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GAMIFICATION AND MOBILE APPLICATIONS IN TEACHING ENGLISH: INNOVATIVE APPROACHES TO THE DEVELOPMENT OF COMMUNICATIVE SKILLS

Abstract. *The purpose of the article is to investigate gamification and mobile applications as innovative tools for developing communicative skills in the process of teaching English. The study addresses the growing need for effective pedagogical approaches capable of enhancing learner motivation, engagement, and communicative competence within contemporary digital learning environments. The research methodology is based on the application of general scientific methods, including analysis, synthesis, generalization, and systematization of scholarly sources, as well as comparative and structural-logical analysis. The theoretical framework of the study draws on the principles of the communicative approach to foreign language teaching, theories of learning motivation, and the concept of mobile-assisted language learning. The scientific novelty of the research lies in the comprehensive generalization and systematization of modern scholarly approaches to the use of gamified mobile applications as a pedagogical means of developing learners' communicative competence. Particular attention is paid to the educational potential of integrating game mechanics with mobile technologies in order to support learner autonomy, sustained engagement, and regular communicative practice in English.*

Conclusions. *It has been established that the integration of gamification and mobile applications into the educational process contributes to increased learner motivation and engagement, reduces language anxiety, and enhances the effectiveness of communicative skill development in English language learning. The findings substantiate the expediency of incorporating gamified mobile tools into blended learning models as a complementary component of English language instruction rather than a replacement for traditional teaching methods.*

Key words: *gamification, mobile-assisted language learning, English language teaching, communicative skills.*

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ГЕЙМІФІКАЦІЯ ТА МОБІЛЬНІ ЗАСТОСУНКИ У ВИКЛАДАННІ АНГЛІЙСЬКОЇ МОВИ: ІННОВАЦІЙНІ ПІДХОДИ ДО РОЗВИТКУ КОМУНІКАТИВНИХ НАВИЧОК

Анотація. *Метою статті є дослідження гейміфікації та мобільних застосунків як інноваційних засобів розвитку комунікативних навичок у процесі викладання англійської мови. Актуальність роботи зумовлена зростаючою потребою в ефективних педагогічних підходах, здатних підвищувати мотивацію, залученість та рівень комунікативної компетентності здобувачів освіти в умовах цифрового освітнього середовища. Методологія дослідження ґрунтується на використанні загальнонаукових методів аналізу, синтезу, узагальнення та систематизації наукових джерел, а також порівняльного й структурно-логічного аналізу. Теоретичною основою дослідження є положення комунікативного підходу до навчання іноземних мов, теорії мотивації навчальної діяльності та концепції мобільного навчання, що дають змогу комплексно осмислити педагогічний потенціал гейміфікованих цифрових інструментів. Наукова новизна дослідження полягає в комплексному узагальненні та систематизації сучасних наукових підходів до використання гейміфікованих мобільних застосунків як ефективного педа-*



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гогічного засобу розвитку комунікативної компетентності здобувачів освіти. У статті акцентовано увагу на можливостях поєднання ігрових механік з мобільними технологіями для підтримки навчальної автономії, стійкої залученості та регулярної комунікативної практики англійською мовою, що є важливими умовами формування продуктивних мовленнєвих навичок.

Висновки. Встановлено, що інтеграція гейміфікації та мобільних застосунків у навчальний процес сприяє підвищенню мотивації і залученості студентів, зниженню мовленнєвої тривожності й зростанню ефективності розвитку комунікативних навичок у процесі вивчення англійської мови. Отримані результати обґрунтовують доцільність упровадження гейміфікованих мобільних інструментів у межах змішаних моделей навчання як доповнення до традиційних методів викладання, а не як їх повної заміни, з урахуванням дидактичних цілей та особливостей навчальної аудиторії.

Ключові слова: гейміфікація, мобільне навчання, англійська мова, комунікативні навички.

Introduction. The digitalization of education has become a defining feature of the twenty-first century, reshaping teaching methodologies and learning environments worldwide. In foreign language education, these transformations have intensified the search for innovative approaches that enhance learner motivation, engagement, and communicative competence. English language teaching, in particular, requires instructional strategies that support active interaction, contextualized practice, and learner autonomy.

One of the most prominent innovations in this area is gamification is the integration of game elements into non-game contexts to increase motivation and participation. When combined with mobile applications, gamification creates flexible, learner-centered environments that align with contemporary educational paradigms. Mobile applications such as Duolingo exemplify how game mechanics, adaptive learning, and instant feedback can support language acquisition beyond the classroom.

The relevance of this study lies in the growing demand for pedagogically grounded digital tools capable of fostering communicative skills in English. The article aims to analyze the theoretical foundations of gamification and mobile learning, examine their practical implementation in EFL instruction, and evaluate their effectiveness based on recent empirical research.

