

EXPLORING THE IMPACTS OF GRAMMAR GAMIFICATION ON ADULT STUDENTS LEARNING ENGLISH LINGUISTICS AS A SECOND DEGREE AT A VIETNAMESE UNIVERSITY

Ngô Nguyễn Thiên Duyen^{1*}, Nguyễn Hà Thảo Mi²

¹*Ho Chi Minh City University of Economics and Finance*

²*University of Finance – Marketing*

ARTICLE INFO	ABSTRACT
Received: 03/10/2024	This study examines how gamification in grammar instruction affects motivation of adult learners in Vietnamese continuing education programs, concentrating on game features that motivate learning. Two-stage qualitative research was used: narrative frames and semi- structured interviews. Ten Vietnamese public university students studying English Linguistics were chosen. Researchers collected reflections of participants through narrative frames and then conducted semi-structured interviews to better understand their gamified grammar education experiences. Findings revealed that game components like points, levels, challenges, and social engagement motivate students by encouraging achievement, teamwork, and autonomy. Besides, the participants wanted to master grammar and appreciate it more. Gamification also made grammar lectures less boring, and gamification in grammar training could also increase learner engagement and motivation, primarily through individualized and interactive learning experiences. Accordingly, adult grammar teachers can use these findings to improve their methods.
Revised: 10/02/2025	
Published: 11/02/2025	
KEYWORDS	
Gamification	
Motivation	
Grammar instruction	
Qualitative research	
Adult learners	

KHÁM PHÁ TÁC ĐỘNG CỦA TRÒ CHƠI NGỮ PHÁP HÓA ĐỐI VỚI SINH VIÊN VĂN BẰNG HAI NGÀNH NGÔN NGỮ ANH TẠI MỘT ĐẠI HỌC Ở VIỆT NAM

Ngô Nguyễn Thiên Duyen^{1*}, Nguyễn Hà Thảo Mi²

¹*Trường Đại học Kinh tế - Tài chính Thành phố Hồ Chí Minh*

²*Trường Đại học Tài chính – Marketing*

TH TÓM TẮT ÔN G TIN BÀI BÁ O

Nghiên cứu này tìm hiểu cách thức trò chơi hóa trong giảng dạy ngữ pháp ảnh hưởng đến động lực của sinh viên văn bằng hai trường thành trong các chương trình giáo dục liên tục tại Việt Nam, tập trung vào các tính năng của trò chơi thúc đẩy việc học. Nghiên cứu định tính hai giai đoạn được sử dụng: khung câu chuyện và phỏng vấn bán cấu trúc. Mười sinh viên Đại học công lập Việt Nam học ngành Ngôn ngữ Anh đã được chọn. Các tác giả thu thập phản ánh của người tham gia thông qua tự sự/chuyện kể, sau đó tiến hành phỏng vấn bán cấu trúc để hiểu rõ hơn về kinh nghiệm giáo dục ngữ pháp có sử dụng trò chơi của họ. Kết quả cho thấy các thành phần của trò chơi như điểm số, cấp độ, thách thức và giao tiếp xã hội có thể thúc đẩy sinh viên thông qua việc khuyến khích thành tựu, làm việc nhóm và tự chủ. Người tham gia muốn nắm vững ngữ pháp và đánh giá cao nó hơn. Trò chơi hóa cũng làm cho các bài giảng ngữ pháp bớt nhàm chán, và trò chơi hóa trong luyện tập ngữ pháp cũng có thể tăng cường sự tham gia và động lực của học viên, đặc biệt là thông qua các trải nghiệm học tập cá nhân hóa và tương tác. Từ đó, giáo viên giảng dạy ngữ pháp cho người lớn có thể sử dụng những phát hiện này để cải thiện phương pháp giảng dạy của họ.

