

- 3 Siregar N.C., Warsito, W., Gumilar A., Amarullah A., Rosli R. **STEM in action: real-world applications of science, technology, engineering, and math.** *Prima: Jurnal Pendidikan Matematika*, 2024, vol. 8, no. 2, pp. 493-507.
- 4 Ahmad Z., Ammar M., Al-Thani N.J. **Pedagogical Models to Implement Effective STEM Research Experience Programs in High School Students.** *Educ. Sci.*, 2021, vol. 11, no. 743, pp. 1-15.
- 5 Bragina T.M., Kosanova A.U. **Comparative analysis of mini-project activities of students of general educational schools and schools of innovative education.** *3i: intellect, idea, innovation*, 2021, no. 3, pp. 30-37.
- 6 **Что такое STEM-образование, и как оно развивается в Казахстане** [What is STEM education and how is it developing in Kazakhstan]. Available at: <https://buki-kz.com/news/stem-obrazovanie/> (accessed 12 September 2024). (In Russian)
- 7 Skliarova I., Meireles I., Tchemisova T., Cação I., Martins N. **Teachers' Appreciation of Benefits and Shortcomings of Online and Blended Higher STEM Education.** *Education Sciences*, 2023, vol. 13, no. 4, 338 p.
- 8 Lin Fei, Melor Md Yunus, Tang Haibin, Chen Fan. **Systematic Review of STEM Teaching in Higher Education (2014-2023).** *International Journal of Academic Research in Progressive Education and Development*, 2024, vol. 13, no. 3, pp. 3217-3241.

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THE IMPACT OF GAMIFICATION ON STUDENT MOTIVATION IN LEARNING ENGLISH AS A FOREIGN LANGUAGE

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This study is an attempt to explore the effects of gamification on the motivation of EFL learners in the context of primary education. With a mixed-method approach, this research combines the results from surveys, classroom observations, and interviews in assessing the ways through which the components of gamification – points, badges, leader boards, and rewards – affect students' engagement and intrinsic motivation. The results indicate that gamification contributes to the creation of an engaging educational atmosphere, thereby increasing motivation, participation, and satisfaction among learners. Furthermore, individualized learning experiences offered through platforms such as Kahoot and Quizlet allow students to advance according to their own pace while obtaining prompt feedback, which enhances their motivation. Nevertheless, the study highlights obstacles, such as the necessity for sufficient technological resources and educator training to successfully execute gamification techniques. Despite these challenges, the potential of gamification to create positive classroom environments and improve educational outcomes is indicated by the study. As such, this study offers insights to teachers and curriculum developers interested in integrating game-like approaches into primary school English teaching through its addition to the burgeoning literature base on gamification in education. The study underlines the importance of aligning the elements of gamification with the curricular goals so as to maximize their pedagogical benefits.

Key words: Gamification, motivation, English as a foreign language, primary schools, case study.

АҒЫЛШЫН ТІЛІН ШЕТ ТІЛІ РЕТІНДЕ ҮЙРЕНУ КЕЗІНДЕ ОҚУШЫЛАРДЫҢ МОТИВАЦИЯСЫНА ГЕЙМИФИКАЦИЯНЫҢ ӘСЕРІ

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Бұл зерттеу бастауыш білім беру контекстінде ағылшын тілін шет тілі ретінде үйренушілердің мотивациясына геймификацияның әсерін зерттеуге бағытталған. Аралас әдістерді қолдана отырып, зерттеу сауалнамалардан, сынып бақылауларынан және сұхбаттардан алынған нәтижелерді біріктіре отырып, геймификация элементтері – ұпайлар, белгілер, көшбасшылар тақтасы және марапаттар – оқушылардың қызығушылығы мен ішкі мотивациясына қалай әсер ететінін бағалайды. Нәтижелер геймификацияның тартымды білім беру атмосферасын қалыптастыруға ықпал ететінін, сол арқылы оқушылардың мотивациясын, қатысуын және қанағаттануын арттыратынын көрсетеді. Сонымен қатар, Kahoot және Quizlet сияқты платформалар арқылы ұсынылатын дараландырылған оқыту мүмкіндіктері оқушыларға өз қарқынымен алға жылжуға және жедел кері байланыс алуға мүмкіндік береді, бұл олардың мотивациясын күшейтеді. Алайда, зерттеу геймификация әдістерін табысты жүзеге асыру үшін жеткілікті технологиялық ресурстар мен мұғалімдерді даярлаудың қажеттілігі сияқты кедергілерді атап көрсетеді. Осы қиындықтарға қарамастан, геймификацияның сыныптағы жағымды атмосфераны құру және оқу нәтижелерін жақсарту әлеуеті зерттеу арқылы дәлелденеді. Осылайша, зерттеу ағылшын тілін бастауыш мектепте оқытуға ойын элементтерін енгізуге мүдделі мұғалімдер мен оқу бағдарламаларын жасаушылар үшін маңызды түсініктер ұсынады және білім беруіндегі геймификация туралы зерттеулер қорын толықтырады. Зерттеу геймификация элементтерін оқу бағдарламасының мақсаттарымен сәйкестендірудің олардың педагогикалық тиімділігін арттырудағы маңыздылығын атап көрсетеді.

