Use of Gamification in Employee Training and Development

Lasha Abuladze

University of Economics in Bratislava, Faculty of Business Management,
Dolnozemská cesta 1, Bratislava 5, 852 35
Slovak Republic
lasha.abuladze@euba.sk

Abstract. Gamifying employee training and development is becoming more and more attractive to companies from year to year. By using the right elements of gamification in employee training and development, HRM can identify the strengths and weaknesses of its employees. Training and development programs tailored to the needs of employees can be considered an effective tool for helping employees to transform their weaknesses into strength. The lack of information, research, and comparisons on the ways of gamifying employee training and development focused on employees' soft skills and its effectiveness hinders its wider dissemination. In the article, we identify and describe different situational stories, when gamification is used by HRM to increase, develop employees' soft skills such as: decision making, willingness to change, teamwork and resilience. We also measure the effectiveness of gamified employee training and development focused on their soft skills by comparing the percentage results before and after use of gamification in this area within bank „Technology ".

Keywords: Gamification, Employee training and development, HRM.

JEL classification: *M12, M53, M54*

1   Introduction

Having well-trained, prepared employees is key because human capital is recognized as a determinant of company's competitive advantage and a major differentiator in today's dynamic, competitive market environment. Employee training and development is the process of improving their skills, abilities, and knowledge to meet specific job requirements.
The use of gamification in employee training and development is becoming more and more attractive to companies from year to year. By using the right elements of gamification in employee training and development, HRM can identify the strengths and weaknesses of its employees. Training and development programs tailored to the

needs of employees can be considered as an effective tool for helping them to transform their weaknesses into strength.

The main goal of this research is to identify ways of gamifying employee training and development to increase its effectiveness by developing, increasing employees' soft skills.

The contribution of this research is in identifying and explaining how HRM gamify employee training and development focused on employees' soft skills and to what extent HRM increase its effectiveness.

We believe that the lack of information, research, and comparisons on the ways of gamifying employee training and development focused on employees' soft skills and its effectiveness hinders its wider dissemination. We expect that the information provided by our article will result in increased interest of companies for implementing this tool in employee training and development programs, especially those that focus on the soft skills of employees.

2 Literature Review

Various authors, researchers, have defined gamification as the process of using or applying game elements and principles in gamified work contexts. This can be understood as the use of game philosophy, game thinking and game mechanics in non-game areas to increase motivation and encourage employees to solve specific tasks. Game components used in gamification can be considered: design, aspects, principles, points, badges, levels, and leaderboards [1,2].

Gamification can also be considered as process, activity of reaching company's goals by having fun. According to Mollick and Rothbard [3], it can be defined based on the perspective of employer – as a tool to engage employees in competition and thus contributing to the achievement of company's goals.

Gamification can have one or few following goals, that can be achieved: to make boring tasks more entertaining, so people are more likely to perform them, to increase employee's motivation, engagement, loyalty, to promote positive organizational culture, to create a friendly atmosphere in teams, to decrease stress level among employees and so [4].

Every year more and more companies are noticed in using of gamification, which can be explained by the fact that the new, digital savvy generations Y and Z prefer to have continues fun at working and to fulfil traditional activities in digital environment [5].

Gamification can be used by HRM as a powerful tool for: recruiting and retaining employees, identifying their strength and weaknesses, designing, and providing proper training, identifying employees with the highest level of performance, motivating, engaging, and promoting them, creating, or modifying their career plans, identifying, and predicting employees, who may leave the company, create the desirable EVP (Employ Value Proposition), increasing attractiveness of Employer Branding, etc. In other words, gamification can help to convert work, company related employees' experiences into more interesting, satisfying, fun, productive, interactive, and playful

at every stage from the training of employees to the onboarding process, product testing, sales force, performance management [6,7,8,9].

2.2 Employee Training and Development

Having well-trained, prepared employees is key, because human capital is recognized as a determinant of company's competitive advantage and a major differentiator in today's dynamic, competitive market environment [10,11,12]. Training and development are the process of improving the skills, abilities, and knowledge of employees to meet specific job requirements [13]. With help of employee training and development HRM can create a win-win situation between employer-employee relationship. Through proper training and development, employee can become more effective, efficient, and more productive, which can lead to higher company performance, efficiency, effectiveness, differentiation, etc. [14].

The main goal of employee training and development is to:
- refresh and develop existing employee's knowledge, skills, and abilities,
- familiarize new employees with the organizational mission, vision, rules, regulations, requirement and working conditions,
- keep employees updated on technological and interval/external environmental changes.

