

Gamification of the Educational Process in Higher Education Institutions

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Abstract: The paper reviews the concept of “gamification” and its role in an educational discourse. In particular, the author focuses on studying a student’s competence model, focusing on those students studying philological disciplines. The key specifics of the “gamification” process are analyzed within gaming interactive technologies. The paper also analyzes application issues (points system, implementing the mission, ratings, awards, avatars, currency, resources etc.). The possible ways of gaming technology in an educational process are reviewed. In addition, the author considers the concept of gaming in the educational discourse, which also allows to specify the methods of competence integration.

1. Introduction

The relevance of the study is due to the increased interest of humanities scientists in gaming technologies in the educational field with the aim of creating adequate conditions for motivation for the activities of both an individual student and a group of students regardless of their age, status, gender, individual and personal characteristics, etc. The significance of the development of forms of integrativity, including taking into account new forms of interest of the young generation, is undeniable. The game vector of educational discourse is considered in a number of studies [1, 3, 4, 7].

The traditional system of higher education in the conditions of informatization of society is forced to compete with the phenomena of mass culture, in particular, with the entertainment industry (including computer games), social networks, etc. Indeed, the gaming component allows a person to enjoy any type of activity, including educational, which, undoubtedly, is an important factor in teaching students. In addition, the playing moment in learning is one of the conditions for the student’s self-realization. During the game, natural competition between players is inevitable. The teacher can use this competition as an additional resource for creating students' motivation to master the curriculum disciplines.

In the context of our study, *gaming* is a process, an interactive educational technology that includes certain strategies and tactics of students' actions in the process of mastering the competency model of a graduate of a bachelor-philologist.

One of the effective ways to increase the motivation for learning can be gamification, which is a strategy for using game mechanics in a non-game context. In the paper, the term "gamification" is the application of techniques in the framework of game thinking in education to increase motivation for learning and designing the educational process. We understand game mechanics as a scenario (or scenarios) that followed by students throughout their entire training period. As you know, any scenario (game mechanics) involves the presence of specific game techniques. The concept of “gaming techniques” is included in the terminological apparatus of training technologies [3; 7]. However, in our case, “gaming techniques” are the strategies for mastering the competency model of the graduate and tactics of behavior, specific actions of students in the field of their chosen specialty.

2. Materials and Methods

An experimental study was conducted on the basis of the V. I. Vernadsky Crimean Federal University (Yalta) in the period 2015-2019. Forty-three students of 1-4 courses of the "Philology" field of study, mastering the undergraduate program, took part in the study. Twenty-two students of which made up the experimental group. Twenty-one students made up the control. The first stage is the diagnosis of the current level of motivation for learning in the control and experimental groups. The second stage is the development of motivation for learning using gaming technology. The third stage is a re-diagnosis of students to identify the dynamics of the formation of motivation for learning.

In the experimental group, in order to develop motivation for learning, the following methods were used: (1) the case methods, when implementing problem tasks; (2) the project method, involving a systematic competency-based approach from students to solve the tasks set by the teacher; (5) the portfolio method as one of the indicators of the active position of the experiment participant.

The gaming technology toolkit in the educational process was reflected in the following:

1. *In the tactics of accumulating points* in accordance with the ECTS point-rating system. For each module/discipline, a student can accumulate a maximum of 100 points, from 30 to 70 points of which are necessary for admission to the intermediate certification. The remaining points are awarded based on the results of the exam/test. If a student has accumulated 90-100 points, he is given the right not to pass intermediate certification. This approach represents the universal currency of gaming as a resource indicator.

2. *In the tactics of level growth*, which is based on the data of the Federal State Educational Standard for Higher Education of the Russian Federation (FSES), in our case, in the direction of preparation "Philology" [8]. We are talking about the levels of competencies (basic, main, advanced) that must be formed by bachelors when mastering the curriculum disciplines.

3. *In the tactics of collecting resources*, we consider (1) replenishing the "methodological piggy bank," (2) performing research tasks, and (3) presenting achievements by publishing scientific materials and speaking at international conferences, etc. This approach allows one to implement interdisciplinary communication courses in the curriculum, which affects the development of the professional competence of future specialists.

4. *In the tactics of fulfilling the mission*, taking into account individual aspirations (becoming a professional, gaining status, the possibility of self-expression, etc.), as well as the social role of the student in the group (leader, assistant leader in a particular field of activity, etc. In addition, each participant in the educational process has the opportunity to choose the curriculum disciplines (in accordance with the Federal State Educational Standard of the Russian Federation), which allows the participant in the educational process to move, taking into account the internal motivation for learning.