Түйінді сөздер: геймификация, мотивация, ағылшын тілі шет тілі ретінде, бастауыш мектеп, тақырыптық зерттеулер.

ВЛИЯНИЕ ГЕЙМИФИКАЦИИ НА МОТИВАЦИЮ УЧАЩИХСЯ ПРИ ИЗУЧЕНИИ АНГЛИЙСКОГО ЯЗЫКА КАК ИНОСТРАННОГО

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Данное исследование направлено на изучение влияния геймификации на мотивацию изучающих английский язык как иностранный в контексте начального образования. Используя смешанный методический подход, исследование объединяет результаты опросов, наблюдений на уроках и интервью для оценки способов, с помощью которых компоненты геймификации – баллы, значки, таблицы лидеров и награды – влияют на вовлеченность и внутреннюю мотивацию учащихся. Результаты показывают, что геймификация способствует созданию увлекательной образовательной атмосферы, тем самым увеличивая мотивацию, участие и удовлетворение учащихся. Кроме того, индивидуализированные обучающие возможности, предлагаемые платформами, такими как Kahoot и Quizlet, позволяют студентам продвигаться в собственном темпе, получая оперативную обратную связь, что усиливает их мотивацию. Тем не менее, исследование подчеркивает такие препятствия, как необходимость достаточных технических ресурсов и подготовки педагогов для успешного внедрения методов геймификации. Несмотря на эти трудности, потенциал геймификации в создании позитивной атмосферы в классе и улучшении образовательных результатов подтверждается исследованием. Таким образом, это исследование предоставляет рекомендации учителям и разработчикам учебных программ, заинтересованным в интеграции игровых подходов в преподавании английского языка в начальной школе, и дополняет растущую базу знаний о геймификации в образовании. Исследование подчеркивает важность согласования элементов геймификации с целями учебной программы для максимизации их педагогической пользы.

Ключевые слова: геймификация, мотивация, английский как иностранный язык, начальные школы, тематическое исследование.

Introduction. The utilization of game elements and mechanics in non-game settings, known as gamification, has garnered considerable interest in the education sector. Specifically, when applied to language learning, such as acquiring proficiency in English, gamification holds promise for amplifying student motivation and involvement. This article focuses on investigating the impact of gamification on student motivation in learning English as a foreign language in primary schools.

Motivation is a vital factor in acquiring language skills as it directly influences students' eagerness to actively participate and commit themselves to the learning process. Traditional language learning methods often struggle to sustain student motivation, resulting in decreased engagement and limited progress. Gamification offers a promising approach to address these challenges by leveraging elements like points, badges, levels, and leader boards to create a more engaging and immersive learning environment.

This article presents a case study conducted in primary schools to examine the impact of gamification on student motivation in learning English as a foreign language. The study employs a mixed-methods approach, combining surveys, observations, and interviews to gather comprehensive data on student perceptions and experiences. By exploring the effectiveness of gamification in enhancing student motivation, the study aims to provide valuable insights for educators and curriculum developers.

The primary goals of this study involve examining the impact of gamification on student motivation within the context of learning English, investigating the specific elements of gamification that contribute to heightened motivation, and identifying the potential obstacles and factors to consider when implementing gamification strategies in primary schools. The findings of this study will not only contribute to the existing literature on gamification in education but also provide practical recommendations for incorporating gamification techniques in English language instruction at the primary school level. By understanding the impact of gamification on student motivation, educators can design effective gamified learning experiences that promote engagement, foster a positive learning environment, and ultimately improve language learning outcomes.

The goal of this research is to investigate the effect of gamification on students' motivation and engagement in learning English as a foreign language in a primary education setting. This study tries to analyze the viability of gamification as an instructional method for improving educational results and promoting a constructive classroom atmosphere.

Objectives:

1. Investigate the effect of gamification features, such as points, levels, and leader boards, on learners' motivation and engagement within English language instruction.
2. Identify the specific gamification elements that motivate and help to enhance learning experiences for primary school students.