Employee training and development can:
- improve employee's satisfaction and engagement. According to various authors, training and development can help increase employee satisfaction as well as reduce absenteeism and turnover [12,15],
- decrease the level of supervision. A well-trained employee will be well acquainted with the job and will need less of supervision. Thus, there will be less wastage of time and efforts.
- decrease accidents and errors rates. Poorly and unproperly trained employees are more likely to have accidents and errors if they lack knowledge and skills required for doing a particular job. On the other hand, well-trained employees can significantly increase company's efficiency level by committing less accidents and errors in job [16],
- increase chances of promotion. By acquiring or developing skills, knowledge and abilities, employees may become more eligible for promotion. Some authors consider well-trained and developed employees to be the company's main asset,
- increase employee productivity. Proper training and development improve efficiency and productivity of employees. Well-trained employees show both quantity and quality performance. Company may have less wastage of time, money, and resources if employees are properly trained [17].

In today's turbulent dynamic market, among other important factors that affect the current or future state of the company, employee preparedness and readiness play a key role in the company's vitality. To remain sustainable in the market, every company needs to pay attention to human capital due to its intangible characteristics, such as knowledge, skills, and abilities [18].

2.3   Gamifying Employee Training and Development

By gamifying employee training and development HRM use game elements, components and mechanisms such are: badges (provides positive reinforcement to employees), leaderboard (helps to raise employees' intrinsic motivations based on competition), levels (gives feedback on employees' progress), rewards (helps to rise employees' extrinsic motivations as experience points and badges can be converted into real world rewards), experience points (earned by employees based on their progress through their training), visualization (video game, avatars, virtual reality), role-play (playing different characters) and so [19,20].

Use elements, components and mechanisms in employee training and development can: make whole process more fun, increase engaging, increase competition, decrease stress, shorten feedback time, increase participant's empowerment and so [20,21].

Before implementing gamification HRM needs to determine specific goal(s), purpose(s) of gamification, which should be achieved in accordance with the needs of its employees. Once the goal(s), purpose(s) of employees training and development have been determined, HRM must carefully select the right game elements, components, and mechanisms to avoid overuse, which may increase employee involvement, engagement but cannot provide any positive results [22].

The use of gamification in employee training and development is becoming more and more attractive to companies from year to year [19]. By using the right elements of gamification in employee training and development, HRM can identify the strengths and weaknesses of its employees. Training and development programs tailored to the needs of employees can be considered an effective tool for helping employees to transform their weaknesses into strength [23].

3   Methods

In the theoretical part of research, we use deduction and analyze methods to identify, analyze current knowledge on employee training and development, gamification and gamifying employee training and development. We also used an induction method on use of gamification in employee training and development. By synthesizing, comparing, and inducting current knowledge, we have identified and defined a gap in how HRM can gamify employee training and development to increase its effectiveness by developing, increasing employees' soft skills. We have identified the lack of knowledge on the ways of gamifying employee training and development focused on employees' soft skills and its effectiveness. Subsequently, we created a research goal and questions for our study.

Main research goal: identify ways of gamifying employee training and development to increase its effectiveness by developing, increasing employees' soft skills.

Research questions: how can HRM gamify employee training and development focused on employees' soft skills? to what extent can HRM increase its effectiveness?

The practical part of the research is based on a case study examining a Greek bank as a main object headquartered in Athens, Greece. The bank's management did not allow us to state the name of their company in our publication and instead offered us to

refer them as „Technology,, bank. They have 412 branches in Greece with approx. 8,900 employees and gamify employee training and development for their clerks since 2018 with help of partner company.

At „Technology,, bank, HRM gamify clerks' training and development to develop their soft skills such as: decision making, willingness to change, teamwork and resilience. Main source of practical part of research is the statistical report provided by HRM, based on which we identified, analyzed ways of gamifying employee training and development, and measured its effectiveness by comparing its results before and after using gamification. We also used an interview with the HR manager to get a detailed explanation of the statistical report.

4   Results

4.1   Case Study – Gamifying Employee Training and Development within the Company - „Technology "

HRM at bank „Technology" headquartered in Athens, Greece use gamification in the employee training and development for their clerks. „Technology" bank has 412 branches in Greece with approx. 8,900 employees. „Technology" bank belongs between three leading banks in Greece in terms of market shares in loans and branch network. It provides a wide range of financial products and services for individuals, financial institutions, small and large businesses across Greece.

