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Mariia Gladun,
Lecturer in Cyclic Commission Mathematical Economics
and Management Sciences
University College
Borys Grinchenko Kyiv University
m.gladun@kubg.edu.ua

USING GAMIFICATION AS A WAY OF INCREASING STUDENTS MOTIVATION

Gamification is a learning approach that is becoming more popular and prevalent in business and education and is a viable alternative to many of the existing educational methods. The article shows the effectiveness of gamification as a new way of learning that has tremendous educational potential. The author has demonstrated that the use of computer games in the classroom enhances motivation, continues term of interest in solving the problem and increases the probability of achieving your goal. The author presents the resources that can be used as a gaming platform to enhance the motivation of primary school students.

__Key words:__ gamification, increasing motivation, learning process, gaming technology.

Introduction

Any modern man is confronted every day with a lot of gaming applications on different types of computers. As a result, the use of possibilities of gaming space provides elements of diversity in the performance of daily operations. Students, who in the same way spend a lot of time in the virtual world of different software gaming industry, are no exception today.

However, while visiting lessons, doing their homework, the level of students' enthusiasm demonstrates lower rates. This is explained

by the fact that most children's attitude to learning is a model of conduct "training exercise responsibilities within the workflow".

So today we need to put in the first place increasing the attractiveness of different training programs that would encourage students to study with care and attention and maximum efficiency.

Another aspect of this problem is the fact that the current process of studying the curriculum consists of a large number of repetitive work related with the tasks that often do not bring pleasure for children: reading, memorization etc. We can conclude that today it is necessary to find such methods of presenting the material that will make the process attractive (exciting) for children.

Minimizing described problems, in our view, lies in this phenomenon as gamification educational process. The purpose of the paper is to analyze foreign experience and gaming practices in the educational process and making recommendations for their use in the classroom.

Analysis of Recent Research and Publications

The idea of using games in education is not new. But the exploration of gamification lacks structured research. This issues are explored by foreign authors: Michael Barber, Kevin Verbaha, Dilip Soman and Wendy Hsin-Yuan, Donald Clark, Elizabeth Corcoran, Joey J. Lee and Jessica Hammer, Maciej Laskovski, Jane Makgonigel, Lee Sheldon, etc.

Elizabeth Corcoran explores the impact of gamification in the learning process and types of digital games in schools. The author believes that "gamification is not dependent on internal motivation. Instead, it uses an old trick: provides instant impact, pushing for competition and rewards even in tiny steps of progress. Gamification assumes that the player is not particularly motivated, at least in the beginning, and then provides an incentive to build experience, and this motivates" (Corcoran, 2010).

Michael Barber has shown an interesting experience in solving the task of transforming education in a powerful resource of social development and strengthening of democratic values in the book "The Learning Game" (Barber, 1996).

The authors Joey J. Lee, Jessica Hammer (2011) indicate the advisability of gamification in education in their work. They explain the meaning of "gamification" and how it can be used. At the same time point to possible shortcomings in the case of incorrect use.

Donald Clark explores the increasing motivation in learning under the influence of the effect of the games. It is found that people who set

goals for a certain period of time, reaching their best when it comes to acquiring knowledge. Games put before the player a lot of goals – strategic and tactical (Clark, 2011).

Research shows that the desire to learn and acquire knowledge out of personal motives and not from external impacts. People reach personal goals in games that they have set, and it increases their motivation.

Wendy Hsin-Yuan Huang and Dilip Soman (2013) of the University of Toronto in their book "A Practitioner's Guide to Gamification of Education" talk about the stages of implementation and the use of the games in the learning process.

Jane Makgonigel from San Francisco explores the impact of changes reality through video games on the objective reality of a man. Jane Makhonihel concludes that this game is not a waste of time but quite productive activities. Gameplay (*from English* "gameplay" is gameplay video game in terms of player) cannot contribute to the gross domestic product, but research shows that games affect our quality of life by creating positive emotions (optimism and curiosity) and strong social relationships (especially if we play with real friends and family). Gamers (*from English* "gamer" is a fan of computer and video games) that prefer hard, difficult games, learn to make quick decisions, stress tolerance, and awareness of the consequences of the player's actions – mistakes are not repeated, successful strategies are used again.

Presenting main material

Gamification is used in various contexts: business, marketing, social, organizational or promotional purposes. However, we want to demonstrate their usefulness and importance in the educational environment.