* Corresponding author. Email: duyennt@uef.edu.vn

à 2/
y 20
h 25
o
à
n
t
h
i
ệ
n
:

N 11
g /0
à 2/
y 20
đ 25
ã
n
g
:

TỪ
KH
ÓA

Trò
chơi
hóa

Độn
g
lực

Giá
ng
dạy
ngữ
phá
p

Ngh
iên
cứu
định
tính

Ngư
ời
học
trườ
ng
thân
h

DOI: <https://doi.org/10.34238/tnu-jst.11222>

1. Introduction

In the dynamic landscape of lifelong learning, adult education in Vietnam is witnessing a growing emphasis on continuing education programs to meet the evolving needs of its workforce and society. This trend aligns with global shifts toward knowledge-based economies, where upskilling and reskilling are essential for individuals to remain competitive [1]. Adult learners bring unique characteristics like independence and life experiences to the language learning environment, but they also face challenges like time constraints, financial burdens, and difficulty acquiring new skills [2], [3]. Additionally, factors such as limited prior English exposure and fear of making mistakes can further lower confidence and motivation [4], [5]. These challenges underscore the need for tailored language learning approaches that acknowledge and address the specific needs and constraints of adult learners. Motivation plays a critical role in learning, influencing engagement, and persistence [6]. Adult learners, despite being driven by self-improvement, often struggle with grammar acquisition due to its abstract and intimidating nature [7]. Balancing work, family, and learning also creates obstacles. Gamification has emerged as a potential solution to these issues, incorporating game elements like points, badges, and leaderboards to foster intrinsic motivation [8], [9]. Studies show that gamification can enhance engagement and language proficiency, particularly in grammar [10], [11]. It also promotes a learner-centered environment, which is essential for adult education [12].

Gamification, the strategic integration of game design elements into non-game contexts [9], has emerged as a promising avenue to address these challenges and revitalize grammar instruction. By incorporating elements such as points, badges, leaderboards, and interactive narratives, gamification can tap into intrinsic motivations, fostering a sense of challenge, autonomy, and social connection that can make grammar learning more stimulating and rewarding [13]. Much research has shown that gamification can positively influence various aspects of the learning process. It has been found to enhance student motivation and engagement across different educational levels and subjects [14]. Notably, studies have specifically demonstrated the positive impact of gamification on language learning outcomes, including improved vocabulary acquisition, grammar understanding, and overall language proficiency [15]. The interactive and competitive nature of gamified activities can create a sense of achievement and progress, encouraging learners to actively participate and persist in their grammar studies [16]. Moreover, gamification has the potential to create a more learner-centered environment, promoting autonomy and self-directed learning, which are crucial factors for adult learners [17].

Besides, research has also shown that gamification can positively influence motivation in various learning contexts. Studies have reported increased learner engagement, participation, and enjoyment when game elements are incorporated into educational activities [18]. In the context of language learning, gamification is particularly effective in boosting motivation, especially for tasks that may be perceived as challenging or tedious, such as grammar acquisition [11]. A key aspect of gamification is the use of rewards and incentives to reinforce desired behaviors and encourage continued engagement. However, the impact of rewards on intrinsic motivation is a subject of ongoing debate. While some studies suggest that extrinsic rewards can undermine intrinsic motivation [19], others argue that rewards can be beneficial if they are perceived as informational rather than controlling [13].

While the potential of gamification in education has been increasingly recognized, much of the existing research on gamification in education has primarily focused on younger learners in high school and university settings [20]. While some studies have explored gamification with adult learners, they often lack a specific focus on the unique challenges and motivations of this demographic within the context of continuing education [21]. Although there is growing interest in gamification in Vietnam, the majority of studies have been conducted in Western contexts [22]. This highlights a significant gap in understanding the cultural nuances and contextual factors that may influence the effectiveness of gamification for Vietnamese adult learners [22].

This study examines how gamification affects grammar motivation of adult learners in Vietnamese continuing education programs. This research aims to illuminate the motivational dynamics of gamification in this context to help adult learners in Vietnam design and implement more effective and enjoyable grammar learning experiences, fostering language proficiency and lifelong learning. To fulfill the aims, the study tries to answer the following research questions:

1. How does the integration of gamification into grammar instruction influence the motivation levels of adult learners in Vietnamese continuing education programs?
2. Which specific game elements are effective in enhancing motivation within the context of grammar learning for Vietnamese adult learners?