Analysis of sources and recent research. The problem of gamification and the use of mobile applications in teaching English as a foreign language has attracted considerable scholarly attention in recent decades. Contemporary research is primarily focused on the pedagogical potential of digital technologies to enhance learner motivation, engagement, and communicative competence. Scholars emphasize that traditional language teaching methods often fail to meet the needs of modern learners, which has led to the

growing integration of game-based and mobile learning approaches into educational practice.

The theoretical foundations of gamification in education were established by S. Deterding [3], who defined gamification as the use of game design elements in non-game contexts. Further development of this concept in educational settings is presented in the works of K. Kapp [4] who highlights the role of game mechanics, dynamics, and components in shaping learner behavior and motivation. These studies provide a conceptual framework for understanding how gamification can support learning processes, including foreign language acquisition.

A significant body of research addresses the motivational impact of gamification. According to E. Deci and R. Ryan's self-determination theory, learning environments that support autonomy, competence, and relatedness foster intrinsic motivation. Empirical studies by M. Sailer and L. Homner confirm that gamified learning environments positively influence learner motivation and engagement, provided that game elements are meaningfully aligned with instructional goals. At the same time, researchers such as I. Bogost and J. Hamari caution against superficial gamification that prioritizes rewards over meaningful learning.

In the context of language education, gamification is closely connected with the communicative approach. D. Hymes's concept of communicative competence emphasizes the importance of using language appropriately in real-life situations rather than focusing solely on grammatical accuracy. J. Reinhardt argues that gamified environments can effectively support communicative language teaching by encouraging interaction, experimentation, and contextualized language use. Similar conclusions are drawn by J. Plass, B. Homer, and C. Kinzer, who stress the cognitive and emotional benefits of game-based learning in language instruction.

Special attention in recent research is given to gamified mobile applications, particularly Duolingo. Studies show that Duolingo enhances learner motivation, reduces anxiety, and supports regular language practice. Z. Ouyang, Y. Jiang, and H. Liu further report that AI-integrated features of Duolingo positively affect learners' willingness to communicate and engagement in online learning environments. However, researchers agree that such applications are most effective when used as supplementary tools within blended learning models rather than as substitutes for formal instruction.

The purpose of the article is to investigate gamification and mobile applications as innovative tools for developing communicative skills in the process of teaching English, as well as to theoretically substantiate the expediency of their integration into contemporary educational practice in order to enhance learner motivation, engagement, and the effectiveness of communicative competence formation.

Main body. In contemporary educational discourse, gamification is understood as an innovative strategy that involves the use of game elements, mechanics, and thinking in non-game contexts in order to enhance learner motivation, engagement, and learning outcomes. Although the term *gamification* was first introduced in 2002, it gained widespread academic recognition after 2010, when sustained scholarly interest in its educational applications emerged. Since then, gamification has evolved into a powerful educational tool that enables the alignment of instructional objectives with engaging game-based formats, creating additional motivational incentives for learners.

The core idea of gamification lies in transferring effective game mechanisms such as points, competition, achievements, levels, rewards, and narrative structures into educational environments with the aim of fostering intrinsic motivation. As noted by M. Sailer and L. Homner [5], gamification increases learner engagement, promotes positive attitudes toward the learning process, and supports cognitive activity. The positive impact of gamification on academic achievement is further confirmed by meta-analytical research [1], which demonstrates statistically significant improvements in learning outcomes in gamified environments compared to traditional instructional

methods. These findings are supported by applied studies conducted across diverse educational contexts, ranging from primary education to higher education.

The theoretical foundations of gamification encompass a range of pedagogical and psychological concepts. One of the key frameworks is self-determination theory, proposed by E. Ryan and R. Deci, which emphasizes the importance of three basic psychological needs: autonomy, competence, and relatedness. Within gamified learning environments, these needs are addressed through learner choice, visible progress, and social recognition. Alignment with self-determination principles ensures not only external motivation but also the development of deep intrinsic motivation, which is why gamified educational settings are often regarded as effective tools for fostering learner autonomy and emotional engagement.

Equally significant is the contribution of cognitive psychology, particularly cognitive load theory, which highlights the importance of structured and balanced information delivery to maintain learners' attention and cognitive efficiency. Properly designed gamified elements help organize learning content into manageable stages, making the learning process more controlled and comprehensible. According to the research [5], gamification also facilitates the implementation of experiential learning, allowing learners to actively interact with educational content. Additionally, gamified tasks support learning discipline through systems of immediate feedback and continuous progress monitoring.

