

## APPLICATION OF GAMIFICATION ELEMENTS IN THE MANAGEMENT OF A GENERATION Y AND Z PROJECT TEAM

<sup>a</sup>ELVIRA GUMAROVNA NIKIFOROVA, <sup>b</sup>ANNA ALEKSEEVNA MIKHAILOVA

<sup>a</sup>*Candidate of Economic Sciences, Associate Professor of the Department of General Management of the Institute of Management, Economics and Finance, Kazan Federal University, Kremlyovskaya St, 18, Kazan, Republic of Tatarstan, 420008, Russia*

<sup>b</sup>*Department of General Management of the Institute of Management, Economics and Finance, Kazan Federal University, Kremlyovskaya St, 18, Kazan, Republic of Tatarstan, 420008, Russia*

E-mail: <sup>a</sup>aelvir4ik@ya.ru, <sup>b</sup>anyamix29@gmail.com

**Abstract:** The development of the organization's project activities is associated with the dynamics of change and the uncertainty of environment, including such a phenomenon as the COVID-19 pandemic. There is also an increase in the number of millennial employees in the labor market, therefore the companies need to adapt to trends that are dictated by the increasing importance and spread of information technology. One of these trends is gamification, which is driven by the development of the gaming industry, involving the representatives of Y and Z generations.

**Keywords:** Gamification, Project Team Management, Generational Theory, Project Activities, COVID-19

### 1 Introduction

Considering the specific nature of project activities, the manager should understand that the efficiency of the project operations, which ultimately affect the project, depends on the involvement of the project team members, on the transparency of conditions, restrictions and nature of work. In this regard, the use of gamification elements can be proposed as additional tools for the project team management (Eremenko, 2005).

Gamification is the "use of game elements in non-game contexts" (Dale, 2014). Let us consider the prerequisites for the gamification emergence. The term was first introduced by R. Bartl, Doctor of Artificial Intelligence Sciences, in 1980. R. Bartl meant the use of game elements for user collaboration under this term (Mazeina, 2014).

As part of studying the gamification application in the project activities, the greatest contribution was made by such researchers as K. Cunningham, G. Zikerman, M. Burke and T. Hiltbrand. They analyzed the most frequently used game elements from the gamification programs implemented by the companies. And based on this, it was suggested that the effectiveness of gamification application depends on the players supported by the system, the goals and results specified, the adaptation methods incorporated, as well as the organization of the feedback system and improvement of the social interaction mechanism (<https://4brain.ru>).

The authors K. Werbach and D. Hunter pointed out that the main gamification task is to use the game psychology. The desire to have fun is one of the most powerful motivators that motivates a person to be engaged in something with enthusiasm and full dedication. Therefore, "adding fun" to the workflow with the help of game mechanisms allows achieving the employee engagement, enthusiasm in work performance, as well as creating a learning environment in the organization that forms new experiences and new ways of solving problems (Deterding, 2018).

The use of gamification is also justified by the development of the XYZ generation theory. Due to the fact that the number of Y or millennial generation employees, who were born in the 1980s and 2000s, is increasing today, the organizations need to take into account that this generation grew up in the era of digital engagement (<https://www.ashridge.org.uk>).

The gamification elements include: game elements, relationships between these elements, abstract concepts. They also include game mechanics and game techniques that allow game elements being used in a non-game context in a way that has the same impact on gamification users as on regular players.

Thus, we see the relevance of introducing gamification tools based on its development prerequisites, from the development of the theory of generations. The organization can effectively use this information to interact with the project teams in order to achieve certain goals and objectives.

Due to the development of the COVID-19 pandemic, the project implementation activities were completely suspended in "AIESEC". This is due to the ban on crossing borders between countries for projects with the participation of foreign citizens, as well as the ban on holding mass events. To get out of this situation, "AIESEC" is currently developing a new activity direction: online personal development courses for young people. Business changes all the time. That means you need a flexible approach, and unis have lots of ways of helping you develop one. At WBS one undergrad module helps students develop creative skills like presentation, negotiation and debating, while another one invites them to try a little acting to get under the skin of how businesses work and explore the ethics of different situations.