Materials and research methods. Gamification has been a topic of interest in the field of education, particularly in the context of foreign language learning. Several studies have explored the impact of gamification on student motivation in learning English as a foreign language. Kang & Kusuma proposed a Hybrid Learning Model that combines both Gamification and Personality Traits to increase academic achievement and motivation for students studying foreign languages online [1]. Similarly, Ali & Abdalgane found positive results on the extent of the positive impact of the Kahoot learning tool based on gamification in learning English vocabulary for academic purposes and motivation [2]. Furthermore, Mohandas et al. highlighted the impacts of gamification in language learning, including boosting enthusiasm, lessening disruptive behaviors, and increasing cognitive growth, which ultimately improves student motivation [3]. Additionally, Thurairasu emphasized the potential of gamified education to influence intrinsic motivation and increase motivation to learn a language [4]. Furthermore, Naseri et al. provided evidence that gamification in the education sector has been proven to increase students' motivation in their learning process [5].

In the scholarly article "Utilizing Gamification in Elementary School English Classes: A Theoretical Review" by Zh.T. Sabirova, the authors conduct an extensive analysis of existing literature concerning the integration of gamification in English lessons at the elementary school level. The authors emphasize that gamification not only boosts student motivation but also enhances the overall efficacy and enjoyment of the learning experience. Furthermore, the incorporation of gamification in elementary school English classes facilitates the development of students' social and psychological skills, such as teamwork, decision-making, and problem-solving abilities. In general, gamification in English classes in elementary school is an effective teaching method that allows students to achieve high results and develop their creative and communication skills [6, p. 14]. The authors explore gamification as a strategy for developing motivational information systems. They emphasize that the implementation of gamification techniques has the potential to encourage students, enhance their motivation, satisfaction, and overall performance in the process of learning foreign languages [7, p. 191].

Studies specifically focusing on gamification in primary school English lessons have reported promising results. For example, a study by Hampton J. implemented a gamified English language learning program in a primary school setting and found that students exhibited increased motivation, engagement, and language proficiency [8]. In a study conducted by Chen et al., the effects of utilizing a gamified vocabulary learning application on primary school students were investigated, leading to notable improvements in both vocabulary retention and motivation [9].

Gamification, which involves integrating game elements and mechanics into non-game contexts, has emerged as a promising strategy for augmenting motivation and engagement across various educational settings. This literature review focuses on exploring the efficacy and potential applications of gamification in English lessons at the primary school level, with a particular emphasis on its influence on student motivation and language learning outcomes. Motivation holds a crucial position in the process of acquiring language skills, as it directly influences students' level of involvement, persistence, and overall success. Prior research has highlighted the importance of intrinsic motivation, which stems from personal interest and enjoyment, in fostering sustained engagement and proficiency in language acquisition. Gamification presents a potential solution for enhancing intrinsic motivation by creating a stimulating and rewarding learning environment. Research investigating the impact of game elements in foreign language learning consistently demonstrates positive effects on student motivation. For example, Xu and Xie conducted a study demonstrating that the introduction of gamified elements like points, levels, and leaderboards heightened students' intrinsic motivation and engagement in English language activities [10]. Similarly, a study by Li et al. revealed that gamification enhanced students' self-efficacy and positive attitudes towards learning English [11].

In primary school English lessons, gamification strategies have been applied to enhance student motivation and language learning outcomes. One common approach is the use of rewards and achievements, such as badges or virtual currencies, to incentivize progress and accomplishment. Research by Lee and Hammer demonstrated that rewards-based gamification increased student engagement and motivation in English language tasks [12].

Another gamification strategy involves the incorporation of storytelling and narrative elements to create immersive and meaningful learning experiences. Studies by Johnson et al. [13] and Wang et al. [14] highlighted the positive impact of narrative-driven gamification on student motivation and language learning outcomes. By contextualizing language learning within a compelling storyline, students were more motivated to actively participate and practice their English skills.

Both foreign and domestic researchers in the study of foreign languages have made a significant contribution to the field of gamification. For example, a foreign scientist Siler et al. conducted an extensive analysis of the activity of gamification elements in education and noticed a significant positive impact on the motivation and learning outcomes of the pupil. Their findings concluded that gamification can effectively enhance student engagement and achievement [15,

p.77]. Another notable study by Hamari et al. explored the motivational factors present in gamified educational applications and highlighted the importance of autonomy, competence, and relatedness in fostering motivation [16].

Additionally, researchers such as Dicheva et al. have investigated the effectiveness of gamification in language learning contexts, emphasizing the potential of gamified environments to enhance student motivation and engagement. Their research further supports the positive impact of gamification on language learning outcomes [17, p. 75]. More over, the systematic review by Nathan & Hashim reported positive effects of gamification on learners' learning experiences and their learning outcomes, further supporting the notion that gamification positively impacts student motivation in learning English as a foreign language [18]. Furthermore, Yacob et al. suggested that writing via digital gamification improved students' creativity and problem-solving skills in English language learning, indicating a positive impact on motivation [19]. In conclusion, the synthesis of these references indicates that gamification has a positive impact on student motivation in learning English as a foreign language. The use of gamification strategies, such as the integration of game elements and design techniques, has been shown to increase students' motivation, engagement, and academic achievement in the context of language learning.