Gamification of clerks' training and development is realized on their web-platform and manages to attract hundreds of employees monthly and turns their everyday activities into fun and effective experience. Their gamification includes employee-motivation elements, such as progress bars, ranking, experience points, rewards, leaderboard, visualization, and specialized badges.

Main purpose of gamifying clerks' training and development is to develop their soft skills such as: decision making, willingness to change, teamwork and resilience. Their gamification is based on roleplay in different working situations, where clerks' abilities, behaviours and above-mentioned soft skills are evaluated.

Decision making. At „Technology "clerks are required to come up with a decision quickly and effectively. HRM pay attention to clerks' key decision-making ability and skills such as: receive, understand, integrate, and work with information, identify relevance of information, find different options, analyse, and understand pros and cons of each option, forecast their outcomes and select the best variant from available options in particular situation, which can generate best possible results.

HRM gamify decision making process based on roleplay within working situation to increase clerk's level of confidence in decision-making and their ability to make a quick and right decisions, to choose wisely among different options and to learn from own mistakes in decision-making.

In the gamified decision-making, clerks have different situational stories in which they are free to decide how to behave, manage the situation and apply the required skills correctly and accordingly. For example: in one situational story HRM test clerks' ability to recognize a problem and take an action to handle it, in other story clerks' skills

are tested based on situation, when their supervisors are out of office and they have to make quick decision on business matter, in another situational story they need to make decision based on business matter about which they have zero or limited knowledge. HRM also evaluate clerks' ability how they can manage each situation, what outcomes they can get, and how well they can handle outcomes of bad decision made by them.

Employee willingness to change. HRM pay attention to clerks' willingness: to adapt on changing, turbulence situations, to show proper behavioural responses in different situations if and when it's necessary, to take, adapt on new, unexpected duties and tasks, to select or modify behaviours and skills in response of changing situations, circumstances, to demonstrate creativity, communication, negotiation and excellent time management skills, to stay calm in face of difficulties, others mistakes and turbulences.

HRM gamify willingness to change process based on roleplay within working situation to increase clerks' ability and skills: to use creative ways of finding innovative solutions in turbulence and unexpected situations, to successfully work with changing priorities, tasks, and workloads, to have effective time-management within unexpected circumstances and to receive feedback or advice.

In the gamified employee willingness to change, clerks have different situational stories in which they are free to decide how to behave, manage the situation and apply the required skills correctly and accordingly. In different situational stories HRM test clerks' ability, skills and behaviours: to task, which is outside of their job description, to task when they had to meet deadline but couldn't manage it because of being interrupted by co-workers, to completely new task, that they have never done before, though team activity when team member's performance do not meet their expectations, to a task that is almost done, but they get sudden and time-consuming new instructions that should be included in the task.

Resilience. At „Technology ", it is crucial to have highly resilient clerks. HRM pay attention to clerks' ability and skills: to quickly recover form professional or personal failures, to work on the failure until they find successful, win solution, that can make job done, to easily find a solution that will lead to great results, to perform well under pressure and can easily recover from conflicts, failure, increased workload and personal criticism.

HRM gamify employee resilience based on roleplay within working situation to increase clerks' ability and skills: to perform well under pressure, to stay calm and positive in difficult working situations, to keep work-life balance and well-being, to stay engaged and committed in difficult working situations.

In the gamified employee resilience, clerks have different situational stories in which they are free to decide how to behave, manage the situation and apply the required skills correctly and accordingly. In different situational stories HRM test clerks' ability, skills and behaviours: to situation where they have to work under stress, pressure (how they can handle each situation), to failure caused by working under stress, pressure and ways how they react (give up, find new solution and so.), to criticism about their performance received from their colleagues, clients and supervisor, to deal with an upset customers who communicate their complaints, to the ways of dealing and manage a pressure at work.

6

Teamwork. HRM pay attention to clerks' team working skills, abilities, and behaviours such as: interpersonal interactions, team members' relationships, collaborations among team members on the common goals or visions, verbal, cognitive and behavioural activities needed to reach team's goals, sacrificing personal interests for teams' best, sharing knowledge across the team and learning from others.

HRM gamify employee teamwork activities based on roleplay within working situation in order to increase clerks' ability and skills: to easily understand teams' common goals or objectives that have to be achieved, to develop their teamworking competencies and skills, to freely express their opinions, feelings in the manner that can deliver positive result to teamwork, to keep or even improve performance when company faces new difficulties and challenges.

