
Exploring Gamification Approaches in Grammar Learning

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Article Info

Abstract

Article History:

Received: 06/04/2024

Accepted: 08/04/2024

Published: 27/05/2024

Keywords:

Gamification, grammar learning, educational technology, student engagement, educational outcomes.

The integration of digital tools into education has fostered innovative methodologies like gamification, which is particularly notable in the field of grammar learning. This literature review assesses the role of gamification—defined as the use of game design elements in educational settings—in enhancing grammar mastery. Traditional grammar teaching often struggles to maintain student engagement and motivation, which are critical for effective learning. This review evaluates the efficacy of gamification in grammar instruction by analyzing empirical studies and scholarly articles from databases including Google Scholar and various educational journals. Focused keywords such as "gamification," "grammar learning," and "educational technology" guided the literature search, with a selection criterion aimed exclusively at studies intersecting gamification and grammar learning. The review details the application of gamification elements like points, badges, leaderboards, and challenges, and their impact on learner engagement, motivation, and academic outcomes. It also discusses the educational theories underpinning these strategies, such as behaviorism and constructivism. The findings suggest that while gamification significantly boosts engagement and motivation, its effect on actual grammar learning outcomes remains mixed. The review highlights a need for more longitudinal research to understand the long-term benefits and demographic variations. Consequently, while promising, gamification in grammar education requires further targeted investigation to fully realize its potential.

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p-ISSN 2830-5949

e-ISSN 2830-4837

INTRODUCTION

Traditional grammar teaching methods have long been associated with challenges in engaging students and promoting effective learning and often rely on rote memorization of rules and structures, which can lead to disinterest and lack of practical application (Komila, 2021). Teachers face difficulties in making grammar instruction relevant and engaging, both in isolation and within the context of writing.

Additionally, the struggle to make grammar teaching engaging is evident in various educational settings, such as in Albanian tertiary education (Enesi et al., 2023). In response to these challenges, there has been a rise in the use of gamification in educational settings as a means to enhance student engagement and learning outcomes and involves incorporating game elements, such as rewards and competition, into non-game contexts like education (Sailer &

Homner, 2020). Studies have shown that gamification can be an effective instructional approach, particularly in improving student engagement (Kim & Castelli, 2021).

However, there is a need for more systematically designed studies to confirm the educational benefits of gamification and to understand the factors contributing to its success (Dichev & Dicheva, 2017). Gamification has been increasingly recognized for its potential to motivate learners and improve their performance (Özdamli & Yazdeen, 2021). By applying game concepts like narrative and progress tracking, gamification makes the learning process more enjoyable and engaging (Krishnamurthy et al., 2022).

Furthermore, tailored gamification designs that match individual student needs and preferences have been highlighted as essential for maximizing the benefits of gamification in education (Oliveira et al., 2023). Overall, the shift towards gamification in educational settings reflects a growing recognition of the importance of engaging and interactive teaching methods.

While traditional grammar teaching methods pose challenges in maintaining student interest and relevance, gamification offers a promising approach to enhance learning experiences and outcomes. However, further research and systematic studies are needed to fully understand the impact and effectiveness of gamification in education.

Effective grammar learning is crucial in both educational and professional settings. Research indicates that grammar instruction is necessary and effective, although it may not always be perceived as enjoyable (Jean & Simard, 2011). Understanding grammar is essential as it plays a pivotal role in language learning (Andriani et al., 2021). Studies have shown that cognitive factors such as statistical learning and cognitive control can predict second language (L2) grammar learning (Chen et al., 2022).

Additionally, task-based learning methods have been found to enhance students' grammar abilities (Darussalam, 2022). Integrating various teaching methods, including blended learning, gamified-learning, and mobile learning, has been

shown to positively impact students' grammar learning outcomes (Al Bataineh et al., 2019; Hashim et al., 2019; Irawan & Wahyudi, 2022). Moreover, the use of technology, such as computer-assisted educational games and video-based projects, has been found to have positive effects on grammar learning (Kayan & Aydin, 2020; Nguyen, 2021).

In professional contexts, having a strong command of grammar is essential for effective communication, both spoken and written. Mastery of grammar is crucial for English teachers to deliver lessons effectively and for students to achieve high levels of proficiency (Sujana et al., 2021).

