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Gamification use for government authority employee training

Uso de la ludificación para la capacitación de empleados de la autoridad gubernamental

Olga V. ROGACH 1; Elena V. FROLOVA 2; Svetlana V. DEMINA 3; Tatyana M. RYABOVA 4

Contents

ABSTRACT:

In order to determine the effectiveness of gamification use during the training of government officials, the authors conducted the study according to the results of simulation game called "State institution resource management" for the distance education of government agency structural subdivision heads using the questionnaire (N = 25) and the focus-group research (N = 4). The study showed that a single use of gamification in the activities of public authorities makes a positive effect. Gamification not only contribute to the strengthening of motivation of employees, but also to develop professional skills, expand horizons, foster creativity of public servants. However, it can be limited by the following factors as a long-term strategy for civil servant development: addiction, the reduction of remuneration value, an excessive involvement in game context, and the reduction of other motivational technique effectiveness use.
Keywords: gamification, game attributes, game mechanics, training, state power, civil servants.

RESUMEN:

Para determinar la efectividad del uso de gamificación durante la capacitación de funcionarios del gobierno, los autores llevaron a cabo el estudio de acuerdo con los resultados del juego de simulación denominado "Administración de recursos de instituciones estatales" para la educación a distancia de jefes de subdivisión estructural de agencias gubernamentales utilizando el cuestionario (N = 25) y la investigación del grupo focal (N = 4). El estudio mostró que un solo uso de la gamificación en las actividades de las autoridades públicas tiene un efecto positivo. La gamificación no solo contribuye al fortalecimiento de la motivación de los empleados, sino también a desarrollar habilidades profesionales, expandir horizontes y fomentar la creatividad de los servidores públicos. Sin embargo, puede estar limitado por los siguientes factores como una estrategia a largo plazo para el desarrollo de funcionarios públicos: adicción, reducción del valor de la remuneración, una participación excesiva en el contexto del juego y la reducción de otros usos de eficacia de la técnica motivacional.
Palabras clave: gamificación, atributos del juego, mecánica del juego, entrenamiento, poder estatal, funcionarios.

1. Introduction

Over the past few years, the inclusion of game mechanics and dynamics in non-gaming applications is the subject of research interest of scientists in various spheres of public life (Markopoulos et al., 2015; Farzan R. et al., 2008; Jung J.H. et al., 2010; Landers R.N., 2014; Hamari J. & Koivisto J., 2015). The original term "Gamification" has undergone significant changes in modern human resource management (Gordon E. et al., 2014) and, more often it is understood as the use of game system elements - competition, rewards, quantification of a player/a user behavior in non-player domains, such as work and productivity (Woodcock J., Johnson M.R., 2017).

Gamification is the influence on a person's behavior that company management plans to encourage among its employees or customers (Dale S., 2014). Gamification seeks to adapt the benefits of games - to play and to challenge - and to apply them to real business processes in order to increase the attractiveness of work and the motivation of a workgroup (Landers R.N., 2015). The use of gaming elements in the design of gaming applications is not enough to achieve successful gamification. In order to have a significant impact on the motivation and behavioral settings of an employee through gamification, it is necessary to involve a user in the gaming experience that a user associates with the creation of value (Lobna Hassan, 2017).

It's fair to note that gamification does not have to meet all criteria of a "full-fledged" game (Deterding et al., 2011). Its understanding from the perspective of game thinking development for the development of public life serious areas (Broer & Poeppelbuss, 2013; Deterding, 2012; Huotari & Hamari, 2016) is more accurate. An active use of gamification in the activities of modern companies is associated with the use of motivational advantages, which create additional experience for work collective development (Melnichuk A.V. et al., 2017; Rigby, 2015). Gamification has a direct impact on the behavior of employees through the use of incentives and external awards. It makes gamification effective for obtaining quick, short-term changes of personnel work settings (Bogost, 2015, Nicholson, 2015).

According to the results of the leading research in this field, one of the reasons gamification attracts more and more users is the opportunity to set autonomously motivated goals for participants (Hamari, 2013). A number of studies draws parallels between employee involvement in the work process, the speed of new information learning, and the use of game elements (Veltsos, J.R., 2017). However, there is a real danger with the long-term use of gamification, namely, the reduction of employee internal motivation, the replacement of internal rewards with external ones, and the emergence of an employee behavior dependence on unstable external factors (Zuckerman & Gal-Oz, 2014). Taking into account that gamification uses gaming functions, a number of studies notes an excessive involvement of participants in the game context with the loss of semantic and educational content of a task (Karagiorgas D.N., Niemann S., 2017). Besides, the experience of gamification use in the activities of state authorities is insignificant (Frolova E.V. et al., 2017); there is practically no understanding about the ways of play on civilian platforms to support an active participation and help in community development (Hassan L., 2016).