In the gamified employee teamwork activities, clerks have different situational stories in which they are free to decide how to behave, manage the situation and apply the required skills correctly and accordingly. In different situational stories, HRM test clerks' ability, skills and behaviours: to situation when one or few team members have bad attitude that blocks team performance (how clerk can handle situation, through what skills and behaviours), to situation when clerk doesn't trust other team members in delivering their part of work, to situations when conflict occurred in team, to situation when new changes and challenges were accepted inside the team, to situation when clerk is not able collaborate with his/her co-workers.

Gamification data. HRM at the bank "Technology" has been using gamification in employee training and development since 2018. The data presented in Table 1 shows a percentage comparison employee training and development programs' results before and after the use of gamification in the clerks' soft skills: decision-making, willingness to change, resilience, teamwork.

Table 1. Clerks' soft skills before and after using gamification.

Clerks' soft skills	Before using Gamification	After using Gamification	Difference
Decision making	78%	94%	Increased by 16%
Willingness to change	69%	81%	Increased by 12%
Resilience	74%	88%	Increased by 14%
Teamwork	65%	83%	Increased by 18%

Source: Data report of „Technology ", 2021

As Table 1 shows, after more than 3 years of using gamification in employee training and development, HRM managed to increase: clerks' decision making skills, abilities by 16% (before gamification 78% - after gamification 94%), their willingness to change by 12% (before gamification 69% - after gamification 81%), their abilities and skills of resilience by 14% (before gamification 74% - after gamification 88%), their teamwork abilities and skills by 18% (before gamification 65% - after gamification 83%).

5   Discussion and Conclusion

In the literature, through induction, deduction and comparison of existing knowledge provided by various authors in the form of research articles, papers we defined and explained: characteristics, elements, principles, ways, and areas of using gamification by HRM, characteristics of employee training and development, its importance, goals, benefits, and areas of focus and lastly characteristics of gamified employee training and development, its elements, and potential benefits. By deduction, inducting, synthesizing, and comparing current knowledge, we have identified and defined a gap in how HRM can gamify employee training and development to increase its effectiveness by developing, increasing employees' soft skills. We found a lack of knowledge in this area of using gamification and we set it as the main goal of our research.

The first research questions of this study were to identify, examine how can HRM gamify employee training and development focused on employees' soft skills? Based on case study of our research object - bank "Technology", we identified, explained that HRM gamify their clerks' training and development, which is realized on their web-platform. Through gamification HRM managed to attract hundreds of clerks monthly, turned their everyday activities into fun and effective experience. Their gamification includes employee-motivation elements, such as: progress bars, ranking, experience points, rewards, leaderboard, visualization, and specialized badges. Main areas of gamifying clerks' training and development is to increase and develop their soft skills such as: decision making, willingness to change, teamwork and resilience. Their gamification is based on roleplay in different working situations, where clerks' abilities, behaviours and mentioned soft skills are tested based on different, specific challenges.

The second question of this research was to identify to what extent can HRM increase effectiveness of clerks' training and development? Based on the statistical report of the bank "Technology", we compared employee training and development programs' perceptual results before and after the use of gamification in the clerks' soft skills: decision-making, willingness to change, resilience, teamwork. We found that after more than 3 years of using gamification in employee training and development, HRM managed to increase: clerks' decision making skills, abilities by 16% (before gamification 78% - after gamification 94%), their willingness to change by 12% (before gamification 69% - after gamification 81%), their abilities and skills of resilience by 14% (before gamification 74% - after gamification 88%), their teamwork abilities and skills by 18% (before gamification 65% - after gamification 83%). We have proven, that gamification can increase effectiveness of employee training and development in employees' soft skills.

By answering research questions, we succeeded to fulfil goal of our research, which was to identify ways of gamifying employee training and development to increase its effectiveness by developing, increasing employees' soft skills.

Gamifying employee training and development to increase and develop clerks' soft skills has an impact on their career growth at the bank "Technology", as HRM can easily see how well and on what level they are ready to be promoted on new job position by measuring, controlling required skills, knowledge, behaviours, and abilities.

Gamifying clerks' soft skills is recognized as one of the main influencing factors of company's benefits, as possibility of training and development is on third place among most wanted benefits at bank "Technology". Through gamifying of this area HRM can see, which branch has employees with highest soft skills and can predict their future performance at bank "Technology".

Our research has several barriers, limitations in the application of its results, which may also be topics of future research. Our study does not provide information on whether gamifying employee training and development can increase and develop clerks' soft skills with equal effectiveness for all age groups, as results of the elder generation may differ from the younger ones. We have also not proven whether the increase in the results of employee training and development can be transferred at the same level to real performance. Results of our study provided insights on the employee training and development over a period of 3-4 years, and we couldn't identify and show how the impact of gamification can change on increasing and developing clerks' soft skills in the long run.

