Gamification integration into multilingual classrooms

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Abstract
This paper discusses today's multilingual classrooms, which are developing under the conditions of digitalization by promoting gamification or incorporating game elements and mechanics into non-game contexts. The purpose of the study is to substantiate and evaluate the impact of gamification on students' motivation, engagement, and enjoyment with the help of action research, and gamification is compared to the game-based learning method. The instruments applied were tests, interviews, and class observations. The gamification of learning is an educational approach that seeks to motivate students for the benefit and purpose of the foreign language class. When applied correctly, gamification can bring new and complex elements to the foreign language learning environment, which created quite favorable overall students' perception of the class. The findings indicate that the action research validates the effectiveness of gamification as a strategy for engaging, motivating and entertaining students in the university classroom setting.
Key words: gamification, game-based learning, multilingual classroom, university classroom setting, game elements

Introduction

According to the forecasts of analytical agency Newzoo, almost a third of the world's population actively spends their free time playing video games. An analysis of statistics over the past years also confirms the trend of increasing the number of gamers every year (Global Games Market Report 2023). Along with the global growth in the number of video game lovers, the concept of gamification has been formed. Video game mechanics are used to solve any non-gaming tasks, for example, performing sports exercises or daily routines. As one of the areas of gamification, game-based learning is actively developing, and online courses and special applications are created. So, video games have been introduced into our everyday lives and can become an interesting additional tool for teaching foreign languages to students. The very concept of using games in education is not a new thing for pedagogical research. Game teaching methods have been used by teachers since the 17th century. At the beginning of the XX century, outstanding Russian researchers in the field of pedagogy and psychology, Vygotsky, Shchedrovitsky, Elkonin studied the specifics and features of the game and gaming activities in the teaching process and upbringing (Vasilizhenko et al., 2020). "Game technology" used in the educational process is fully recognized as extremely effective, universal, easily reproducible, suitable for any academic discipline and solving almost all educational and developmental tasks" (Igna, 2011: 187). In the 21st century, with the development of information technology and its widespread introduction into everyday life, as well as into the learning process, the term "gamification" appeared. The research by Cheng et al. (2017) proves the presence of a positive effect of modern gamification in the learning process.

The study aims to analyze how gamification and game-based learning (GBL) in the EFL classroom impact students' motivation, engagement and enjoyment. It is hypothesized that gamification in the EFL classroom increases students' motivation, engagement, and enjoyment compared to game-based learning.

In the course of the study, we conducted action research with the purpose of evaluating the impact of gamification on motivation, engagement, and enjoyment in comparison to a game-based learning approach.

The research work is significant because of the way in which it fills in a gap in the existing literature about gamified learning that plays a crucial role in improving students' academic performance.

The study is significant because it contributes to the limited qualitative data on students' perception of gamification's impact on their motivation, engagement and enjoyment to achieve good academic performance in English.

Literature review

Gamification is a fairly new term that was first coined by British game designer Nick Pelling in 2002. He described the practice of using game-based elements outside of games (Werbach & Hunter, 2012). But gamification saw widespread adoption in its current sense (Werbach & Hunter, 2012; Deterding, et al., 2011) only "in the second half of 2010". Since then, scientists have given a number of definitions to gamification. Deterding et al. (2011: 10) stated that "gamification is the use of game design elements in non-game contexts". The root word at the heart of "gamification" is "game", not play (or playfulness), where "play" can be conceived of as the broader, looser category different from "games" (Salen & Zimmerman, 2004). According to Zichermann and Cunningham (2011:14), gamification is "the process of game-thinking and game mechanics to engage users and solve problems". Marczewski (2017) states that "the purpose of gamification design elements is quite different from game design, the former being used to enhance the engagement in different contexts, whereas the latter is directed towards pure entertainment".

As far as game-based learning (GBL) is concerned, it refers to applying games or related elements, concepts, mechanisms or designs into learning (Deterding et al., 2011), which integrates educational games into classroom teaching and self-study and results in immersive learning experiences by students while mastering knowledge and skills. It also involves the application of some gaming principles in real-life settings (Trybus, 2015).

There are some differences between these two methodologies. Games are usually designed for a particular period of time, setting a start and a clear end. However, gamification uses some game elements, but there is no time restriction (Kapp, 2012: 23). The goal of a game is to give pleasure and entertain, while gamification aims to motivate.

