

# Gamification: Digital Technologies in Management

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**Abstract** — The relevance of the study lies in the fact that any work is not always enjoyable, and an increase in its payment often does not give the expected results, since the monotony is tiresome. Lack of employee motivation is the cause of many of the company's problems. It is possible to improve work efficiency by awakening a true interest in the process among employees. One of the most effective HR management techniques is gamification. Gamification is the use of methods and tools similar to those used in computer games, in non-gaming processes to increase engagement and interest in the performance of employees' duties.

The aim of this study is to analyze the issues related to the implementation of gamification tools in the organization's personnel management. To achieve this goal, the following tasks have been solved in the article: the goal of gamification is determined, the HR tasks that can be solved with its help are highlighted; analyzed the gamification product development process; the main methods of gamification in the company are considered; revealed the advantages and disadvantages of gamification in business; shows the most popular gamification solutions in companies and its impact on the company's HR processes. As a result of the study, a conclusion was made about the effectiveness of the introduction of gamification in various processes of personnel management. In preparing this work, the experience of Russian and foreign companies in the implementation of game methods in personnel management was studied.

**Keywords**—Gamification, automation of HR processes, gamification methods, advantages and disadvantages of gamification, gamification tasks, gamification efficiency.

## I. INTRODUCTION

Today, gaming techniques are increasingly being used by companies as a human resource management tool. According to statistics, about 70% of all employees of companies in the world are not passionate about their work. Gamification can help to effectively motivate employees, enable them to learn and develop at work, and provide real-time feedback. It is based on the development and implementation of game-based approaches to work processes, which allows to increase the involvement of personnel, increase the motivation and loyalty of employees. Gamification is understood as a set of elements, technologies and practices of games for various spheres of life and activity. Gamification quickly spread to almost all spheres of life, including HR management. For the first time, elements of gamification began to be introduced in the 2000s by commercial companies with the aim of improving business

processes and improving performance. Over time, Western experience and technologies began to enter Russian life, and the popularity of introducing game methods into the activities of organizations has grown greatly, including in HR processes: recruitment and selection of personnel, adaptation and motivation of personnel, assessment, training and development of personnel, organizational effectiveness. [1].

## II. METHODOLOGY AND METHODS

The methodological basis of the study was the analysis of the policies and practices of companies that are actively introducing gamification into HR management processes, the study of the business processes of these companies, analysis of specific situations, observation, interviews with employees, and statistical analysis. Methods of systemic and situational analysis, methods of expert assessments, logical constructions, generalizations, analogies, comparisons, included observations, in-depth interviews and questionnaires are also used. The use of these methods allows us to objectively assess the conditions and features of human resource management when introducing gamification at an enterprise and to determine a set of relevant methods that allow us to improve the company's personnel policy and increase its competitiveness.

## III. A WORKING HYPOTHESIS

Development of practical recommendations for the implementation of gamification methods in the company will increase the efficiency and productivity of personnel, as well as increase the competitiveness of the organization.

## IV. RESULTS

Before developing and implementing gamification, it is necessary to identify the tasks for which its implementation is planned. The main goal of gamification in a company is to change the behavior of employees depending on the goals and objectives of the business, because when an employee works with enthusiasm and good mood, it gives serious results. Consider the tasks that can be solved using gamification:

1. Vocational guidance of students to attract talented youth to the company.
2. Selection and selection of employees (It is an opportunity to use playful methods to weed out unsuitable applicants who do not value the company's tradition, and to recruit those who successfully cope with the tasks assigned when hiring.).

