



GAMIFICATION OR MYSTIFICATION?

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ABSTRACT

Today, authors select from the set of definitions referred to gamification their own interpretation, but the essence of the teaching method remains the same. Another thing is the task to make the use of game elements and approaches for non-gaming tasks the most natural and useful part of the curriculum in preparing specialists in different fields. The article is devoted to this problem and provides answers to many questions concerning ways to avoid banal imitation or mystification of true significance of gamification on any of the described levels of educational practices (including Corporate University of JSC «Russian Railways»).

ENGLISH SUMMARY

Background.

Intense competition forces business to attentively track each other, since someone can invent something and break out ahead. On the other hand, the high cost of decision-making forces to be extremely careful and do not rush the introduction of new theories. These trends explain why gamification is so popular. Business believes that gamification can become an indispensable and a very promising direction. Is this true? Is gamification a way to break out ahead or a mystification?

Objective.

The objective of the authors is to investigate gamification of learning processes, its advantages and disadvantages.

Methods.

The authors use methods of analysis and descriptive method.

Results.

Game in the lives of animals and people

To understand the essence of gamification, it is advisable to examine the role of a game in the lives of animals and people. Karl Groos believed that playing activity occurs in the lives of animals because of the need to acquire new forms of behavior that are underdeveloped on the level of instincts. Carl Buhler supplemented this theory with the statement that playing activity is supported by «functional pleasure» derived from the activity itself.

In pedagogy, a logical mind is traditionally recognized as the essence of the man and his highest value, respectively, attention was paid to the development of intellectual abilities. The game was a way to increase interest in learning and relieve emotional stress.

Now the game is increasingly considered as a method of construction of the educational process with the purpose of reproduction of reality. R. K. Gedraytis identifies the following characteristics of the game [1]:

- Universalism of playing activity that allows it to be present in all activities.
- Naturality, harmony.
- Ability to restore the integrity of a person, integrating his abilities: rational and non-rational, intellectual and emotional.
- Development of communicative skills and team work.

- Formation of a strategic behavior of a person.
- Development of social and cultural space in which a man lives.
- Mobilization of internal resources of an individual.
- Support for psychological balance.

Modern researchers also highlight the ability of games to cultivate the value of freedom and creativity, which is especially important in an age of rapid development of industry. Yu.M. Lotman stated: «The game is one of the mechanisms of generation of creative consciousness, which does not passively follow any set program, but orients in a complex and multidimensional continuum of opportunities». [2]

What is gamification?

In this section the authors analyze the most commonly used definitions of gamification.

1. Gamification – is the use of game mechanics and elements in non-gaming context (Gametrek.ru).

2. Gamification is the use of approaches, characteristic of computer games, software tools for non-gaming processes in order to attract users and consumers to increase their involvement in the solution of applied problems, the use of products and services (wikipedia, citing articles of three different authors).

3. Gamification is turning anything into a kind of a game (Jesse Schell, professor at Carnegie University).

4. Implementation of game mechanics in many aspects of people's lives has led to two key terms – gamification and serious games. Gamification is a set of game design techniques, game thinking and game mechanics to solve the non-gaming tasks.

5. Gamification is the application of game elements and digital methods of designing games for non-gaming tasks (business objectives and issues of social impact) (Kevin Werbach, professor of the University of Pennsylvania, author of the world's first online course on gamification).

Summing up, the authors derive the following definition:

Gamification is a set of actions typical for games and aimed at changing a process with a specific purpose (education, to increase sales, to find a way to bypass traffic jams, increase the commitment to explore something new, etc.).

Parameters of gamification

After studying publications on this topic, the authors have concluded that there are three main types of characteristics:

1. Logical parameters – characteristics that define the basic parameters of gamification, each of which can take only one value from the list.

2. Required parameters – those that must be present in the gameplay in any way.

3. Optional parameters – those that may not be present in the gameplay.

Logical parameters

Before proceeding to the gamification process, a person should understand exactly whether it is necessary to be done. If the decision is positive, then a choice should be made, answering questions from the block «logical parameters» (to select activity, choose the principle of rules' formation, to complete form for presentation of results, etc.).