The use of game elements is different from the game itself. According to Kapp (2012), a game is a system in which players participate in an abstract challenge. It is characterized by the presence of rules, interactivity, feedback, and a goal that can be quantitatively measured, often causing an emotional reaction (Kapp, 2012). Gamification and the game are related as the part and the whole. The game uses many game elements and its goal is mainly entertainment. The game has a clear beginning, middle and end, which is the player's victory. Unlike the game, gamification aims to help students achieve the course's educational objectives and maintain their interest and motivation by introducing game elements into the course.

The elements of the game are considered to be tools specific to video games that make it possible for players to compete with each other and track their personal progress. As a rule, these are points, awards, medals and achievements, levels, honor boards, a progress bar, tasks and tests, elements of the player's interaction and avatars. Some of these elements are already used in traditional classrooms. For example, when conducting some difficult test, the teacher can assign a reward for its successful completion. However, such use oversimplifies the essence of gamification. Since the

main goal is to receive a reward, it is more important to make students interested. Gamification is the integration of game elements like point systems, leaderboards, badges, or other elements related to games into "conventional" learning activities in order to increase engagement and motivation. Game-based learning, in contrast, involves designing learning activities so that game characteristics and game principles are within the learning activities themselves (for example, students doing an Economics course might compete in a virtual stock-trading competition). In short, gamification applies game elements or a game framework to existing learning activities; GBL designs learning activities that are intrinsically game-like (Vasilizhenko et al., 2020).

Kapp distinguishes two types of gamification: structural (structural gamification) and content (content gamification). He notes that both types are not opposite to each other but, on the contrary, can effectively complement each other within the same course (Trybus, 2015).

Structural gamification uses game elements such as scores, levels, achievements, and leaderboards to keep the student interested and motivated throughout the course. At the same time, the content of the course remains exclusively educational.

Bearing in mind the importance of students' engagement and motivation for achieving desirable outcomes in learning, it is necessary to create an environment in which these elements can occur. According to Zhang and Wang (2023), students' motivation to learn English is defined "as the driving force based on emotions and achievement-related goals behind an individual's behaviors". The lack of learners' motivation and engagement in the EFL classroom is an issue that most university educators are concerned about. Taking into account this problem, we carry out action research in order to analyze how the implementation of gamification and GBL affects students' motivation, engagement and enjoyment.

Csikszentmihalyi (1990: 49) states that enjoyment has to do with accomplishing something new or challenging, creating a growth experience. One of the elements of enjoyment is the concentration on the task being performed. Furthermore, the fun and happiness experienced during the activities are related to another element of enjoyment, which claims that one performs a task with effortless involvement and forgets about the worries and frustrations of daily life (Csikszentmihalyi, 1997: 423).

Shernoff et al. (2003: 160) argue that engagement is associated with the flow state, which is a "deep absorption in an activity that is highly enjoyable". In this state, people work at full capacity, and the task itself becomes rewarding. The participants of the research experienced increased engagement when the perceived challenge of the task and their own skills were high, and in balance, student engagement is related to how much control learners have over their learning process. Besides, they are more engaged in activities in which they are in control instead of being directed by the teacher (Shernoff et al., 2003). Smiderle et al. (2020) state that "the gamification of education can enhance levels of students' engagement similar to what games can do, to improve their particular skills and optimize their learning.

Although the studies have been conducted by many authors, this problem is still insufficiently explored. To fill the literature gap, this paper identifies how the integration of gamification into the EFL classroom and game-based learning impacts students' motivation, engagement and enjoyment in the university setting.

Methodology

Gamification as a topic of interest in our study, receives attention in the context of the research areas such as Education, Psychology, Game Theory and Design, Human–Computer Interaction, Digital Information Systems. However, design approaches vary

widely depending on the area of research and application, a fact that is reflected in the diversity of publications in the literature. Clearly, the main ideas of gamification have now become a reality and are embodied in the learning process.

Systematic and personalized activity-based approaches as the components of a general scientific methodology vary widely depending on the area of research and application, a fact that is reflected in the diversity of publications in the literature. They allowed us to determine the specifics of using gamification in the university setting, such as students' motivation, engagement and enjoyment of game-based activities.

In our study, we conducted action research in a university setting aiming to evaluate the impact of gamification on motivation, engagement, and enjoyment in comparison to a game-based learning approach. Gamified classes were adapted to the program already established by the university. It should be noted that a mixed-method approach to research was used as qualitative and quantitative data was collected. The qualitative research strategy made it possible to test the validity of the gathered data through the convergence of information. The dependent variables were GBL and gamification, while the independent variables were motivation, engagement, and enjoyment.

