

# Gamification in Training and Development: Conceptualizing Employee Perspectives

Siti Nur Nadhirah Abdul Latip

Universiti Tun Abdul Razak, 50400, Kuala Lumpur, Malaysia

Md Mamun Habib

Universiti Tun Abdul Razak, 50400, Kuala Lumpur, Malaysia

Muhammad Safuan Abdul Latip (Corresponding author)

Faculty of Hotel and Tourism Management

Universiti Teknologi MARA Cawangan Terengganu Kampus Dungun,

Dungun 23000 Terengganu Malaysia

E-mail: safuanlatip@uitm.edu.my

Maslina Tamrin

Faculty of Business and Management

Universiti Teknologi MARA Cawangan Melaka Kampus Alor Gajah,

Alor Gajah 78000, Melaka, Malaysia

E-mail: maslana434@uitm.edu.my

Received: July 30, 2024      Accepted: Sep. 15, 2024      Published: Sep. 23, 2024

doi:10.5296/bmh.v12i1.22274      URL: <https://doi.org/10.5296/bmh.v12i1.22274>

## **Abstract**

Gamification, which includes game components in non-gaming environments, has gained popularity across various organizations to enhance training and development. This study aims to explore the literature on the potential elements influencing employees' acceptance of gamification in training settings. Key variables explored include social influence,

performance expectancy, self-efficacy, and age. By examining these factors, this conceptual study offers valuable insights for organizations aiming to implement gamification strategies effectively. The study provides a theoretical foundation for organizations to leverage gamification and highlights its role in fostering continuous professional development, inspiring organizations to embrace this innovative approach. Furthermore, the study highlights potential areas for future empirical research.

**Keywords:** gamification, social influence, performance expectancy, self-efficacy, age

## 1. Introduction

The rapid advancement of technology in recent years has completely revolutionized our daily routines and brought about significant transformations in various aspects of life. This has been made possible through the availability of sophisticated systems and tools that simplify even the most complex of everyday tasks (Latip et al., 2020). These technological advancements have catalyzed widespread changes in traditional sectors such as education and entrepreneurship and have greatly influenced how we approach and engage with these areas. One particularly noteworthy technological trend that has been gaining traction is gamification, which involves the integration of game elements into non-game contexts. This approach has been increasingly utilized across various fields to enhance user engagement and motivation, driving a shift in how we interact with technology in many settings (Deterding, 2012). Gamification has been the subject of extensive research and implementation in various industries. This innovative approach has been mainly explored in the field of education, where it has been utilized to enhance learning experiences (Johan et al., 2023; Khan & Zaheer, 2023; Silva et al., 2020; Tamrin et al., 2022; Wan Ishak & Yamin, 2020), as well as in banking and healthcare, where it has been used to improve customer engagement and motivate healthier behaviors, respectively (Çera et al., 2020; Nasirzadeh & Fathian, 2020).

In the rapidly evolving and competitive contemporary business landscape, organizations must prioritize continually enhancing their employees' knowledge and skills. Companies can ensure that their employees understand their roles and responsibilities by investing in comprehensive training and development activities. To optimize the efficacy of these initiatives, numerous organizations spanning diverse sectors have integrated e-training and gamification methods into their learning programs (Latip et al., 2024). Notably, the global market for corporate training is expected to experience substantial growth, driven by the increasing recognition of the value of ongoing employee development (Newswire, 2023). This underscores the urgency for organizations to adopt innovative approaches like gamification. Furthermore, the study highlights potential areas for future empirical research.

In Malaysia, e-training has been embraced and more accepted, particularly after COVID-19. Its widespread adoption is attributed to its convenience, allowing individuals to access learning materials at their own pace and from any location. This flexibility has significantly contributed to the increasing popularity of e-training (Rawashdeh et al., 2021). Furthermore, the advantages of e-training, such as its ability to present material engagingly, have played a pivotal role in its widespread acceptance (Mokmin & Neoh, 2023). Another benefit is that it fosters employee commitment due to its user-friendly nature. Moreover, e-training has enhanced employee performance, making it a valuable tool for learning and development within the Malaysian context (Eng et al., 2024).

From the perspective of the human resources (HR) department, gamification is currently considered a pivotal and innovative technique for enhancing the efficacy of training and development initiatives within organizations. This approach involves utilizing game-like elements and strategies to engage employees in learning and development activities. By incorporating gamification, HR departments can better monitor employee performance,

provide constructive feedback, administer incentive structures, and streamline recruitment (Wunderlich et al., 2020).