"Creative behaviours are essential," says WBS associate professor Rachel Dickinson. "As work contexts become less predictable and employees need to respond to problems that lack predetermined outcomes, students must seek out approaches that help them prepare." In business, an understanding and appreciation of other cultures can be handy in particular ways. You'll find that different societies take care of business in very different ways, and the multinational nature of business schools can help you start learning about them.

Gemma, student experience and engagement manager at WBS, explains how being around people from a range of countries, as well as from all kinds of backgrounds, is great news for students.

"Diversity brings different perspectives, outlooks and experiences. Together these factors equip students to be strong global contributors." Developing the ability to reflect on your performance and the way you learn, or approach tasks, will be a pretty useful skill once you're out in the business world. Your time both in and out of the classroom will help you hone it.

### 2 Methods

The research methods include generalization and analysis of theoretical materials on the project team management, implementation of the gamification system in the "AIESEC" activities, analysis of experience of the gamification system implementation in the employee management, as well as synthesis of efficiency factors for the project team management.

"AIESEC" was founded in the world in Stockholm in 1948, a representative office in Russia was opened in Moscow in 1989. The organization is represented in more than 120 countries worldwide.

The "AIESEC" project team is a team of forum organizers who organize a project in Moscow on a full-time basis. The project term necessary for the organization without deviations is 4-5 months on average.

Let us analyze the experience dynamics of project teams in Fig. 1. We analyzed the age of each project team member for 2017-2019 as a basis for analysis.

According to this figure, we see that the longest experience of staying in the AIESEC for 2017 was 5 years in the project team "Forum of Leaders of Technological Change" in 2017 and in the

project team "Forum of Young Leaders" in 2017. The smallest length of service was 1 year of work in "AIESEC".

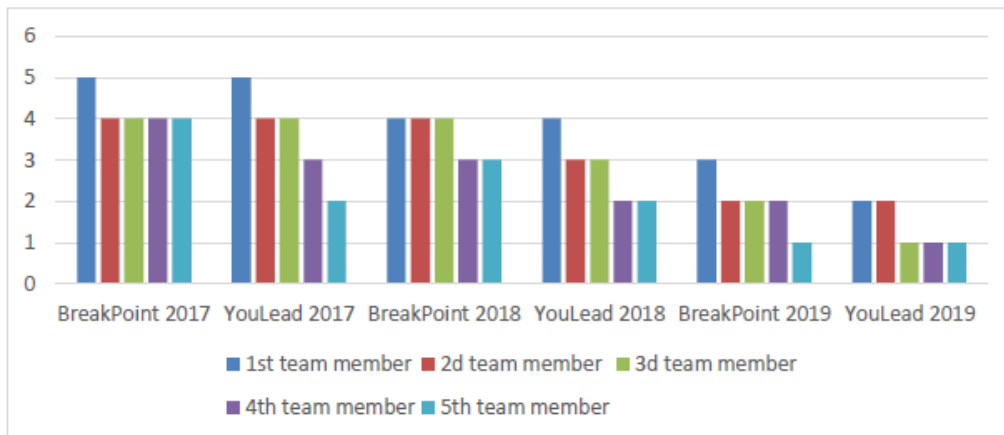


Fig. 1: Experience dynamics of the project team members for 2017-2019 based on a comparison of the time spent in the organization (compiled by the author)

Fig. 2 shows a graph of the ages of each project team member for 2017-2019. The figure shows that the oldest project team

member was at the age of 25 years old, the youngest - at the age of 18 years old.