The reviewed literature demonstrates the positive impact of gamification on student motivation in English lessons at the primary school level. The utilization of gamification tactics, which encompass the incorporation of rewards and achievements, storytelling, and the integration of technological tools, has proven to be successful in cultivating intrinsic motivation, engagement, and achieving positive outcomes in language learning. Foreign research works have further reinforced the findings, providing valuable insights into the effectiveness of gamification interventions in education.

To investigate the impact of gamification on student motivation in learning English as a foreign language in primary schools, a mixed-methods approach was employed. This approach allowed for a comprehensive understanding of the phenomenon by combining both quantitative and qualitative data collection methods. The following research methods were utilized:

A survey questionnaire was developed to collect quantitative data on student perceptions of gamification and its impact on motivation. The survey included Likert-scale items to measure students' level of motivation, engagement, and enjoyment in the gamified English language learning activities. It also included open-ended questions to gather qualitative insights on specific aspects of gamification that students found most motivating. The questions were designed to be short and clear. The survey included a combination of open-ended and closed-ended questions. For example, the question "Do you enjoy point-based games?" offered a "Yes" or "No" response option, while an open-ended question such as "Which task did you find most interesting?" allowed children to express their thoughts freely.

Classroom observations were conducted to observe student engagement and behavior during gamified English lessons. We observed and recorded students' active participation, level of enthusiasm, and overall engagement with the gamification elements. These observations provided qualitative data on the real-time impact of gamification on student motivation. Observers recorded students' activity levels, their participation in game-based tasks, and their interactions with each other. The results of the observations were documented using a pre-prepared table.

In-depth interviews were conducted with a subset of students to gain deeper insights into their experiences with gamification and its effects on their motivation in learning English. The interviews were semi-structured and allowed students to express their thoughts, perceptions, and experiences related to the gamified activities. The interviews provided rich qualitative data, capturing individual student perspectives and offering a more nuanced understanding of the impact of gamification on motivation.

The collected data from surveys, observations, and interviews were analyzed using both quantitative and qualitative analysis techniques. The quantitative data obtained from surveys were analyzed using statistical measures such as descriptive statistics and inferential analysis to identify trends and patterns in student motivation. The qualitative data from observations and interviews were analyzed through thematic analysis, identifying recurring themes and capturing the nuances of student experiences and perceptions.

By employing this mixed-methods approach, a comprehensive understanding of the impact of gamification on student motivation in learning English as a foreign language was achieved. The integration of quantitative and qualitative data provided a robust foundation for drawing conclusions and generating meaningful insights that can inform future gamification strategies in primary school language learning settings.

Results and discussion. The literature reviewed demonstrates the positive impact of gamification on student motivation in English lessons at the primary school level. Employing gamification techniques, such as the implementation of rewards and achievements, storytelling, and the utilization of technology, has proven to be successful in cultivating intrinsic motivation, engagement, and positive outcomes in language learning. The findings highlight the potential of gamification to create dynamic and stimulating learning environments that promote active participation and skill development.

However, further research is needed to explore the long-term effects of gamification, address specific challenges in implementation, and examine the impact of gamification on different learner populations. By leveraging the benefits of gamification and integrating it thoughtfully into primary school English lessons, educators can cultivate a motivating and effective language learning environment that supports students' language proficiency and overall educational growth.

In the field of teaching general languages and Applied Linguistics, the use of qualitative and quantitative methods of data collection is widely used. In accordance with this, a mixed methodological approach was used, combining qualitative and quantitative methods of data collection, depending on the purpose of the study. The study used a parallel embedded design model to collect data, combine and analyze the study, although qualitative data was prioritized. By introducing gamification using platforms according to the school curriculum, the researchers studied the experience of elementary school students and identified game elements on the Kahoot and Quizlet platforms. The data was collected by monitoring the activity of Primary School students on these platforms in completing tasks performed on the platform and using a survey to determine the increased motivation of Primary School students. In addition, semi-structured interviews were conducted among all primary school students in focus groups for more information.

The study applied the Kahoot and Quizlet platforms as two main digital tools to improve learners' motivation in learning the English language. The Kahoot platform was used for interactive quizzes and games concerning vocabulary. Students were provided with exercises where they had to find the meanings of unknown words or choose the right

grammatical forms. This platform made students more involved and encouraged them to become more active participants.

