




Teachers' attitudes on gamification: The Greek EFL context

 **Filomachi Spathopoulou**^{1*}

 **Konstantinos M. Pitychoutis**²

^{1,2}The American University of the Middle East, Kuwait.

¹Email: Filomachi.s@aum.edu.kw

²Email: konstantinos-p@aum.edu.kw



(+ Corresponding author)

ABSTRACT

Article History

Received: 6 June 2023

Revised: 12 September 2023

Accepted: 28 December 2023

Published: 1 February 2024

Keywords

EFL

Gamification

Language teaching

Perceived usefulness

Teacher attitudes

Teaching experience.

This article explores teachers' attitudes towards the perceived usefulness and intention of using gamification in the English as a Foreign Language (EFL) classroom. The study examines the impact of age, teaching experience, and educational background on teachers' attitudes towards gamification. The literature review highlights the potential benefits of gamification in enhancing student engagement, motivation, and positive learning behavior, as well as its potential to address affective factors and language skills. This quantitative study employed a correlational research design, involving a sample of 70 language instructors from five language schools in Greece. Data collection was conducted using a structured questionnaire adapted from the Technology Acceptance Model (TAM). The research indicates that younger teachers are more willing to incorporate gamification into their lessons, while older teachers may require additional support. Teaching experience negatively influences teachers' intention to use gamification, indicating that less experienced teachers are more open to experimentation. Educational background, however, does not significantly impact teachers' intention to use gamification. Additionally, the study finds that the perceived usefulness of gamification is influenced by age, teaching experience, and attitudes towards control and student approval. The article concludes that while gamification can enhance student engagement and learning outcomes, its effectiveness depends on various factors. Recommendations include tailored training programs and support networks for older teachers and the promotion of collaborative communities to facilitate the integration of gamification in EFL classrooms. Further research is encouraged to explore public school EFL teachers' attitudes and develop effective strategies for gamification implementation.

Contribution/Originality: This study contributes to the existing literature on attitudes towards gamification. The originality of the study lies in its investigation of the factors that regulate teachers' intention to use gamification in the Greek EFL context. It also provides practical recommendations to facilitate the use of gamification.

1. INTRODUCTION

In the 21st century, the game education system can provide essential benefits for designing education learning settings if designed meaningfully and knowledgeably, with an understanding of the motivational aspects, goals, and context of learning. A fundamental comprehension of the application of the primary game elements is also needed to implement gamification effectively. Designing effective games entails more than merely developing an engaging and motivating game. Through gamification, students get encouragement and a mindset of trying new things and not giving up on failure. Additionally, gamification is an innovative approach to learning as new technologies are

constantly emerging. As compared to traditional teaching methods, games generally result in the enhancement of the learning process.

In the education sector, gamification is at the start of a process of extensive development, and as such ongoing practice and research will be needed to overcome the challenges of the concept. Even though gamification has numerous challenges in its adaptability, it does not outweigh the opportunities and benefits presented. The challenges may be overcome by future extensive research, eliminating challenges such as those of teachers lacking the skills to implement gamification in their learning contexts. As such, gamification is an idea worthy of further inquiry and a concept that may improve educational outcomes through its innovative applications. Based on studies, there is some evidence that gamification has been utilized in the Greek educational system (Kotsifakos, Karali, Katzola, Kravvari, & Douligeris, 2022; Legaki, Xi, Hamari, Karpouzis, & Assimakopoulos, 2020).

However, it needs to be clarified to what extent gamification has been implemented in the Greek educational system as a whole and the views of the stakeholders on gamification. A literature review of game-based learning in the Greek education system notes that gamification has not been widely exploited in Greek educational contexts (Kirstavridou, Kousaris, Zafeiriou, & Tzafilkou, 2020). Consequently, the research problem addressed in this study is the lack of clarity surrounding the extent of gamification implementation in the Greek educational system, particularly in English as a Foreign Language (EFL) classrooms, and the views and attitudes of EFL teachers toward gamification. While some evidence suggests gamification has been utilized in certain studies, its overall prevalence and effectiveness in diverse educational contexts remain unclear. Therefore, this research aims to investigate English language teachers' attitudes and intention to use gamification and their perceived usefulness of gamification in the Greek EFL class. By exploring these aspects, the study seeks to contribute to the understanding of gamification's potential impact on educational outcomes and identify factors influencing its adoption and integration into the Greek EFL curriculum. To explore Greek EFL teachers' attitudes towards the use of gamification this research addressed the following three research questions:

- a) How useful do Greek EFL teachers consider the incorporation of gamification into their teaching?
- b) How open Greek EFL teachers are to the prospect of incorporating gamification into their teaching?
- c) What are the factors that regulate Greek EFL teachers' attitudes towards gamification?