In the era of digital learning, incorporating tools like Google Classroom and flipped classrooms can enhance grammar learning outcomes (Muthmainnah, 2022; Zarinfard et al., 2021). Interactive activities and gamification have been identified as effective strategies to support grammar teaching and learning in the 21st century (Vijayarajoo et al., 2019). Moreover, the use of data-driven learning and corpus-aided language learning has been found to transform students' grammar learning patterns from passivity to active engagement (Lin, 2016; Lin & Lee, 2019).

A literature review on gamification in grammar learning not only addresses an emerging and potentially transformative educational tool but also responds to broader shifts in pedagogical strategies, learning environments, and educational research priorities. It provides an essential foundation for both theoretical exploration and practical application in contemporary education.

METHOD

To ensure a comprehensive and thorough literature review on the gamification of grammar learning, a variety of academic databases and sources were utilized, including Google Scholar, targeted educational journals like the "Journal of Educational Technology," "Computers & Education," and "TechTrends," ERIC (Education Resources Information Center), and Scopus. These sources provided access to a broad

spectrum of academic articles, theses, books, and peer-reviewed literature across multiple disciplines. The literature search was meticulously conducted using keywords such as "gamification," "grammar learning," "educational technology," "game-based learning," and "motivation in grammar education," applying Boolean operators to refine the results. The selection criteria for inclusion required that studies specifically focus on gamification in grammar learning, provide empirical data, and be published within the last ten years. Exclusion criteria filtered out non-empirical studies and those lacking in clear methodology or not directly related to grammar learning. Data from each study was extracted with a focus on study design, participant demographics, gamification elements, and outcomes concerning engagement, motivation, and academic achievements in grammar learning. This methodical approach helped create a detailed synthesis of the existing literature, providing clear insights into the effectiveness and impact of gamification strategies in enhancing grammar education.

RESULTS AND DISCUSSIONS

Gamification has been increasingly recognized as a beneficial approach in enhancing grammar learning. Studies have shown that incorporating gamification methods, such as using game-based learning platforms, can significantly impact grammar learning outcomes. For instance, research has indicated that gamification can lower learners' affective filter during grammar lessons, leading to increased learning motivation (Idris et al., 2020).

Gamified activities have been found to reduce anxiety among English as a Foreign Language (EFL) learners and improve their grammar performance (Phuong, 2020). Furthermore, the benefits of gamification in English language learning extend beyond grammar improvement. It positively affects students' attitudes, emotional responses, and overall language skills (Zhang & Hasim, 2023). Gamification not only fosters engagement but also helps in the completion of grammar and

vocabulary tasks in an interactive and engaging manner, leading to the development of language competence (Gil-Acirón, 2022).

Gamification reinforces essential educational skills like problem-solving, collaboration, and communication, which are crucial for effective language learning (Thurairasu, 2022). Studies have also highlighted that gamification can enhance various language skills, with a significant percentage of respondents agreeing that it can help learners improve not only their grammar but also other language competencies (Helvich et al., 2023).

Gamification, as defined in the literature, involves the incorporation of game elements such as points, badges, levels, challenges, and leaderboards into non-game environments to enhance user engagement and motivation (Abu-Hammad & Hamtini, 2023). These game elements are crucial components that contribute to the success of gamified systems. Points, badges, and leaderboards are among the most commonly used design elements for gamification (Miller et al., 2016; Sheffler et al., 2020). Points serve as a measure of progress or achievement, badges signify accomplishments, and leaderboards display rankings, fostering competition and motivation among users.

In addition to these traditional game elements, gamification can also involve narrative-based experiences that go beyond classic game elements to create immersive and engaging environments (Trinidad et al., 2021). Gamification can impact explicit motive dispositions and influence achievement goal selection, highlighting the importance of thoughtful design in incorporating gamification elements (Durmaz et al., 2022).

While points, badges, and leaderboards are prevalent in gamification strategies, it is essential to consider other game elements to enhance learning outcomes. Neglecting elements beyond Points-Badges-Leaderboards (PBL) may limit the potential benefits of gamified learning experiences (Rodrigues et al., 2022). Successful gamification strategies should target specific psychological characteristics of users and

carefully select game elements to influence these characteristics effectively (Landers, 2019).