A central concept in gamification is game design, defined as the process of creating interactive environments that stimulate specific learner actions and responses. According to the model proposed by K. Werbach and D. Hunter [1], educational game design operates on three hierarchical levels: dynamics (motivational drivers such as emotions, progress, and narrative), mechanics (challenges, cooperation, competition), and components (points, badges, leaderboards, avatars). This structure enables the purposeful integration of gamified mechanisms into pedagogical practice and supports the development of adaptive learning pathways tailored to learner needs. As emphasized by Z. Zainuddin [5], gamification serves as an effective tool for integrating pedagogical objectives with game logic, transforming

the educational process into a cohesive interactive experience.

The psychological basis of gamification is also closely related to the concept of flow, introduced by M. Csikszentmihalyi [2], which describes a state of complete immersion in an activity. This state is achieved when clear goals are present, task difficulty is balanced with learner competence, and immediate feedback is provided – features that are characteristic of well-designed game environments. Achieving a flow state enables learners to remain highly engaged without experiencing fatigue, perceiving learning as an enjoyable and meaningful activity. Creating conditions conducive to flow represents a key pedagogical objective in gamified instruction.

Gamification further aligns with constructivist approaches, which view knowledge as being constructed through active learner participation. In game-based contexts, this is realized through open-ended tasks, opportunities for learner choice, and adaptive increases in task complexity J. Reinhardt. Such approaches empower learners to construct individualized learning trajectories and assume responsibility for their learning outcomes. As a result, gamification not only sustains attention but also promotes deeper cognitive connections with learning material, supporting the development of critical thinking and self-reflection skills in digitally evolving educational environments.

The advantages of gamification in education, particularly in the teaching of English, include increased learner motivation, reduced anxiety, enhanced participation, and the creation of a positive emotional learning climate. J. Reinhardt emphasizes that gamification in language education facilitates contextualized learning, encourages spontaneous language use, and supports the development of communicative competence. Tools such as Duolingo and Quizlet enable flexible, interactive, and highly personalized learning experiences. Moreover, gamified learning environments allow assessment to be embedded directly into the learning process, ensuring continuous feedback and adaptive instructional adjustment.

At the same time, several limitations of gamification have been identified. Researchers such as I. Bogost warn against the risk of motivation formalization, where learning engagement

relies solely on external rewards. Additionally, the effective design of gamified systems requires careful pedagogical consideration to avoid superficiality or cognitive overload. Overuse of game elements may lead to mechanical task completion, loss of meaningful learning, or decreased intrinsic motivation once external incentives are removed. Another challenge concerns unequal access to digital resources, which may exacerbate educational inequality. J. Reinhardt also stresses the importance of inclusive gamification practices that account for diverse learning styles and learner needs. These elements perform motivational, cognitive, and regulatory functions. For instance, points and levels allow learners to track their progress, set micro-goals, and experience a sense of achievement. Badges serve as symbolic recognition, positively influencing learners' self-esteem. Leaderboards stimulate social competition which, when applied appropriately, can enhance learner activity and participation.

According to the findings of S. Bai, K. Hew, and B. Huang [1], achievement systems based on badges and rankings significantly increase learner engagement, as students perceive learning as a challenge that requires effort and offers rewards. Moreover, opportunities for choice and personalization such as selecting learning paths or customizing avatars constitute an important motivational factor, supporting learner autonomy.

Particular attention should be given to the role of narratives and challenges in establishing an emotional connection with learning content. Research conducted by J. Plass, B. Homer, and C. Kinzer demonstrates that the use of narrative structures in gamified courses activates emotional processing and creates an immersive learning experience, which in turn increases interest in the subject matter. Such emotional engagement facilitates the transition from extrinsic to intrinsic motivation, as explained by self-determination theory. These effects are especially evident in mobile language-learning applications. For example, Duolingo incorporates daily goals, badges, progress bars, levels of difficulty, and elements of social interaction through competitive leagues. It has been emphasized [1] that the combination of game elements with adaptive personalization enables Duolingo to maintain a high level of learner motivation for independent language learning.

Another essential component of gamified learning environment is feedback. In gamified contexts, feedback should be immediate, specific, and adaptive, supporting the development of metacognitive skills such as error awareness, reflection, and strategic planning. As noted by the researchers [4], learners tend to perform more effectively when they can clearly observe the immediate consequences of their actions.

Nevertheless, the implementation of gamification elements requires a careful didactic approach. Risks arise when learning is reduced to mechanical point accumulation without meaningful cognitive engagement. I. Bogost refers to this phenomenon as “gamification superficiality.” Therefore, as emphasized by J. Hamari, educators must maintain a balance between game-based incentives and instructional objectives, designing tasks that require meaningful engagement with content.

