



# Using Gamification to Support English Language Learning and Teaching in Turkish Context: A Systematic Review

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## Abstract

In the 21<sup>st</sup> century to fulfill the needs of the contemporary era, attract digital natives' attention, make learning more attractive, and satisfy their needs, technological tools and diversifying theories and strategies have become necessary. In this modern world, gamification has been one of the best and most attractive ways to support English foreign language teaching and learning with existing applications in the market. An overview of the application of gamification in the Turkish context is provided in this review. For this review, four main databases were searched and 16 research articles published from 2013-2023 were studied to emphasize the focal points of the research in terms of methodology, publication year, setting, and how and for what purposes gamification is used in the context. Findings show the phenomenon has gained popularity among researchers and the majority of the articles (N=15) were conducted after 2018. The researchers mostly utilize a Mixed-Method research design and favor conducting their studies in university settings recruiting students. Finally, the findings suggest that researchers are mostly inclined to find out the effectiveness of certain gamification tools on learners' motivation, participation, engagement, and academic achievement and the perceptions of teachers and/or learners about these tools.

**Keywords:** gamification, English education, technology, gamification tools

## Introduction

Foreign language teaching and learning environments have undergone significant transformations in teaching methodologies and the views they hold. This process has accelerated with the aid of developing technology, and language learning environments have attempted to adjust (Kılıç, 2020). The environment has to adapt itself to this new technological world as the learners/students of this age are accepted as according to Presnky (2001) digital natives or Gen-Z learners. With this adaptation, the amount of information and communication technologies (ICT) used in language classrooms has increased dramatically (Kıyanççek and Uzun, 2022). Instructors have been urged to adopt more creative ways to encourage language acquisition through interactive techniques and approaches (Nafis, 2020). Teachers and experts realized the necessity of utilizing more technological tools like cell phones and tablets to

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facilitate language learning and teaching in addition to the projectors and computers that already exist in the classroom (Kıyanççek and Uzun, 2022).

Learning a foreign language becomes harder for students when the instructors do not hold the same habits, and interests, particularly vision and strategies (Uzun, Çetinavcı, Korkmaz, & Salihoğlu, 2013). Karaaslan & Budak (2012) assert that utilizing new technologies is crucial for grabbing the interest of digital natives. Anyaegbu (2010) puts forward that learners find traditional classroom activities boring and lose their interest as they change rapidly and adapt to new technological developments. Therefore, different theories and strategies must be integrated into the classroom to make learning more attractive and satisfy the learners' needs (İnanç & Baysal, 2022). Games are one of the most innovative and common ways to learn a foreign language that has been gaining popularity. Gamification can be highly exciting and motivating for learners since there are several challenges to overcome, objectives to meet, and rewards to be collected (İnanç & Baysal, 2022).

Gamification has been defined in various ways by prominent researchers. For instance; Zicheremann and Cunningham (2011) defined the concept as “*using the way of thinking and game rules in games to attract people's attention and solve problems*”. Gamification, according to Deterding et al., (2011) and Huotari & Hamari (2012), is the process of enhancing goods, services, and information systems with elements of game design to improve learner productivity, motivation, and behavior. Flores (2015) defines gamification as the process of incorporating elements of games—such as objectives, rewards, challenges, executive sheets, opportunities, and so on—into teaching strategies to pique students' interest and push them toward deeper, more complex levels of engagement. Therefore, gamification is a strategy that uses these mentioned aspects to increase the effectiveness of the language learning process (İnanç & Baysal, 2022).

Gamification has several cognitive, affective, and social benefits (Lee & Hammer, 2011; Dominguez et al., 2013), and it is effective in providing desired behaviors in education and assisting learners in meeting learning outcomes (Lee & Hammer, 2011; Simoes et al., 2013). Moreover, it has been claimed by numerous studies that gamification increases motivation and participation in the lesson (Muntean, 2011; Kim & Lee, 2013; Simoes, Redondo, and Vilas, 2013; Hakulinen et al., 2015; Perry, 2015; Yürük, 2019; İnanç & Baysal, 2022) and positively impacts academic performance (Rachel and Rockinson-Szapkiw, 2018).