Gamification has demonstrated positive outcomes in enhancing grammar learning. Research has shown that gamified activities can reduce anxiety, improve performance, increase motivation, engagement, and enjoyment (Helvich et al., 2023; Phuong, 2020; Redjeki & Muhajir, 2021). In language learning, especially in ESL classrooms, gamification has been associated with benefits such as boosting enthusiasm, reducing disruptive behaviors, increasing cognitive growth, improving maturity, and enhancing attention span (Mohandas et al., 2020). Additionally, gamification has been found to facilitate the completion of grammar and vocabulary tasks in an engaging manner, leading to active student involvement and the development of language competence (Gil-Acirón, 2022).

The implementation of gamification strategies in language learning has been correlated with increased motivation for language acquisition and improvement in speaking fluency among elementary students (Marin-Pacurucu & Argudo-Garzón, 2022). Furthermore, gamified learning has been acknowledged as a motivating and enjoyable approach to teaching grammar, particularly beneficial for weaker learners (Helvich et al., 2023). It has been suggested that gamified education can impact intrinsic motivation, surpassing traditional learning methods and directly enhancing students' motivation to learn a language (Thurairasu, 2022).

Overall, current research indicates that gamification has the potential to significantly influence grammar learning outcomes by enhancing motivation, engagement, performance, and overall language acquisition in ESL classrooms. By integrating gamified activities into language learning, educators can establish a more interactive and stimulating environment that encourages active participation and facilitates the development of language skills.

Gamification has been recognized as an effective approach to enhancing learner engagement and motivation in English as a

Foreign Language (EFL) learning. Research has consistently shown a positive relationship between the application of game elements and increased learning motivation (Phuong, 2020). Studies have demonstrated that gamified learning interventions can significantly increase student engagement and improve learning outcomes (Buckley & Doyle, 2016), the integration of gamification in EFL classes has been found to enhance students' enthusiasm, participation, and motivation, thereby making the language learning process more enjoyable (Suharno et al., 2023).

Gamification has been observed to stimulate language learning among EFL learners and boost their motivation (Ahmed et al., 2022). A systematic review highlighted the positive impact of gamification on ESL learners, particularly in terms of engagement, motivation, and enjoyment (Zhang & Hasim, 2023). Additionally, incorporating gamification into language learning has been shown to enhance learners' creative, critical, and problem-solving skills (Mee Mee et al., 2020).

Studies have emphasized the effectiveness of gamification in enhancing EFL learners' motivation by incorporating inspiring gaming elements into traditional learning methods (Hassan et al., 2023). The positive effects of gamification on learners' motivation in EFL classes have been acknowledged by both learners and teachers (Helvich et al., 2023). Teachers are encouraged to incorporate gaming elements to encourage students to take a more active role in the learning process (Asiri, 2019).

Overall, gamification in EFL learning has been acknowledged as a valuable strategy to increase learner engagement and motivation. By leveraging game elements and design techniques, gamification not only enhances motivation but also creates a conducive and engaging learning environment for EFL students (Thewissen et al., 2022).

Gamification has been a topic of interest in educational research, particularly in the context of grammar learning. The effectiveness of gamification in grammar learning has been explored across different age groups, educational

levels, and cultural backgrounds. It has been found that gamification has high potential to assist in grammar learning and can be particularly beneficial in reducing learners' affective filter and enhancing motivation (Idris et al., 2020; Rojas et al., 2021).

While gamification shows promise in enhancing learning outcomes, there is a need for further research to clarify the mechanisms underlying gamified educational interventions and to explore theories that explain the effects of these interventions on learning outcomes across diverse demographics (van Gaalen et al., 2021). Additionally, the use of gamification in developing English language skills, including grammar, raises questions about the preferences of students and teachers for this form of learning (Chugh & Turnbull, 2023).

Gamification has shown positive effects on motivation, interest, and engagement in learning activities, further research is needed to fully understand its impact on learning outcomes, especially in grammar learning across different demographic groups (Alsawaier, 2018; Costa, 2023).

The synthesis of findings from various studies underscores the effectiveness of gamification in grammar learning, emphasizing its role in enhancing motivation, engagement, and performance among ESL learners. By incorporating gamified elements such as feedback, rewards, and challenges, educators can create dynamic and interactive language learning environments that cater to the diverse needs of students.