Quizlet is a website that allows students to practice retaining English vocabulary and reviewing grammatical concepts. Using its specifically designed flashcards, Quizlet has proven to be an effective tool in learning materials in an educational setting. Moreover, it allowed students to work through the content at their own pace, thus accounting for their individual learning speeds, abilities, and needs.

Technical limitations were, however, noted during the study. The fact that some of the students did not have digital devices did not allow equal use of the platforms in all lessons. This limitation, though, did not seriously affect the overall effectiveness of the research but did prevent full realization of the potential application of gamification.

Further research is needed to delve into specific aspects of gamification in primary school English lessons and explore the long-term effects on motivation and language learning outcomes. It is very important to take into account the specific contextual factors and characteristics of students that can affect the effectiveness of gamification in various educational institutions and in accordance with educational programs.

The research discovered that the use of gamification may greatly enhance student motivation in the context of English language training. It heightened excitement, involvement, and pleasure, cultivating a feeling of satisfaction and accomplishment. By using gamification, students were able to advance at their own speed and get immediate feedback. The fundamental elements of gamification, such as points, levels, diplomas, leader boards, and incentives, promote competitiveness, achievement, and social recognition. Nevertheless, the study emphasized the need of harmonizing gamification with educational goals and the requirement for adequate technology resources and teacher training. The research determined that the use of gamification in primary schools may greatly augment student motivation, resulting in a dynamic and captivating learning environment.

The story and survey used in this study had a structured format. includes a combination of open and closed questions, quantification scales, and multiple-choice points. The survey consisted of 24 questions in three parts. The first part is devoted to the thoughts and beliefs of younger schoolchildren regarding English as a foreign language, which is important for studying their general opinion. However, the answers to this section have not been analyzed, since it does not contribute to solving three research problems and is not the subject of research. In the second category, the experience of primary school students of secondary school No. 25 named after T. Ryskulov in Shymkent was considered. In the second part, a quantitative assessment scale from 1 to 10 was used, which corresponded to the official assessment system used in everyday school, in order to clarify seven questions to students. It was not difficult to answer the questions, since the grading scale was familiar to the students. Five questions were closed, with limited answers such as "Yes" or "no". Eleven questions were open-ended, which allowed elementary school students to answer in their own words. Since the survey was conducted on pages in a ready-made template released specifically for elementary school students, the answers to these open-ended questions were usually brief. One question can be classified as open and closed, since it always requires specifying a certain numeric value in the answer.

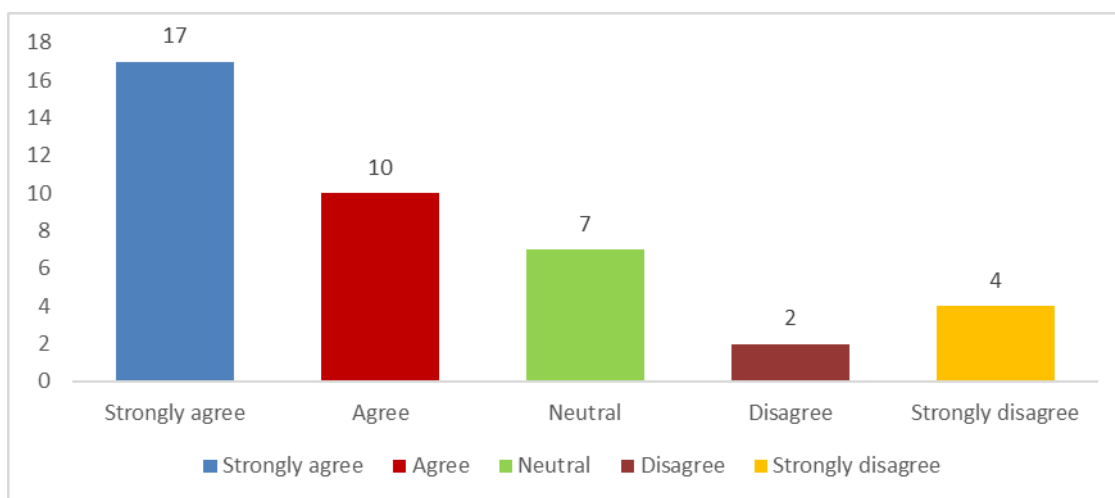


Figure 1 – Gamification serves as a motivational tool when undertaking English learning tasks

In the classroom environment, a total of 42 participants completed an online survey using Google Forms on their smartphones. However, due to the failure of two students to save and submit the survey, the analysis was based on data from only 40 students. The completion time for the survey was a maximum of 15 minutes. The survey was conducted in the Kazakh language, and the students provided their responses in Kazakh as well.

Furthermore, the surveys provided valuable insights into the students' perceptions of easy and challenging language tasks, contributing to the identification of game elements by the students. The survey results (fig. 1) were analyzed and served as a foundation for the subsequent focus group interviews.