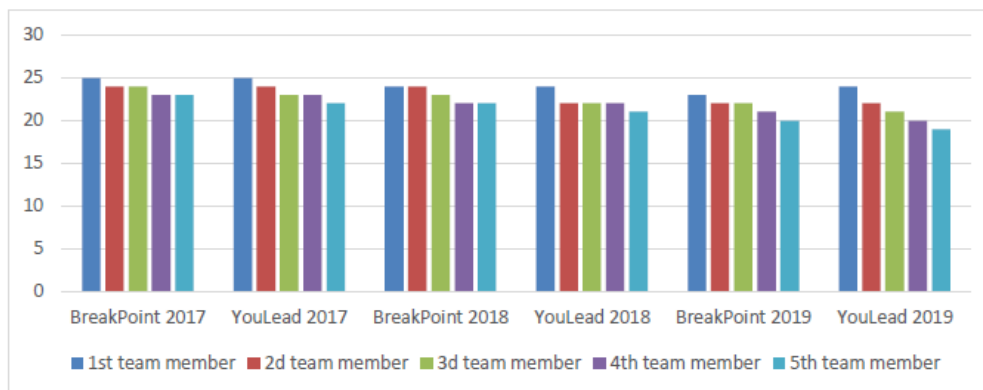


Fig. 2: Age dynamics of the project team members for 2017-2019 (compiled by the author)

A decrease in the length of service in the "AIESEC" and a decrease in the average age of project teams can have a negative impact on the project results. If we look at the project execution schedule for 2016-2020, we can see that there is a schedule variance due to the deviation in the selection for a new project manager and project team. Schedule variance is the amount of

time that the project is behind or ahead of the planned delivery date at a particular point in time, expressed as the difference between the earned value and the planned volume. Let us analyze the schedule variance in Table 1, where SV - schedule variance, EV - earned value, that is, the actual start date of the operation, PV - planned volume (<https://pmjournal.ru>).

Table 1: Analysis of planned and actual indicators of the beginning of operations

Operations	YouLead 2017, weeks			BreakPoint 2018, weeks		YouLead 2018, weeks		BreakPoint 2019, weeks		YouLead 2019, weeks	
	PV	EV	SV	EV	SV	EV	SV	EV	SV	EV	SV
Election of projects team leader	1	2	-1	4	-3	4	-3	6	-5	4	-3
Project team selection	5	6	-1	5	0	7	-2	10	-4	6	-1
Education for project team	5	6	-1	5	0	7	-2	10	-5	6	-1
Planning of the project	9	10	-1	9	0	10	-1	12	-3	12	-3
Creating of agenda	9	10	-1	9	0	10	-1	12	-3	12	-3
Searching and approving of speakers	12	11	+1	14	-2	13	-1	16	-1	17	-5
Searching and approving of partners	9	10	-1	11	-2	11	-2	13	-4	16	-7
Searching and approving of the	5	6	-1	8	-3	9	-4	9	-4	9	-4

The permissible variance in terms of project organization is +/- 1 week; respectively, each excess of this permissible indicator is a threat to the project quality.

"AIESEC" pays great attention to the project team selection, work program development with each leader and each project team for the project implementation in the current environment. For the effective work of the project team, the project leader holds weekly personal meetings with each team member, which allow identifying the difficulties that each individual member currently faces. At the same time, the project quality has a downward trend at the moment, which is accompanied by a reduction in its implementation terms, an increase in the cost of project implementation, in conjunction with the tendency to create project teams with less relevant experience compared to previous project teams.

### 3 Results

Based on the above analysis, we list the prerequisites for the need to introduce gamification tools into the project team management, after which we will conduct their detailed analysis, taking into account the factor of process gamification.

The first prerequisite is the problem of the coronavirus epidemic, due to which "AIESEC" has suspended its activities, while there

is a need for a system for retaining talents and knowledge, which will allow the organization resuming its activities after the situation ends.

The second prerequisite is the downward trend regarding relevant experience in the project team composition, which affects the quality of project execution and compliance with the main processes.