2. Methodological coordinates

The purpose of the performed study is to determine the effectiveness of gamification use for government official training. The authors put forward the hypothesis about the short-term effect of this training technique use due to the specifics of civil servant work. In the long term, the use of gamification is complicated by a number of factors, the study of which requires additional research procedures.

The research was carried out by the authors in 2017 on the basis of simulation game called "State institution resource management" in the distance education of government agency structural division heads. The task of the project is to explain to the first persons of state institutions the finer points of financial resource and state purchase management and the principles of effective property management in a simple way. The key performance indicators that the program participants strive to achieve are the actually developed standards presented for the game in a somewhat simplified form. The game participants are trained to manage an institution strategically, not to tolerate violations and to ensure the development

of their organizations. During the game, participants make choices - how to purchase, how to manage personnel and property, and to analyze the consequences of their choices, which can only be seen in the long run within an ordinary life.

The leading method of research is a questionnaire survey of state authority employees (N = 25), who participated in the simulation game. In order to verify the obtained data, the focus group survey method was used, in which the heads of public authority staffing (N = 4) took part.

3. Study results

The performed study illustrates the change in the technological component of civil servant training. A little while ago, open lectures and master classes of key drivers within the areas affecting the interests of state power were considered by the staff leaders as the priority opportunities for civil servant skill upgrade.

Anna K.: "Such forms of education as lectures and master classes, which presuppose one-sided communication of a lecturer with an audience lose its value for the professional training of personnel. According to practice, this form of an adult audience inclusion in the educational process has a low degree of effectiveness. It does not provide any noticeable increment of knowledge and professional skill increase. Most often, there is a simple presence during teaching hours without an active involvement of employees in the educational process."
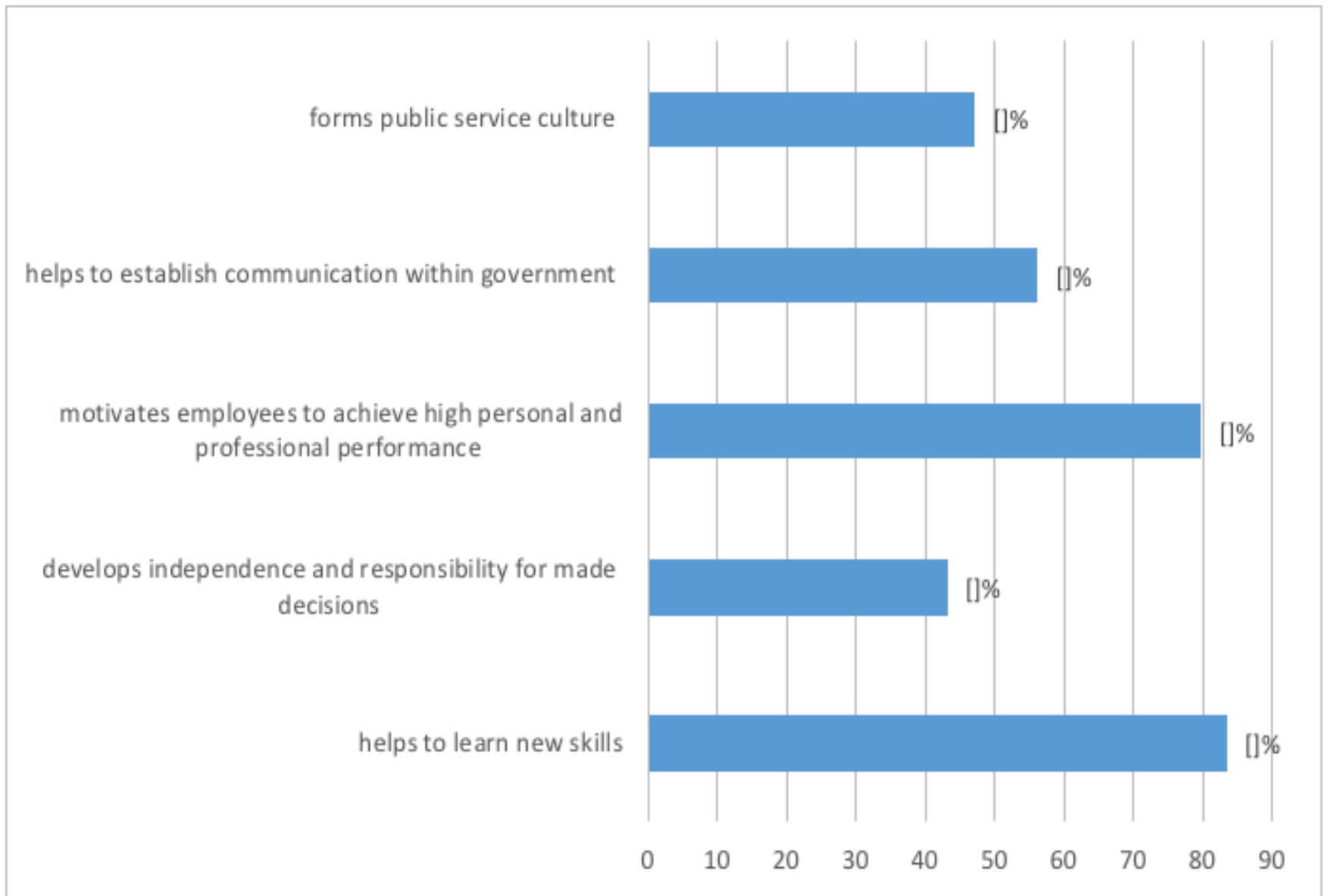
At the same time, the desire to match best practices in terms of personnel training and retraining draws the attention of HR heads to fundamentally different forms of civil servant training. The use of gaming techniques has a particular importance in distance learning.