Acknowledgement

References

1. DETERDING, S. et al. From game design elements to gamefulness: defining" gamification". In: Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments. 2011. p. 9-15. DOI: 10.1145/2181037.2181040
2. SILIC, Mario, et al. The effects of a gamified human resource management system on job satisfaction and engagement. Human Resource Management Journal, 2020, 30.2: 260-277. DOI: 10.1111/1748-8583.12272
3. MOLLICK, R., ROTHBARD, N.: Mandatory fun: Consent, gamification, and the impact of games at work. The Wharton School research paper series. DOI: 10.2139/ssrn.2277103
4. BLOHM, Ivo; LEIMEISTER, Jan Marco. Gamification. Wirtschaftsinformatik, 2013, 55.4: 275-278. DOI: https://doi.org/10.1002/9781405165518.wbeos1321
5. POOLE, Sonja Martin, et al. Get your head in the game: using gamification in business education to connect with generation Y. 2014.
6. VARDARLIER, P., Gamification in human resources management: An agenda suggestion for gamification in HRM. Research Journal of Business and Management, 8.2: 129-139. DOI: https://doi.org/10.17261/Pressacademia.2021.1402 (2021).
7. BLŠTÁKOVÁ, Jana; PIWOWAR-SULEJ, Katarzyna. Gamification as an innovative idea within human resources management. 2019.
8. VIVEK, R.; NANTHAGOPAN, Y. Gamification in Human Resource Management. Journal of HRM Perspectives, 2020, 5.1: 44.
9. OPRESCU, F., JONES, C., KATSIKITIS, M.: I PLAY AT WORK—ten principles for transforming work processes through gamification. Frontiers in psychology, 2014, 5: 14. DOI: https://doi.org/10.3389/fpsyg.2014.00014

10. AL KARIM, R. Impact of different training and development programs on employee performance in Bangladesh perspective. International Journal of Entrepreneurial Research, 2019, 2.1: 8-14. DOI: 10.31580/ijer.v1i2.506

11. HAMEED, A., WAHEED, A. Employee development and its affect on employee performance a conceptual framework. International journal of business and social science, 2011, 2.13.

12. ANIS, A. et al. Employee retention relationship to training and development: A compensation perspective. African journal of business management, 2011, 5.7: 2679-2685. DOI: https://doi.org/10.5897/AJBM10.1036

13. JEHANZEB, K., BASHIR, N. Training and development program and its benefits to employee and organization: A conceptual study. European Journal of business and management, 2013, 5.2.

14. RODRIGUEZ, J., WALTERS, K. The importance of training and development in employee performance and evaluation. Worldwide Journal of Multidisciplinary Research and Development, 2017, 3.10: 206-212.

15. OKECHUKWU, W. influence of training and development, employee performance on job satisfaction among the staff. Journal of Technology Management and Business, 2017, 4.1.

16. AZEEM, M. F., PARACHA A. T. Connecting training and development with employee engagement: how does it matter? World Applied Sciences Journal, 28(5), 696-703. DOI: 10.5829/idosi.wasj.2013.28.05.1230

17. MOZAEL, B. M. Impact of training and development programs on employee performance. International Journal of Scientific and Research Publications, 2015, 5.11: 37-42.

18. VEMIĆ, Jelena. Employee training and development and the learning organization. Facta universitatis-series: Economics and Organization, 2007, 4.2: 209-216.

19. ARMSTRONG, M. B., LANDERS, R. N. Gamification of employee training and development. International Journal of Training and Development, 2018, 22.2: 162-169. DOI: 10.1111/ijtd.12124

20. LANDERS, R. N., et al. Gamification of adult learning: Gamifying employee training and development. The Cambridge handbook of technology and employee behavior, 2019, 271-295. DOI: 10.1017/9781108649636.012

21. LARSON, K. Serious games and gamification in the corporate training environment: A literature review. TechTrends, 2020, 64.2: 319-328. DOI: 10.1007/s11528-019-00446-7

22. AHMED, A., SUTTON, M. Gamification, serious games, simulations, and immersive learning environments in knowledge management initiatives. World Journal of Science, Technology and Sustainable Development, 2017. DOI: 10.1108/WJSTSD-02-2017-0005

23. PEREIRA, Marcelo, et al. The gamification as a tool to increase employee skills through interactives work instructions training. Procedia computer science, 2018, 138: 630-637. DOI: 10.1016/j.procs.2018.10.084