According to psychology researcher Sichler (2014), motivation can be defined as "the psychic process that initiates, guides, and maintains human behavior". Student engagement in learning can be defined as "students' willingness, need, desire, and compulsion to participate in, and be successful in, the learning process" (Bomia et al., 1997). According to Briggs (2015), student engagement can be described as "the level of interest demonstrated by students, how they interact with others in the course, and their motivation to learn about the topics". Smith et al. (2014) state that "enjoyment is a positive affective state that occurs when a person engages in an experience or activity that satisfies a desire, goal, or needs, including but not limited to the need for pleasure, ..., or love". Another researcher Li (2022) describes this activity in the context of education as "the joy of learning when the student feels that he/she can value the content and manage and complete the activities he/she is encountering".

In general, the use of gamification should be appropriate. If a regular exercise benefits from additional game elements, then it is worth gamifying this exercise. If the educational value of the exercise is lost when adding game elements, then it should not be gamified. The desired engagement effect can only be achieved by weighing the pros and cons of gamification.

In our study, we used the Quizlet platform which is one of the examples of structural gamification. During three classes, we applied it when studying the theme "Functions and roles of money". In the first class, Quizlet was used for the introduction of new vocabulary necessary for studying the text "Money: role, forms, functions". The students had to find the application on their devices and go to the section "Flashcards". In this section there are 16 terms accompanied by translation and a graphic. Each lexical unit was read aloud, worked out in a group and individually and copied out into the exercise book. If any word was already known to the students, they needed to "swipe" it to the right side of the screen and new words and expressions to the left side. During the next class, the instructor arranged vocabulary practice for the students based on the exercises given in the course book and in the mobile application in "Write" and "Match" study modes of the Quizlet platform. Working in the mode "Write" students noted down the translated words. If a word was spelled incorrectly, the application memorized that word for later study. In the mode "Match" the learners competed for speed: this mode is a game where one needs to match the word to its translation. This task was done for several times. For

homework the students were asked to do the mode "Test". As for the third class, the instructor arranged the game from Quizlet Live mode, which allowed the educator to conduct team quizzes in real-time.

In our study we used the game called Hot Seat, which is one of our students' favorite games and is always at the top of the list when they are asked what they want to play. It works well as various skills can be practised in the EFL classroom, such as vocabulary, speaking and listening, and it can be used for any level of learners. Hot seat allows students to build their vocabulary and encourages competition in the classroom. In our action research, it included four stages.

Stage 1: the instructor prepared relevant vocabulary related to the topic "Financing a car loan" in the form of PowerPoint slides and kept the students informed about that. This stage also involved students including detailed information and a task to complete based on this information.

Stage 2: the instructor split the class into two teams and elected one person from each team to sit in the hot seat, facing the classroom with the whiteboard behind him/her.

Stage 3: the instructor demonstrated a word or a phrase on the slide. One of the team members in the hot seat helped the student guess the word by describing it. They had a limited amount of time and couldn't say, spell or draw the word. They continued the game until each team member had described a word to the student in the hot seat.

Stage 4: the instructor assessed the students' output. Although there are many benefits to GBL as a teaching technique, the facilitator had to make sure that all students participate and are truly engaged. Points were awarded to players depending on their role in the game: the student in the hot seat - 1 point for each player who correctly guessed the answer the instructor showed. All other Players - 1 point for each player that guesses the answer the instructor showed; 2 points for guessing the player in the Hot Seat's answer correctly; 4 points for responding with the same answer as the player in the Hot Seat.

The research took place at Financial University in the 2022-2023 academic year. The target sample was 25 students from two groups. They were first-year undergraduates. These students have been studying English for several years at school and, at the moment in which the study was conducted, they had a CEFR B1- B2 level of proficiency. For this study, we analyzed the data collected from three methods: a survey, interviews with students, and class observations. The survey was designed to evaluate and compare the levels of students' motivation, engagement, and enjoyment between gamification activities and game-based learning activities presented during the course. The main objective of the interviews was to get a more thorough understanding of students' perspectives on the use of gamification in the language classroom. Class observations were focused on motivation, engagement, and enjoyment.