2. Methodology

2.1. Research sites and participants

This research was conducted at a university in Vietnam that offers English Linguistics and other courses to help adult learners continue their studies. This study included 10 Bachelor of English Linguistics students of varied ages. The selected students who were the participants of the current study wanted to improve their professional abilities and promote lifelong English learning. They were recruited using purposive sampling to ensure that all individuals had similar English linguistics educational and career goals. Participants could withdraw from the study at any time, and pseudonyms were employed to protect their privacy. The demographics of participants are shown in Table 1.

Table 1. *The demographic information of the participants*

Age Range	Purpose of Learning	Job Title (Optional)
25-34	Career Advancement	Marketing Manager
35-44	Personal Development	Teacher
45-56	Change in Career	Software Engineer

2.2. Research instruments

This study collected qualitative data using story frames and semi-structured interviews in two stages. In the first stage, narrative frames captured experiences of participants and reflections on gamified grammar training. Participants described how game components like points, levels, and collaboration motivated them to learn the English language. Narrative frames are ideal for gathering descriptive data [23]. The second stage includes semi-structured interviews to further examine story elements. Based on the findings of the first stage, an interview guide was created to learn more about how gamification affected motivation and engagement. The replies of the participants were flexible and consistent in addressing major themes related to the research questions due to the semi-structured style [24].

2.3. Data collection and analysis procedures

Data collection was carried out in two phases. Participants completed narrative frames to reflect on their gamified grammar education experiences in the first phase. These narratives revealed the motivations of the participants and their views on grammar learning gamification. The second step involved semi-structured interviews with each participant to further investigate their perspectives. Participants were encouraged to respond in Vietnamese or English, depending on their comfort level, during Vietnamese interviews. Using inductive content analysis, narrative frames, and qualitative data of semi-structured interviews revealed patterns and themes [25].

According to Self-Determination Theory (SDT) [19], intrinsic motivation came from satisfying three psychological needs: competence, relatedness, and autonomy. This framework guided the coding and theme identification by concentrating on how gamified learning environments meet the needs of adult learners. Following the three rounds of qualitative content analysis [26], the

researchers carefully reviewed and reread narrative narratives and interview transcripts. This preparation process helped understand the experiences of the participants. Next, narrative frames and semi-structured interview transcripts were open-coded during organization. The SDT demands of competence, relatedness, and autonomy determined learner motivation, engagement, social interaction, and personalization codes. Data segments were coded for game aspects, learner motivation, and social interactions. Four main themes arose from these codes as follows:

1. **Increased intrinsic motivation:** This theme captured the heightened interest and enjoyment participants expressed towards gamified grammar activities.
2. **Desire for achievement and progress:** This theme reflected the drive of the participants to earn points, level up, and achieve mastery within the gamified environment.
3. **Social interaction and collaboration:** This theme highlighted the value participants placed on collaboration, competition, and social interaction within the learning process.
4. **Personalized and autonomous learning:** This theme captured the appreciation of the participants for the flexibility and self-direction afforded by the gamified environment.

These themes were chosen for their SDT alignment and recurrence across both data sets. Gamified grammar education boosted intrinsic motivation, desire for achievement, and progress, which showed the developing competence of learners.

3. Results and discussion

3.1. Results

3.1.1. Increased intrinsic motivation

The narratives revealed a clear trend in the motivational impact of gamification on adult learners in Vietnamese continuing education programs. The participants reported heightened engagement, with the narratives of participant 5 emphasizing how gamification creates "excitement" and makes the learning process more "dynamic". This observation aligns with the findings of Deci and Ryan's [8] self-determination theory, which highlights that when learners are exposed to stimulating and enjoyable tasks, their intrinsic motivation increases. For instance, several participants noted that they felt less inclined to view grammar as a tedious subject, with one commenting, "it feels less like memorizing rules and more like a challenge that I want to complete" (Participant 1, narrative, or P1, nar). Furthermore, several responses in the interview further corroborate these themes. For example, participant 8 noted that gamification "*creates excitement, visual appeal, and a different approach compared to traditional learning methods*" (interview), while participant 9 affirmed that it "*helps review lessons quickly and enjoyably at home when the teacher assigned us with the Quizizz practices*" (interview). These comments highlight both the affective and practical dimensions of gamified learning.

