

Increase Learning Success with Game Based Projects

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Abstract. Practical studies are significant component in engineering education. Through this importance practical courses must be high quantities rather than the theoretical courses in engineering education process. Application courses can depend on the projects which is prepared as individual or group study by students. Project and game based learning is an effective and powerful method in the learning process. In this study, effect of project and game based methods' with different technique to the course's learning success is examined.

In general each course which project based learning is used may have its own project with related topics. Nevertheless in the same semester these kinds of courses will be causes priorities problems in terms of students. Therefore some courses' success can be decrease. In this sense there is no enough coordination within the courses' instructors. Instead of this classical method, in this approach projects include more than one course's contents are applied. The main idea is to generate specially designed game based projects which include more than one courses contents for easy and interactive learning.

A case-study is proposed as a game based project includes algorithms and programming and digital logic course's topics in this work. Project is produced as a logic game which includes the embedded course's subjects. In this project problem is implementing an interface which enables the user to construct a logical expression.

These projects should also supports incidental learning with game scenarios includes combined several courses contents. This example study is realized with students at first class of computer engineering department, from Dokuz Eylül University.

Grades of experimental students in this study and previous year' grades based on classical learning methods are collected. To explore and survey the learning success of the embedded course, grades of experimental students is compared with the previous year's students' success. This comparison shows that course's success was increased. This study was influenced to increase the learning success of courses.

Keywords: Project based learning, game based learning, learning success