Results and discussion

In this section, we will illustrate some experimental results. It is important to highlight the fact that we asked the students to rate their experiences in order to evaluate their level of motivation regarding gamification and game-based learning activities used during the course.

Our results demonstrated that the motivation level is quite similar to the one seen in the games in the class. It should be noted that the students were working harder in this activity (Gamification). There is an upward trend of both methodologies (see Fig. 1).

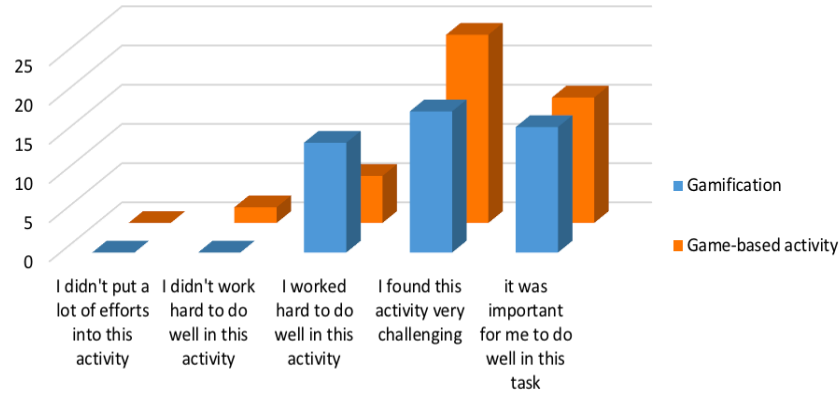

Figure 1. The levels of motivation

As shown in Table 1, the levels of motivation given in relation to gamification and game-based learning are quite similar like their total mean, which is 9.6. This means that both teaching methods have a significant impact on students' motivation. GBL's standard deviation is bigger than that of gamification, which means that they impacted differently. Last but not least, t < critical value, which means that the difference is not significant at $p < 0.05$ (see Table 1).

Table 1: Students' motivation based on *t* test results

Motivation	Gamification	GBL
Mean	9.6	9.6
Stand. Dev.	7.9	9.1
t	0	
Critical value	12.706	

Source: Compiled by the authors.

The students are familiar with games. Thus, they don't usually have difficulty playing them, and only fun may impact their motivation. On the opposite, gamification is influenced mainly in the area of effort. As to gamification, the system represented a challenge for them since the students were unfamiliar with it and its structure. So, the students had to try harder to succeed. All in all, the levels of motivation are similar but the aspects that influenced them are different.

During the interviews the students were asked the question about the major factors influencing their motivation in the EFL classroom. In their opinion, one of the factors mentioned was classroom interaction, which, with dynamics and games, makes them have fun and share experiences with their groupmates. Therefore, interaction has a huge influence on students' motivation. Communication seems to be another key factor. Many of them claimed they wanted to be able to communicate with different people around the world. According to one of the students, socializing

with other students makes him learn a lot because he can judge how well he's improved his English when he talks to them. The students appreciate the way they are taught because they can develop effective communication skills. Some learners pointed out that the element of competition presented in the activities was useful to engage them.

The next question the students were asked about was related to the challenges they had. Most of them felt positive about the challenges and always volunteered for them. The learners argued that they were really interactive and motivating. As one of the students put it, challenges motivated them to get involved more in the activities. Similarly, they were fun. They encouraged the students to work harder when studying with the elements of fun.

During the class observations, the level of motivation regarding gamification was not very noticeable at the start because the learners were in the process of figuring out the system. Obviously, it was possible to notice that motivation remained constant and was even increasing slowly when the students felt surer about this method. As far as game-based learning activities are concerned, students' engagement increased significantly, which means that those games motivated them to get more involved. Motivation reached its highest point when the students were truly engaged with the games, and then it went down as they came to an end. It has been found that the levels of motivation concerning game-based learning fluctuate. In addition, not all games possessed the same level of motivational potential.

As shown in Figure 2, the students rated their experiences to evaluate their level of engagement regarding gamification and GBL activities used during the course. Regarding Quizlet employing gamification techniques and engagement, almost all the students wished to explore all the options because it was very challenging. Eight students claimed they felt that time passed quickly during the activity, and ten learners said that they wanted to complete the game. On the other hand, four students said they did not care how the game ended. Concerning GBL activities and engagement, ten students desired to travel over all the options because of the very challenging experiences they could have, while a larger number felt that the game was over very quickly. Two students argued that they wanted to complete the game, two felt bored when playing it and four learners stopped caring how the game finished.