In general, it can be said that gamification is a widespread strategy that has been utilized by language teachers and learners in global and local contexts. Many studies have been conducted to determine its effectiveness in foreign language teaching and learning environments. However, there is no conclusive evidence concerning gamification and its effect on various aspects of the learning process and outcomes for English teaching in the Turkish context. This systematic review intends to investigate the literature on gamification in the English language teaching/learning environment specifically in the Turkish context and fills the gap in the literature. The study also intends to contribute to the growing body of research and make aware of the stakeholders taking advantage of gamification in the English language learning environment in this technological era with digital natives.

This study includes a thorough analysis of research articles that have been published between 2013 and 2023 regarding the use of gamification in English language instruction. The following research questions were addressed in the present study:

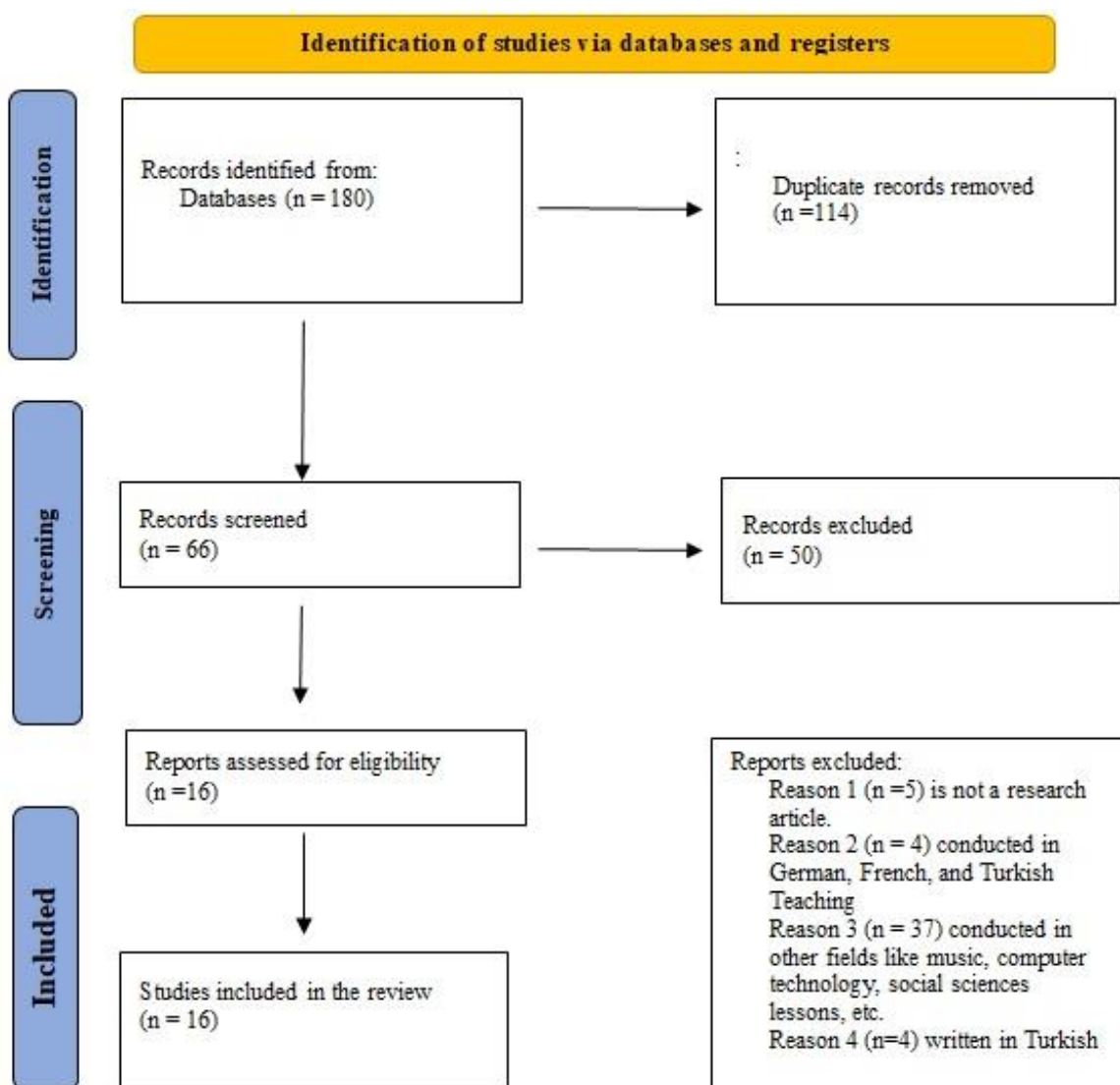
1. What are the trends in conducting gamification research articles in Türkiye in terms of methodologies, settings, participants, and publication time?
2. How and for what purposes is gamification used in language learning and/or teaching in Türkiye?