5. *In the rating tactics*, reflected in the portfolio of the experiment participant, which allows one to manifest their achievements (artifacts) through free access to the "achievement board." In accordance with the "Maslow Pyramid," this approach enables self-realization and self-affirmation through recognition, which gives the participant a sense of pleasure and a desire to return to the educational process;

6. In the tactics of using avatars, which allows the teacher to objectively evaluate tasks performed by participants in the experiment, remotely. This approach reflects the elements of the image of a gaming participant, contributes to the student's self-realization when choosing a certain image, which also affects the desire to return to the educational process.

7. In the tactics of concluding alliances, which allows the participant in the experiment to independently select team members to perform tasks of various types. This approach directs students to the development of communicative competence and encourages active action in the chosen field. So, when performing tasks of an advanced level, students can distribute among themselves the responsibilities for their implementation.

3. Results

Extensive work on the introduction of gaming technology in the educational process of the Humanitarian and Pedagogical Academy had a positive impact on the educational results of future philologists. The multidisciplinary systems approach to gaming technology has contributed to the following:

- Improving the ability of students to choose and effectively use communication strategies and tactics, taking into account the specific speech situation of communication. So, in the experimental group, the results of the control sections indicate an advanced level of communicative competence among students, which is 83% of the total number of participants in the experiment. In the control group, this indicator is 46%;
- It is advisable to develop the ability to engage in the dialogue of different formats. Thus, the implementation of case studies within the framework of gaming technology helped students develop effective communication skills with representatives of different age groups. The results of the control sections indicate a rather high level of professional competencies of participants in the experimental group (86%), in contrast to students in the control group (48%);
- The formation of skills in appropriate forms of self-presentation, as well as the presentation of their achievements, results in a particular field of activity. Thus, creating a positive image, taking into account the specific situation of communication, allowed the participants in the experiment to become competitive members of society: 94% of the graduates of the experimental group work in the specialty;
- The development of sustainable motivation for learning, which contributed to the actualization of personal reserves of students' self-development;
- The perfection of universal, general professional, professional competencies of students.

This approach was reflected in the overall performance of the participants in the experiment. Eighteen people from twenty-two students of the experimental group completed the training with marks “excellent” and “good.” This represents 82% of the quality of knowledge. In the control group, the quality of knowledge is 47% of 21 students.

4. Discussion of Results

In the process of mastering the competency model of a graduate of one or another orientation of training, the teacher does not have to compete with the phenomena of mass culture if, in the educational process, elements of technology that allows the motivated students to constructive educational activities can be applied.

Using the gaming tools, the teacher should pay attention to the ambiguous attitude of students to the “awards.” On the one hand, this tool makes it possible to encourage the student, which motivates him to move further along the chosen development path. On the other hand, the abundance of awards can demotivate participants of the educational process due to the substitution of internal motivation.

During the experiment, 10% of students were partially demotivated at some stages of training, which allowed us to revise the methodology of promotion.

Depending on the student's actions, we distinguished the following types of awards: for the degree of involvement, for the quality of the assignment.

Reward schedules are as follows:

- a) Continuous (for example, for each attended practical lesson, completed homework of a reproductive nature, etc.). This is the minimum motivation because of being connected with special merits, and it happens automatically;
- b) Fixed (for example, three answers at the seminar, homework submitted on time for verification, etc.);
- c) Unfixed, single. These are one of the most effective rewards (for example, for performing creative tasks, tasks of increased difficulty, etc.).

In general, the results of the study indicate the positive dynamics of the formed sustainable motivation for learning, which positively affected student performance.

5. Conclusion

Thus, when using gaming technology in the educational process in a higher educational institution, positive results were achieved both by students and teachers participating in the experiment.

The participants in the experiment, enjoying such interactive training, are motivated to master the philologist's competency model.

Thus, students have the following:

- a) Emotionally involved in the process of mastering the competency model of the graduate-bachelor, enjoying the learning process;
- b) Get the ability to quickly and effectively adapt to changing educational conditions, which contributes to the timely reflection of the student;
- c) Free to choose strategies and tactics for achieving their goals and objectives, acquiring sustainable communication skills, which enables self-realization, personal and professional growth;
- d) Objectively demonstrate artifacts of their achievements, which creates the conditions for additional self-motivation, self-affirmation in the team;
- e) In the process of working on the image, using avatars, resources, ratings, taking into account the aesthetics of their design, they have an additional opportunity for self-expression and self-presentation.

Gaming technology allows the teacher to do the following:

- a) Creating conditions for self-realization of students;
- b) Intensifying the educational process at all its stages;
- c) Using gaming tools to facilitate non-standard communication with students;
- d) Revising the system of assignments for the course, taking into account intersubject communications, which contributes to the progress in the field of personal and professional growth of the teacher, creates the conditions for multidimensional mastering of courses;
- e) Using forms of electronic interaction with students through avatars, which makes it possible to provide sufficient objectivity to check the level of formed competencies.

The issue of reviewing the assessment criteria for tasks of different levels within the selected competencies remains relevant.

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