Furthermore, the gamification market is experiencing rapid growth and is projected to reach an estimated \$ 70.4 billion by 2030, reflecting its increasing acceptance and utilization in various business contexts (Hernandez, 2021). Despite the popularity of gamification in the workplace, there still needs to be a greater understanding of the factors that encourage employees to accept gamification in their training and development programs (Latip et al., 2024). Consequently, further research is needed to understand what motivates employees to embrace gamified training approaches. The study conceptualizes potential factors influencing employee acceptance of gamification as a training method.

## **2. Literature Review**

### *2.1 Unified Theory of Acceptance and Use of Technology Model (UTAUT)*

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), builds upon eight earlier technology acceptance models. It identifies four key determinants influencing technology acceptance: performance expectancy, effort expectancy, social influence, and facilitating conditions. These determinants are moderated by four variables: gender, age, experience, and voluntariness of use (Viswanath Venkatesh et al., 2003).

The UTAUT model has been extensively applied in various contexts, including academic settings (Khan & Zaheer, 2023; Kumar & Kumar, 2024) and workplace environments (Moughal et al., 2023; Puspitawati et al., 2023). This conceptual paper focuses on two fundamental variables, namely, social influence and performance expectancy, in the context of gamification acceptance within employee training environments. By theoretically exploring these factors, the paper aims to provide a comprehensive understanding of how social influence and performance expectancy conceptually affect the adoption and effectiveness of gamification strategies. The insights generated are intended to guide organizations in effectively integrating gamification into their training programs, enhancing employee engagement and optimizing training outcomes. This conceptual analysis also sets the stage for future empirical research by identifying critical areas for further investigation and theoretical development.

### *2.2 Gamification*

Gamification can be described as “the integration of game design elements into non-gaming Settings” (Zimmerling et al., 2019). In recent years, gamification has experienced a notable increase in popularity, resulting in a swift growth of related academic literature (Wunderlich et al., 2020). Gamification strategically incorporates elements from games, including game mechanics and cognitive frameworks, boosts motivation, fosters meaningful interaction and enhances the learning environment (Latip et al., 2023).

Gamification tools, such as storytelling, point systems, badges, feedback mechanisms, avatars, and progress bars, are increasingly employed to boost motivation and engagement in

employee training and development (Wiseman, 2022). These tools have gained traction in various workplace applications, including recruitment (Buil et al., 2020; Leutner et al., 2023) and training and development programs (Hoffmann, 2023; Klaiber & Kok, 2022). For gamification to yield effective results, it is essential to focus on two critical elements: a deep understanding of the target audience and a clear articulation of the desired outcomes (Latip, 2020). Addressing these factors helps ensure that gamification strategies are tailored to meet employees' specific needs and achieve the intended objectives.

### *2.3 Social Influence*

Social influence encompasses how individuals' behaviours and attitudes are shaped by observing and reacting to the actions and responses of others (Latip et al., 2023). According to Sweet and Andhikari (2023), social influence involves the impact of others' opinions and pressures—both positive and negative—on an individual's behaviour. This influence can arise from various sources, including peer pressure, familial expectations, cultural norms, and societal values. Social influence's complex and pervasive nature highlights its substantial role in shaping individuals' thoughts, decisions, and actions across different social contexts (Latip et al., 2023).

Empirical research underscores the importance of social influence in gamification adoption. For instance, Vanduhe et al. (2020) investigated factors affecting employees' intentions to use gamification in higher education settings and identified social influence as a critical determinant. The study found that employees tend to view gamification favourably when endorsed by respected figures. This conclusion is echoed by Chung et al. (2019) and Mastor et al. (2023), who reported that social influence positively impacts students' use of gamification in learning environments. Further supporting this, Dahri et al. (2023) explored the acceptance of mobile learning technology among teachers and found a positive relationship between social influence and the adoption of mobile learning. In contrast, Tamrin et al. (2022) reported that social influence did not significantly affect students' acceptance of gamification in learning.