Besides, specific game elements such as points, leaderboards, and interactive challenges were identified as particularly effective in enhancing motivation. As one participant mentioned, "seeing my progress in real-time helps me stay focused and pushes me to do better" (Participant 2, interview, or P2, int). This feedback illustrates the motivational power of gamification through immediate feedback and competition, both of which are crucial game elements that foster a sense of achievement and progression. Moreover, another respondent reflected, "working in teams during grammar games builds a sense of community, which makes me want to participate more" (P3, int), emphasizing the social dynamics at play in motivating learners through cooperative game features.

3.1.2. Desire for achievement and progress

The inclusion of game elements such as points, levels, and challenges sparked a strong sense of motivation among learners to strive for achievement and track their progress. Many participants expressed a desire to be "*challenged*" and to "*see how well I understand the lesson*"

in the narrative, which reflects an underlying drive for mastery and self-improvement. This motivation aligns with the competence component of self-determination theory, which posits that individuals are inherently motivated to feel capable and successful in their tasks [13]. The competitive nature of gamification, evident in the pursuit of points and levels of learners, provides them with tangible benchmarks for measuring progress and accomplishment, further enhancing their motivation to excel. Making it clearer in the interview section, one participant commented, *"seeing my score improve after each round motivates me to keep going"* (P4, int). This emphasis on progression and self-improvement underscores the role of gamification in promoting a more engaging and achievement-oriented approach to grammar learning.

Additionally, the reflections of learners in the interview echoed this theme of progress and achievement. One participant remarked, *"Points and levels help me clearly see my progress"* (P7, int), while another shared, *"Challenges and progress through each lesson make me want to learn more"* (P10, nar). These responses reinforce the notion that gamified elements serve as effective motivators, helping learners stay focused and invested in their learning journey. Another participant captured the confidence boost gained from reaching new milestones, stating, *"Achieving new levels makes me feel more confident in grammar learning"* (P9, int).

3.1.3. Social interaction and collaboration

Gamification fostered a sense of social connection and collaboration among learners, further enhancing motivation. Participants highlighted the importance of teamwork, with one noting that *"playing in groups allows us to learn from each other and discuss how to solve problems together"* (P5, int). This reflects the significance of relatedness, a core element of self-determination theory, which suggests that individuals are more motivated when they feel a sense of belonging and connection within their social environment [13]. Collaborative elements of gamified learning, such as group challenges and team-based competitions, not only facilitated peer interaction but also created a supportive learning atmosphere, helping learners feel more engaged and motivated. One participant remarked, *"The group activities made me more invested because we all wanted to win together"* (P6, int), illustrating how social interaction fosters a collective motivation to succeed.

Responses in the interview section further highlighted this collaborative dynamic. Participant 3 shared, *"Teamwork games help me learn from others and feel more connected. I can cooperate with classmates that I have never worked with before"* (P3, int), while another explained, *"Playing in groups motivates us to win together. Besides, I am a bit old and I cannot catch up with the new technology or the rules in games, the younger students in the team supported me a lot"* (P10, int). These reflections point to the critical role that collaboration plays in sustaining motivation and engagement, as learners benefit from shared goals and peer support. Additionally, participant 5 also noted that *"Group discussions during games help me review the lessons more effectively"* (int), which highlights the cognitive benefits of collaborative gamified activities. These insights reveal that gamified activities facilitate social interaction, which enhances engagement and motivation, as learners benefit from a more collaborative and connected learning experience.

