Gamifaction - games in user education, learning, exams

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Introduction

Digital natives feel at home in the virtual world, however, their information searching strategies are often much poorer than their capacity for handling the technology. Providing user training for them is a great challenge, especially when the know-how of information searching/sharing and publishing is the topic.

Facing these difficulties, our library has decided to introduce gamification to user education. The essence of gamification is to apply game elements in different activities, in our case in education.

Objectives

In the autumn semester of the 2015/2016 academic year, a group of students took their exam in library informatics by means of an information seeking game to be "played" in teams, and next year the curriculum will be supplemented by a gamified training module.
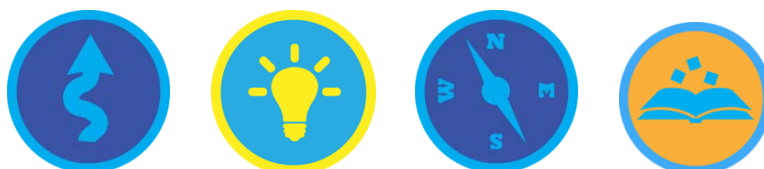

Figure I.
Badges from http://moodlebadges.com/

Methods

2015/2016 - Examination by a game? The "Crazy scholar" exam game

In the last semester there were 21 participants at the course consisting fully of classroom practices. (Formerly it was a blended course with 6 hours' classroom practices and 7 hours' e-learning.)

At the exam students formed teams of 3-5 members which had to go through the steps of an imaginary story where they could only go on if they managed to solve problems. These problems require skills in information searching and handling and involve both printed and electronic resources. The story is simple: a crazy scholar believes that students are not ready for entering the international scholarly world and students have to prove he is mistaken. The key ideas behind the project are: challenge, adventure, cooperation and revelation of hidden contents.

A crazy scholar wants to destroy the world because he thinks that people only care for themselves, there are no more communities, co-operation and group cohesion have disappeared. The scholar thinks the LEGOs should set an example. In their world everybody and everything works in a systematic way, and creates marvels. The key is the knowledge and acceptance of rules.

The scholar shared his opinion on Twitter and offered a challenge. When he sent out his tweet through the free Wi-Fi of a railway station, police has tracked him down, but finally he managed to slip out of their hands. Escaping he lost a folder with some hidden traces and a message: *I have prepared a game. If somebody manages to win in it, the world may avoid a catastrophe and deserves survival.*
Leaders of the world have selected two special teams which try to play the game with success.
You are one of the TEAMS! You are responsible for saving the world by proving that people can be co-operative, and are able to solve problems following a fixed set of rules.
Read the TWEET and save the world!

Figure II.
Picture from the "Crazy scholar" exam game

2016/2017 - Gamification supplementing the curriculum

The aim of introducing a gamified module is to supplement classroom teaching and e-learning with a complex game (also applicable in Moodle) by means of which students may gather points by solving practical tasks; they may share what has already been found; they may also select which tasks they want to do for extra benefits, etc. The key ideas behind this part of the project are: practicing acquired skills and knowledge, motivation, and presentation of practical applicability.

Results

After the exam students could evaluate the course and the new type of examination. Their feedback was positive thus we intend to include more interactive, gamified tasks in the curriculum of the course similar to the exam.

Teamwork at the exam reduced the stress of students, thus it was not hindering their achievements. The information gained during the team's cooperation was reinforced and supplemented by the others, thus even the exam was part of the learning process, as it was expressed by some who gave feedback.

A játékban **négy érmet kell megszerezni**. Az érmeket kérdések megválaszolásával lehet elnyerni egymás után. Minden egyes blokk teljesítésével más és más érmet lehet megkapni.
Amikor mind megvan, akkor a tudós lemond világot elpusztító tervéről és megmutatja miért rajong.

A kérdés blokkok:

- ✔ Első lépések - sikeresen teljesítve
- **Irány a könyvtári világ - katalógus, Matarka** (5 kérdés)
- Jelek az adatbázisokban (4 kérdés)
- Internetes források(3 kérdés)

Érmek:

Figure III.
Picture from the "Crazy scholar" exam game

Conclusions

Not only new needs, requirements and technical challenges must be taken into consideration when planning the teaching-learning process, but also the new methods and trends are to be incorporated. We must not be afraid of experimenting with methods emerging in other fields in the development of library and information skills.

Student feedback convinced us that we are on the right track in changing the Library informatics course. Positive results gave us an impetus to broaden the application of gamification throughout the course.

The "Crazy scholar" online exam game

It is a game which may be played from any browser. The story was created with Twine.
Twine is an open-source tool for telling interactive, nonlinear stories.

1. Introduction: the teacher managing the game shows the website to the groups and hands over the folders containing the information aiding the play. Then groups enter the game and get acquainted with the intro, the game starts.
2. The game consists of distinct sets of questions. Players may gain a medal (Figure I.) at the end of each part if the questions are answered correctly. The goal is to win four medals.

Parts:

- First steps – or notions required for solutions (2 questions)
- Heading for the library – the library catalogue, and Matarka (Hungarian periodicals table of contents database) (5 questions)
- Signs in databases – PubMed, WoS, ScienceDriect, Ebsco/Medline (4 questions)
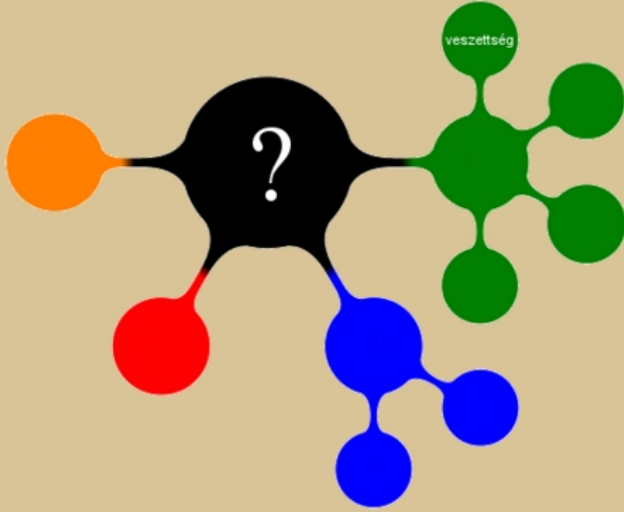- Internet resources – e.g. GoogleScholar (3 questions)

Figure IV.
Picture from the "Crazy scholar" exam game

3. Having acquired all four medals there come congratulations and a Youtube video: Everything is Awesome Lego Movie song
4. Distribution of certificates
5. Discussion – sharing opinions, ideas