Implications for Educational Practice

To provide practical implications for teachers and curriculum developers regarding the integration of gamification in educational practices, several key findings from relevant studies can be synthesized:

1. Alignment of Beliefs and Practices.

Teachers' beliefs about grammar instruction and their classroom practices may not always align (Phipps & Borg (2009)Alghanmi & Shukri, 2016). It is crucial for educators to reflect on their teaching beliefs and ensure that they are consistent with their instructional

practices to optimize student learning outcomes

2. Enhancing Motivation and Engagement

Gamification has been shown to enhance learners' motivation, problem-solving abilities, decision-making skills, and social interactions (Park & Kim, 2021; González-Fernández et al., 2022). Teachers can leverage gamified elements such as leaderboards, challenges, and rewards to create engaging learning environments that motivate students to actively participate in educational activities.

3. Professional Development

There is a gap between theory and practice in implementing pedagogical strategies, indicating a need for teachers to stay informed about the latest educational approaches (Sajinčič et al., 2022). Continuous professional development programs can help educators stay updated on effective gamification techniques and strategies for language teaching.

4. Adaptation to Learner Needs

Teachers should pay attention to adapting gamification approaches based on learners' preferences and needs (Yaşar et al., 2020). Understanding students' views and levels of adoption of gamified learning can guide educators in tailoring gamification strategies to suit the diverse learning styles and preferences of their students.

5. Positive Attitudes Towards Gamification

Research indicates that teachers generally have a positive attitude towards using gamification in educational settings (Sajinčič et al., 2022). This highlights the importance of fostering a supportive environment where educators are encouraged to explore and implement gamified approaches to enhance teaching and learning experiences.

6. Effective Learning Design

Curriculum developers can benefit from exploring instructional design models in gamification to enhance the teaching-learning process (González-Fernández et al., 2022). By incorporating effective gamification design principles, curriculum developers can create

engaging and interactive learning experiences that promote student participation and achievement.

CONCLUSION

There is strong evidence that gamification in EFL/ESL contexts improves grammar learning, as demonstrated by the large amount of research on the topic. Gamification, the deliberate addition of game components like leaderboards, digital badges, quizzes, and feedback, has been demonstrated to dramatically increase student motivation, engagement, and learning results. These components support a supportive learning environment by lowering anxiety levels and encouraging greater performance and participation. Additionally, gamification fosters the critical, creative, and problem-solving abilities that are necessary for thorough language learning.

Positive student feedback shows that gamified approaches are well received, implying that learning becomes less daunting and more fun with their help. Gamification functions as a link between educational methods and student requirements, augmenting language abilities and enhancing confidence and motivation by lowering emotional filters and involving students in meaningful and interactive tasks.

All things considered, gamification shows itself to be a potent weapon in the toolbox of language teachers, providing a dynamic and successful way to improve grammar competency and general language ability in EFL/ESL environments. Because of this, it has the potential to be a transformative approach to education as well as an instructional style that makes language acquisition fun and efficient.