Given the age characteristics, since the participants were primary school students, it was assumed that the initial answers to the survey questions, especially those asked closed, according to the research problem, may be insufficient or incomplete. In classroom research, individual interviews are often used for data collection when direct observation is challenging. However, due to the larger number of participants compared to our previous study, it was not feasible to conduct individual interviews simultaneously, as the total number of participants in the survey was 42. In accordance with the purpose of the study, only 4th grade students and 3rd grade students in the form of volunteers were interviewed as an alternative approach, but this ensured that all participants had the opportunity to express their experiences, opinions,

views and beliefs regarding gamification. Interviews with Focus groups provided valuable data on both research problems. Elementary school students gave an idea of the game elements that they learned while using in English class, and how these elements influenced their motivation to participate in the game process. In addition, opinions were expressed in the interview about the negative impact of using platforms such as Kahoot and Quizlet to learn a gamified language, as well as positive aspects. Focus group interviews were conducted in a semi-structured format commonly used in practical research. This format made it possible to compare the responses of different focus groups and create more detailed data compared to the structured format of interviews in focus groups.

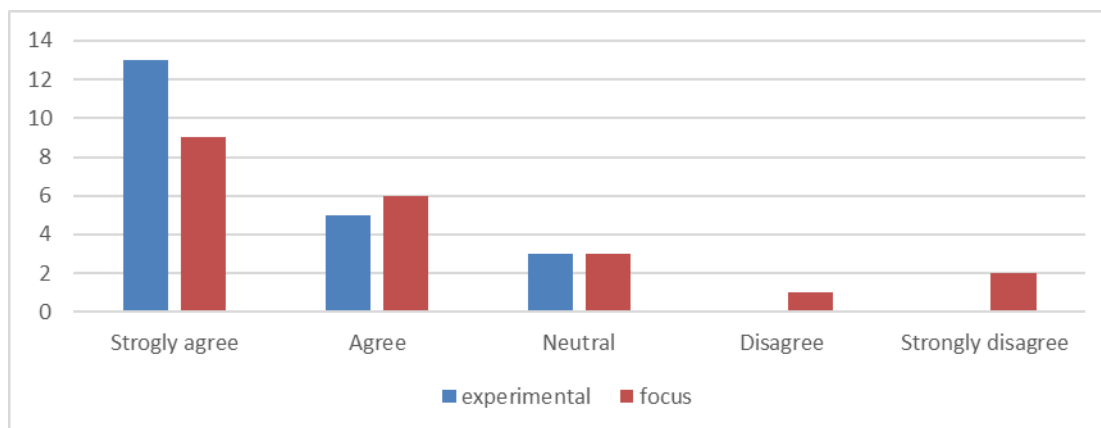


Figure 2 – Using gamification increased participation

Active participation is a vital aspect of gamification, and technological advancements have provided various metrics to evaluate engagement, such as page views per visitor. Consequently, it is interesting to investigate the extent of student activity and compare the characteristics of the most and least active groups.

Kahoot automatically recorded a total of 403 entries, representing the actions taken by 42 students. This implies that, on average, each student engaged with the activities around 9.6 times throughout the course's duration. However, there were notable variations in the students' levels of activity, as depicted in Figure 2.

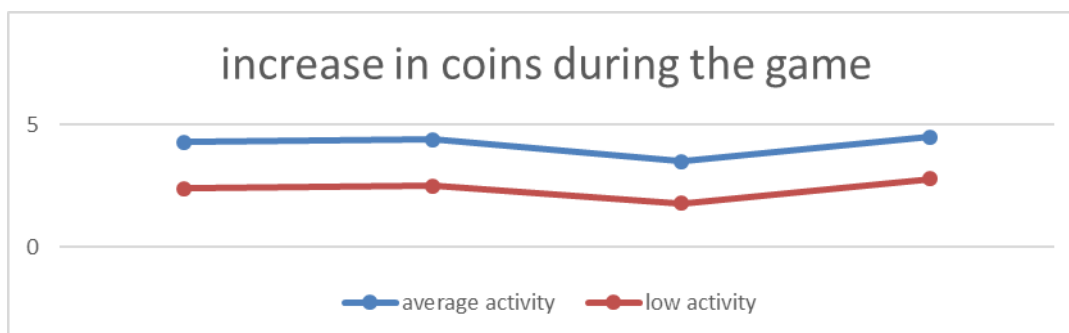


Figure 3 – The student's motivation when scoring points

Monitoring the accumulation of coins through Kahoot and Quizlet served as a means to gauge the students' achievements. In a group comparison, by evaluating the activity of students while playing the game and the number of individual coins by the average number of coins on the platform, you can estimate the performance of students compared to attendance and interest. By scoring points in the process of completing Group or pair tasks, it becomes possible to track the indicator of students' motivation. If students did not increase their coin count, it indicated that they had not successfully completed group challenges, suggesting lower motivation. In general, collecting coins or kopecks Kahoot or Quizlet game on the addition platforms was an effective tool for collecting specific indicators of student motivation, which contributed to solving as the main problem of the study in accordance with the purpose of the study using tasks on both platforms (fig. 3).

