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USING GAMIFICATION FOR TEACHING AND DEVELOPING CREATIVITY OF PRIMARY SCHOOL STUDENTS

The development of personality, its future achievements in life are related to such individual and psychological features of a person as creativity, talent, giftedness, which are most clearly manifested in creativity, which allows the personality to express itself to the fullest. This development of personality is usually carried out through various creative activities, where children interact with the world around them and with other people. A game remains one of the leading activities of younger schoolchildren that “builds a bridge” between the real world and a child’s imagination, gives the feeling of success and wish fulfillment. A game allows a child to try his or her hand in unusual activities where it is necessary to be flexible and think in an extraordinary way. That is why integrating game activities into the learning process motivates children to study, develops their creativity and increases effectiveness of the educational process.

The purpose of the article is to characterize the significance of using gamification in the educational process of primary school and suggest the ways of teaching and developing younger schoolchildren’s creativity during game activities.

Game technologies (gamification) are still “innovative” in the Ukrainian education system. Using them during the lessons contributes to the formation of students’ competencies, increases interest in learning. The role of gamification in the formation of younger schoolchildren’s creativity was emphasized in the studies of such Ukrainian scientists as O. Antonova, Ye. Antonov, O. Kryvonos, O. Moroz, O. Sorokina, and others. The younger school age is insufficiently studied and remains a sensitive period for the development of creativity.

P. Torrens notes that creativity means “digging deeper, seeing better, correcting mistakes, talking to a cat, diving into the depths, passing through walls, lighting the sun, building a castle in the sand, welcoming the future” [2, p. 28].

Defining the concept of “creativity”, we share the opinion of V. Pavlenko who considers this concept as “an attribute of the personality that manifests itself during the creative process as the ability to generate a diverse, socially important, original product and productive ways of its application; the ability to find solutions in non-standard situations; a property that is realized only under favorable environmental conditions at a high level in various fields of human activity during one’s life” [4, p. 5].

E. P. Torrans identified the following stages of the creative process: perception of a problem, search for a solution, generation and formulation of hypotheses, testing of hypotheses, their modification and obtaining a result. The scientist proposed a model of

creativity, which consists of such components as speed (productivity), flexibility, and originality [1, p. 307].

The development of creativity of younger schoolchildren should be carried out by the teacher systematically as the level of creative abilities can fluctuate: from a passive level to an active level and vice versa. While integrating gamification in educational process a teacher should create a trusting atmosphere that fosters the expression of creativity and the related processes of thinking and imagination.

K. Groos pointed out the orientation of the game toward the future considering play as preparation for life. The scientist considers the game as the primary form of human involvement in society, highlighting its main function as the "extension" of existence. In addition to physical compensation, the game enriches the emotional sphere of the individual with those feelings that a person either does not feel in real life, or that are suppressed by emotions related to the achievement of practical goals [3].

O. Sorokina in the article "Learning by playing" talks about the great influence of the game on the formation and development of a mature personality in society: "A child's full moral and volitional development cannot be achieved outside the game, there is no personality education outside the game" [5, p. 65].

The use of game-based technologies has a huge potential as a priority educational task in terms of shaping a child's active position, understanding the importance of his own activity, communication and self-awareness. The key educational trend of modern education is gamification, which involves the use of computer games in non-game situations. The purpose of this process is to attract and increase students' attention and improve their motivation when solving practical tasks.

Occupying an important place in the educational process, gamification not only contributes to the activation of students' activities and the development of their cognitive interests but also performs many other functions:

- 1) a methodically organized game, taking into account the specifics of the lesson and the subject, contributes to the development of memory and the formation of speech skills and abilities;

- 2) play stimulates the development of thinking activity of younger schoolchildren, as well as their attention and cognitive interest in studying the subject;

- 3) play promotes the development of students' activity.

Games have a huge potential to make the learning process more engaging. Students' expectations of learning activities depend on games. Students prefer visually rich, dynamic interfaces designed to work in a multitasking scenario to sequentially combine individual tasks and pieces of information, further increasing engagement.

We can identify the following positive aspects of gamified education: it has a wide range of possibilities for implementing this technology, and it gamifies lessons at different levels of equipment and with different degrees of processing, which allows the teacher to conduct a lesson both with full provision of digital support and without it using traditional methods.

While didactic games and lesson gamification without digital technologies have long been used by educators, new digital technologies and resources are still a novelty for many teachers. The essence of gamification in the educational process lies in using a person's natural inclination toward play as a key to engaging them in the processes of exchanging and consuming information. Gamification of the learning process resembles a computer game, where a certain number of points is awarded for each correctly completed task, and the player can use these points at their own discretion.

It should be noted that gamification differs from didactic games in that specially designed game elements and techniques are integrated throughout the entire learning process. Students eagerly participate in such games, the advantage of which lies in the fact that during the game participants take an active role, which helps to increase their motivation to learn and leads to more effective consolidation of knowledge.

To use gamification for conducting lessons, a teacher needs a computer, a projector and speakers, if necessary. The teacher also needs the corresponding software installed on the computer. Online resources, web-sites and platforms can be used as well. In our opinion, the best educational gamification platforms are AhaSlides, Quizlet, Memrise, Duolingo, CodeCombat, Khan Academy, Kahoot, EdApp, Class Dojo, ClassCraft. If the lesson involves using websites, an internet connection will be required. If the classroom in primary school is equipped with computers and projectors, there are no difficulties in conducting a lesson using gamification. A gamification lesson can also be conducted using interactive whiteboards and VR technologies. Virtual reality is an artificially created information environment that replaces the usual perception of the surrounding reality with information generated by various technical devices. For using VR as a means of gamification, there should be several VR headsets for students and enough space in the classroom for moving.

Today many teachers actively use Power Point presentations in their lessons. However, most often, the presentations only include illustrative and graphic material, and the animation used tends to be decorative. Power Point presentations have tools that allow teachers to create interactive educational presentations. The following elements of game technologies are used: role-playing games, a quest game, an association game, dramatization, a trip-excursion, a lexical constructor, a "truth or lie" game, etc.

To conduct a lesson using gamification in Microsoft PowerPoint, the teacher must first select tasks according to the lesson's topic. In any game, there are always at least three levels of difficulty (more can be added), so tasks should be created with three levels of difficulty. The teacher invents the plot of the game, characters and the text. Each character is assigned a specific difficulty level and dialogue lines. Finally, the teacher refines the plot by adding interactive elements. For example, to conduct a lesson in the second grade, a mathematics game with three levels of difficulty can be developed: the first level focuses on multiplication and division, the second level involves creating an example based on a task, and the third level deals with the components of the example and the order of operations. The game itself is developed using Microsoft PowerPoint.

Conclusions and prospects for further research. Currently, gamification is used in schools in several ways: as an independent technology for mastering concepts, topics or units of various subjects; as a technology for conducting a lesson or its fragment; and as a technology for extracurricular activities. Any activity during the lesson allows the teacher to incorporate game elements to foster the creativity of younger schoolchildren. The perspectives of our research include selecting digital tools for teaching and developing primary school students' creativity, as well as describing and classifying game activities used for conducting various subjects in primary school.

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