Viktor T.: "The activities that are carried out within the framework of government official training, first of all, should be at the forefront of their practical skill development to solve professional problems, the broadening of their horizons, and the enhancement of creative abilities. In my opinion, it is possible to solve this problem using the gamification techniques."

According to the survey conducted among the heads of government structural divisions trained within the simulation game, gamification has significant advantages as one of personnel training methods. In particular, the obtained data illustrate the following picture: gamification helps managers to master new skills (83.4%); it motivates civil servants on the achievement of high personal and professional indicators of their activities (79.7%). Besides, gaming technology allows to influence communication within government bodies, the culture of public service and the effectiveness of work collectives.

Diagram 1
Gamification use opportunities for government official training

Horizontal bar chart with the following categories and values:

- forms public service culture: []%
- helps to establish communication within government: []%
- motivates employees to achieve high personal and professional performance: []%
- develops independence and responsibility for made decisions: []%
- helps to learn new skills: []%

(x-axis: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90)

According to respondents, in comparison with the traditional methods of training, the possibility of gamification impact on personal and professional development of workers is much higher. In view of this circumstance, the ratio of public authority head requests to conduct training programs in the form of lectures and gaming makes 40 to 60. In particular, the simulation game "State institution resource management" is designed to train state institution heads concerning the quality management of financial resources and property, competent planning and the response to emerging events before the implementation of tasks assigned to an institution. When you use traditional master classes, the achievement of such results would be extremely difficult.