These varying results suggest that while social influence is generally a significant factor in the acceptance of new technologies, its impact may differ based on context and specific conditions. For employees, encouragement from employers or peers could enhance the likelihood of adopting gamification strategies in training. Thus, understanding the role of social influence is crucial for organizations aiming to implement gamification effectively. Based on these insights, the following hypothesis is proposed for further investigation.

H1: Social influence positively affects gamification acceptance among employees in training.

### *2.4 Performance Expectancy*

Performance expectancy represents an individual's belief in a technology or system's potential benefits and utility, reflecting their confidence in its advantages (Latip et al., 2022). This concept is built on several foundational components, including perceived usefulness, alignment with job requirements, comparative advantage, extrinsic motivation, and anticipated outcomes (Venkatesh et al., 2003).

The critical role of performance expectancy in technology adoption is well-documented in the literature. Mastor et al. (2023) demonstrate that performance expectancy is a pivotal factor influencing students' decisions to engage with gamification in educational settings. Students who believe that gamification will enhance their learning outcomes are more inclined to adopt and integrate this technology into their studies. This aligns with findings from Latip et al. (2022), who similarly report that performance expectancy positively affects students' engagement with e-learning platforms.

Furthermore, Minh et al. (2023) highlight that in the context of Vietnamese users, performance expectancy significantly shapes their attitudes towards gamification. The positive correlation suggests that individuals are more likely to embrace gamification if they perceive it as beneficial for achieving specific outcomes. These findings underscore the importance of performance expectancy in educational technology and broader technology adoption contexts. The consistent positive impact of performance expectancy across different studies suggests that perceived benefits drive technology acceptance. If employees perceive gamification as a tool to enhance their performance and productivity, they are more likely to adopt and effectively utilize it in their training.

Therefore, it is essential to consider performance expectancy when implementing gamification strategies. To investigate this further, the following hypothesis is proposed for empirical testing:

H2: Performance expectancy positively affects gamification acceptance among employees in training.

### *2.5 Self-Efficacy*

Self-efficacy, introduced by Albert Bandura (1997), refers to an individual's assessment of their ability to perform tasks effectively to achieve desired outcomes. It is defined as one's belief in one's capability to execute actions required for success. In online learning and gamification, self-efficacy is influenced by access to necessary resources such as the internet, computers, and digital learning tools (Latip et al., 2020). Individuals with high confidence in their technological skills are generally more receptive to e-training and gamification.

Moreover, previous research underscores the significant role of self-efficacy in adopting gamification. Polo-Peña et al. (2020) found a positive relationship between individuals' experiences with gamification and their self-efficacy, indicating that successful interactions with gamification can enhance one's confidence in their abilities. This finding is corroborated by Biltrian et al. (2024), who demonstrated that gamification in e-training boosts employees' security self-efficacy, suggesting an improvement in their confidence regarding security-related tasks.

Additionally, Hoffmann (2023) explored the impact of gamification on managers' self-efficacy and found that gamification effectively increased self-efficacy among managers. This suggests that incorporating gamification into training programs can enhance individuals' confidence in their skills and capabilities.

These studies highlight that self-efficacy plays a crucial role in the effectiveness of gamification. Individuals who believe in their ability to succeed with gamification are likelier to engage with and benefit from such interventions. Therefore, understanding and enhancing self-efficacy is vital for successfully implementing gamification in training contexts. Based on this reasoning, the following hypothesis is proposed for empirical testing.

H3: Self- efficacy positively affects gamification acceptance among employees in training.

### *2.6 Age*

Age cohort refers to individuals born within the same period who typically experience similar historical events and societal conditions throughout their lives (Kenton, 2019). Adulthood is often divided into three main phases: young adulthood (approximately 20-39 years), middle adulthood (40-59 years), and older adulthood (60 years and older). Within older adulthood, further distinctions are made: young old (60–75 years) and elderly old (75 years and older) (Lachman, 2001).

Research on the impact of age on technology adoption, including gamification, presents varied findings. For instance, Alosaimi et al. (2021) investigated factors influencing teachers' behavioural intentions to use gamification in learning management systems and found a negative moderation effect of age. Specifically, older teachers showed less intention to engage with gamification, suggesting that age may limit enthusiasm or perceived utility of such technologies.

Conversely, Çera et al.(2020) examined the moderating role of age on the relationship between gamification intention and mobile banking usage. Their study revealed that individuals born before 1996 had lower scores on gamification and demonstrated reduced engagement with mobile banking. This finding implies that older age groups might have a lower acceptance of gamification and related digital innovations.

