

**PERCEIVED ADVANTAGES AND DISADVANTAGES OF
GAMIFICATION IN ENTERPRISE SETTINGS: A PILOT STUDY**

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ABSTRACT

This article is devoted to the gamification's advantages and disadvantages. The purpose of the study was to identify the pros and cons of gamification, which would be or has already been implemented in the enterprise. As the gamification is gaining its popularity at the moment – the conducted study reveals both sides of this concept and allow for more detailed view. The basis of the research was a pilot study conducted among polish MBA students (managers, entrepreneurs, professionals) in the year 2021. The pilot study showed that gamification is more and more popular solution used by the companies, in its few areas such as: marketing, human resources management or knowledge management. And this concept has no limits according to company's operating sector. But, next to the visible advantages offered by gamification, some significant disadvantages have been noticed as well, such as: additional costs associated with its implementation, the risk of reluctance among the employees or it could be perceived only as a tool used for sale increase.

Keywords: *gamification, advantages, disadvantages, pilot study, MBA students*

INTRODUCTION

The gamification concept is not a new concept anymore, however still is perceived as a something new – an idea, an activity or a simple game. As it is clear from the gamification name itself, its base is a game whose dynamics and mechanics (to motivate and maintain the involvement of participants) and its impact on human, have been known in ancient times. Games accompanied people from the beginning of history as a way of spending time, in subsequent years they took different forms: board, open-air or computer games. One can therefore assume that the use of games mechanisms in a business practice was a matter of time. The first gamification manifestation were mechanisms used in the field of marketing in the 80s of the twentieth century, in the form of loyalty programs developed and functioning in airlines companies, hotels and catering (Bajdor, Dragolea, 2011, p. 579). Computer games had a large influence on gamification isolation, creating a separate gaming industry. This caused an interest among scientists, who strived to understand what makes that computer games are so addictive. This in turn has led to a number of theories and concepts related not only to the game design but also to identify the incentives that motivate players (Robson et al, 2016, p. 413). And this is the basic gamification concept, because the understanding of these factors determines the success of the game. In contrast, technological development, in particular social-media and the Internet, had popularized this concept in a large scale. They have changed the way in which businesses and consumers participate in knowledge sharing, new product creation, discussions and gaining experience.

In addition, companies are constantly seeking for new ways not only to get in touch with customers but also increase their loyalty and commitment. And successful implementations made by such global companies as Microsoft, Nike, Deloitte, Honda, Marriott Hotels, L'Oreal, Cisco and Facebook have popularized this concept as well, through which gamification has received broad group of supporters (Osyra, 2013, p. 150). Currently, the smaller companies use gamification mechanisms as well. For example, Starbucks has launched My Starbucks Rewards application, where customers paying for the coffee using a mobile application, collect points that can later exchange for certain benefits. For the people, conscious about health, programs sending the challenges of taking care are directed. Thus, they increase the level of health care health through sport and proper diet. At the moment, it can be stated that gamification mechanisms are being used in almost every field: motivating people to exercise, self-care, supporting the so-called sustainable consumption behavior or increasing the level of environmental awareness (Brzeziński, 2016, p. 70).

This versatility of gamification use, has caused that this concept has now many definitions formulated by theorists and practitioners, operating in this field of research. It should be noted that most of them refers to the "business gamification", understood as "conscious and deliberate use of mechanisms and

techniques used during the game design to increase the commitment, loyalty, modifying behavior and habits of employees, customers, contractors or other partners the company's business, what in turn allows to increase the efficiency of business processes in the relevant areas" (Swacha, 2015, p. 155). Thus, most of the gamification definitions is formulated based on its impact on consumer behavior and the company's employees. One of the shorter definitions was introduced by J. Grove: "as the use of gameplay mechanics for non-game applications", in which gamification is described as a process, in which, in order to solve the problem or employees' engagement increase, the artificial intelligence mechanisms are being used. Zichermann and Cunningham present the gamification concept as the application of psychological game design principles for both: engaging consumers and motivating employees (Zichermann, Cunningham, 2011, p. 25). C.F. Hofacker et al define gamification as the "use of game design elements to enhance non-game goods and services by increasing customer value and encouraging value-creating behaviors such as increased consumption, greater loyalty, engagement, or product advocacy" (Hofacker et al, 2016, p. 28), so again it is connected with the business gamification concept. According to S. Deterding et al, gamification is a manifold socio-technological phenomenon with claimed potential to provide a multitude of benefits such as enjoyment as well as social benefits through communities and social interaction (Deterding et al, 2011, p. 13). Among the polish authors, the most accurate definition is the one formulated by P. Tkaczyk: purposeful change in humans' behavior through the use of games mechanisms (Tkaczyk, 2011, p. 18). This definition is closely related with the J. Grove's definition presented above.