The third prerequisite is the downward trend in the availability of relevant experience among project team leaders. In this regard, there is a decrease in the quality of the management tools used in the project and project team management; in particular, in the performance of control and knowledge management functions.

If we consider each age group in relation to the theory of generation (according to Table 2), then we get the following results:

- from 2013 to 2016, the composition of the "AIESEC" participants was mainly comprised of Y generation representatives;
- since 2017, Z generation representatives have been joining the organization; moreover, the "AIESEC" leaders are also the representatives of this generation.

Table 2: Dynamics of the "AIESEC" average age group from 2013 to 2019

	2013	2014	2015	2016	2017	2018	2019
Team leaders of projects in IYPO «AIESEC», years	24	24	23	23	23	23	21
Team members, years	21	21	21	20	20	20	19

As we considered above, the gamification is one of the factors of effective work with Y and Z generation representatives. In the context of the applied gamification elements, it should be emphasized that "AIESEC" has the prerequisites for a more extensive application of gamification elements within the framework of the functions we are considering: control and management knowledge.

Within the framework of this problem, the gamification elements will facilitate the leader's work in monitoring the key performance indicators of the project team members by involving them in ensuring the transparency of their activities. Moreover, the gamification elements will encourage the desire to share their own results.

At the moment, this need is the most urgent in connection with the current situation with the spread of the COVID-19 virus. Since offline projects have moved to the online format, the work method has changed to a remote one, and to continue its activities, "AIESEC" shall create a unified system in which all the results of the project team's activities, as well as compliance with the deadlines for the main processes and tasks will be monitored.

Due to an increase in the cost of project organization, "AIESEC" is also considering reduction of the project preparation time, which may negatively affect its results.

Let us consider the application of gamification elements within the framework of the "Forum of Young Leaders 2019" project.

As an example, let us consider the implementation of the following elements (Chou, 2003):

- a description of the project "epic meaning" for the project team;
- defining the role of each project team member within the mission;
- defining the goal achievement levels within the framework of the "logistics manager" position and the assignment of individual badges for each level, etc.

Since the project is being developed within the framework of the company's mission "Peace and Realization of Human Potential through Development of Leadership in Youth", and the slogan "I Hear My Voice. I Choose Loyalty to Myself" (the slogan is aimed at making it clear to each participant that he/she has his/her own way of achieving success), we can define the epic meaning of the project as "To become a guide and support for young leaders who strive to make their contribution to the development of themselves and their country". Thus, the project positions itself as a support tool "for leaders", which will stimulate the project team to get involved in the improvement of results.

Thus, after determining the "epic meaning" of the project, we can offer the following options for the roles of each project team member, presented in Table 3.

Table 3: Roles of the project team members "Forum of Young Leaders 2019"

No.	Position	Role in the new mission
1	Program director	«Integrator of new knowledge in personal development sphere»
2	Head of department of delegates servicing	«Referee for all of the delegates and lawyer for the best of them»
3	Head of Logistics Department	«Strategist in creating conditions for maximizing the potential of young leaders»

4	Head of Partnership department	«An integrator of the country's best employers to provide young leaders with resources for their implementation»
5	Head of department of marketing	«Virtuoso in promoting the meaning and purpose of the project, which affects the decision of each young leader»

Source: compiled by the author

#### 4 Discussion

Thus, the common names of functional roles have taken on a larger and more meaningful name for the project team members.

Then we will define the performance indicators for the logistics manager and assign levels and corresponding badges in Table 4.