These mixed results highlight the complex relationship between age and technology adoption. While some studies suggest that older individuals may be less inclined to embrace gamification, other research indicates that age-related factors can influence the extent of technology use. Understanding these nuances is crucial for tailoring gamification strategies to different age cohorts and ensuring their effectiveness across diverse age groups.

Based on these insights, further empirical research is warranted to explore how age influences gamification adoption and to develop targeted strategies for different age groups, particularly within employee training and development. Thus, based on the literature above, the following hypothesis is proposed:

H4a: The relationship between social influence and gamification acceptance in training development will be stronger among young employees

H4b: The relationship between performance expectancy and gamification acceptance in training will be stronger among young employees.

H4c: The relationship between self-efficacy and gamification acceptance in training will be

stronger among young employees.

### **3. Proposed Methodology**

Future research is encouraged to adopt a quantitative methodology with a correlational design to explore the relationships between variables. This approach enables the examination of how different factors interact without implying causation. A cross-sectional design is recommended for collecting data from respondents simultaneously, providing a snapshot of current perceptions and attitudes.

The study population can vary based on the focus of future research. For example, investigations could target employees within higher education institutions to assess the acceptance of gamification in training among teaching staff. Alternatively, research could extend to other industries, such as hospitality or retail, to explore how gamification is received in different contexts. Expanding the target populations to include diverse settings and sectors can enhance the generalizability of the findings. Future studies could examine these relationships across various industries, educational levels, or geographical regions to gain broader insights.

Data collection should involve structured questionnaire surveys to capture detailed responses. Analytical tools such as the Statistical Package for the Social Sciences (SPSS) and Partial Least Squares Structural Equation Modeling (PLS-SEM) are recommended for conducting reliability tests, identifying outliers, assessing normality, and evaluating model validity.

Future research should include critical evaluations, such as reliability and validity tests, assessments of data normality, and outlier detection, to ensure robust and reliable findings. These steps are essential for verifying the accuracy and credibility of the results and contributing to a solid evidence base.

Implementing these suggestions will provide a comprehensive understanding of the relationships between the studied variables and valuable insights across various populations and contexts.

### **4. Conclusion**

A study on gamification primarily focuses on its impact on students in higher education, particularly in learning and student performance. However, more research is needed on using gamification in training and development, especially in diverse human resources contexts.

The technological environment and the increasing presence of younger employees influence training preferences. The younger generation, in particular, is more inclined toward using technology daily. Integrating gamification into training and development, which aligns with their technological preferences, may facilitate the more effective achievement of training objectives. Since gamification has been shown to enhance performance and improve learning outcomes, it is a promising method for modern training environments.

Future research should aim to apply these insights broadly, exploring how gamification can enhance employee development in various settings and industries. By tailoring training

approaches to meet the needs of diverse populations, organizations can better support professional growth and drive success in a dynamic landscape.

## References

Alosaimi, M., Umar, I. N., & Rabu S. N. A. (2021). Factors Affecting Schools Teachers Behavioural Intention to Use Gamified Learning Activities in Learning Management Systems (LMS) in Saudi Arabian Schools. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 12(12), 1–12. <https://doi.org/10.21125/iceri.2020.1155>

Biltrian, P., Buil, I., Catalan, S., & Merli, D. (2024). Gamification In Workforce Training: Improving Employees' Self-Efficacy And Information Security And Data Protection Behaviours. *Journal of Business Research*, 179, 114685. <https://doi.org/10.1016/j.jbusres.2024.114685>

Buil, I., Catalán, S., & Martínez, E. (2020). Understanding Applicants' Reactions To Gamified Recruitment. *Journal of Business Research*, 110, 41–50. <https://doi.org/10.1016/j.jbusres.2019.12.041>.