In relation to marketing, in the literature on gamification we can find a model proposed by J. Schell: Elemental Game Tetrad Model, which might be a helpful tool for practitioners, in order to encourage positive marketing outcomes. This model consists of four elemental characteristics which are applicable to gamification – story, mechanics, aesthetic and technology. According to Schell's all these elements should be carefully aligned to create players' engagement.

Story – this element provides the context to a game and in addition, provides a meaning to the consumers' experience and behaviors.

Mechanics – this element refers to structural aspects of game and its rules. It is also concerned with how the achieved target or success is recognized by reward. Mechanics also covers the structure and levels of the game. It enables a game dynamic which in turn creates or shapes the consumer's (user's) personal experience.

Aesthetic – it refers to the look of the game, as its presentation to the users is also an important factor for potential users. No one will play an "ugly" game.

Technology – is responsible for shaping the game experience, it allows for example for games in a network or through the Internet. The higher level of technology, the more interesting could be the game and get bigger the engagement (Schell, 2008, p. 56).

One of the most interesting examples of using gamification in relation to marketing is the case of book "Decoded" written by rapper Jay-Z, launch (Robson et al, 2016, p. 33). Usually, book launches are not very exciting or particularly interactive, still, the traditional way is the most popular one. But Jay-Z's book launch was a pure gamified experience. With the agency Droga5 help, the book launch led to an engaging customer' experience. With cooperation with Microsoft's search engine and Bing, the agency has designed an online and on-the-street gamified experience, in which players were forced to find pages of this book. All 320 pages were displayed in various sizes and in many unexpected places, such as pool bottom, rooftop, pool table or even in cheeseburger wraps. In total the pages of the book were displayed in 200 locations in 13 major U.S. cities. Through interaction, engagement and virtual maps offered by Bing, players could unlock pages and win special prizes such as concert tickets or memorabilia. Facebook and Twitter have been also engaged in that game, allow to identify the clues leading to pages. These actions caused that players' involvement have increased and led to significant achievements: the book spent 18 weeks on the NYT bestsellers' list, Bing has moved to top 10 most visited Internet sites and Jay-Z' Facebook account got more than 1mln friends.

The global gamification market is growing very fast and now its value is estimated at 500 bln USD, it is forecast that in 2018 it will reach 5.5 bln dollars. The development of this market is done primarily through the activities of companies such as Gigya or Bagde Ville but also due to a growing awareness and knowledge of customers, who are looking for new and more effective solutions and ideas for advertising campaigns or even human resource management.

Although the above-given example of gamification application has referred to marketing, this concept can be also used in areas such as (Cybulski, 2016, p. 2):

- Sales, Stylove application in which the user complements the fashion sets in price ranges, can also encourage other users to vote for his set,
- Consumer and loyalty programs, Banking and Shopping applications in which users by making transactions gain points which can be exchanged to some products, and very popular in Poland Payback program,
- Human resources, Ziemia 2 polish application, in which players are NASA agents looking for candidates ready to colonize the Earth,
- Employee development and motivation, Inspiratorium Management 2.0 program, which includes contents in the form of challenges, movies, videos, e-books and tests. Using this program, employees start to think prospectively about their professional development,
- Self-development and health, Super Better application, which makes the user more capable of getting through any difficult situations,
- Education, the best example is Quest to Learn, created with the support of the MacArthur Foundation. Students instead of traditional learning, take the challenges, and missions during which are trying to solve complicated problems,
- Finance, Mint financial portal which helps for budget management. It monitors user's financial situation and allows to perform personal targets,
- Sport, Nike+ application which encourages users for sport activities. It helps to monitor physical condition, motivate others to stay health,
- Social programs, for example, Chorewars application, in which users create teams together with their friends and compete in the household duties performance.

