Introduction

Along with the developments in the internet technology, Web Based Training have started to have more importance, and web based applications developed in this process have become essential tools in learning environments. In recent years, web has become the most easily accessible data source with rapid developments in internet and its common use. As a result of providing suitable services according to the visitors’ demands, developing the structures of web site, and using the web pages affectively, Web Mining has become more significant field of study (Daş ve Türkoğlu, 2010). Today’s developing technology and changing needs have also affected the methods used in education. Therefore, teaching methods that require the teachers and the pupils to be in the same place and at the same time, and in which the teachers are both the source and the director have become insufficient, and they do not meet the needs of the learners being in different places and at different times due to personal preferences or other responsibilities of our time (Savaş, 2007). The fact that the lessons are student-centered in Web Based Training (WBT) makes the teachers’ field of study wider and the teachers have the responsibility of counseling the pupils. The learners free from the time and place have started to learn on their own and with their own speed. Interactive pages have been quite efficient in learning many concepts. Besides, it has been also seen that the lessons including multiple environment applications have supported the active learning and helped the learners understand the topics easily (Schank, 1994: 69-78).
Some researchers have suggested a new method based on data mining on account of the fact that there have been some problems in higher education systems resulting from information gap. Information gap stems from not having satisfactory quantity and perspective of information in the process of education such as planning, evaluation and counseling. Through data mining method and revealing the secret patterns, relationships and abnormalities, this information gap can be overcome (Delavari, Beikzadeh ve Phon-Amnuaisuk, 2008).

**Purpose**

This study has been done in order to determine the efficiency level in the extend of learners’ evaluation by means of comparing the Web Based Learning (WBL) with traditional face to face learning. In this respect, the effect of WBL and traditional environment has been analyzed in the class of Visual Programming I, and the learners have been evaluated with the rule based data mining method in a WBL environment.

**Method**

In this study, the impact of experimental group in WBL environment and the control group in traditional face to face learning environment on the learners’ success has been analyzed. Accordingly, the effects of independent variables WBL environment and traditional face to face learning environment in learners’ success have been tried to be determined. In other words, the effects of WBL and traditional environments in learners’ success have been observed.

In the study, a “success test” has been prepared as appropriate to the three topics of Visual Programming – I, which is one-term class. These topics are “Operators”, “Functions” and “Control Structures and Cycles”. This success test has been used as a pre-test in order to determine the levels of learners at the beginning of the program, and as a post-test after they have finished the program to evaluate their progress.
Result and Discussion

WBL system developed within the scope of this study has contributed much to web based learning and supervision and evaluation of the learners in web based environments. At the end of this evaluation, the learners’ success has been analyzed. It is clearly known that there is no online supervision and evaluation in WBL environments except for the exams in distance education of many institutions. However, it has been found at the end of this study that supervising, controlling and evaluating the learners in WBL environment, and system’s directing the learners when it is necessary have contributed much to the WBL environment. Although WBL system has been improved by means of the programming and internet technologies and they have been offered to the learner’s use, then data analysis have been done with certain results, it has been agreed that the most effective and determining factor in WBL systems is the learners that use the system.

One of the most significant issues in this study is the system’s directing and processing the learners both in the course of study and at the end of the tests. This processing and directing have been proved effective in terms of determining the points that the learners fail and making them have trust in the system. However, in order that the system can direct the learners in a reliable way, the content of the courses to be presented in WBL should be analyzed and the exam questions should be grouped according to this content.

Citation Information