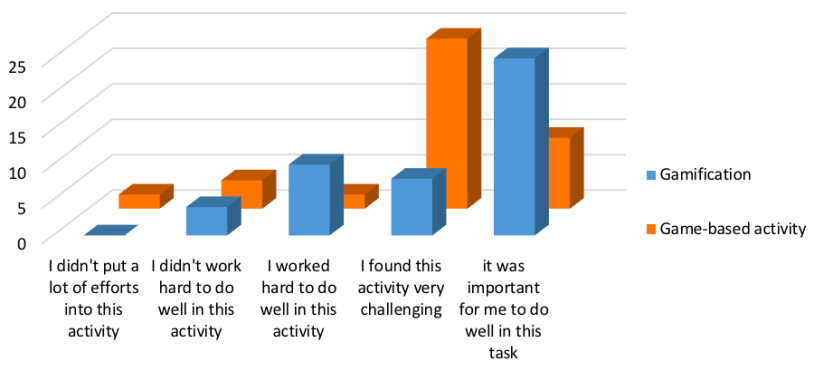

Figure 2. The levels of engagement

The data in Table 2 indicates that the total mean of engagement level is 8.4 for GBL, which is lower than the one for gamification, which has a total mean of 9.4. The standard deviation for Gamification and GBL was quite similar. Ultimately, t < critical value, which means that the difference is not significant at $p < 0.05$ **(see Table 2).**

Table 2: Students' engagement based on *t* test results

Engagement	Gamification	GBL
Mean	9.4	8.4
Stand. Dev.	8.5	8.3
t	0.1876	
Critical value	2.306	

Source: Compiled by the authors.

Games generally keep learners engaged, and in most cases, they do not pose a challenge because they are sure about what will happen. However, we can observe gamification had a great influence on the levels of engagement, the element of challenge playing a key role in this activity, making it possible for the learners to experiment with various types of engagement.

During the interview, some students pointed out the games the university educator used in the classroom and what made games engaging for learning purposes. According to some students' responses, the coins used to exchange for some rewards served as a motivator to get involved in the activities and get more points. For other learners, games presented an exciting and useful part of the class because they worked in groups, learned how to work in teams, talked in real situations, and were able to understand topic-related vocabulary and practice more grammar. They were also pleased with the implementation of technology. The level of engagement in relation to gamification was different. It is necessary to bear in mind that gamification occurs throughout the whole learning process. Because of this, the teacher applied it to the different parts of the class, but it was necessary to remind students about how the system worked. The level of engagement was not characterized by visible enthusiasm, but it was seen in other forms. The learners were more concentrated on the activities for a longer period of time. Instead of decreasing, the level of engagement remained unchanged and it worked for the majority of learners as they stayed motivated with encouraging checkpoints with helpful study reminders.

During the class observations, when game-based learning activities were used in the classroom, most of the students showed eagerness and wished to take part. Nonetheless, some learners were busy doing other things on their smartphones or chatting with each other refusing to fully participate in the activities. However there were students who actively participated.

To evaluate the level of enjoyment regarding gamification and game-based learning activities used during the course, the students were asked to rate their experiences. Figure 3 shows an upward trend of both methodologies where GBL reaches the highest point (see Fig. 3).

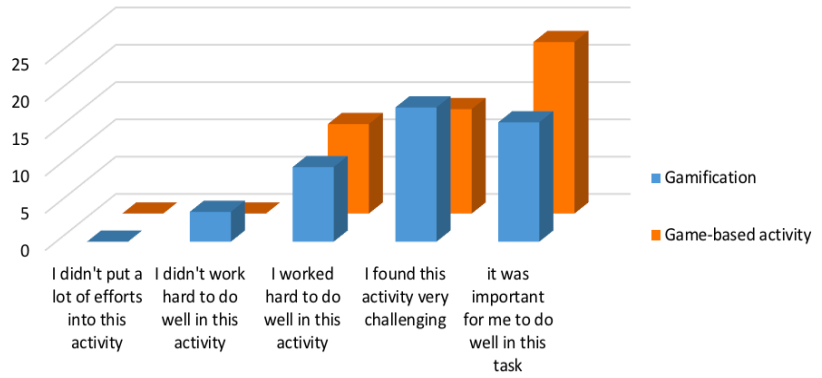

Figure 3. The levels of enjoyment

Our data suggest that the levels of students' enjoyment with regard to gamification and GBL are almost the same, with a total mean of 9.6 for gamification and 9.8 for GBL. Standard deviation GBL is bigger than gamification, which means their different impact on the learners. Last but not least, t < critical value (-0.04 < 2.306), which means that the difference is not significant at $p < 0.05$ (see Table 3).