REFERENCES

- Abu-Hammad, R. M., & Hamtini, T. M. (2023). A Gamification Approach for Making Online Education as Effective as In-Person Education in Learning Programming Concepts. *International Journal of Emerging Technologies in Learning*, *18*(7), 28–49. <https://doi.org/10.3991/ijet.v18i07.37175>
- Ahmed, A. A. A., Ampry, E. S., Komariah, A., Hassan, I., Thahir, I., Hussein Ali, M., Fawzi Faisal, A., & Zafarani, P. (2022). Investigating the Effect of Using Game-Based Learning on EFL Learners' Motivation and Anxiety. *Education Research International*, *2022*. <https://doi.org/10.1155/2022/6503139>
- Al Bataineh, K. B., Ahmed Banikalef, A. A., & H. Albashtawi, A. (2019). The Effect of Blended Learning on EFL Students' Grammar Performance and Attitudes: An Investigation of Moodle. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3367595>
- Alsawaier, R. S. (2018). The effect of gamification on motivation and engagement. *International Journal of Information and Learning Technology*, *35*(1), 56–79. <https://doi.org/10.1108/IJILT-02-2017-0009>
- Andriani, A., Yuniar, V. D., & Abdullah, F. (2021). Teaching English Grammar in an Indonesian Junior High School. *AL-ISHLAH: Jurnal Pendidikan*, *13*(2), 1046–1056. <https://doi.org/10.35445/alishlah.v13i2.956>
- Asiri, M. J. (2019). Do teachers' attitudes, perception of usefulness, and perceived social influences predict their behavioral intentions to use gamification in EFL classrooms? Evidence from the middle east. *International Journal of Education and Practice*, *7*(3), 112–122. <https://doi.org/10.18488/journal.61.2019.73.112.122>
- Buckley, P., & Doyle, E. (2016). Gamification and student motivation. *Interactive Learning Environments*, *24*(6), 1162–1175. <https://doi.org/10.1080/10494820.2014.964263>
- Chen, Y., Li, L., Wang, M., & Wang, R. (2022). Which Cognitive Factors Predict L2 Grammar Learning: Cognitive Control, Statistical Learning, Working Memory, or Attention? *Frontiers in Psychology*, *13*. <https://doi.org/10.3389/fpsyg.2022.943988>
- Chugh, R., & Turnbull, D. (2023). Gamification in education: A citation network analysis using CitNetExplorer. *Contemporary Educational Technology*, *15*(2). <https://doi.org/10.30935/cedtech/12863>
- Costa, J. M. (2023). Using game concepts to improve programming learning: A multi-level meta-analysis. *Computer Applications in Engineering Education*, *31*(4), 1098–1110. <https://doi.org/10.1002/cae.22630>
- Darussalam, A. (2022). Teaching Grammar By Using Task Based Language Learning (Tbtl) in Tefl for English Education Study Program (Stit Ibnu Rusyd Tanah Grogot). *Peel (Paser)*