3. Personnel adaptation (Informal surroundings help employees adapt more quickly, information is more easily absorbed and remembered, and the moral and psychological climate of the team improves.)
  4. Motivation of employees (Playful methods give managers new opportunities to motivate staff. For example, instead of monetary rewards, you can award points to leaders, which they can later exchange for any bonuses. The main point is to determine the driving factors of a person, knowing which the leader can pick up the most effective gamification options.)
  5. Involvement in work (The company's great advantage is its ability not only to retain employees, but also to involve them in work processes that seem boring and uninteresting to them.)
  6. Improved learning outcomes (Games based on the work process, allow a better grasp course material, to reduce the number of errors and reduce the time to complete tasks.)
  7. Development of corporate culture (By using playful methods, it is easier to instill corporate values in the employee, you can form strong teams, and build an understanding of the HR-brand among working employees.)
  8. Creating healthy competition in the team (In-game achievements of employees are KPIs, which represent a counter of personal achievements and are converted into bonuses, points, gifts.)
  9. Increase of efficiency and productivity of labor (Playful methods show a sense of excitement, arouse curiosity and interest, and the performance of employees increases through basic rewards: ratings, badges, awards and bonuses for completing tasks or completing the next training course.)
  10. Team building, improving the quality of communication in the team, reducing the number of conflicts.
  11. Unification of employees with a common idea, involvement in team work.
  12. Identification of leaders in a particular area.
  13. Determining the vector of development of each individual employee and the team as a whole and stimulating their improvement in this direction.
  14. Increasing the visibility of the results of the work of each of the employees.
  15. Providing all employees with prompt feedback on performance results. (By feeling important, employees stop worrying about their abilities and focus on doing a good job.)
- Having defined the task that the company poses for gamification, and knowing which elements of the game evoke the desired emotions of employees, it is possible to simulate the necessary behavior and gradually introduce these elements into game processes. The gamification product development process is shown in Figure 1.

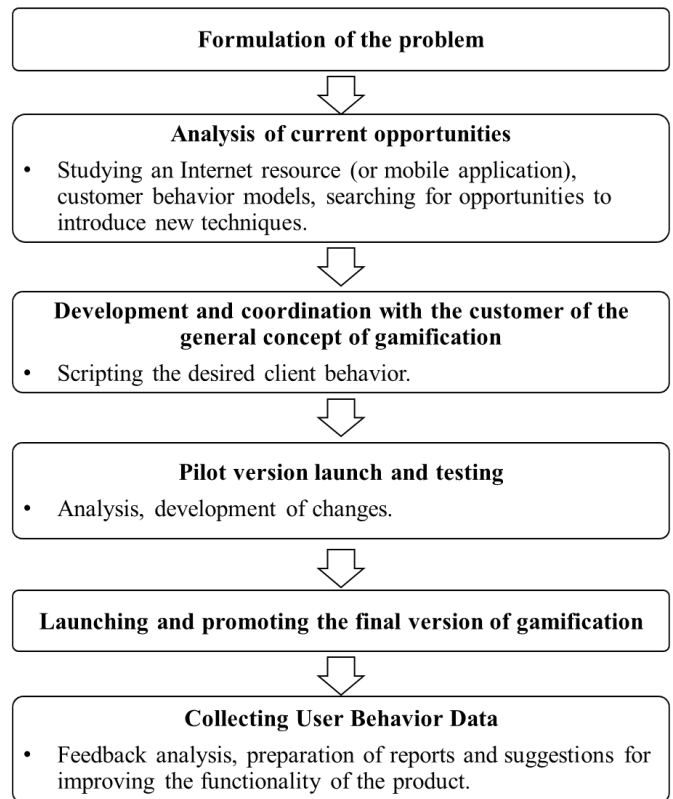


Fig. 1. Gamification: the development process [2]

Let's consider the main methods of gamification for company employees (Table 1).

Table 1. The main methods of gamification in the company [1, 2, 3, 4]

№	Method	Comment
1	Achievements	The essence of the method is that achievements are initially closed and open after the completion of a certain stage. They can have different levels of difficulty, and for the receipt of which rewards are expected
2	Personal and group ratings and leaderboards	The method allows each employee to see their own progress. Most employees are interested in competing with each other, increasing their efficiency, using the maximum of their personal reserves to achieve high positions in fulfilling the company's goals.
3	Quests	This method differs from ordinary tests in that it basically contains a plot content and is aimed at collectively overcoming obstacles.
4	Bonus programs	The method is based on the fact that managers give their employees bonuses for completing tasks or in order to increase loyalty and build a strong brand. Subsequently, bonuses can be exchanged for any rewards.