It should be noted that initially there was a slight delay between sending group assignments and awarding points and coins to the group, since learning a foreign language was the first experience for elementary and 3rd grade students. Most of the students wanted to get high scores and coins immediately to advance in the game, to become leaders, but they had to wait for the teacher to evaluate their work. Since most assignments are completed during the lesson, the teacher cannot provide instant feedback after completing the assignment. Figure 3 shows the average number of points and coins held by students during the game when completing tasks through the game, with each point corresponding to the time spent in a particular week. The flat line shows that students initially did not earn many coins or high scores, which indicates a low level of activity among students.

The study demonstrated that the use of gamified digital tools is an effective method to enhance students' motivation for learning English. Kahoot and Quizlet were identified as the primary platforms utilized. The Kahoot platform focused on increasing student engagement through interactive quizzes and tests. During lessons, students completed tasks of varying difficulty levels to review grammatical rules or learn new vocabulary. The platform rewarded students with points for correct answers and displayed their results on a leader board, fostering a competitive spirit and significantly boosting their interest. The study results indicated that 42 students engaged with Kahoot a total of 403 times,

averaging 9.6 participations per student. This systematic participation highlighted students' high level of interest in the tasks.

Additionally, the Quizlet platform was aimed at enriching English vocabulary and mastering grammatical structures. This platform allowed students to memorize words quickly and efficiently using specially designed flashcards. A key feature of Quizlet was providing immediate feedback after each task and enabling students to work at their own pace. This approach supported personalized learning by accommodating individual learning styles. As a result, consistent task completion enhanced students' memory retention and improved their comprehension of the learning materials.

This study highlights the significant impact of gamification on enhancing the motivation of primary school students learning English as a foreign language. The integration of gamification elements into English lessons substantially increased students' excitement, participation, and enjoyment, demonstrating its potential to create a more engaging and stimulating learning environment.

Gamification effectively tapped into students' intrinsic motivation, as many participants reported feelings of satisfaction and accomplishment from achieving goals, earning rewards, and advancing levels. This aligns with self-determination theory, emphasizing the importance of intrinsic motivation for sustained learning engagement. Additionally, gamification facilitated personalized learning experiences by allowing students to progress at their own pace and receive immediate feedback, catering to diverse learning needs and styles, which further enhanced motivation.

Key gamification elements such as points, levels, badges, leader boards, and rewards created a sense of competition, achievement, and social recognition, motivating students to actively participate and improve. However, the study also identified challenges, including the need for sufficient technological resources, teacher training, and alignment with curricular objectives. Addressing these challenges is essential for successful implementation and maximizing the benefits of gamification.

In conclusion, gamification offers great potential for fostering motivation and engagement in English language learning for primary school students. By leveraging its elements and techniques, educators can create an interactive and dynamic environment that supports effective language acquisition and encourages active student participation.

Conclusion. It is important for educators and policymakers to recognize the value of gamification and provide necessary support and resources for its implementation. Professional development programs and collaborations between teachers and instructional designers can facilitate the effective integration of gamification into the curriculum.

Further research is warranted to explore the long-term effects of gamification on student motivation and language learning outcomes. Additionally, investigating the impact of gamification on different learner groups and in different educational contexts can provide a more comprehensive understanding of its effectiveness.

In conclusion, the study demonstrates that gamification positively influences student motivation in learning English as a foreign language in primary schools. By harnessing the power of gamification, educators can foster a motivating and engaging language learning environment that supports students' language acquisition and promotes their overall educational success.

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REFERENCES:

- 1 H. Kang, G. Kusuma. **The effectiveness of personality-based gamification model for foreign vocabulary online learning.** *Advances in Science Technology and Engineering Systems Journal*, 2020, vol.5, no.2, pp. 261-271. <https://doi.org/10.25046/aj050234>.
- 2 R. Ali, M. Abdalgane. **The impact of gamification "Kahoot app" in teaching English for academic purpose.** *World Journal of English Language*, 2022, vol.12, no.7, 18 p. <https://doi.org/10.5430/wjel.v12n7p18>.
- 3 E. Mohandas, A. Hussin, T. Ahmad. **Language gamification in ESL classroom: teaching perspective.** *European Journal of Open Education and E-Learning Studies*, 2020, vol.5, no.2. <https://doi.org/10.46827/ejoe.v5i2.3445>.
- 4 V. Thurairasu. **Gamification-based learning as the future of language learning: an overview.** *European Journal of Humanities and Social Sciences*, 2022, vol.2, no.6, pp. 62-69. <https://doi.org/10.24018/ejsocial.2022.2.6.353>.
- 5 R. Naseri, R. Abdullah, M. Esa. **The effect of gamification on students' learning.** *International Journal of Academic Research in Progressive Education and Development*, 2023, vol.12, no.1. <https://doi.org/10.6007/ijarped/v12-i1/16253>.
- 6 Sabirova Zh.T. **Primenenie gejmfikacii na urokah anglijskogo yazy'ka v nachalnoj shkole: teoreticheskij obzor** [Application of gamification in English lessons in primary school: a theoretical review]. *Intellektualnyj potencial regiona: istoriya, problemy, resheniya. Ser. Pedagogika*, 2018, iss. 36, pp. 14-18. (In Russian)
- 7 Koivisto J., Hamari J. **The rise of motivational information systems: A review of gamification research.** *International journal of information management*, 2019, pp. 191-210. <https://doi.org/10.1016/j.ijinfomgt.2018.10.013>.
- 8 Hampton J. **Experiences of video game play and subreddit communities on self-reported well-being and resilience during COVID-19: A phenomenological study of animal crossing: new horizons:** Thesis, University of Florida, 2022, 108 p.
- 9 Chen C.M., Li M.C., Chen T.C. **A web-based collaborative reading annotation system with gamification mechanisms to improve reading performance.** *Computers & education*, 2020, vol.102, iss. 2, pp.219-237. <https://doi.org/10.1016/j.compedu.2019.103697>.
- 10 Xie J., Zhong L., Xu L. **The impact of personalization feature on students' engagement patterns in a role-playing game: A cultural perspective.** *Education and Information Technologies*, 2022, pp. 1-19. <https://doi.org/10.1007/s10639-022-11529-z>.
- 11 Li X., Chu S. K. W. **Exploring the effects of gamification pedagogy on children's reading: A mixed-method study on academic performance, reading-related mentality and behaviors, and sustainability.** *British Journal of Educational Technology*, 2021, no.1, pp. 160-178. <https://doi.org/10.1111/bjet.13057>.

- 12 Lee J.J., Hammer J. Gamification in education: What, how, why bother? *Academic exchange quarterly*, 2011, vol. 15, no. 2, 146 p.
- 13 Johnson D., Deterding S., Kuhn K.A. et al. Gamification for health and wellbeing: A systematic review of the literature. *Internet interventions*, 2016, pp. 89-106.
- 14 Wang W., Gan H., Wang X., Lu, H., Huang Y. Initiatives and challenges in using gamification in transportation: a systematic mapping. *European Transport Research Review*, 2022, vol. 14, no. 1, pp. 1-19. <https://doi.org/10.1186/s12544-022-00567-w>.
- 15 Sailer M., Homner L. The gamification of learning: A meta-analysis. *Educational Psychology Review*, 2020, no. 1, pp. 77-112. <https://doi.org/10.1007/s10648-019-09498-w>.
- 16 Hamari J., Morschheuser B., Werder K., Abe J. How to gamify? Development of a method for gamification. *Proceedings of the 50th annual Hawaii international conference on system sciences (HICSS)*, 2017, pp. 1298-1307.
- 17 Dicheva D., Dichev C., Agre G., Angelova G. Gamification in education: A systematic mapping study. *Journal of educational technology & society*, 2015, no.3, pp. 75-88.
- 18 L. Nathan, H. Hashim. A systematic review on gamified learning for improving language skills in ESL classrooms. *International Journal of Academic Research in Business and Social Sciences*, 2023, vol. 13, no. 4. <https://doi.org/10.6007/ijarbss/v13-i4/16873>.
- 19 N. Yaccob, S. Rahman, S. Mohamad et al. Gamifying esl classrooms through gamified teaching and learning. *Arab World English Journal*, 2022, no.8, p. 177-191. <https://doi.org/10.24093/awej/call8.12>.

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INVESTIGATION INTO THE EFFICACY OF CLIL TECHNOLOGY ON BIOLOGY TEACHERS' PROFESSIONAL COMPETENCE IN KAZAKHSTAN

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This study explores the effectiveness of Content and Language Integrated Learning (CLIL) technology in the context of teaching biology in Kazakhstani public schools, using the example of the Turkestan region. We used a survey as a research tool to examine the effectiveness of this technology in forming the professional competences of biology teachers. The survey was conducted among 32 school teachers in the Turkestan region who had undergone the specialized training in CLIL technology. The survey addresses factors such as teachers' workplace, years of experience