Diagram 2
Comparative analysis of "lecture classes" and "gamification" influence
on the development of civil servant potential (number of men).
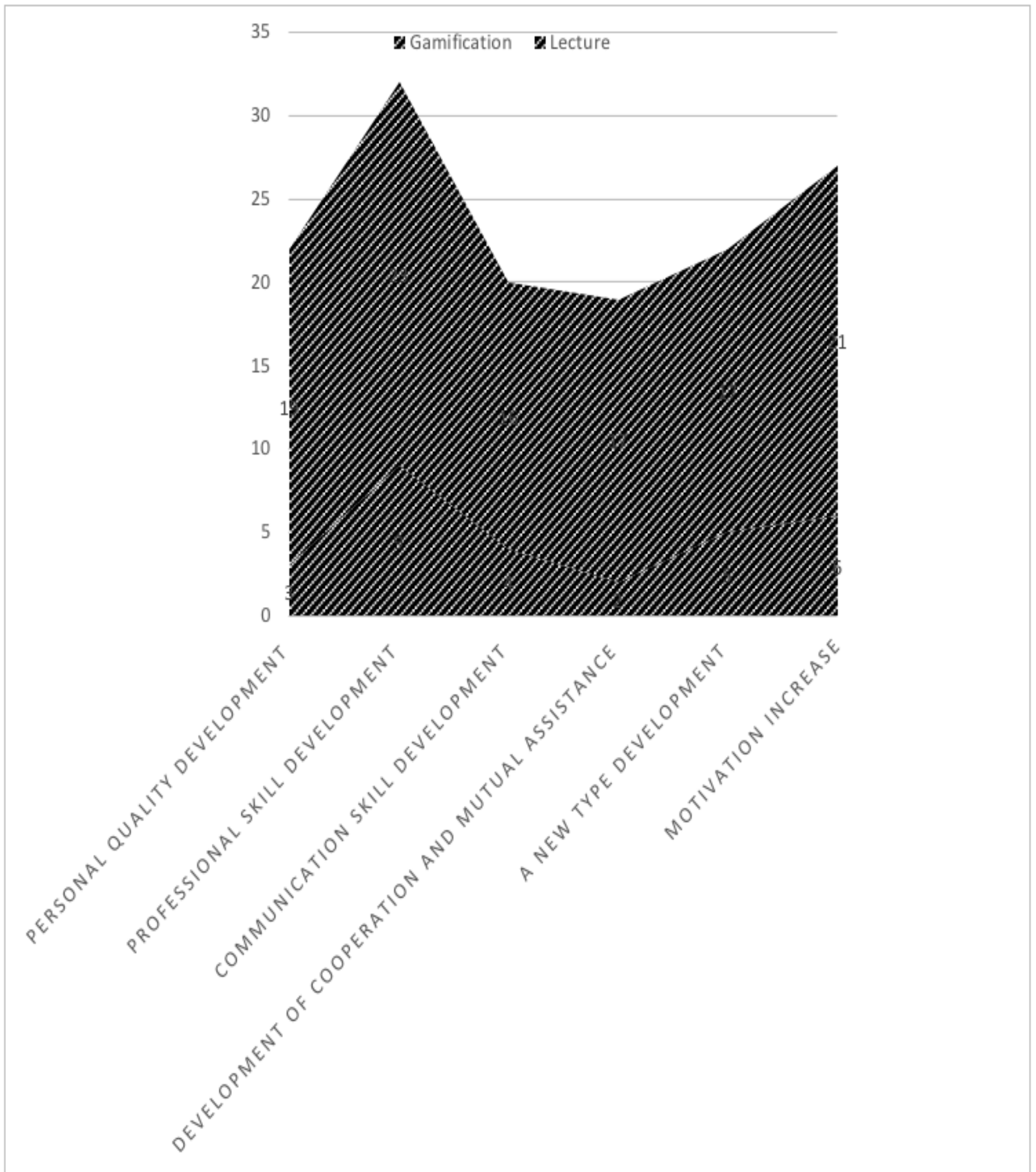
Anna K.: "Gamification is distinguished from other forms of education by an active involvement of all participants in the learning process through the use of various cases and game techniques"

Konstantin V.: "Using the game techniques in the process of training, the situation is achieved in which a person becomes the part of a micro community model, a certain group faced with the need to solve a non-standard set of tasks. Later, a training participant will have a ready-made and, most importantly, a practical solution facing with similar tasks in real life during the performance of his direct job duties."

For heads of government authority structural units who participated in the survey, the use of gamification in the distance education of civil servants demonstrates a high efficiency index

due to the following reasons.