## Methodology

### Databases and search strategy

Three major databases; Web of Science, Scopus, and Eric were utilized to find the relevant articles for this systematic review. In addition to the database search, the researcher checked the references in found studies and searched on Google Scholar for additional research. The following key terms were utilized; ‘Gamification’, ‘Gamification in Language Learning/Teaching’, ‘Gamification in the Turkish Context’, and ‘Gamification and EFL Teaching in Turkey’. To find the most relevant and up-to-date literature in the field the period was limited to 2013 until 2023. There were two main reasons limiting the study period for the last ten years. First, Garland (2015) claims that gamification in language teaching is relatively a new research field in language teaching and gamification was primarily used in educational environments from 2008 (Jakubowski, 2014). Second, considering the FATİH Project (Movement of Enhancing Opportunities and Improving Technology) started to be launched by the Turkish Ministry of National Education in 2012 to equip education areas with educational technologies may affect teachers' way of conducting their lessons as gamification mostly relies on technology. Moreover, only research articles written in English were included and the PRISMA model was used to select research articles for this review.

Figure 1. PRISMA Flow Diagram for the study



### ***Inclusion and Exclusion Criteria***

For inclusion and exclusion, the following criteria were followed by the author. The following inclusion criteria were applied when looking for pertinent studies:

- The study must be a research article, not a review or systematic article, a book chapter or a report, and a conference paper.
- The study is written in English.
- The study should be conducted in the Turkish context.
- The study should be conducted in “EFL/ESL” context.

The exclusion criteria were:

- The study is excluded when gamification was used for learning any other language (e.g. German, Turkish, French) or any other field (e.g. music education, fitness, etc.).
- Articles written in Turkish were excluded.

The title and abstract of the articles were checked to include or exclude the articles. If an article fulfilled the inclusion and exclusion criteria, the pdf was downloaded to a folder to be read and checked again. After checking the title, re-reading the abstract, and if necessary, reading the whole article to find out the research area, the final sample consisted of 16 research articles. Most excluded articles were conducted in any field like music, computer technology, social sciences lessons, etc. other than English language teaching/learning.

### **Results**

The overall findings from the literature review are presented in this section, and the findings are arranged by the two research questions.

Table 1 provides an overview of the included publications in terms of authors, years of publication, publication source, education level, methodology, data collection method, duration, number of participants, and learning outcomes.

Table 1. Quantitative description of the research articles

Authors	Years of Publication	Publication Source	Education Level	Methodology	Data Collection Method	Duration	Number of Participants	Learning Outcomes	
								Various Learning Outcomes	Content Language Learning
Yasemin, M. E. R. T., & Samur, Y.	2018	Turkish Online Journal of Qualitative Inquiry	Primary School	Qualitative Research Design	Semi-Structured Interviews	5 Months	12	Motivation	Game Elements
Karaaslan, H., Kilic, N., Guven-Yalcin, G., & Gullu, A.	2018	Turkish Online Journal of Distance Education	University Prep Class	Quantitative Research Design	A self-report questionnaire	8 weeks	45	Motivation	Vocabulary
Öden, M. S., Bolat, Y. İ., & Goksu, İ.	2021	Journal of Computer and Education Research	Vocational High School (9 <sup>th</sup> Graders)	Mixed Method Research Design	Motivation, Attitude, and Exam Anxiety Scales and Interviews	10 weeks	88	Motivation Attitude Exam Anxiety	-
Çinar, A., Erişen, Y., & Çeliköz, M.	2022	International Journal of Educational Research Review	Secondary School (5 <sup>th</sup> graders)	Mixed Method Research Design	Pre-test/Post-test and Semi-Structured Interviews	15 Hours	91	Engagement Achievement	-
Yürük, N.	2019	Journal of Educational Technology and Online Learning	University - Participants from the Translation and Interpreting Department	Mixed Method Research Design Action Research	Questionnaire	10 weeks	15	Success Interest Collaboration Motivation	-
Kaplan, G., Bolat, Y. İ., Gökse, İ., & Özdaş, F.	2021	Elementary Education Online	Primary School	Mixed Method Research Design	Pre-test/Post-test and Questionnaire	8 weeks	30 students, 17 Parents	Negative Attitude Behavior Management	-