1.1. Contextual Background

The contextual background of this research is the Greek EFL (English as a Foreign Language) environment, which has its own distinctive features that shape the teaching and learning of English in Greece. English is compulsory in Greek state and private schools from an early age, with a focus on developing language skills like reading, writing, listening, and speaking. The curriculum aims to ensure a certain level of English proficiency by the end of schooling. The extensive use of the traditional grammar-translation method in the classroom is one of the particularities of the Greek EFL system. Greek EFL instruction places significant emphasis on grammar, following the influence of the traditional grammar-translation method. Grammar rules are explicitly taught, and accuracy is prioritized over fluency. As a result, translation plays a vital role, with students regularly translating between Greek and English and memorizing vocabulary lists (Vlachou, 2020). Despite the emphasis on grammar and vocabulary, many Greek EFL learners encounter challenges in speaking and listening skills due to limited opportunities for oral proficiency practice in the traditional classroom environment (Giannikas, 2011). The teacher-centered approach in Greek EFL classrooms may hinder student interaction and active language production (Gregory, 1994).

Another aspect of the Greek EFL educational system is the establishment of several private language tutorial schools, providing extra English instruction alongside regular schooling. These schools often adopt different teaching methodologies, offering more opportunities for communicative activities, language practice, and exam training which is prevalent in Greece. Standardized testing, such as the State Certificate of Language Proficiency (KPG) exam, is a

crucial component of the Greek EFL context. These tests assess language skills and provide a recognized certification of English proficiency, shaping classroom instruction and teaching methodologies (Kostoulas & Stelma, 2017).

In recent years, efforts have been made to integrate technology into English language learning in Greece. Digital resources, interactive whiteboards, online platforms, and language learning apps are being utilized to enhance teaching and provide additional resources for students (Lazou, Panagiotou, & Tsinakos, 2021; Liontou, 2015). With globalization, multilingualism and multiculturalism in Greece, there is a growing recognition of the importance of English as a Lingua Franca (ELF). Greece is working to promote English language learning and proficiency to prepare students for international communication and career opportunities (Sifakis, 2009).

2. LITERATURE REVIEW

2.1. Gamification in Education

Gamified education is an approach that incorporates game elements into non-game environments. It is a teaching methodology that creates a game-like scenario around the course objectives and the entire curriculum (Legaki et al., 2020). Unlike game-based learning, which uses games as its medium of education, gamification uses game elements to facilitate learning. These game elements, such as badges, leaderboards, and points, as well as avatars, time pressures, levels, competition, and three-dimensional environments (Al-Azawi, Al-Faliti, & Al-Blushi, 2016), can promote learner engagement and motivation by combining intrinsic and extrinsic motivation (Ibhadode & Ugoji, 2019). Despite being a relatively new concept, gamification has become increasingly popular due to its potential to address the challenge of traditional learning contexts by making learning more exciting and engaging. The idea of gamification has become extremely popular, with an extensive range of firms creating game platforms for many subjects. The concept has been applied in various settings encompassing education, business, healthcare, and productivity (Rabah, Cassidy, & Beauchemin, 2018). In education, in particular, gamification has become increasingly popular among learners and teachers since modern technology offers a wide variety of advantages for teachers and learners to create a learning experience that is more enjoyable and more effective. There is more science behind the success of courses that incorporate gamification elements than other learning methods. Regardless of the particular audience in the classroom or the subject matter, gamification can help teachers create exciting and entertaining courses (Legaki et al., 2020). However, despite all its advantages, gamification is not a cure-all. The application of gamification in education has faced criticism from many who argue that while games in learning offer opportunities for reshaping education, they are not a solution to every problem, nor are they universally applicable (Rojas-López, Rincón-Flores, Mena, García-Peñalvo, & Ramírez-Montoya, 2019). If a game is not carefully designed, it runs the risk of backfiring and being overhyped, thus failing to reach its full potential.