Çera, G., Pagria, I., Khan, K. A., & Muaremi, L. (2020). Mobile Banking Usage And Gamification: The Moderating Effect Of Generational Cohorts. *Journal of Systems and Information Technology*, 22(3), 243–263. <https://doi.org/10.1108/JSIT-01-2020-0005>

Chung, C. H., Shen, C., & Qiu, Y. Z. (2019). Students' Acceptance Of Gamification In Higher Education. *International Journal of Game-Based Learning*, 9(2), 1–19. <https://doi.org/10.4018/IJGBL.2019040101>

Dahri, N., Almogren, A., Yahaya, N., Vighio, M., Al-Matuok, Q., & Al-Rahmi, A. A. (2023). Acceptance of Mobile Learning Technology by Teachers: Influencing Mobile Self-Efficacy and 21st-Century Skills-Based Training. *Sustainability*. <https://doi.org/10.3390/su15118514>

Deterding, S. (2012). Gamification: Designing For Motivation. 19(4), 14–17. <https://doi.org/10.1145/2212877.2212883>

Eng, A. C. S., Yuan, F. C., & Ping, K. Y. (2024). The Relationship Of E-Training, Work Motivation, And Work-Life Balance On Malaysian Teachers' Performance During Covid-19 Pandemic. *Malaysian Journal of Business and Economics*, 11(1). <https://doi.org/10.51200/mjbe.v11i1.5292>

Hernandez, E. (2021). *Gamification an Emerging Technology*. LinkedIn. Retrieved from <https://www.linkedin.com/pulse/gamification-emerging-technology-edgar-hernández>

Hoffmann, A. (2023). The Impact of Gamification on Self-Efficacy in Managers. *Journal of Applied Economic Sciences*, 79, 27–38. [https://doi.org/10.57017/jaes.v18.1\(79\).04](https://doi.org/10.57017/jaes.v18.1(79).04)

Johan, N. S., Kew, S. N., Zaidatun, T., Koh, T. W., Liew, T. W., & Lee, S. S. (2023). *The Implementation of Digital Gamification in English Classroom: Teachers' and Students' Perspectives*. ICETM 22. <https://doi.org/10.1145/3582580.3582607>

- Kenton, B. (2019). *Age Cohort*. *Open Education Sociology Dictionary*. Retrieved from <https://sociologydictionary.org/age-cohort/>
- Khan, N., & Zaheer, A. (2023). The Role Of Social Influence On Gamification Adoption in Educational Settings: Evidence From A Study On Lecturers. *Education and Information Technologies*, 28(2091–2110).
- Klaiber, M., & Kok, M. (2022). *Examining The Technology Acceptance Factors That Define Gamification Use Intention*. Jonkoping University.
- Kumar, M., & Kumar, S. (2024). Using The Utaut Model to Understand Social Media's Adoption for Enhancing Academic Performance among Indian University Students. *European Economic Letters*, 14(2), 903–908.
- Lachman, M. (2001). *Adult Development, Psychology of International Encyclopedia of the Social & Behavioral Sciences* (pp. 135–139). <https://doi.org/10.1016/B0-08-043076-7/01650-8>
- Latip, M. S., Noh, I., Tamrin, M., & Latip, S. N. N. (2020). Students' Acceptance for e-Learning and the Effects of Self-Efficacy in Malaysia. *International Journal of Academic Research in Business & Social Sciences*, 10(May), 658–674. <https://doi.org/10.6007/IJARBSS/v10-i5/7239>
- Latip, M. S., Tamrin, M., Noh, I., Rahim, F., & Latip, S. N. N. (2022). Factors Affecting e-Learning Acceptance among Students: The Moderating Effect of Self-efficacy. *International Journal of Information and Education Technology*, 12(2), 116–122. <https://doi.org/10.18178/ijiet.2022.12.2.1594>
- Latip, S. N. N. (2020). *Students' Acceptance of Gamification*. In FBM, UITMCM KAG.
- Latip, S. N. N., Mamun, H., & Latip, M. S. (2024). Lecturers' Acceptance of Gamification in Training and Development: A Conceptual Study. *Business and Management Horizons*, 12(1–14). <https://doi.org/10.5296/bmh.v12i1.21699>
- Latip, S. N. N., Tamrin, M., & Harun, N. (2023). Gamification in The Workplace: A Conceptual Paper. *International Journal of Academic Research in Business and Social Science*, 13(7), 514–519. <https://doi.org/10.6007/IJARBSS/v13-i7/17401>
- Leutner, F., Codreanu, S., Brink, S., & Bitsakis, T. (2023). Game Based Assessments Of Cognitive Ability in Recruitment: Validity, Fairness and Test-Taking Experience. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.942662>.
- Mastor, S., Tamrin, M., & Rahim, F. (2023). Students' Acceptance of Gamification: A Case Study In FBM, UiTM Kampus Alor Gajah. *International Journal of Academic Research In Business & Social Sciences*, 13(5), 1975–1986. <https://doi.org/10.6007/IJARBSS/v13-i5/16944>
- Minh, D., Oanh, L., & Quynh, N. (2023). How Gamification Affects Online Shopping Behavior: An Approach With Youngsters (aged 16–30). *Cogent Business and Management*,