Authors	Years of Publication	Publication Source	Education Level	Methodology	Data Collection Method	Duration	Number of Participants	Learning Outcomes	
								Various Learning Outcomes	Content Language Learning
Demirci, C., Hamzaçebiğlu, H., & Arslan, M.	2021	European Journal of Education Studies	Secondary School	Qualitative Research Design (Case Study)	Open-ended questions	Not explicitly stated	25	Interest Competence Group working skills	-
Yavuz, F., Ozdemir, E., & Celik, O.	2020	World Journal on Educational Technology: Current Issues	University (Tourism Guidance Department)	Quantitative Research (Experimental) Design	a background questionnaire, a writing anxiety questionnaire, pre-and post-tests	Not explicitly stated	47	Engagement Participation	Writing
Korkmaz, S., & Öz, H.	2021	International Online Journal of Education and Teaching	University Prep Class	Mixed Method Research Design A quasi-experimental design	Questionnaire Open-ended questions	7-week course period	38	Collaboration Motivation	Reading Comprehension
Demirbilek, M., Talan, T., & Alzouebi, K.	2022	International Journal of Technology in Education	Public/Private Schools	Qualitative Research Design (Case Study)	Structured interview questions	Not explicitly stated	16 Teachers	Engagement Participation	-
Koç, G., & Sütçü, S. S.	2023	Educational Policy Analysis and Strategic Research,	Private College Secondary School (6 <sup>th</sup> Graders)	Mixed Method Research Design	Pre-test/Post-test and Semi-Structured Interviews	Not explicitly stated	80	Academic Success	Grammar
Tatli, Z., Gülay, A., & Mert, A.	2023	International Journal of Contemporary Educational Research	Primary School (4 <sup>th</sup> graders)	Mixed Method Research Design	An attitude scale for English lessons in primary school, homework, a follow-up chart, and a semi-structured interview	4 weeks	33	Curiosity Participation Success Positive effect on procrastination behaviors	-

Authors	Years of Publication	Publication Source	Education Level	Methodology	Data Collection Method	Duration	Number of Participants	Learning Outcomes	
								Various Learning Outcomes	Content Language Learning
Başal, A., & Kaynak, N. E.	2020	Innovations in Education and Teaching International,	University	Mixed Method Research Design	Questionnaire Open-ended questions	14 weeks	79	Motivation Encouragement Participation Self-awareness	-
Sadeghi, K., Sağlık, E., Mede, E., Samur, Y., & Comert, Z.	2022	Heliyon	University Prep Class	Mixed Method Research Design	pre- and post-vocabulary tests and pre- and post-motivation questionnaires and semi-structured interviews	7 weeks	32	Motivation	Vocabulary
Uzun, L., Çetinavci, U. R., Korkmaz, S., & Salihoglu, U. M.	2013	Digital Culture & Education (DCE)	University (Undergraduate Level)	Mixed Method Research Design	Pre-test/Post-test and Interviews	6 weeks	70	Enjoyment	-
Sezgin, F., & Sezgin, E.	2019	International Journal of Recent Advances in Organizational Behaviour and Decision Sciences (IJRAOB)	University	Quantitative Research Design	Questionnaire	6 months	168 Teachers	-	-