Table 4: Gamification of performance indicators of the logistics manager

№	Performance indicators	Levels	Badges and their compliance with the level
1	The number of partners involved for a coffee break	Level 1: 5 Level 2: 7 Level 3: 9 Level 4: 11 Level 5: 13	Level 1: «Snack» Level 2: «nourishing coffee break» Level 3: «the step to vigor» Level 4: «the nutrition of a true leader» Level 5: «The Royal Lunch»
2	NPS of partners	Level 1: 7 Level 2: 8 Level 3: 9	Level 1: «The level of worthy event» Level 2: «Nomination: hospitable project of the year» Level 3: «The secure future of the next projects»
3	Providing of gifts to guests and forum participants	Level 1: 1 gift for 1 person Level 2: 2 gifts for 1 person Level 3: 3 gifts for 1 person	Level 1: «The little gratitude» Level 2: «Thank you for being» Level 3: «We will return to you»

Source: compiled by the author

Additionally, we can offer to implement such gamification elements as "Messages from the project", which will be used as a support system for each individual project team member. By using the Telegram bot, the manager can add automatic notifications for specific dates, which will generate the following messages:

- questions that contribute to the independent analysis of the results and actions of the project team member;
- reminders on the personal development plan, within which it is necessary to perform certain actions, as well as pay attention to certain results;
- motivational messages that will support the emotional state of the project team member;
- question messages to monitor the psychological and emotional state, which directly affects the productivity of the project team member.

To visualize work processes, we can also propose to use the "checklists" system as an applied gamification element, thereby contributing to the knowledge management in the organization, to focus the team on creating new ideas, and not on performing routine tasks and activities.

Let us will assess the effectiveness of the implementation of the proposed gamification system in the "AIESEC" project activities. We will consider the effectiveness of the implementation of this system using the project management performance indicators, as well as the changes that will be made after the implementation of the gamified system.

When comparing the planned and actual variance indicators in the start of operations, we considered the "Forum of Young Leaders 2017" as a project with minimal variance from the actual start of operations (+/- 1 week). When reviewing the "Young Leaders Forum 2019" project, our variance rates increased to 7 weeks from the required start date. Moreover, a variance of more than 1 week is critical.

The average variance for the "Young Leaders Forum 2017" project was 0.86 weeks, while the average variance for the "Young Leaders Forum 2019" project was 3.4 weeks. Based on this, we can conclude that this project has the potential to reduce deviations in terms of up to 0.86 weeks, that is, by 2.54 weeks.

Accordingly, the first goal that we plan to influence through the use of gamification elements in the project team management is the shedule variance indicator, namely, the reduction of this indicator by 2.54 weeks.

When this indicator is met, each project team member frees up an average of 2.54 weeks, which can be invested in increasing the project quality.

Thus, with a project cost of 2,600 thousand roubles, and a project execution time of 24 weeks, the cost of one week was 108.3 thousand roubles for 2019. Thus, when introducing gamification elements into the project team management, we expect a reduction in the cost of project implementation by 275 thousand roubles. In business, an understanding and appreciation of other cultures can be handy in particular ways. You'll find that different societies take care of business in very different ways, and the multinational nature of business schools can help you start learning about them.

Gemma, student experience and engagement manager at WBS, explains how being around people from a range of countries, as well as from all kinds of backgrounds, is great news for students.

"Diversity brings different perspectives, outlooks and experiences. Together these factors equip students to be strong global contributors."

#### 5 Conclusions

Thus, taking into account the specific nature of project activities, its limitations, we found that a project team requires for the effective work of its members not only professional skills and qualities that allow them fulfilling their scope of tasks, but also special skills of self-organization and self-motivation, which will allow them acting in the conditions of different restrictions. These factors represent the potential of employees, which the leader needs to not only manage, but also develop. This is due to the fact that the project activity nature requires the project team members to constantly improve their knowledge and interaction methods. At the same time, it is desirable to stimulate the project team members to self-development.

In order to ensure this, the leader needs to create conditions conducive to increasing the involvement of employees in the activities that increase their motivation to develop and achieve the organization's goals. We proposed the introduction of gamification elements as a tool for creating these conditions. The results of this study can be used not only in "AIESEC", but in any organization to create an effective project team management system after the end of the COVID-19 epidemic.

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