GAMIFICATION AS A WAY TO INCREASE THE EFFECTIVENESS OF THE LEARNING PROCESS

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Abstract. This paper aims to analyze gamification as a way to increase the effectiveness of the learning process, focusing on theoretical foundations, practical experience, and potential consequences. The study explores the technologies for enhancing educational and cognitive activity, pedagogical approaches, and the impact of practice routines, selection of methods and key aspects of gamification. The results offer valuable recommendations for pedagogues and administrators to support the orientation of each participant in the gaming process to achieve goals and obtain practical results, and not just to participate in the game.

Keywords: gamification strategies; practical application; vocational education; pedagogical approaches; gaming process.

ГЕЙМИФИКАЦИЯ КАК СПОСОБ ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ ОБУЧАЮЩЕГО ПРОЦЕССА

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Аннотация. Целью данной статьи является анализ геймификации как способа повышения эффективности процесса обучения с упором на теоретические основы, практический опыт и потенциальные последствия. В исследовании рассматриваются технологии активизации учебно-познавательной деятельности, педагогические подходы, влияние практических занятий, выбор методов и ключевые аспекты геймификации. Полученные результаты дают ценные рекомендации педагогам и администраторам, поддерживающие ориентацию каждого участника игрового процесса на достижение целей и получение практических результатов, а не просто на участие в игре.

Ключевые слова: стратегии геймификации; практическое применение; профессионально-техническое образование; педагогические подходы; игровой процесс.

Gamification technologies occupy top places in the ranking of technologies for enhancing educational and cognitive activity of both participants in the educational process of institutions of general secondary education and students of institutions of professional and higher education. According to recent studies, 95% of teenagers aged 13–16 years play computer games [1, p. 34], so the problem logically arises: how to use gaming

technologies in the educational process for the benefit of its participants. However, the conceptual foundations of gaming activity were explored even earlier in the works of many scientists, in particular in the works of M. Savchin, V. Bespalka, A. Polat, A. Moroz, S. Sysoeva, N. Morse [3]. The introduction of gamification elements as components of educational technologies has gained popularity in the last decade. Today, scientists and educators from all over the world are dealing with the problem of gamification in the modern world, in particular, Kevin Werbach, a lecturer at Wharton University in the USA, explores this problem on the pages of his book "For the Win", describes real projects with students and teachers that are implemented in a course on gamification on the Coursera platform. D. Dixon and S. Daterding classify the planes of gaming activity in the gamification process: gaming – determine the controlled activity of participants; toys – do not predict a specific result, determine the emotional climate between players; playful design-aimed at simplifying the perception of the game [6, p. 25].

Researchers Gabe Zickerman and Jocelyn Linder have identified what gamification is not:

1) Not a Virtual World Immersion. Contrary to the immersive environments of three-dimensional virtual worlds like Second Life, gamification does not entail complete submersion into such digital landscapes.

2) Not Games During Work or Study. Gamification does not equate to the incorporation of games within professional or educational contexts, distinguishing it from activities like playing games during work or study.

3) Not McDonald's Monopoly Project. It is not confined to projects like the McDonald's Monopoly, where games are integrated into a business framework.

4) Not Limited to Serious Games. Gamification diverges from serious games, which encompass simulators used in diverse fields like pilot training, medical education, and military expertise.

5) Not Solely for Marketing. While often associated with marketing, gamification extends beyond customer attraction and is not exclusively applied for marketing purposes.

6) Not Game Theory. Gamification is distinct from game theory, a branch of applied mathematics exploring optimal strategies in games [5, p. 38].

In essence, gamification transcends these misconceptions, defined as the application of gaming principles inherent in computer games to non-gaming processes through software tools.The overarching aim is to induce behavioral changes through deliberate manipulation.

Key aspects of gamification encompass:

– Dynamics. Involves the integration of scenarios necessitating real-time user attention and response.

– Mechanics. Encompasses the utilization of gameplay-specific elements such as virtual rewards, statuses, points, and virtual goods within scenarios.

– Aesthetics. Focuses on creating an overall gaming experience that contributes to emotional engagement.

– Social Interaction. Involves a diverse array of techniques facilitating inter-user interaction characteristic of gaming environments.