5	Unexpected discoveries, rewards	This method assumes that receiving small bonuses or gifts for the employee gives him pleasure, attracts attention and arouses interest, which contributes to more diligent work on the tasks assigned.
6	Competition	The method is used to increase motivation, increase involvement, and develop team spirit. Healthy competition encourages employees to be productive if they have a specific goal. An example of this method is hackathons, which involve organizing teamwork in which all employees move in the same direction, showing their best sides.
7	Virtual awards	The method involves a visual demonstration for employees of the recognition of their achievements.
8	Team building	This method is based on the unification in an informal setting of employees of the company or its individual divisions, where they need to complete certain game or business tasks. Team building allows you to unite the team, unleash the potential and hidden talents of employees, and gives them the opportunity to show themselves from their best sides.
9	Team building games	The method is based on the involvement of personnel in the corporate culture and activities of the company, which contributes to the most active and creative work of employees who are worried about the success of their employer.
10	Performance management	The method is aimed at encouraging workers who perform a monotonous and repetitive task, with a specific goal. The effectiveness of the personnel is determined on the basis of assessments of customer satisfaction, performance metrics.
11	Community building	The method is based on the formation of a group that discusses a specific topic, problem, and allows you to highlight active representatives, leaders. For participation and involvement in the process, employees are awarded bonuses, points, titles are assigned, and badges are issued. This method creates a sense of community.
12	Payment, remuneration	The method involves receiving a bonus after completing a task a certain number of times, forms the required model of behavior, reinforced through encouragement.

13	Creation of a legend, history	The method allows employees to create a sense of involvement in a large significant process, and that the efforts made in a common cause will bring benefits and satisfaction.
14	Status	The method is based on building the process in such a way that, in the form of competition, the employee has many opportunities to demonstrate his achievements and successes, allowing him to show his superiority to others, and, above all, to himself.

Implementing gamification in HR management has both pros and cons. Game elements may not be used in every company, so it is important to weigh all the advantages and disadvantages of this method before developing and implementing gamification.

Table 2. Advantages and disadvantages of gamification in business [2, 5]

Benefits of gamification	Disadvantages of gamification
<ul style="list-style-type: none"> <li>– labor productivity increases;</li> <li>– there is a deep involvement of employees in the work process;</li> <li>– leaders can be identified;</li> <li>– there is a prompt feedback;</li> <li>– the quality of communication in the team is growing;</li> <li>– conflicts between employees are reduced;</li> <li>– staff are united by one common idea;</li> <li>– corporate values are easily instilled;</li> <li>– the psychological climate is improving;</li> <li>– mood improves;</li> <li>– employee loyalty increases;</li> <li>– reduced staff turnover;</li> <li>– there is a continuous improvement of personnel skills;</li> <li>– employees receive additional motivation to develop their business competencies;</li> <li>– intracorporate communications are improving;</li> <li>– management gets the opportunity to effectively manage the process of motivating employees;</li> <li>– the personnel are being prepared for the new working conditions and the tasks of the company.</li> </ul>	<ul style="list-style-type: none"> <li>– it is necessary to develop new games, contests, as they tend to become outdated;</li> <li>– not all employees want to participate in the games, despite the bonuses;</li> <li>– if the process is not properly organized, games can be time-consuming, and therefore damage work processes;</li> <li>– the company needs to allocate money for the development of games, computer programs;</li> <li>– according to some experts, gamification dulls the sense of responsibility of employees, distracts from performing basic tasks and relaxes.</li> </ul>

Despite the fact that there are many more positive aspects of using gamification in business than negative ones, the dissemination and implementation of this tool is proceeding very slowly both in Western companies and in Russian ones. According to statistics, only 70% of all HR professionals have

heard of such a phenomenon as gamification. It follows from this that this instrument is still underestimated in Russia and in the world. By educating corporate executives and HR professionals, it is possible to spread the use of gamification tools for business development, which, if applied wisely, can increase employee engagement and productivity.

According to a study by the International Recruiting Company HAYS, which surveyed HR specialists from 487 Russian and international companies, currently 21% of them have implemented game elements in HR. 69% of them use gamification for staff development and training, 59% for employee adaptation, 40% for staff motivation. 30% use gamification to attract new hires and 24% to appraise staff. [6] Based on this study, the most popular gamification solutions in companies include the options shown in Figure 2.