The idea of applying game mechanics in education actively began to develop at the beginning of 20th century (Cohen, Rhenman, 1961). It is considered that the first known simulator was developed in 1936 (Faria, 2009). Initially playing learning model was used for military purposes. Maria Birshtein (Leningrad State Engineering and Economic University) developed the game which simulated the process of assembling a typewriter at a factory in the city Lyhovo.

However, this practice belongs to game based learning. Gamification is not to be confused with educational games. Developing educational games are developed for special courses for students. The basic idea is to include gamification techniques and game mechanics in non-fiction environment.

Gamification is rather broad term, its goal is motivation user, prompting him to any action. The most common definition is:

– Gamification is an approach specific to computer games software tools for non-gaming processes (Burke, 2014).

– Gamification is the use of gaming practices and mechanisms in the context of non-fiction to attract users to solve problems (Wikipedia, 2016).

The main difference between computer games and normal education is the attitude to mistakes. The school often punishes for mistakes and teachers do not always praise for correct answers or solutions. Therefore students know what they did wrong. This leads to the fact that students focus only on estimates, but not on concrete knowledge and content.

Everyone knows the expression "learn from mistakes". in computer games, it is a basic principle for a player to succeed. Take, for example, the game "Angry Birds", which is not just for kids. It is a good indication that when a player fails he tries all the new variants to successfully achieve the goal – to bring down pigs. We know that when we are playing there is nothing wrong with failure. The sooner we do something wrong, the sooner we can find the right solution. Therefore it becomes clear why students spend their free time in games, rather than do homework for school. It is important to build such learning process where students can learn from their mistakes (research of game designer Randall Fujimoto, 2014).

Now imagine that it is possible to design gaming environment which aims not only to receive, consolidate knowledge and formation competencies, but also for the pleasure of participating in the game, no fear to make a mistake.

The implementation of this project as part of the educational process today is based on the combination of these four individual components required player (*Figure 1*).

As a result the combination of the above described components for the user formed reality in which he knows in which direction focus his efforts, strict requirements to achieve this goal and the importance of the achieved results. This, in turn, allows him to move instantly to solve new designed and described in detail task.

This forms a positive feedback that allows you to enjoy the gameplay. As a result, the user feels the consistency of actions that occur. This approach protects the student from performing a series of isolated,
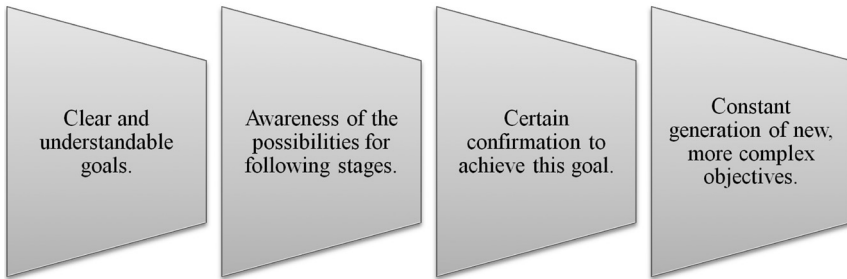
Fig. 1. Individual components required by player

thoughtless and ineffective actions that can generate a steady desire to leave for some time gameplay. When the student ceases to do tasks that are assigned to them within the educational process, it creates a negative trend lag in the development of the proposed material. As a result the interaction between teacher and student begins to weaken.

Thus the use of four interrelated components of gamification in the implementation of educational technologies, allows us to get enough productive tool for student concentration in the learning process today.

Today there are a lot of people, including students, who play MMORPG games (Massively multiplayer online role-playing game is a computer role-playing online game network) that are designed for many online role-playing games where a large number of players interact with each other in the virtual world. You can define the parallels between such games and training sessions in school. There are many experiments, when study appears in the following game. Lee Sheldon, the author of "The Multiplayer Classroom" (2011), explores the creation and implementation of courses for schools, which are based on the multiplayer game, which is very successful and has proved effectiveness as a good students' achievement and their interest.

The lesson can be organized as MMORPG-game. It may include different forms of organization:

1. Making profiles of student and teacher as a description of their characters and appearance, the list of achievements, etc.