From the above is visible that today, gamification is present and can be used in almost every aspect of human life. And thanks to rapid and dynamic technology development we may assume that in the future, new solutions of using this concept will arise.

According to Gartner's experts, gamification has a huge potential and, has already, become an important part of strategy of any digital business. They, however, highlight that the majority of organizations do not use it in a proper way. Gamification should motivate people to achieve their own targets, not the ones selected by the organization. If the organization verifies its targets, will be able to use the gamification to motivate people to reach them, in consequences, it will lead to achieve business targets as well. Moreover, Gartner's experts state that in 2016 gamification will become one of the most important ways to gain customers' loyalty. And up to 2020 it will have a significant influence on innovations, employees' efficiency, globalization in education and personal development (CEO report). So we can predict that in the next 50 years the gamification will become a "traditional" tool, used by the organizations and people itself to conduct their activities in various fields.

The purpose of the research

A. *The main purpose*

The main purpose of conducted research was to identify the pros and cons of gamification, which would be or has already been implemented in the enterprise. In polish enterprises gamification is still treated as a novelty, so another purpose of the research was to spread a knowledge about gamification among organizations. The overall research covered subjects such as:

- Gamification advantages and disadvantages mentioned earlier,
- Overall knowledge on gamification,
- The main motives to implement a gamification in the company,

However the presented article includes the results on gamification perception by surveyed companies, its advantages and disadvantages.

B. *The methodology*

In total, the survey questionnaire had 12 questions:

The first three were about the sex, age, position of the respondent and sector in which the company operates. Another three questions were related to overall knowledge on gamification. Another set of questions were about the gamification advantages and disadvantages.

The research were conducted on August 2021 among MBA students, among which were CEO's, Directors and top management, managers, specialists and other.

We have received, in total, 68 filled survey questionnaires.

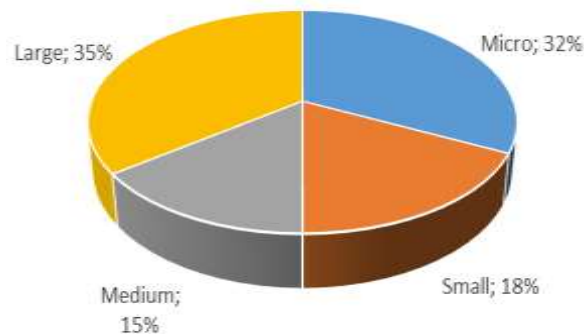


Fig. 1. Companies' size
Source: Own work

From the above figure is visible that the number of each group of companies are almost equal. It is only visible that medium sized companies were the smallest group. We have also checked the relation between the company size and the knowledge on gamification.

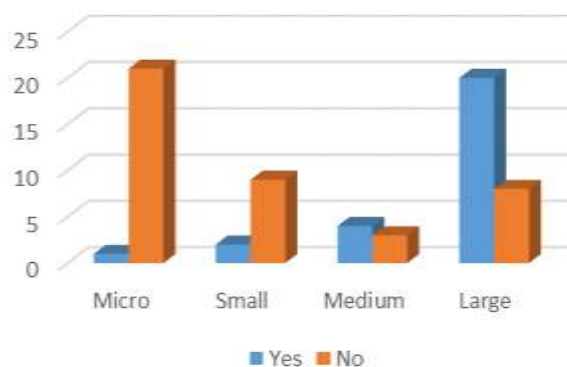


Fig. 2. Relation between the company size and possessed knowledge on gamification
Source: Own work

As it is clearly visible from the figure 2, in the case of micro sized companies, the vast majority of them have no knowledge on gamification. Almost the same situation may be noticed for the small sized. But in the case of two last types of companies: medium and large sized – the majority of them have possessed this knowledge. It seems that possession of knowledge on gamification is more typical for big companies. It might be caused by its size and thus by having an appropriate human resource, which can deal with this subject. Also, the knowledge on gamification could be acquired on the way of new plans or strategies designing, as a potential solution. Therefore, micro and small companies, are concentrated on their activity the most, also, they could have just started their activity, being on the development path's beginning, so they deal with the most important issues. It can be only assumed that in time, they would acquire some knowledge on gamification.