3.1.4. Personalized and autonomous learning

The ability to customize learning was another attraction for adult learners. Gamified activities gave flexibility and choice, with one participant wanting *"a wider variety of games that allow me to choose what I need to review"* (P7, int). Participant 6 wrote, *"I want more types of games so I can choose which parts I need to review"* (nar). Autonomy in self-determination theory motivates learners more when they control their learning [13]. The flexibility to choose assignments, change challenge complexity, or try new games gave learners autonomy over their learning path.

Adult learners enjoy self-directed learning and the freedom to customize their education, therefore autonomy is vital. The following narrative and interview excerpts demonstrate it:

"Choosing learning activities my way makes me more interested." (P2, nar)

"Personalization in games allows me to learn at my own pace." (P8, int)

These findings suggest that giving students autonomy and personalized learning can boost their motivation by allowing them to tailor the learning process to their needs and preferences, making grammar learning more engaging and effective. In conclusion, the narrative inquiry and semi-structured interview qualitative data show how gamification might motivate grammar learning in several ways. Gamification can improve engagement, effectiveness, and learner-centeredness by tapping into intrinsic motives including enjoyment, achievement, social connection, and autonomy. Overall, this encourages grammar learning and lifetime learning.

3.2. Discussion

The findings of this research provide valuable insights into the impact of gamification on the motivation of adult learners in the context of Vietnamese continuing education programs, effectively addressing the two research questions posed in the study.

In terms of the first question, the positive impact of gamification on the motivation of adult learners in grammar instruction aligns seamlessly with the broader trends observed in gamification research within educational contexts. While [18] and [26] showed the positive impact of gamification on motivation has been widely recognized, particularly in younger learners and in general educational contexts, this study provides new insights by focusing on adult learners in continuing education. Specifically, the identification of personalized choice and flexibility as key motivational factors addresses a gap in the literature that has been less explored in relation to adults balancing multiple responsibilities. Furthermore, the study adds to the evidence that gamification might help adult learners overcome their specific problems. Traditional grammar education may bore or demotivate adult learners with various obligations and different learning styles. Gamification may solve these problems and improve learning environments by making grammar learning more interactive, interesting, and rewarding. This study extends the work of [27] and [28] by not only confirming the motivational impact of gamification on adult learners but also emphasizing how specific elements, such as teamwork and peer support, address the needs of older adult learners, particularly those who may struggle with technology.

The second research question says game elements motivate Vietnamese adult learners. SDT promotes points, levels, challenges, and teamwork. When activities meet psychological needs for competence, autonomy, and relatedness, SDT argues intrinsic motivation thrives [8]. First, points and levels are appealing because they show progress and achievement. Students feel successful and capable as they level up. Gamification motivates and engages pupils by rewarding success [29]. Second, gamified grammar challenges motivate students to improve. Goal-setting and overcoming obstacles also improve confidence. This study deepens our understanding of gamification in education by illustrating the dual effects of competition: it boosts motivation for some students while increasing anxiety for others, especially those unaccustomed to competitive scenarios. It challenges the prevailing assumption that competition has universally beneficial impacts, addressing a gap in the existing literature that has largely overlooked the varied responses to competitive learning environments. [18]. Furthermore, collaborative game elements promote social interaction and a sense of belonging, fulfilling the need for relatedness. This confirms findings from prior research [12], [17] but this current study goes further by identifying that collaboration not only supports engagement but also provides peer support for learners struggling with technology or new game rules, particularly older participants. Lastly, while not explicitly specified as a game feature in the research questions, the narratives of the participants stressed the importance of choice and personalization in motivation. The freedom to choose

learning activities and customize the learning experience empowers learners and gives them control over their learning journey, supporting their need for autonomy. By framing the findings within SDT [8], this study not only confirms the relevance of theory to adult learners but also suggests refinements in how competence, autonomy, and relatedness are addressed in gamified environments, particularly for adults in continuing education. Unlike previous studies, which often overlook the complexities of adult learner motivation, this research reveals that the autonomy afforded by personalized learning paths plays a critical role in maintaining engagement among learners with competing responsibilities.