Some authors think that the process of gamification can be not only useless but even harmful. To understand whether gamification of a process is necessary, a person should be sure that he knows the answers to the questions (see list below), and they do not contradict the goal of the process:

- Field of activity (education, business, marketing, social sphere, self-development).
- Interactivity (online / offline / mixed type).
- Plot (open / closed).
- Typology of results:
 - o prizes (real / virtual);
 - o award (public / private).
- Rules of the game (known at first, all unknown, disclosed as the game).

Required parameters

By analogy with math theory the concept of basis can be introduced in gamification. Basis is a set of parameters, non-interacting with each other such as that any vital process can be represented as a set of these parameters, and set uniquely determines whether a process is a game process. The authors have identified several basic, required parameters:

- Scenario, reflecting the sense of the game. A clear idea of what a person is doing, what he gets, for what actions, what benefits he receives.
- Rules of the game. They must also prescribe the conditions for the exception of cheating, or provide special award for it.

• Regular information about the rules to avoid any looping only upon receipt of awards (addiction to gambling).

- Presentation of results.
- The presence of a plot. Its task is emotional involvement of the audience in the game.
- Division of the plot into missions.
- Opportunity to leave positive / negative feedback. That is, to achieve emotional relieving and greater involvement.

Optional parameters.

After analyzing various cases of gamification's introduction, the authors have chosen those that occur from time to time. They color a game, creating its unique character, increasing the involvement of the audience.

If we want to color a particular process (team work, telework, increased level of competition ...), then we can use a number of optional parameters:

- Encouragement of each correct / good action.
- Encouragement of productive interaction with coefficient (if it is necessary to create an environment for teamwork).
 - Creation of an atmosphere in which a player focuses on winning, not just wants to avoid defeat.
 - Visual representation of achievements (progress indicator, experience points, levels, merit matrix).
 - Virtual currency. One or more virtual currencies for different purposes (for example, the purchase of services, improving the status, earning bonuses).
 - «Charismatic replica» – with a certain sequence of actions a person can achieve something unique in its own way (prize, bonus), others do not get it.
 - The imperfect rewards for those who are not involved. Analogue is premium account in games where the interest is shown in paying real money for an account. At the same time it is easier to earn experience points and virtual money – here, appear a coefficient 1.3–1.5.
 - Comparison of the achievements of each other, not to be in an information vacuum and see to whom / what to strive for.

• Actions of curators, creating an atmosphere of tolerance (nomination of «twos» may seem like a personal insult).

Diagnosis of readiness of a training system

If you are asked why you need gamification of a process, you should be able to answer this question; otherwise you'll have to come up with an answer, mystifying reality.

In one situation gamification of a learning process is not required, in another it may be to a small extent, and in the third one to achieve a result you need a deep, hard work on gamification.

To find out whether it is required to revive the education system using gamification, it is necessary [3]:

1. Based on needs of business, determine what «result» should be obtained (in Pic. 1 – y-axis).
2. Determine the degree of interest of students in training (x-axis).
3. Assess the ability of the audience to learn (in the figure – angle α_1).
4. Determine the educational system's ability to transfer knowledge to students (Figure – angle α_2).

Thus, after obtaining the desired values, it is possible to predict the level of results of the educational process (see Pic. 1). Angle of deflection α (line **A**) will be determined by the sum of the values of $\alpha = \alpha_1 + \alpha_2$. The smallest angle α_2 would have dead systems and the livelier is the system, the higher is the value of the index. At the same time the higher is the level of «audience's interest», and angle of deflection α , the greater is the «result». [3]

Conclusions

• If the level of interest of the audience (of a group) gets a result below the desired level of results, this means that the task of a business will fail.

• For the best results, one or all of the following actions should be made: increase α_1 (the ability of audience) and α_2 (the ability of an educational system), increase the interest of the audience.

• Gamification of a learning process will make it possible to achieve a desired level of results by increasing the values of the α_2 (in Fig. 1 – right A *) or indicator «audience's interest» (see the x-axis, the value of the «level*»).

Levels' of programs' gamification

If the decision is made in favor of gamification of a training program, it is necessary to understand how deep it should be done. To understand the situation, the authors propose to use the scheme of Pic. 2.