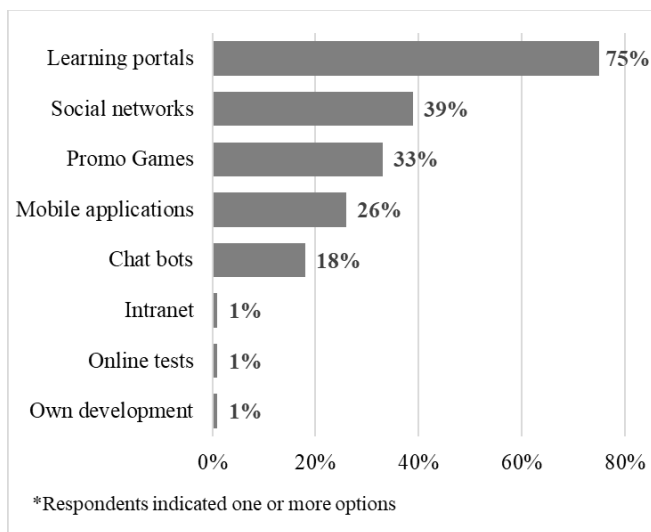


Fig. 2 The most popular gamification solutions in companies [6]

Out of 79% of respondents who did not implement elements of gamification, the reasons were distributed as follows (Fig. 3):

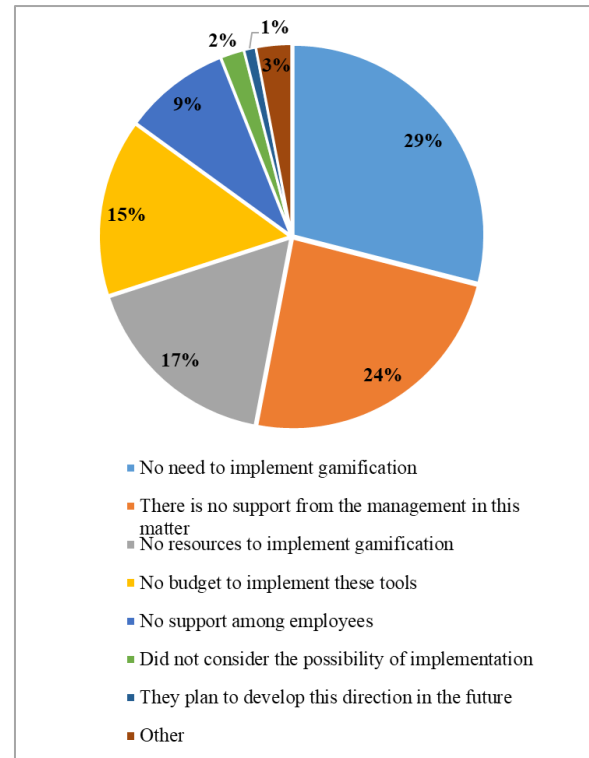


Fig. 3. Answers of respondents who have not implemented gamification [6]  
The results of a survey of companies that use gamification in HR are presented in Figure 4.

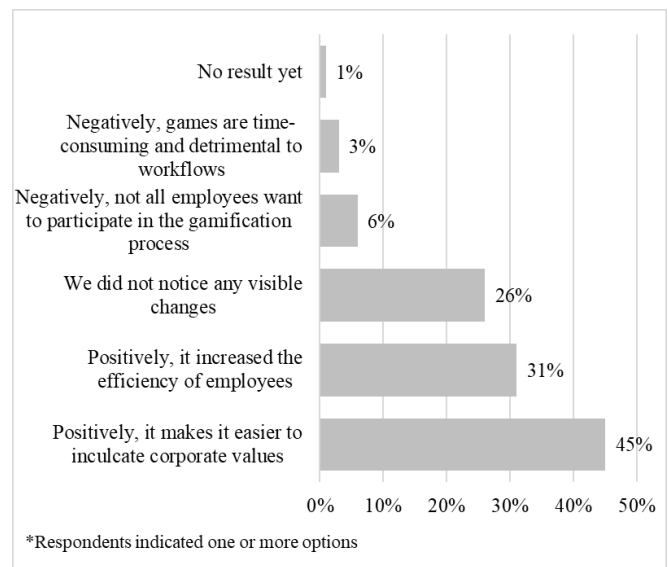


Fig. 4. Impact of gamification on HR processes in the company

#### IV. CONCLUSION

Gamification in human resource management is currently a new HR trend in 2021, representing an effective tool used both in hiring and in the process of recruiting, developing, training, adapting and motivating employees of the firm. The interest in games is constantly growing, so the prospects for their use in workflows are growing all the time. Success will be assured if companies implement successful game strategies to engage personnel in the implementation of the assigned tasks. Game methods increase the

efficiency of the organization's employees, contribute to team building, encourage them to achieve better results, which leads to an increase in the company's profits and an increase in its competitiveness and attractiveness in the labor market.

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