The embodiment of the information revolution is the active study and implementation of computer and communication technologies in educational practice. K. Werbach widely and effectively covers theory and practice, effective methods and approaches of gamification, arguing that entertainment is a very powerful tool for solving serious business problems [2, p. 43]. I. Stambler also supports the idea of the influence of gaming technologies on civic and educational development [3, p. 72]. A. Mazelis supports and continues the idea of gamification, considering the Encounter gaming platform as an opportunity to "gamify the level of control of students' knowledge in theory and practice" [4, p. 4]. J. Shapiro, the author of a series of articles on this topic, is also a proponent of the use of gaming technologies, who especially draws attention to the need to coordinate the game with the educational context [5, p. 66]. Among Russian modern scientists, the topic of gamification is reflected in the research of Volkova N., Kravets N., Sergeeva L. and others.

At present time, gamification is recognized as one of the key trends in information technology for organizations. However, this project has a focus on business content and requires more careful study in matters of vocational education.

The purpose of the study is to reveal the concept of gamification and to consider models of methods of gaming technologies and gamified systems from the point of view of their application in the education of future music teachers.

There are many definitions of gamification theory. The most popular definitions are by K. Verbach: "gamification is the use of game elements and game mechanics in a non-game context" [2, p. 21] and G. Zichermann: "the process of implementing game strategies in business is called gamification. With it, you can gain experience that will create the necessary meaning and strengthen the motivation of employees and customers. A gamified project takes advantage of game mechanics, loyalty programs, and behavioral economics to solve critical problems and increase engagement [6, p. 19]."

N. Volkova suggests defining gamification in several directions: "as a solution to real problems using game elements and techniques; the use of game elements and techniques to solve non-game problems; the use of approaches typical of computer games, non-game processes in order to attract users and consumers, increase their involvement in solving applied problems" [1, p. 30].

The most interesting, in our opinion, is L. Sergeeva's definition: "gamification is the application of approaches typical for computer games and software tools for non–gaming processes. This is a set of motivational management techniques borrowed from computer games and their creators" [7, p. 55].

All definitions are united by the common goal of gamification-to attract and retain the attention of participants, where various elements of computer (multimedia) awards play the role of an intangible "gamified" reward.

D. Clark notes the criteria for the effectiveness of the game for motivation in education [7, p. 62].

1. Internal motivation. The scientist assumes a stronger and more effective factor of internal motivation than external one. The gamification participant is a key character, is at the center of the action and the process of "playing" depends only on himself, which blunts external negative pressure.

2. The autonomy of the game. Motivation is stimulated by one's own choice (even if it is an illusion of choice). A person who feels in control of his own decisions is better able to retain interest in the activity, which in turn stimulates motivation to continue the business.

3. Self-confidence. The specifics of the game are such that it always starts from the simplest level with gradual complication. This will contribute to the development of self-confidence, the lack of which often kills motivation. The "player" determines his own pace, level and process of complication, acquires self-confidence, strengthens motivation to continue education.

4. The goal. Having a goal is an important incentive to motivation. As long as there is a goal, the "player" will try to achieve it, which will also contribute to achieving personal goals.

5. The test increases attention and deepens the education process. Successfully overcoming the stages of the game fosters self-confidence, and the reward process supports addiction and the desire to continue the "game".

6. Feedback. The process of game education should be accompanied by control through open structures, which is accompanied by assessments of the results of efforts.

In addition to maintaining deep motivation, the use of game mechanics will contribute to solving a number of tasks:

- identification of the group leader;
- increasing the level of activity and efficiency during the educational process;
- identification and control of the success rating;
- stimulating self-improvement;
- uniting participants in the educational process with a common goal, involving them in teamwork.

Considering the works studied, the key points that distinguish gamification technologies from certain gaming activities is the orientation of each participant in the gameplay to achieve goals and obtain practical results, and not just to participate in the game.

The conditions for the successful inclusion of the gamification process in education are seen in three forms of manifestation of gaming technologies: competition-motivation (using tournament tables, bonus banks, alternative awards); ensuring a win-win mechanism (a game without a winner), aesthetics of the presentation of the educational process (visualization of goals, objectives, effectiveness of participants in the process).

So, we consider gamification in vocational education as a way to create problems that motivate future music teachers to actively acquire professional educational knowledge. Game mechanics activate, diversify and enliven the learning process with the help of the Internet and modern multimedia technologies. Gamification is an effective tool of professional education, as it improves the assimilation of educational material; engages in the educational process; provides a systematic, continuous, motivated study of academic disciplines; forms personal qualities through the experience of overcoming difficulties; forms a system of competencies necessary for a future music teacher.

The field of gamification is quite young, although it has many examples of practical application, especially in business. There are many opinions about the benefits and harms of involving gaming computer mechanics in professional education, which requires further careful study of this issue.

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