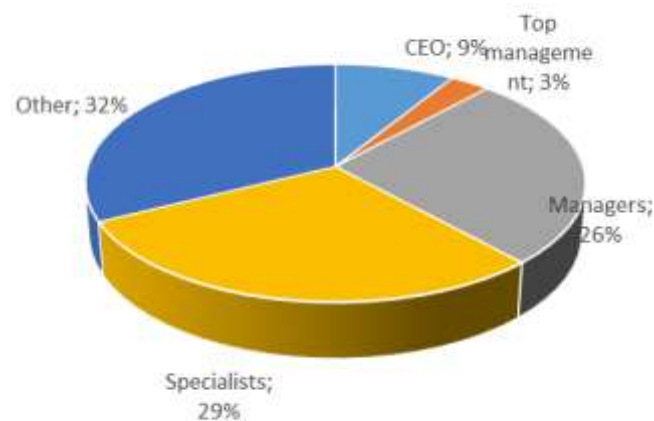


Fig. 3. Respondents positions
Source: Own work

The vast majority were specialists and managers, among “other” category we could highlighted: vice-director, client advisor, inspector, technician, salesman, secretary and data entry clerk. Having in mind the above results we have also checked the relation between respondents’ positions and the knowledge on gamification.

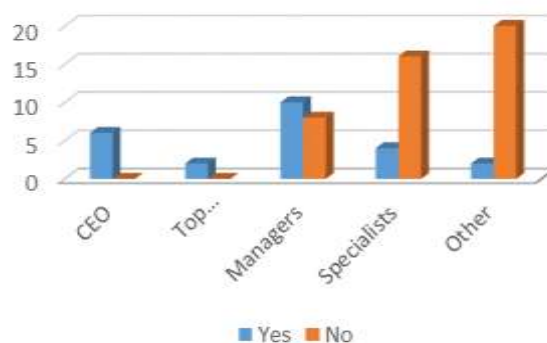


Fig. 4. Relation between the respondents’ positions and possessed knowledge on gamification
Source: Own work

Among the CEO, there were no respondent who would not have any knowledge about the gamification, as the same in the case of top management. Among managers, half of them have some knowledge about the gamification and almost half – have not. Only in the case of specialists and other – the vast majority of them have highlighted that they did not have any knowledge on gamification. Based on this, can be concluded that wider knowledge about gamification have the people occupying higher positions than the other person. Only in the case of specialists, it can be explained by the fact that this position binds to the so-called narrow but highly specialized field, so if this position involves eg. marketing activities, the lack of awareness of this subject can be understood, among the respondents.

The research results

The following statements were considered as the gamification advantages:

- Bigger attractiveness of workshops/trainings, which can lead to higher level of employees’ engagement in performing duties [1],
- Through the more attractive form, employees are more involvement doing their tasks [2],

- Gamification flexibility allows for better tools adjustment for employees who like the competition as well for the ones, who like teamwork [3],
- Gamification can be considered as a positive monitoring-controlling tool in highlighting the merit of employees, such as ability for strategic thinking, together with feedback to employee [4],
- The form of gamification such as awards, rewards, certificates, is highlighting the increase of professional status [5],
- Work as a game caused that employees are more involved and time needed for work is optimized [6],
- Rules clarification attract employees [7],
- It increases employees' self-esteem [8],
- It improves knowledge flow through the company through increasing number of ideas or conceptions, it stimulates creativity [9],
- Allows for time reduction during the recruitment process [10],
- It gives impulse for team work [11],
- Can be used as a coaching and motivating tool [12],
- It allows for company's strategic goals achievement [13],
- Can cause that employee will identify itself with the company [14],
- Flexibility is the major gamification feature [15].

And the statements below, were considered as the gamification disadvantages:

- Gamification not always contributes to company's strategic targets realization [A],
- Its effectiveness very often depends on its image, form and attractiveness level [B],
- Gamification implementation requires large financial expenditures [C],
- There is a risk of reluctance to play among employees [D],
- Too complicated system, too ambitious targets can cause the employees' reluctance, showing by lower motivation [E],
- Maladjustment of gamification form to employees' expectations [F],
- Perceiving gamification as a marketing tool only [G],
- Can lead to exclusion of employees which do not take a part in gamification [H],

In case of these two groups of questions, respondents were asked to put an appropriate range, when:

- 1 meant the least important,
- 2 meant less important
- 3 meant "do not have opinion"
- 4 meant important
- 5 meant the most important.

