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USING GAMIFICATION AS A WAY OF INCREASING STUDENTS MOTIVATION

Abstract. 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 tools 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 presented the resources that can be used as a gaming platform to enhance the motivation of students in primary school.

Keywords: gamification; increase 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. The students are no exception today, who in the same way spends a lot of time in the virtual world of different software gaming industry.

However, when visiting lessons, doing their homework level of students' enthusiasm demonstrate lower rates. This is explained by the fact that most children 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 children often do not bring pleasure: reading, memorization and others. 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 gamification lack of structured research. This issues 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).

Author 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 increase motivation in learning under the influence of the effect of the games. 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 use 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 man. Jane Makhonihel concluded that this game is not a waste of time, and quite productive activities. Gameplay (from eng. 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 eng. Gamer is a fan of computer and video games) that prefer hard, difficult games, learn to make quick decisions, learn stress tolerance, and awareness of the consequences of the player's actions - mistakes are not repeated, successful strategies used again.

Presenting main material. Gamification is used in various contexts: business, marketing, social, organizational or promotional purposes. But 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 XX century (Cohen, Rhenman, 1961). Considered that the first known simulator was developed in 1936 (Faria, 2009). Before, playing learning model used for military purposes in the first place. Maria Birshtein (Leningrad State Engineering and Economic University) developed a game in 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, when to study and work of students used game that is specially developed program during the course. 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 it is the attitude to mistakes. The school often punished for mistakes and teachers do not always praise for correct answers or solutions. Therefore students know just 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 their 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 to 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):

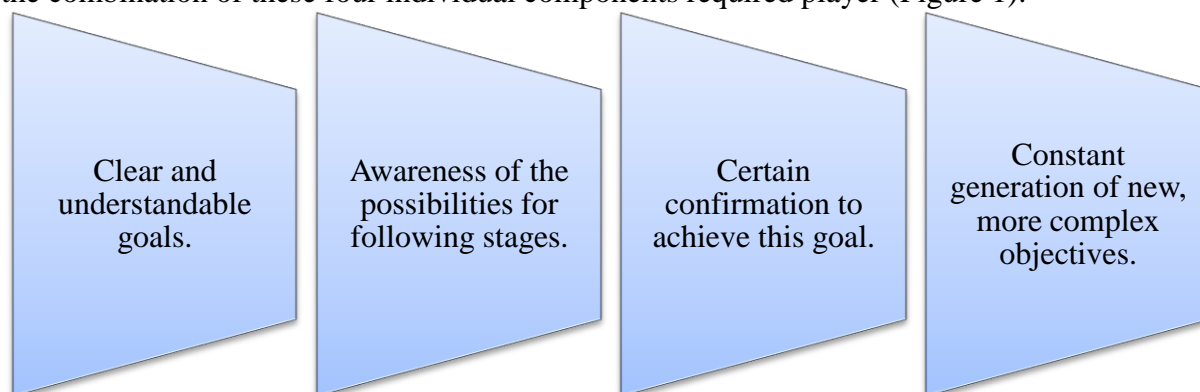| Clear and understandable goals. | Awareness of the possibilities for following stages. | Certain confirmation to achieve this goal. | Constant generation of new, more complex objectives. |

Figure 1: Individual components required player.

As a result the combination of the above described components for the user formed reality in which he knows in which direction focus your efforts, strict requirements to achieve this goal and the importance of the achieved results. This, in turn, allows you 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, thoughtless and without effective 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 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 is the author of «The Multiplayer classroom» (2011), she explores the creation and implementation of courses for schools, which are based on the multiplayer game, which is very successful and has proved effective as a good student achievement and their interest.

The lesson may take as MMORPG-game adapting as:

1. Profile of student and teacher is a description of his character portrait and selectable appearance, the list of achievements, etc.

2. Teachers are becoming the leading their webinar, which connect students from all over the world.

3. Classes consist of various activities. 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 (work at the board one of the students or the team, it means to give him leading role and demonstration before a group their work).

4. Participants do the task in a team and under the supervision of a teacher, informing readiness, and the teacher marks the success in the online system. As a result of the day, week, month each accumulated set of achievements, which is adequate evaluation of its activities. Classes can be built in the form of match CTF (capture the flag), where two teams are competing, each 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 have 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 «Hrayemosya» 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 forget 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 the use of new technologies. To select and use technology 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 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 encourage students.

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ВИКОРИСТАННЯ ГЕЙМИФІКАЦІЇ ЯК СПОСІБ ПІДВИЩЕННЯ МОТИВАЦІЇ УЧНІВ

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Анотація. Геймифікація – підхід до навчання, який стає все більш популярним і поширеним в бізнесі та освіті і являється альтернативою для багатьох з існуючих методів навчання. У статті здійснено дослідження ефективності геймифікації як нового способу навчання, який має величезний освітній потенціал. Автор показав, що використання комп'ютерних ігор в класі підвищує мотивацію, подовжує термін зацікавленості у вирішенні проблеми та збільшує ймовірність досягнення своєї мети. Автором представлені ресурси, які можуть бути використані в якості ігрової платформи для підвищення мотивації учнів у початковій школі.

Ключові слова: геймифікація; підвищення мотивації; процес навчання; ігрові технології.