10. <https://doi.org/10.1080/23311975.2023.2256076>

Mokmin, N. A. M., & Neoh, Y. T. (2023). *A Study of Perceived Ease of Use, Perceived Usefulness and Self-Efficacy Among Mature-Aged Worker's Behavioural Intention on Using the Online Training Portal in Manufacturing Industry.* <https://doi.org/10.21203/rs.3.rs-2526209/v1>

Moughal, W., Nordin, S. M., Salleh, R., & Abbasi, H. A. (2023). Social Networking Sites for Success: A UTAUT-Based Investigation into University Employee Performance Enhancement. *Business Management and Strategy*, 14(2), 144–163. <https://doi.org/10.5296/bms.v14i2.21369>

Nasirzadeh, E., & Fathian, M. (2020). Investigating The Effect Of Gamification Elements on Bank Customers To Personalize Gamified Systems. *International Journal of Human-Computer Studies*, 143, 102469. <https://doi.org/10.1016/j.ijhcs.2020.102469>

Polo-Peña, A. I., Frías-Jamilena, D. M., & Fernández-Ruano, M. L. (2020). Influence of Gamification On Perceived Self-Efficacy: Gender And Age Moderator Effect. *International Journal of Sports Marketing and Sponsorship*, Ahead-of-Print (Ahead-of-Print). <https://doi.org/10.1108/IJSMS-02-2020-0020>

Puspitawati, P. A., Kesiman, Antara, M. W., & Sariyasa, S. (2023). The Effect of Employment Status in the UTAUT Model on the Use Behavioral of E-Office Users: Case Study at Politeknik Pariwisata Bali. *Jurnal Info Sains : Informatikan Dan Sains*, 13(2), 345–353.

Rawashdeh, A. Z. A., Mohammed, E. Y., Arab, A. R. A., Alara, M., & Al-Rawashdeh, B. (2021). Advantages and Disadvantages of Using e-Learning in University Education: Analyzing Students' Perspectives. *The Electronic Journal of E-Learning*, 19(2), 107–117. <https://doi.org/10.34190/ejel.19.3.2168>

Silva, R., Rodrigues, R., & Leal, C. (2020). Social Factors Influence on Accounting Students Attitude to Use Games Based Learning. In *The Role of Gamification in Software Development Lifecycle* (pp. 109–123). <https://doi.org/10.5772/intechopen.95430>

Sweet, T., & Andhikari, S. (2023). *Modeling of network structures* (4th ed.). <https://doi.org/10.1016/B978-0-12-818630-5.10053-3>

Tamrin, M., Latip, S. N. N., Latip, M. S., Royali, S., Harun, N., & Bogal, N. (2022). Students' Acceptance for Gamification in Education: The Moderating Effect of Gender in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 12(8), 1847–1860. <https://doi.org/10.6007/IJARBSS/v12-i8/14461>

Vanduhe, V. Z., Nat, M., & Hasan, H. F. (2020). Use Gamification For Training in Higher Education: Integrating the TAM, SM, and TTF. *IEEE Access*, 8, 21473–21484. <https://doi.org/10.1109/ACCESS.2020.2966179>

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>

Wiseman, M. (2022). *Gamification In Corporate Training: 10 Examples And Techniques*. Big Think. Retrieved from <https://bigthink.com/plus/gamification-in-corporate-training/>

Wunderlich, N., Gustafsson, A., Hamari, J., Parvinen, P., & Haff, A. (2020). The Great Game Of Business: Advancing Knowledge On Gamification In Business Contexts. *Journal of Business Research*, 273–276. <https://doi.org/10.1016/j.jbusres.2019.10.062>

Zimmerling, E., Hollig, C., Sadner, P., & Welppe, I. (2019). Exploring the Influence of Common Game Elements On Ideation Output and Motivation. *Journal of Business Research*, 94, 302–312. <https://doi.org/10.1016/j.jbusres.2018.02.030>

### **Copyrights**

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).