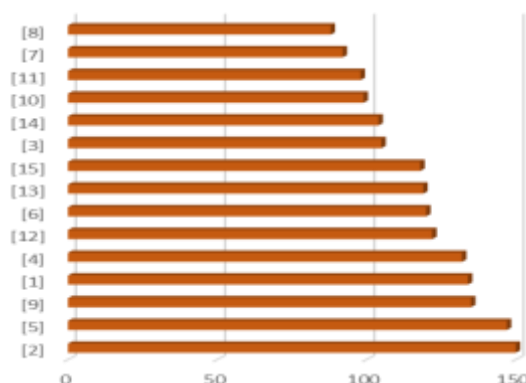


Fig. 5. The gamification advantages

Source: Own work

For the most important gamification advantages, respondents considered the possibility of increasing the involvement of employees in the performance of their duties through more attractive forms of their execution. Also, prizes, awards and certificates are gamification tools that enhance the involvement of

employees as well as contribute to their desire to enhance their professional status. Such a high position allows to conclude that the most stimulating gamification tool are the awards, certificates, and preferment, and they motivate employees to greater efforts the most. On further places were found the advantages of: improving information flow and increase creativity among employees, attractive form of training or seminars that better motivate employees or gamification perception as a controlling-motivating tool in its positive aspect because it emphasizes the employees' advantages and capabilities. In contrast, as the least significant gamification advantages, respondents considered its ability to self-esteem increase. Respondents in fact decided that the increase in self-esteem a character primarily affects. Thus, they have distinguished gamification's influence on the level of employee involvement in their duties and sense of their values. Just as gamification transparency rules does not affect how much use at solution will be treated - all attractive forms, prizes and awards, or level of complexity are count the most. Respondents also believed that gamification does not give an impulse to teamwork, only the form of its use, on the one hand may lead to create a team of employees in order to achieve the goal, and can also put on a free and individual problem solving and duties realization. However, from the definition, gamification does not lead to the initiation of teamwork. In the middle were the advantages on which the respondents had no opinion, ie. they did not negate the fact that these are benefits but did not attribute to them a major level of significance.

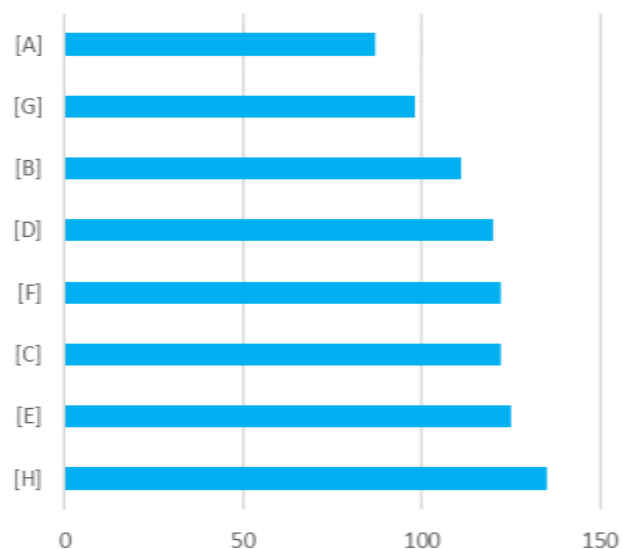


Fig. 6. The gamification disadvantages
Source: Own work

For the biggest gamification disadvantages respondents considered the exclusion of those employees, who do not participate in the game. Therefore it can be assumed that during gamification implementation, company should involve all workers or department in which the gamification platform will be launched. Of course it can happen that employee would not have a desire to take part in the game, but it is worth to assume that platform will be addressed to all employees and not just those selected. On the second place among gamification disadvantages its maladjustment to employees; skills or to reality have been found. It can, however, lead to discouragement of workers and thus decrease in motivation and commitment. It is therefore worth to carry out the so-called tests to determine whether the implemented solution is not too complicated or how it is perceived by employees. And in the case of comments, they should be carefully considered and appropriate corrections should be made. Indeed, employees will be the end-users of the platform and the company wanting, through gamification, to meet specified targets, should adapt the platform to the employees' skills and expectations of. On the other hand, the least significant gamification disadvantaged respondents considered the fact that, gamification not always contributes to the strategic goals of the company. Thus gamification is regarded as one of the solutions used in the company and not as a determinant of its further development. Drawback for gamification perception as a marketing tool has also been designated as the less

important. Thus it is hard to perceive it as a marketing tool when it is implemented, in human resources department. Also the dependence its efficiency of its appearance was not a major defect - the effectiveness and impact on the level of commitment and motivation are the most important factors. The fact that gamification is not perceived as a marketing tool only, can be affected by the research results on segments in which, the gamification is being used the most common.

