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GAMIFICATION OF THE EDUCATIONAL PROCESS AS A TREND IN HIGHER EDUCATION

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Introduction. Gamification in education is generally regarded as one of the approaches that helps to improve students' self-motivation and their active involvement in the course of classes through the use of game design elements in the learning process. In general, gamification can be considered a progressive technology for promoting the quality of learning. However, there are still no well-founded principles, methods and technologies for implementing gamification in the educational process of higher education, which makes this paper relevant.

According to the Law of Ukraine "On Education", education is the basis of intellectual, spiritual, physical and cultural development of the individual, his or her successful socialization, economic well-being, and the key to the development of a society united by common values and culture, and the state [1]. The introduction of gamification technologies into the educational process of higher education can contribute to this.

Many foreign and ukrainian scientists have studied gamification. Diadikova O., Marienko S., Borysiuk I. analyzed the game as a learning technology. Karabin O., Kumar B., considered gamification in the educational process as a means of developing students. Yurchenko A., Semenikhin O., Khvorostina Y. studied programming learning through gamification [2].

Aim. This paper identifies the key goals of implementing gamification as an educational trend and proposes a model of an e-learning platform designed for higher education.

Materials and methods. This goal requires solving a number of tasks, namely:

- analysis of the semantics of the concept of "gamification" in the historical context;

- characterization of gamification as an educational strategy;

- defining the dynamics, mechanics and components of gamification;

- review of the current situation of gamification implementation in teaching students the basics of algorithmization and programming;

- identifying the role of gamification in the educational process;

- research of gamification as a new direction of national education;

- development of technologies for the implementation of gamification;

- defining the features of task implementation.

In the search for approaches to increasing productivity, the term gamification has recently become very popular in many areas of life. But its appearance is connected with the desire to increase sales, and it happened a long time ago. About a century ago, Cracker Jack, an American brand of fast snacks, started putting surprise toys in every box. After that, many companies started using games, toys, and other entertainment to increase sales. However, this phenomenon is somewhat different from what is meant by the term "gamification" today.

It first appeared in 1980, when Richard Bartle, a well-known game developer and researcher at the University of Essex in England, was engaged to develop a project called MUD1. MUD1 was the first multi-user domain, or rather a multi-user "dungeon". In fact, it was the first large-scale game for many people. But it was only a little bit like a game. It was a text-based system on a university computer network. It was MUD1 that first gave people the opportunity to enter a shared virtual world, becoming a source of inspiration for games such as Second Life and World of Warcraft [5, p. 213].

Bartle's role in this project was to develop a platform for collaboration and gamify it, turning work into a game. But even then, this did not mean what is now meant by the concept of gamification.

Results and discussion. Today's understanding of gamification is based on two types of development. The first was student research into video Game-Based learning, when Tom Malone, now at MIT's Sloan School of Business, began developing the first video games. He was able to show that children can learn through video games. Following him, a number of developers conducted similar and deeper research. One of them is James Paul from Arizona State University. He has written books about how even mass-produced, commercial, and entertaining games like the Tomb Raider series can contain powerful built-in learning mechanisms that are explored in serious human development research [5, p. 213].

The second type of development that defines the current concept of gamification is the Serious Games movement. The Serious Games program was created in 2002 by Ben Sawyer and David Rietzky and brought together private, academic, and military communities that used fully functional games for training and creating various non-game simulations [5, p. 213].

Gamification, as it is now understood, was first used in 2003, when English developer and designer Nick Pelling founded the consulting firm to promote gamification in the consumer goods industry. He wanted to bring playful elements to hardware. The idea was unsuccessful, and the company closed rather quickly, but the idea was voiced that game mechanisms and concepts could be applied to consumer goods and other situations. In 2005, Bunch Ball was founded. In 2007, it launched a product that actually turned out to be the first gamification platform. Because the term had not yet become widespread, it was not called that, but it was the first platform to incorporate game mechanics for the company's business goals [4].

In 2008, Brett Terrill of Zynga Games used the term to describe gamification as "taking game mechanics and applying them to other web properties to increase customer engagement" [6].

However, it was only in 2010 that the term became widespread. However, the exact definition of the term is still a matter of debate, as various disciplines that intersect and surround gamification: game studies, marketing, human-computer interaction, game design, etc. offer different definitions of the concept.

One of the most cited definitions is as follows: "gamification is the use of game design elements in non-game contexts" [3, P. 10]. This statement was proposed by Deterding [3]. Although it is simple, it contains a number of key attributes that distinguish gamification from other similar pedagogical and learning processes.

In interpreting this definition, Deterding et al. distinguish between "game" and "play", arguing that gamification is based on the former, which is more structured and formal, rather than the latter, which is more loosely defined, free-form and improvisational [3, p. 10]. Their use of the term "element" reflects that gamification does not use "full games" for non-entertainment purposes, but rather mobilizes small components of the game experience. They also seek to define what they mean by design (interface design patterns; game design patterns or game mechanics; design principles, heuristics, or "lenses"; conceptual models of game design units and game design methods, and design processes) and "non-game" contexts: any situation where the user does not have cultural expectations of the game experience [3, p. 11]. This definition represents a standard frame through which much of gamification is perceived.

The strength and simultaneous weakness of the definitions under study is that they abstract from the specifics of gamification. This broad approach means that they do not offer an overly simplistic description of the practice, but it also means that they do not attempt to articulate or categorize the kinds of game design elements that are used in gamification, nor the kinds of non-game contexts in which the elements are often used. The presence of key game mechanisms such as points, badges, levels, challenges, leaderboards, rewards, and adaptation are signals that a game is taking place [7].

Considering this concept in the educational context of higher education, which is important in this study, we can conclude that it pushes us towards the digitalization of learning. However, it is also worth noting that gamification can be introduced into learning even without digital applications, but with the help of additional points, rewards, leaderboards, and so on.

Formation of practical experience in higher education is one of the most

important problems of modern education. Attempts to develop algorithmic thinking have been underway for a long time around the world.

Gamification can be defined as "the application of game metaphors to real-life tasks to influence behavior, improve motivation, and enhance interaction." As education is a field that certainly needs to improve motivation and engagement, it is not surprising that it is also the field of various gamification attempts.

Conclusions. The use of gamification in education is one of the incentives for students to be active. Gamification and learning require participation and motivation from the very beginning to the end of the process. There is no big difference between children and adults, because everyone wants to enjoy learning.

Gamification in education has long been used to give good students rewards to encourage them to practice and study hard. There are many benefits to teachers and students alike from the use of gamification. It also improves learning and understanding of complex topics.

These are some of the benefits of gamification:

- Gamification stimulates many emotions, from negative emotions such as frustration and dissatisfaction to positive emotions such as optimism and pride.

- Gamification increases engagement and motivation.

- Social interaction through talking, listening, and active learning.

- Gamification provides a great opportunity to express yourself.

- Changing the usual approach to teaching material.

- Students have the right to make mistakes and can correct them on their own.

- Gamification is not limited to the classroom. Students can complete tasks in their free time, or meet with their friends and teacher to complete them outside the university classroom.

- Communication between teachers and students is well established.

The above elements encourage students to be actively involved in the learning process and make the always difficult or monotonous tasks interesting. Gamification helps to turn the classroom into an educational hub or a space for leadership

development.

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