First, gamification allows employees to be proactive in educational course selection and their mastering rate (46.8%). The fact is that since the elements of gamification have been included in the traditional format of distance learning, namely, the competitive aspect was introduced, any civil servant who passes a distance education program has his "avatar". It is available for viewing by other participants and displays the degree of skill development, the number of points and the increase of "avatar" status. In other words, the areas of knowledge and skills in which the employee mastered his skills are depicted in an interactive form. This kind of distance learning participant success and achievement visualization stimulates them to compete and, thus, leads to the professional skill increase voluntarily, and not by an immediate supervisor coercion. This aspect was noted during the survey by more than half of the respondents (57.4%). Moreover, employees constantly receive confirmation of their action usefulness through the visualization of successes and achievements, not only from the management, but also from colleagues. This fact has a significant impact on the motivation of employees, which was noted by 68.6% of respondents.
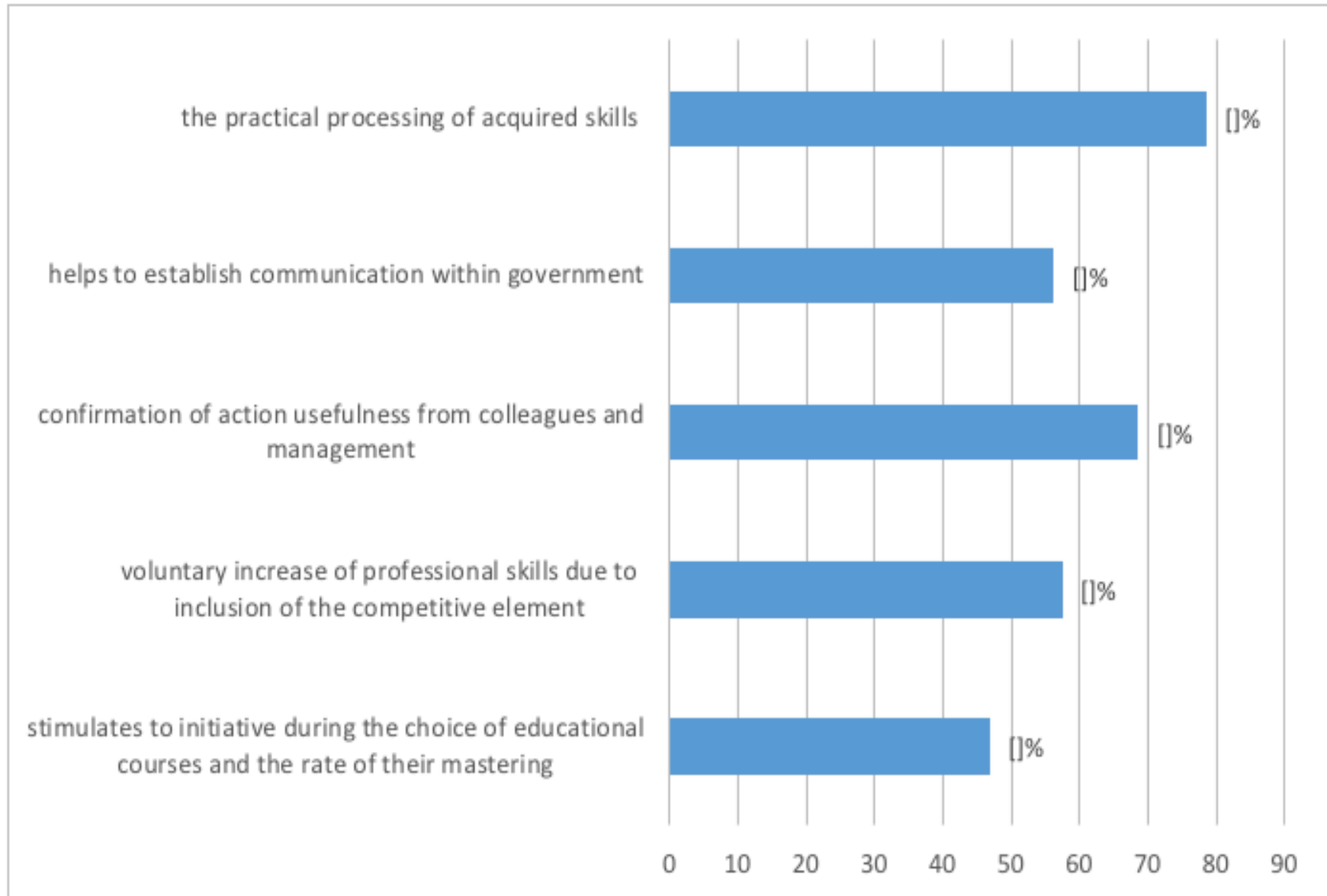
Secondly, the respondents see the advantage of gamification in comparison with other forms of training in the practical applicability of skills developed by simulator (78.5%). At the same time, the range of generated and mastered skills includes:

- "Soft skills", which allow the employees of government bodies to be successful regardless of their position and their professional activity specifics. Such skills are traditionally attributed to the number of social skills, namely: the ability to persuade, the ability to find an approach to people, to lead, negotiation skills, the ability to work in a team, the ability to manage time, etc. Thus, 28.6% of respondents noted their thinking productivity increase; 27.9% noted an increased memory and decision-making speed, memory efficiency; 30.1% noted the believe in their own strength.