- English Education and Linguistic*), 1(1), 47–56. <https://doi.org/10.56489/peel.v1i1.87>
- Dichev, C., & Dicheva, D. (2017). Gamifying education: what is known, what is believed and what remains uncertain: a critical review. *International Journal of Educational Technology in Higher Education*, 14(1). <https://doi.org/10.1186/s41239-017-0042-5>
- Durmaz, T. B., Fuertes, J. L., & Imbert, R. (2022). Influence of Gamification Elements on Explicit Motive Dispositions. *IEEE Access*, 10, 118058–118071. <https://doi.org/10.1109/ACCESS.2022.3220254>
- Enesi, M., Strati, E., & Trifoni, A. (2023). Alternative grammar teaching vs. traditional grammar teaching in Albanian tertiary education. *International Journal of Education and Practice*, 11(2), 279–294. <https://doi.org/10.18488/61.v1i2.3337>
- Gil-Acirón, L. Á. (2022). Benefits of Gamification in Second Language Learning. *Epos: Revista de Filología*, 38, 103–126. <https://doi.org/10.5944/epos.38.2022.33785>
- Hashim, H., Rafiqah M. Rafiq, K., & Md. Yunus, M. (2019). Improving ESL Learners' Grammar with Gamified-Learning. *Arab World English Journal*, 5, 41–50. <https://doi.org/10.24093/awej/call5.4>
- Hassan, M. S., Emam, H. E., & sayed, F. R. A. (2023). Using gamification to enhance sixth grade pupils' motivation. *Journal of Pedagogical Research*, 4(15), 226–239. <https://doi.org/10.21608/sjsw.2023.288031>
- Helvich, J., Novak, L., Mikoska, P., & Hubalovsky, S. (2023). A Systematic Review of Gamification and Its Assessment in EFL Teaching. *International Journal of Computer-Assisted Language Learning and Teaching*, 13(1). <https://doi.org/10.4018/IJCALLT.322394>
- Idris, M. I., Mohd Said, N. E., & Tan, K. H. (2020). Game-based learning platform and its effects on present tense mastery: Evidence from an ESL classroom. *International Journal of Learning, Teaching and Educational Research*, 19(5), 13–26. <https://doi.org/10.26803/ijlter.19.5.2>
- Irawan, R., & Wahyudi, U. (2022). Using the Tsanawiyah English Grammar Android Application to Improve Grammar Accuracy and Build Islamic Values. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v7i14.12020>
- Jean, G., & Simard, D. (2011). Grammar teaching and learning in L2: Necessary, but boring? *Foreign Language Annals*, 44(3), 467–494. <https://doi.org/10.1111/j.1944-9720.2011.01143.x>
- Kayan, A., & Aydın, İ. S. (2020). The Effect of Computer-Assisted Educational Games on Teaching Grammar. *World Journal of Education*, 10(1), 117. <https://doi.org/10.5430/wje.v10n1p117>
- Kim, J., & Castelli, D. M. (2021). Effects of gamification on behavioral change in education: A meta-analysis. *International Journal of Environmental Research and Public Health*, 18(7). <https://doi.org/10.3390/ijerph18073550>
- Komila, M. (2021). Competence of Teaching Grammar Communicatively As a Part of Linguadidactic Competence of Future English Teachers. *Psychology and Education Journal*, 58(1), 2003–2010. <https://doi.org/10.17762/pae.v58i1.1075>
- Krishnamurthy, K., Selvaraj, N., Gupta, P., Cyriac, B., Dhurairaj, P., Abdullah, A., Krishnapillai, A., Lugova, H., Haque, M., Xie, S., & Ang, E. T. (2022). Benefits of gamification in medical education. *Clinical Anatomy*, 35(6), 795–807. <https://doi.org/10.1002/ca.23916>
- Landers, R. N. (2019). Gamification Misunderstood: How Badly Executed and Rhetorical Gamification Obscures Its Transformative Potential. *Journal of Management Inquiry*, 28(2), 137–140. <https://doi.org/10.1177/1056492618790913>
- Lin, M. H. (2016). Effects of Corpus-Aided Language Learning in the EFL Grammar Classroom: A Case Study of Students' Learning Attitudes and Teachers' Perceptions in Taiwan. *TESOL Quarterly*, 50(4), 871–893. <https://doi.org/10.1002/tesq.250>
- Lin, M. H., & Lee, J. Y. (2019). Pedagogical suitability of data-driven learning in EFL grammar classes: A case study of Taiwanese students. *Language Teaching Research*, 23(5), 541–561. <https://doi.org/10.1177/1362168817740899>
- Marin-Pacurucu, B. A., & Argudo-Garzón, A. L. (2022). Gamification strategies and speaking fluency in EFL elementary students. *Iustitia Socialis*, 7(1), 77. <https://doi.org/10.35381/racji.v7i1.1702>
- Mee Mee, R. W., Shahdan, T. S. T., Ismail, M. R., Abd Ghani, K., Pek, L. S., Von, W. Y., Woo, A., & Rao, Y. S. (2020). Role of