Regarding research question 1, Table 1 indicates that in the Turkish context, researchers are mostly in favor of utilizing a ‘Mixed-Method Research Design’ (62,5%) and half of these studies adopted an experimental design. It is followed equally by ‘Qualitative’ and ‘Quantitative’ research design, with a percentage of 18,75% for each methodology type. While conducting quantitative design studies, researchers made use of ‘questionnaires’, in qualitative design studies the researchers utilized either semi-structured/structured interviews or open-ended questions to find answers to their research questions. In terms of setting, 8 out of 16 research articles were carried out at the university level by academics and/or their graduate students. The university setting is followed by primary and secondary school settings having 3 articles conducted in each setting. Only one study was carried out in the vocational high school setting. Considering the variance in types of high schools in Türkiye, no studies have been carried out in Anatolian, Social Sciences, or Science high school settings. In terms of participants, 14 studies recruited students as their participants, while 2 studies were carried out with teachers to find out their perspectives related to using/adopting gamification in EFL classes. One study was conducted with pre-service teachers, and one study included not only students as participants but also parents. The researcher of that research managed to include 17 parents in the study to find out the effectiveness of the gamification tool ‘ClassDojo’ on the development of their children. The publication years of the articles showed an increase after 2018. 15 articles published between 2018 and 2023. Dehganzadeh and Dehganzadeh (2020) found a similar result in their systematic review by stating the use of gamification in foreign language teaching became popular among researchers after 2015. Therefore, we can say that in the local context, gamification in foreign language teaching has gained attention for the last 5 years. Even though it has attracted researchers' attention, the field has to be searched profoundly.

Regarding research question 2, gamification has been used in the classroom for various purposes; enhancing the vocabulary knowledge of the learners, and increasing learners' academic achievement in grammar. Moreover, gamification is used in the classroom environment to increase learners' motivation, participation, self-awareness, enjoyment, collaboration, engagement, competence, and group working skills. Previous studies yielded the positive impact of gamification on learners' motivation (Muntean, 2011; Kim & Lee, 2013; Simoes, Redondo, and Vilas, 2013; Hakulinen et al., 2015; Perry, 2015; Yürük, 2019; İnanç & Baysal, 2022) and academic achievement (Rachel and Rockinson-Szapkiw, 2018). Apart from these, the researchers aimed to find out how some gamification tools such as Kahoot!, ClassDojo, and Edmodo, affect learners' exam anxiety, motivation, attitude, writing anxiety, and reading comprehension. For instance; ClassDojo, a classroom management application, was used for the performance evaluation of the learners in one of the reviewed studies and resulted in increased motivation and interest towards the lesson. Kahoot! one of the most popular gamification tools was used in the classrooms for different purposes such as; to enhance students' vocabulary learning performance, to reveal its effect on attitude toward the EFL course, motivation, and anxiety, and to review the topics at the end of every three units.

## **Discussion**

The present systematic review aimed to look into the literature on gamification in the English language teaching/learning environment in the Turkish context. To do so, three major databases were scanned with relevant keywords, and Google Scholar was searched for additional research utilizing the references in found studies. The PRISMA model (2020) was used to include or exclude the found articles in this study. As a result of applying these steps, 16 research articles published between the years of 2013-2023 were included to be analyzed. Initially, the quantitative description of the publications was tabularized and analyzed in terms of methodology, settings, participants, and publication years. The review showed that the researchers made use of different methodologies in their studies. However, the most preferred methodology is “Mixed-Method Research Design (MMRD)” and followed by “Quantitative” and “Qualitative” research designs. The majority of the researchers explained the reason for utilizing MMRD to support their qualitative or quantitative findings and yield more reliable results for their studies. In terms of settings, the researchers carried out their studies at the university level recruiting mostly students. Half of the articles (N=8) were conducted with preparation class students or undergraduate students by academics in the ELT. The rest of the articles were carried out in primary school (N=3), secondary school



(N=3), and vocational high school (N=1) settings. As one study was conducted only with teachers working at varying levels of schools, from primary school to university, its setting cannot be stated clearly. The authors of these articles were either master's or doctorate students. So, it would not be wrong to claim that they are related to the academy in one way or another. The reason behind this finding can be that academics follow the technological developments better than teachers and they have (more) autonomous learners to implement gamification tools in their classes. One other reason can be the population of the classroom and the lack of technological facilities in state schools. Compared to the university setting, state schools have more crowded classrooms, and utilizing technological tools may cause some classroom management problems. Moreover, some teachers have limited knowledge and have no or little confidence in utilizing ICT tools in their classrooms (Dang et al., 2012; Lin et al., 2014). The lack of technological facilities makes things harder for the teachers, as well.