Comprehensive gamified platforms (e.g., Duolingo, LingQ, Mondly) aim to develop all four core language skills—listening, reading, speaking, and writing. Their defining feature is the systematic use of game mechanics, including rewards, achievements, levels, and virtual currencies, which encourage regular practice. Duolingo, for instance, employs an adaptive learning model with continuous progress monitoring, which contributes to sustained intrinsic motivation as emphasized by J. Reinhardt.

Speaking-oriented applications (e.g., Elsa Speak, Speakly, Cake) focus primarily on oral communication skills and phonetic accuracy. These applications integrate speech recognition technologies that allow learners to compare their pronunciation with native-like models and receive immediate corrective feedback. Such tools are particularly beneficial for learners who experience low confidence in speaking English.

Vocabulary-based game applications (e.g., Memrise, Drops, WordUp) are designed to support lexical acquisition through visual associations, flashcards, spaced repetition, and asynchronous mini-games. According to S. Bai et al. [1], multimodal input combining text, images, and audio significantly enhances vocabulary retention and recall.

Social language exchange platforms (e.g., HelloTalk, Tandem, Speaky) function as language-oriented social networks that facilitate interaction with native speakers through text and voice messages. Research by F. Ouyang et

al. indicates increased communicative confidence among learners who regularly engage in such environments. Access to authentic language interaction is considered a crucial condition for the development of spontaneous language use.

Grammar and writing training applications (e.g., Grammarly, Write & Improve, LearnEnglish Grammar) provide opportunities for improving grammatical accuracy and written communication skills. These tools typically offer self-checking features and personalized feedback based on learners’ errors. They are especially effective for independent preparation for written assignments and examinations.

All of the above application types possess distinct advantages as well as certain limitations. As emphasized by M. Csikszentmihalyi [2] and J. Hamari et al., the effectiveness of mobile applications increases when they are embedded within a pedagogically grounded instructional model and form part of a coherent educational strategy. Without proper coordination and instructional support, even high-quality mobile resources may remain superficial in their educational impact.

It should also be noted that gamified applications, despite their popularity, are not universally effective. Their success depends on learners’ individual learning styles, technical conditions (device quality and internet access), language proficiency level, and personal learning goals. Research by L. Sailer and M. Homer [5] indicates that such applications have the strongest positive impact at beginner and intermediate proficiency levels, where motivation plays a critical role in language development.

Thus, the classification of mobile applications allows educators to identify their functional purposes and determine optimal conditions for their use. The following subsection focuses on empirical studies examining the effectiveness of specific mobile applications employed in English language teaching.

Conclusions. The analysis confirms that gamification and mobile applications represent effective and innovative approaches to teaching English as a foreign language, particularly in developing communicative skills. By combining motivational game elements with adaptive mobile technologies, educators can create engaging, learner-centered environments that support autonomy, interaction, and continuous practice.

However, the effectiveness of these tools depends on thoughtful pedagogical design and integration into broader instructional frameworks. Gamified mobile applications should complement, rather than replace, traditional teaching methods, ensuring that communicative objectives remain central.

Future research should focus on longitudinal studies assessing the long-term impact of gamified mobile learning on communicative competence, as well as on developing pedagogical models that align digital tools with curriculum goals and learner needs.

BIBLIOGRAPHY:

1. Bai S., Hew K. F., Huang B. Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data in educational contexts. *Educational Research Review*. 2020. Vol. 30. doi.org/10.1016/j.edurev.2020.100322.
2. Csikszentmihalyi M. *Flow: The psychology of optimal experience*. New York: Harper & Row, 1990. 303 p.
3. Deterding S., Dixon D., Khaled R., Nacke L. From game design elements to gamefulness: defining “gamification”. *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments September 28–30, 2011, Tampere, Finland*. New York: ACM, 2011. P. 9–15. DOI: 10.1145/2181037.2181040.
4. Kapp K.M. *The Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education*. San Francisco, CA: Pfeiffer, 2012. 336 p.
5. Sailer M., & Homner L. The gamification of learning: A meta-analysis. *Educational Psychology Review*. 2020. № 32 (1). P. 77–112. <https://doi.org/10.1007/s10648-019-09498-w>.

REFERENCES:

1. Bai, S., Hew, K. F., & Huang, B. (2020). Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data in educational contexts. *Educational Research Review*, 30. doi.org/10.1016/j.edurev.2020.100322 [in English].
2. Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper & Row [in English].
3. Deterding, Sebastian, Dixon, Dan, Khaled, Rilla, & Nacke, Lennart. (2011). “From Game Design Elements to Gamefulness: Defining Gamification”. *Proceedings of the 15th International Academic MindTrek Conference, ACM*, pp. 9–15. DOI: 10.1145/2181037.2181040 [in English].
4. Kapp, Karl M. (2012). *The Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education*. John Wiley & Sons. 336 p. [in English].
5. 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> [in English].

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