4. Conclusion and implications

In conclusion, the findings resonate with existing literature, highlighting the potential of gamification to transform traditionally dry and demotivating subjects into stimulating and rewarding experiences. By incorporating elements that tap into the psychological needs for competence, autonomy, and relatedness, such as points, levels, challenges, and teamwork, educators can foster intrinsic motivation and create a more learner-centered environment.

The emphasis on the importance of choice and personalization further of this study underscores the need to tailor gamified experiences to the needs and preferences of adult learners.

learners. This approach not only empowers learners but also acknowledges the diverse learning styles and responsibilities that characterize this demographic. By offering flexibility and opportunities for self-direction, gamification can facilitate a sense of ownership and control over the learning process, further enhancing motivation and engagement.

However, it is crucial to recognize that the effectiveness of gamification is not a one-size-fits-all solution. Future research should delve deeper into the potential moderating effects of individual learner characteristics, specific game elements, and instructional context to gain a more nuanced understanding of its efficacy. Additionally, longitudinal studies are warranted to examine the long-term impact of gamification on learning outcomes and retention, as well as its potential to cultivate a sustained interest in language learning beyond the immediate gamified intervention.

Overall, this research contributes valuable insights into the motivational dynamics of gamification in adult grammar instruction. The findings support the integration of thoughtfully designed game elements into language learning environments, offering a promising avenue to enhance motivation, engagement, and ultimately, the success of adult learners in their pursuit of language proficiency.

REFERENCES

- [1] UNESCO, *Rethinking Education towards a Global Common Good*, Paris, 2015.
- [2] S. Lieb and J. Goodlad, *Principles of adult learning*, ed: Best Practice Resources, 2005.
- [3] T. H. B. Nguyen, "A Study on Adult Learners of English as A Foreign Language in Vietnam: Motivations, Advantages, and Challenges," *International Journal of Language Instruction*, vol. 3, no. 1, pp. 31-42, 2024, doi: 10.54855/ijli.24313.
- [4] M. Cozma, "The challenge of teaching English to adult learners in today's World," (in en), *Procedia - Social and Behavioral Sciences*, vol. 197, pp. 1209-1214, 2015, doi: 10.1016/j.sbspro.2015.07.380.
- [5] F. Mei, Y. Lu, and Q. Ma, "Online language education courses: A Chinese case from an ecological perspective," *Journal of China Computer-Assisted Language Learning*, vol. 2, no. 2, pp. 228-256, 2023, doi: 10.1515/jccall-2022-0017.
- [6] Z. Dörnyei, "Attitudes, orientations, and motivations in language learning: Advances in theory, research, and applications," *Language Learning*, vol. 53, 2003, doi: 10.1111/1467-9922.53222.
- [7] M. Kara, F. Erdogdu, M. Kokoç, and K. Cagiltay, "Challenges faced by adult learners in online distance education: A literature review," *Open Praxis*, vol. 11, no. 1, pp. 5-22, 2019, doi: 10.5944/openpraxis.11.1.929.