Table 3: Students' enjoyment based on *t* test results

Enjoyment	Gamification		GBL
Mean	9.6		9.8
Stand. Dev.	6.9		8.8
t		-0.04	
Critical value		2.306	

Source: Compiled by the authors.

Quizlet, which is gamification in this study, gamifies the content that would be otherwise boring or difficult to learn. Gamification techniques with structures and rules that encompass the whole class. The main components of the lesson Quizlet include the sequence of activities that help students to achieve the English class objective. Most lessons consist of warm-up/ review; introduction; presentation; practice; evaluation, and lesson summary/conclusion. Activities move from controlled to semi-controlled.

It's necessary to emphasize that Quizlet boosts students' learning through several study tools that include flashcards and game-based quizzes. Quizlet takes information and converts it into flashcards, quizzes, and games so that learners can enjoy studying the same information in various forms.

Enjoyment concerning gamification was a bit more difficult to observe since it does not occur only at a specific moment but throughout the whole class. However, enjoyment was seen when the teacher explained that a specific activity was linked to Quizlet Live game mode that allowed multiple students to work collaboratively. Students appeared to enjoy the classroom activities, and they were also more

concentrated on their tasks. As far as GBL is concerned, it was observed that students experienced a lot of enjoyment. Playing games provided them with lots of fun, and most of the students participated in these types of activities. Our observations identified the fact that the students felt comfortable playing those games. They were familiar with these types of activities. So, their feedback was natural.

From the results, it is clear that the impacts gamification and GBL had on enjoyment were quite similar. Despite the two different approaches, the learners had almost the same levels of fun and happiness during those activities. Overall, these findings are in accordance with results reported by Csikszentmihalyi (1990), who believed that a key to enjoyment is undertaking new and challenging activities, giving lots of experience.

Some students reported how games helped them stay focused on the tasks, which enhanced their learning experience. We have verified Csikszentmihalyi's (1997) ideas about reaching enjoyment by means of concentration on the task and having fun and happiness during the activities associated with learners' effortless involvement without any of the worries of daily life. During the class observations, the perception of enjoyment was quite heterogeneous for both approaches. In the case of gamification, the emotion was experienced in a less distinct form, while the GBL activities provided a more intense feeling of enjoyment. On the whole, the survey and interview results reveal that both methodologies had a comparable effect on enjoyment.

It is important to stress that although three aspects of gamification and GBL shared almost the same level, these approaches affected them in various ways. Regarding games, most of the learners reported that the activities were exciting and familiar, so that they performed well. On the other hand, similar ideas were shared about gamification, with several students reporting they had to put more effort into the activity.

Conclusion

The paper concludes by arguing that students share similar levels of motivation in both methodologies: gamification and game-based learning. However, gamification showed higher levels of students' engagement as compared with game-based learning. The activities in the gamified environment kept students engaged for a longer time. When it comes to students' enjoyment, both methodologies demonstrated similar levels. It was more difficult to observe enjoyment in the gamified activities than in the game-based learning activities. Based on the analysis of the results of the survey, both methodologies scored high in all three categories, which means that the perception students had was very favorable. According to the hypothesis, it stipulated that integration of gamification into the EFL classroom increases students' motivation, enjoyment and engagement as compared with GBL. The quantitative results in our research showed that the levels of students' motivation, engagement, and enjoyment were quite similar in both approaches, and the student's t-test identified that differences were not significant. On the contrary, the qualitative results demonstrated that gamification and GBL affect these three aspects differently. By and large, our findings showed a positive effect of gamification and GBL on the three mentioned aspects. Both methodologies can give a spur to a higher level of students' motivation, engagement and enjoyment in the EFL classroom, and they can also be mixed. The successful implementation of the action research validated the effectiveness of these approaches, which depended on their careful integration into the EFL classroom. Gamification provided the learners with communication skills, immediate rewards, progress monitoring, creativity, and a sense of control. Game-based learning made it possible for students to learn in a familiar setting, where they felt confident to explore

the language, collaborate, compete and have fun. All contributed to the successful implementation of this action research.

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