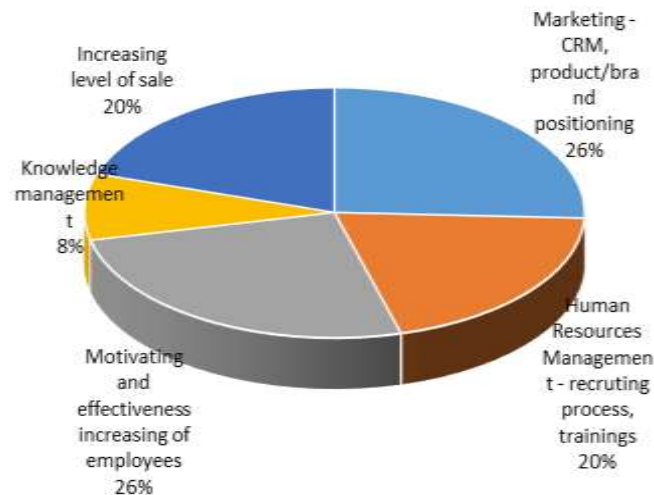


Fig. 7. The sectors of gamification implementation

Source: Own work

As can be seen from the above figure, gamification is being used as a marketing tool, but also often used as a tool to motivate employees. In second place were the sectors related to human resource management, i.e. the use of gamification in the process of acquiring new employees or to increase sales. Least likely gamification is being used in the field of knowledge management. It should however be noted that the uniform distribution of results for the first four segments shows that gamification is not perceived as a marketing tool only.

CONCLUSION

Gamification, particular in business dimension may be the answer to the challenges faced by companies operating in the dynamically changing reality, which requires them to a rapid response to emerging opportunities and rapid adaptation to new conditions. For this purpose, the companies may benefit from new solutions which have arisen as a result of the rapid development of technology, information and communication technologies in particular.

Because as long as gamification did not require this kind of tools previously (eg. awards were in the form of badges or certificates), is a solution directed to modern enterprises, requires a computer, Internet access and the appropriate software.

As is clear from the research conducted among employees (who were MBA students), gamification phenomenon is known in the medium and large companies, and knowledge about it, CEOs or top management possess the most often.

For the most important gamification advantages were considered the following:

- Through the more attractive form, employees are more involvement doing their tasks;
- The form of gamification such as awards, rewards, certificates, is highlighting the increase of professional status;
- It improves knowledge flow through the company through increasing number of ideas or conception, it stimulates creativity.

And the least important:

- Rules clarification attract employees;
- It increases employees' self-esteem;
- It gives impulse for team work.

On the opposite side, we could select the most important disadvantages such as:

- Too complicated system, too ambitious targets can cause the employees' reluctance, showing by lower motivation;

- Can lead to exclusion of employees which do not take a part in gamification.

And the least important:

- Gamification not always contributes to company's strategic targets realization;

They show that gamification primarily affects the level of involvement of employees in the performance of their duties and obtained preferment and awards, mainly underline their professional status. It also has a big impact on the level of creativity of employees - however, this issue requires further research to identify the type of impact. On the other hand, excessive complexity of the game, setting too far-reaching or unreasonable purposes can lead to employees' discouragement and decrease their motivation. It should however be noted that the defect consisting in the fact that the gamification mechanisms implementation requires a large financial outlay, has not been determined as a significant. Also quite a popular belief that gamification is treated only as a marketing tool was not confirmed.

The research presented in this article, were mainly related to determining the level of significance of the advantages and disadvantages of this solution, but they can also provide a basis for further research on entrepreneurs' expectations towards gamification or identify the benefits that companies have had as a result of its implementation.

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