2. Giving webinars by teachers, which connect students from all over the world.

3. Providing different activities at the same lesson One lesson may consist of theory (the teacher explains several provisions on an example), practice (a few problems puzzles) role-playing game (team solve

a complex problem, which includes several stages) and checking homework ("working at the board" one of the students or the team, has the opportunity to show the leading role and perform the work in front of the other group).

4. For doing the task in a team and under the supervision of a teacher, the teacher marks the success in the online system. As a result, the day, week, month set of achievements is evaluated. Classes can be arranged in the form of match CTF (capture the flag), where two teams are competing, led by their leader, trying to find solutions to specific problems.

5. When a student reaches a certain level, he can begin the real work (practice) in production groups. When a team reaches a certain level, it starts to solve real practical problems.

One of the important features of game-based learning is a system of assessments, based on the following theses:
– there is a point system;
– at the beginning of the semester, students start with 0 points;
– each task is estimated in certain points.

Therefore, regardless of their abilities, every student knows that he is on an equal footing with others and he has only one option. This is the way to get good indicator of learning. He may be wrong many times, and knowing that every earned point leads to success, the student will no longer be afraid to make mistakes and will focus on training.

In his study, Donald Clark considers not the fact of acquiring knowledge but motivation to do so. According to the author, it is motivation, or rather its lack and failure is a major obstacle to training people. This phenomenon is described in the book by Professor Michael Barber "The Learning Game" called "frustrated, unmotivated and lost."

Failures at school, misunderstanding the purpose of education, loss of interest in education – all these factors cause disappointment in the institutions of education (school, college, universities, training centers) and in the process of learning, even at the level of self-education. There is a need to re-motivate the unmotivated.

Another important point is the teamwork in the process of gamification educational process. in class, the student often has to be himself: he must do homework alone at home, study course material. But there is a simple reason why he does not do it. He is bored. Therefore as computer games teach us the team interaction and thus schooling should be a team activity,

then students will be more engaged in the learning process and they will be interested in the process.

We analyzed the educational resources for primary school and identified examples of some services that use gamification in education:

– project "ProInternet" (http://www.prointernet.in.ua/game);
– interactive book "The Gruffalo" (http://www.gruffalo.com/);
– service for creating interactive games (http://learningapps.org/);
– game "Kolobok" to study multiplication tables (https://play.google.com/store/apps/details?id=shivart.kolobok);
– portal "Hraiemosia" (http://www.igraemsa.ru/);
– children's game portal "Kids Games" (http://www.uptoten.com/kids/kidsgames-home.html);
– game "CargoBot" (http://twolivesleft.com/CargoBot/);
– portal "Teremok" (http://www.teremoc.ru/);
– series of educational and entertaining programs "Children's Collection" games directory (http://es-area.net/, http://ua.playgame24.com/ etc .).

Oddly, but in classical education it is forgotten a very simple but immensely important factor that what we do should bring us joy and fun. These components make the game so exciting. Learning process is not enough of this.

We should not forget the certain disadvantages that contain gamification process. What are the disadvantages? A lack of understanding of goals, objectives and inability, failure to implement gaming technology. We all know that children love computer games and do not like to study. Therefore the idea of using gaming dynamics in the classroom sounds great. But if you look deeper into the social and emotional growth of children, we must resist the negative effects of the psychology of games in education. Gamification can undermine the psychological behavior. Many children can focus on getting awards, but not on the process of learning.

Therefore, of course, introducing game elements are not solving the problems in the educational process, if we do not pay attention to psychological and pedagogical features of the use of new technologies. To select and use technology we need to change the traditional approach of teachers: to understand the student, to determine its characteristics, to accept the student, to recognize the student as the subject of the learning process to choose the educational technology. There is a need to consider

the age and class of students, the subject and the presence didactic availability of training, not forgetting about the result you want to get.

Future prospects for research should focus on the analysis and verification of effectiveness gamification to improve motivation, loyalty, attracting students to solve problems that will be directed to the practical aspect of research and the impact of these practices on the motivation of the learning process.

Conclusions

In general, the practice of using games in the classroom has proven to be an effective tool. While studying in the form of a game absorbed a greater volume of information and it is kept longer in the memory. Playing techniques can gently influence the higher human needs, guiding student behavior in the mainstream that is necessary for learning. Thus gamification is a technique to attract. Gamification does not teach, as opposed to a specific game, but greatly increases interest and encourages students.

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