- gamification in classroom teaching: Pre-service teachers' view. *International Journal of Evaluation and Research in Education*, 9(3), 684–690. <https://doi.org/10.11591/ijere.v9i3.20622>
- Miller, A. S., Cafazzo, J. A., & Seto, E. (2016). A game plan: Gamification design principles in mHealth applications for chronic disease management. *Health Informatics Journal*, 22(2), 184–193. <https://doi.org/10.1177/1460458214537511>
- Mohandas, E. S., Hussin, A. A., & Syed Ahmad, T. S. A. (2020). Language Gamification in Esl Classroom: Teaching Perspective. *European Journal of Open Education and E-Learning Studies*, 5(2). <https://doi.org/10.46827/ejoe.v5i2.3445>
- Muthmainnah, N. (2022). Examining Google Classroom-assisted blended learning in Indonesian EFL grammar classes. *Erudita: Journal of English Language Teaching*, 1(1), 1–14. <https://doi.org/10.28918/erudita.v2i1.5345>
- Nguyen, V. M. (2021). Positive Effects of Video-based Projects on the Communicative English Grammar Lessons. *International Journal of Language and Literary Studies*, 3(3), 54–68. <https://doi.org/10.36892/ijlls.v2i3.666>
- Oliveira, W., Hamari, J., Shi, L., Toda, A. M., Rodrigues, L., Palomino, P. T., & Isotani, S. (2023). Tailored gamification in education: A literature review and future agenda. *Education and Information Technologies*, 28(1), 373–406. <https://doi.org/10.1007/s10639-022-11122-4>
- Özdamli, F., & Yazdeen, D. F. (2021). Gamification in Computer Science Courses: a Literature Review. *Near East University Online Journal of Education*, 4(2), 90–106. <https://doi.org/10.32955/neuje.v4i2.345>
- Phuong, T. T. H. (2020). Gamified Learning: Are Vietnamese EFL Learners Ready Yet? *International Journal of Emerging Technologies in Learning*, 15(24), 242–251. <https://doi.org/10.3991/ijet.v15i24.16667>
- Redjeki, I. S., & Muhajir, R. (2021). Gamification in EFL classroom to support teaching and learning in 21st century. *JEEs (Journal of English Educators Society)*, 6(1), 68–78. <https://doi.org/10.21070/jees.v6i1.882>
- Rodrigues, L., Arndt, D., Palomino, P., Toda, A., Klock, A. C. T., Avila-Santos, A., & Isotani, S. (2022). *Affective Memory in Gamified Learning: A Usability Study*. 585–596. <https://doi.org/10.5753/sbie.2022.225748>
- Rojas, V. S., Fuentealba, L. F., & Ranjan, R. (2021). Game-Based Didactic Resources as a Strategy in Foreign Language Pedagogy. *International Journal of Learning, Teaching and Educational Research*, 20(12), 195–211. <https://doi.org/10.26803/IJLTER.20.12.12>
- Sailer, M., & Homner, L. (2020). The Gamification of Learning: a Meta-analysis. *Educational Psychology Review*, 32(1), 77–112. <https://doi.org/10.1007/s10648-019-09498-w>
- Sheffler, Z. J., Liu, D., & Curley, S. P. (2020). Ingredients for successful badges: evidence from a field experiment in bike commuting. *European Journal of Information Systems*, 29(6), 688–703. <https://doi.org/10.1080/0960085X.2020.1808539>
- Suharno, Suherdi, D., & Gunawan, W. (2023). The Effects of Teaching Presence on Students' Motivation and Performance in A Long-term Online Gamified EFL Listening Course. *International Journal of Instruction*, 16(2), 1111–1134. <https://doi.org/10.29333/iji.2023.16259a>
- Sujana, I. M., Syahrial, E., Arifuddin, A., & Thohir, L. (2021). Designing Blended Learning for Teaching English Grammar at Higher Education. *Proceedings of the 2nd Annual Conference on Education and Social Science (ACCESS 2020)*, 556. <https://doi.org/10.2991/assehr.k.210525.125>
- Thewissen, J., Temmerman, T., Vincent, A., & Gauthier, J. (2022). Same old, same old? Breaking the traditional teaching mold in the age of Covid-19. *Cognition and Contrast*, 297–326. <https://doi.org/10.4000/books.pu1.27987>
- Thurairasu, V. (2022). Gamification-Based Learning as The Future of Language Learning: An Overview. *European Journal of Humanities and Social Sciences*, 2(6), 62–69. <https://doi.org/10.24018/ejsocial.2022.2.6.353>
- Trinidad, M., Calderon, A., & Ruiz, M. (2021). GoRace: A Multi-Context and Narrative-Based Gamification Suite to Overcome Gamification Technological Challenges. *IEEE Access*, 9, 65882–65905. <https://doi.org/10.1109/ACCESS.2021.3076291>
- van Gaalen, A. E. J., Brouwer, J., Schönrock-Adema, J., Bouwkamp-Timmer, T., Jaarsma, A. D. C., & Georgiadis, J. R. (2021). Gamification of health professions education: a systematic review. *Advances in*

- Health Sciences Education*, 26(2), 683–711.
<https://doi.org/10.1007/s10459-020-10000-3>
- Vijayarajoo, A. R., Maktiar Singh, K. K., Gan, K. C., & Mohd Jani, R. (2019). “Parts of Speech” - “Drop a Card” Board Game. *Social and Management Research Journal*, 16(1), 157.
<https://doi.org/10.24191/smrj.v16i1.6092>
- Zarinfard, S., Rahimi, M., & Mohseni, A. (2021). The Impact of Flipped Classroom on Learning Outcome in a General English Course: Grammar and Vocabulary Gains in Focus. *International Journal of Foreign Language Teaching and Research*, 9(38), 65–80. <https://doi.org/10.52547/jfl.9.38.65>
- Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology*, 13.
<https://doi.org/10.3389/fpsyg.2022.1030790>