- "Hard skills" - specialized skills related to the performed activities. These skills are permanent ones, well-seen, measurable and identifiable with specific designs, and thus they are included in the list of requirements set forth in the job descriptions of government officials, easily subject to a series of simple and final operations.

Diagram 3
The advantages of gamification use for government official training

A horizontal bar chart showing survey responses:

- the practical processing of acquired skills: []%
- helps to establish communication within government: []%
- confirmation of action usefulness from colleagues and management: []%
- voluntary increase of professional skills due to inclusion of the competitive element: []%
- stimulates to initiative during the choice of educational courses and the rate of their mastering: []%

Thus, gamification allows to solve several tasks as the method that improves the efficiency of employee training at a workplace: to involve employees in the learning process without special administrative efforts, to contribute to the development of creativity, allows to make feedback more effective.

Despite the advantages of gamification use shown during the training of civil servants, in the course of the research. The results highlight a number of controversial points. In particular, 34.2% of respondents note the decrease of remuneration value in the long-term use of gaming techniques. Almost half of surveyed (47.1%) ones note that they are too keen on the game context, and, thus, the reduction of orientation toward educational task achievement in distance learning. An addictive syndrome, which was formed among gaming participants, deserves a separate attention. This syndrome has a conditional name, but reflects the effect caused by an excessive enthusiasm for the game context quite correctly. The adapting to simulation games is accompanied by the effectiveness decrease of other motivational technique use, which, of course, should not be forgotten.

Grigory D.: "With all its merits, do not forget about the reverse side of gamification. In particular, the organic introduction of gamification into the distance training of civil servants should be correlated with the priority goals and the unit tasks, the age-related parameter and employee length of service. It is unacceptable to reduce the quality of the regular functionality, which was not included in the focus of a simulation game."

Konstantin V.: "For all its advantages, gamification will replace the traditional forms and the techniques of training unlikely. In my professional opinion, gamification can be used to eliminate point problems in personnel training, whereas the negative consequences of the game techniques use will be very perceptible in the long term: addiction, the shift of worker attention from their core functionality to permanently used skills, etc."

4. Discussion

Having analyzed the experience of gamification introduction into the working process of government bodies, we can conclude that the fields of gamification application by management structures is quite wide and a very effective. The solution of modern

challenges and tasks faced by public authorities at all levels of government makes their leaders to pay attention to fundamentally different forms of their employee training. The activities carried out within the framework of training are focused, first of all, on the development of skills, the broadening of horizon, and civil servant creative ability improvement. Such forms of teaching as lectures and master classes, suggesting one-sided communication of a lecturer with his audience are the things of the past. According to practice, this form of interaction with an adult audience has a low degree of effectiveness, does not have a noticeable increase of knowledge and professional skill development. It is not surprising that in recent years, the training programs for state institution employees have been based mainly on training with gamification various forms and tools.

5. Conclusions

The results of the study indicate the increase of gaming method share in the distance education of government employees. Lectures and master classes, as well as traditional training programs until recently, lose importance if they do not have time to adapt the game context of training for their purposes, introduce game attributes and the mechanics of production problem solution.

A positive experience, which is illustrated in this study, allows to broadcast (to use) gaming methods in a broader context: not only to enhance the motivation of employees, but also to develop skills, broaden the horizon, and enhance the creative abilities of public servants. However, it should be borne in mind that a single use of gamification has a positive effect in the work of public authorities, whereas it can be limited by such factors as addiction, remuneration value reduction, an excessive enthusiasm for game context, and the reduction of other motivational techniques as a long-term strategy for the development of public servants.

Do not forget that an organic integration of gaming into the distance education of government agency employees should correlate with the priority goals and the tasks of a unit, the age-related parameter and the length of employee service. The control over the regular functional performance quality deserves a separate attention.

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1. Assistant professor at the Department of Management and Administration. Russian State Social University, The Russian Federation, Moscow

2. Doctor of sociological sciences, docent, professor of the Department of Management and Administration. Russian State Social University, The Russian Federation, Mosco

3. Certified coach, business trainer, head of Department of public procurement and competitive bidding GBU Moscow "Moskovskiy Dom house of public organizations", The Russian Federation, Moscow

4. Assistant professor at the Department of Management and Administration. Russian State Social University, The Russian Federation, Moscow

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