In terms of participants, 14 studies recruited only students as their samples. While two studies were carried out with only teachers, one study was carried out with pre-service teachers. In one study about the 'ClassDojo' application, the researcher recruited not only students but also parents as participants which makes it unique in terms of the participants.

Jakubowski (2018) claims that gamification in educational settings started to be used in 2008. In line with this, Garland (2015) proposes the use of gamification in language teaching/learning as a new research field. These justify the low number of selected articles in the review. In addition, when we look at the publication years of the studies, it is seen that the majority of the articles (N=15) were published after 2018, and only one article was published in 2013. It could be attributed to the growing popularity of the phenomenon in the Turkish context, the availability or free versions of the gamification tools in the market, and the technological infrastructure provided by the FATİH Project since 2012 in Türkiye. The presence of smartboards in the classrooms encourages teachers to make use of technology more and makes things easier for them to utilize gamification tools in the classroom. Several studies proved the effectiveness of smartboards or tablet computers in class in terms of increasing motivation, interest, academic success, and improving the language skills of the learners (Çiçekli, 2014; Sayır, 2014; Kayahan and Özduran, 2016).

The review also showed that extant studies in the field were conducted to find out various learning outcomes of gamification tools like motivation, participation, engagement, interest, curiosity, academic success, enjoyment, and collaboration. However, only a few of these studies were conducted to improve learners learning content. Enhancing learners' vocabulary, grammar, and reading comprehension skills via gamification tools were two of them. One study was carried out to investigate the effect of 'Edmodo' on learners' writing anxiety levels instead of utilizing the tool to improve learners' writing skills. Half of the studies (N=8) were carried out to investigate the perceptions of teachers and/or learners, and the effectiveness of some gamification tools, Kahoot!, Edmodo, ClassDojo, and other synchronous and asynchronous games and activities. Yürük (2019) found out that Kahoot! can be used as a Review Activity in the class and it enables learners to engage actively and enjoy the learning process. Tatli, et al. (2023) proposed that gamification increases the curiosity and participation of the learners and makes the learning process fun.

## **Conclusion**

This systematic review presents an overview of the use of gamification to support English language teaching and learning in the Turkish context. The study intends to contribute to the growing body of research and make aware of the stakeholders taking advantage of gamification in the language learning environment in this technological era with digital natives.

The study covers a selected period from 2013 to 2023 as gamification in the education context started to be used in 2008 (Jakubowski, 2014), and using gamification in teaching is a relatively new field (Garland, 2015). To find the relevant studies, in addition to three major databases- Web of Science, Scopus, and

Eric- Google Scholar was searched, as well. Additionally, the study employs a search strategy and covers a particular language that offers a moderate representation of this field of study. The study's primary focus is on how gamification is used in English as a foreign language learning and teaching environment in Türkiye.

The study revealed that researchers prefer utilizing a Mixed-Method research design to support their initial findings and cultivate more reliable and generalizable results. Half of the studies (N=8) were conducted at the university level and seven of them recruited university students as participants. 6 of them were carried out either in primary or secondary school while only one study was conducted in a high school setting. The majority of the authors are academics and/or their graduate students. So, it would not be wrong to claim that the teachers who work at state schools are not in favor of utilizing gamification in their lessons if they are not connected to the academy in a way. This implies that using gamification in foreign language teaching/learning is still subject to personal use or choices. The study also revealed that there has been an increase in the number of research articles since 2018. More than 90% of the articles were published between 2018 and 2023. Finally, it was found that even though there are numerous gamification tools in the market, practitioners prefer to utilize the most popular and certain ones like Kahoot!, ClassDojo, and Edmodo to enhance the vocabulary knowledge of the learners, increase learners' academic achievement, motivation, participation, self-awareness, enjoyment, collaboration, engagement, competence, and group working skills.

The present study has some limitations. First, four databases were searched to find the articles in the field. Increasing the scanned databases would yield more studies in the context. The analysis was carried out by the researcher alone. Therefore, conducting a wide range of studies with experts in the field may produce more outcomes.

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