A Discrete Mathematics course using gamification

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Introduction

- Software and technology
- Learning processes and teaching
- The educational model Tec 21
Theoretical Framework

- The development and increased usage of technology
- The use of digital games in education
- Game based learning
Description of the educational innovation

• Discrete mathematics is a fundamental course for computer science students.
• Students are not motivated
• The potential applications of the concepts are not fully appreciated by students
• This work is about using the games and adaptive learning
Implementation

- The main idea is to combine multimedia and learning material from the course of discrete mathematics into a learning interactive application.
- Three basic aspects were considered to develop the proposed system: contents, graphics and computing.
Implementation

Stages:

- Computing system
- The student’s interface
- Game content
- Bank of questions on discrete mathematics
- Stories
- Worlds
Results

• Preliminary tests took place during the spring semester of 2019 by using the Kahoot application.

• To evaluate the quality of every activity, students were asked to answer a brief survey.
Conclusions

• Gamification has been found to propitiate times for reflection, to promote discussions and promotes teamwork.
• Interactive feedback was helpful into the strengthening of the mathematical structures by developing the competencies required by the students.
• During the fall semester of 2019, a computing system will be developed and it will contain two fundamental parts: an administrator that sends questions using adaptive learning and a set of games.
Contact

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