- [8] R. M. Ryan and E. L. Deci, "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being," *American psychologist*, vol. 55, no. 1, p. 68, 2000, doi: 10.1037//0003-066X.55.1.68.
- [9] S. Deterding, D. Dixon, R. Khaled, and L. Nacke, "From game design elements to gamefulness: defining "gamification", in *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 2011, New York: Association for Computing Machinery, 2011, pp. 9-15, doi: 10.1145/2181037.2181040.
- [10] N. A. Boudadi and M. Gutiérrez-Colón, "Effect of Gamification on students' motivation and learning achievement in Second Language Acquisition within higher education: a literature review 2011-2019," *The EuroCALL Review*, vol. 28, no. 1, pp. 57-69, 2020, doi: 10.4995/eurocall.2020.12974.
- [11] R. Huang *et al.*, "The impact of gamification in educational settings on student learning outcomes: A meta-analysis," *Educational Technology Research and Development*, vol. 68, pp. 1875-1901, 2020, doi: 10.1007/s11423-020-09807-z.
- [12] C. Cruaud, "Learner autonomy and playful learning: Students' experience of a gamified application for French as a foreign language," *ALSIC*, vol. 21, 2017, doi: 10.4000/alsic.3166.
- [13] R. M. Ryan and E. L. Deci, "Intrinsic and extrinsic motivations: Classic definitions and new directions," *Contemporary educational psychology*, vol. 25, no. 1, pp. 54-67, 2000.
- [14] L. Huseinović, "The effects of gamification on student motivation and achievement in learning English as a foreign language in higher education," *MAP Education and Humanities*, vol. 4, pp. 10-36, 2024, doi: 10.53880/2744-2373.2023.4.10.
- [15] H. Dehganazadeh and H. Dehganazadeh, "Investigating effects of digital gamification-based language learning: a systematic review," *Journal of English Language Teaching and Learning*, vol. 12, no. 25, pp. 53-93, 2020.
- [16] N. H. Arce and A. C. Valdivia, "Adapting competitiveness and gamification to a digital platform for foreign language learning," *International Journal of Emerging Technologies in Learning (iJET)*, vol. 15, no. 20, pp. 194-209, 2020, doi: 10.3991/ijet.v15i20.16135.
- [17] C. Cruaud, "The playful frame: gamification in a French-as-a-foreign-language class," (in en), *Innovation in Language Learning and Teaching*, vol. 12, no. 4, pp. 330-343, 2018, doi: 10.1080/17501229.2016.1213268.
- [18] P. Buckley and E. Doyle, "Gamification and student motivation," *Interactive Learning Environments*, vol. 24, no. 6, pp. 1162-1175, 2016, doi: 10.1080/10494820.2014.964263.
- [19] E. L. Deci, R. Koestner, and R. M. Ryan, "A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation," *Psychological bulletin*, vol. 125, no. 6, p. 627, 1999.
- [20] D. Dicheva and C. Dichev, "Gamification in education: Where are we in 2015?," in *E-learn: World conference on E-learning in corporate, government, healthcare, and higher education*, 2015: Association for the Advancement of Computing in Education (AACE), pp. 1445-1454.
- [21] J. Koivisto and J. Hamari, "The rise of motivational information systems: A review of gamification research," *International Journal of Information Management*, vol. 45, pp. 191-210, 2019, doi: 10.1016/j.ijinfomgt.2018.10.013.
- [22] K. Al-Dosakee and F. Ozdamli, "Gamification in teaching and learning languages: A systematic literature review," *Revista Romaneasca Pentru Educatie Multidimensionala*, vol. 13, no. 2, pp. 559-577, 2021, doi: 10.18662/rrem/13.2/436.
- [23] G. Barkhuizen, "Narrative knowledging in TESOL," *TESOL Quarterly*, vol. 45, no. 3, pp. 391-414, 2011.
- [24] J. W. Creswell and C. N. Poth, *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications, 2016.
- [25] A. J. Bingham, P. Witkowsky, C. Vanover, P. Mihas, and J. Saldaña, "Analyzing and interpreting qualitative data: After the interview," in *Deductive and Inductive Approaches to Qualitative Data Analysis*, C. Vanover, P. Mihas, and J. Saldaña Eds.: SAGE, 2022, pp. 133-146.
- [26] J. Hamari, "Gamification-motivations & effects," Doctoral Dissertation, Department of Information and Service Economy, Aalto University, 2015.
- [27] K. M. Kapp, *What is gamification* (The gamification of learning and instruction: game-based methods and strategies for training and education). John Wiley & Sons, 2012, pp. 1-23.
- [28] P. Ardi and E. Rianita, "Leveraging gamification into EFL grammar class to boost student engagement," *Teaching English with Technology*, vol. 22, no. 2, pp. 90-114, 2022.
- [29] E. D. Mekler, F. Brühlmann, A. N. Tuch, and K. Opwis, "Towards understanding the effects of individual gamification elements on intrinsic motivation and performance," *Computers in human behavior*, vol. 71, pp. 525-534, 2017, doi: 10.1016/j.chb.2015.08.048.