If learning system gives the desired result, then gamification of a learning process is not necessary, since the desired result is achieved by abilities laid down in the system. This state is called zero-gamification.

If the system does not give the desired result, there are three levels of gamification.

The first level. During the learning process gamification should solve the task to strengthen the influence (slightly) on the audience, usually increasing interest of students in achieving the ultimate goals of education. In this case, training program is created and implemented without reference to the elements of gamification. For example, in Corporate University of JSC «Russian Railways» for one of the programs color coding of students' status is used (Pic. 3).

The second level. Gamification should solve the task to significantly increase the interest of students in the training program. When creating program checkpoints (gates) installed, in which the system will take into account the different values, and those in





turn are reflected in a gamified part. After passing the gates, training program and game conditions change.

Example: in Corporate University of JSC «Russian Railways» in one program, students receive a case consisting of a set of tasks. Each task is associated with one of the topics of study. As a result, at the end of the theme a person gets a certain number of points for the demonstrated solution. Points are awarded according to the standard corporate scale from 0 to 3. Due to varying significance of topics, some assessments get to an additional «weight». The rating is formed in three zones (green, yellow and red).

The third level. It corresponds to the task of capturing the full attention of the audience. The training program is created to the fullest extent as the game. For example, one of Russian banks creates online game for the staff, during which players are introduced to the process of providing banking services, collect points and fight for the top places in the ranking.

At this level, to a greater extent than in other cases, participants should avoid addiction to gambling (pathological addiction games), which entails negative features [4]:

1. Constant involvement, increase in time spent in the game situation.

2. Changing the range of interests, ousting former motivation, constant thoughts about the game, and the predominance of imagination situations involving game patterns.

3. «Loss of control», as expressed in the inability to stop the game as after a big victory, and after persistent losses.

4. The state of psychological discomfort, irritation, anxiety, appearing in a relatively short period of time after the regular participation in the game, with an insurmountable desire to start it again. Such states are a number of features similar to abstinence from drug addicts: they are accompanied by headache, sleep disturbance, anxiety, depressed mood, impaired concentration.

5. Characterized by a gradual increase in the frequency of participation in the game, the desire for risk.

6. Periodical stress, accompanied by the game «drive», all emerging from a desire to find the opportunity to participate in any gambling.

7. Rapidly growing decline in the ability to resist temptation. This is reflected in the fact that, deciding once and for all to give up, compulsive gambling resumes after the slightest provocation (meeting

with old friends, talking on the theme of the game, the presence of near gambling establishments, etc.).

How to avoid mystification

In conclusion, it is reasonable to propose ideas that can help prevent mystification of a learning process, using game elements.

In androgogics particular attention is paid to specifics of mental functions of adults. American scientist Malcolm Knowles proposed a system of concepts that formed the basis of modern foreign androgogics. The authors of the article adapted recommendations for adults' learning process for gamification of a process and the following provisions were obtained.

1. Game should increase understanding of educational problems, their performance standards. It should be very clearly defined, understandable and doable.

2. Game is obliged to promote increased collaboration between students and teachers.

3. Elements of playing scenario should create a climate conducive to the creation of positive mood, desire to help other students, and desire to perform tasks («climate of adulthood»).

4. Game should help to memorize learning material at the lesson.

5. Game involves a balanced feedback of the audience.

6. Game should include critical thinking about reality (professional, political, personal).

7. Game should develop independence and self-organization of students.

8. Experience of the audience is necessarily used in the game.

9. Contents of the game should be adequate to the interests of the participants.

10. The game should have practical significance.

11. The result obtained in the game can be applied immediately.

12. Participation in the game should be voluntary. It is a separate question how to apply these provisions in practice, but application of a part of them will greatly enhance the effect of ongoing training.

Conclusion.

Fundamental research in the areas of «live» and computer games, the use of gaming practices in non-gaming processes and then systematization of the information received will make it possible to get later a unified theory of gamification, basing on which it will be possible to judge the feasibility of introducing games in certain processes, approaches to such tasks.

Keywords: training, vocational education, curriculum, business interests, knowledge, games, gamification, personal development, corporate university.

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