2.2. Gamification in the EFL Context

Gamification has been widely used in several non-English-speaking countries (Zhang & Hasim, 2023) and is considered a robust tool for transforming the EFL classroom into an engaging and entertaining learning environment (Jiménez-Sánchez & Gargallo-Camarillas, 2020). EFL teachers have recognized gamification as an effective method for promoting student engagement, positive learning behavior, and creating an attractive learning environment (Flores-Aguilar, Prat-Grau, Fernández-Gavira, & Muñoz-Llerena, 2023; Mila & Mahbub, 2022). The use of gamification in EFL classrooms shows promise in enhancing students' learning motivation (Hassan, Emam, & Sayed, 2023; Mila & Mahbub, 2022). It can also be utilized to address writing anxiety, which is a significant affective factor in successful language learning (Yavuz, Ozdemir, & Celik, 2020). Studies have investigated the impact of online gamification tools, such as Edmodo, on EFL learners' writing anxiety levels, and the results have shown a significant decrease in anxiety levels (Gironella, 2023; Yavuz et al., 2020). However, more research is needed to explore the usefulness of gamification applications in assisting student vocabulary learning outside the classroom (Panmei & Waluyo, 2022). The use of gamification in EFL classrooms can also encourage students to take a more active role in

their learning (Asiri, 2019). Teachers' attitudes, perceived usefulness, and perceived social influences can predict their intentions to use gamification in EFL classrooms (Asiri, 2019). Furthermore, gamification can be employed to improve speaking fluency in EFL students at elementary schools (Marin-Pacurucu & Garzón, 2022) and reinforce learners' physical, mental, and emotional aspects in memorizing and classifying language forms (Mila & Mahbub, 2022). However, there is still inadequate research on the benefits of gamification for acquiring English as a Foreign Language (EFL) (Ivanjko, Pavlina, & Grubješić, 2020).

2.3. The Greek Context

Private language schools have been around Greece since the 1950s, but they became more popular in the 1980s and 1990s. During this time, Greece experienced a surge in demand for English language education due to the country's joining the European Union, the growing tourism industry, and the increasing importance of English in international business and communication. Greece is one of the countries where the public school provides exposure to English, with two to three hours of English instruction per week. The public school focuses on general English; the materials used are usually locally designed, while the emphasis on language exams and certification is carefully avoided. This void is covered by private foreign language tutorial schools (Richards, 2015). These language institutions employ experienced (often of native-level) English language teachers, adopt teaching materials produced by international publishers and successfully utilize state-of-the-art learning technology while linking their courses to internationally accredited language certificates (Giannikas & Nikitaki, 2022).

Private foreign language tutorial schools have a detrimental effect on the teaching of English in Greek public secondary education. Students resort to private tutorial schools to learn English despite it being taught in schools. Using Bourdieu's cultural reproduction theory, Tsiplakides (2018) argued that private supplementary tutoring brings social class, economic capital, and educational outcomes closer together. The State Council for Employment sets a B2 level in English as the minimum benchmark for proficiency in the foreign language, and with the globalization of the economy, many Greek employers are looking for employees who are competent in English. Wealthier parents see no other option than to send their children to private language schools. As a result, upper and middle-class students have an advantage since they can enter the labor market with valuable educational qualifications that enhance their job prospects. The widespread use of private supplementary tutoring has a negative impact on the teaching of English in Greek public secondary education.

3. THE STUDY

This study aims to investigate the relationship between English language teachers' intention to use gamification (UI) and their perceived usefulness of gamification (PU) in the Greek EFL class.

3.1. Methodology

This is a quantitative study adopting a correlational research design. Instructors from five neighboring language schools in southern Athens were chosen as participants. These language schools are large, long-established institutions with more than 40 EFL instructors and 400 students each, which increased the pool of participants. These two language schools from the southern suburbs of Athens were purposefully selected since, according to the Organization for Economic Co-operation and Development (OECD), people in this area belong to an urban middle class, the largest group of the Greek population.

3.2. Sample and Data Collection

Seventy language instructors volunteered to participate in this research study. According to Louangrath and Sutanapong (2019), a sample size of 30 people maintains a confidence interval of 95% in quantitative studies. The female instructors outnumbered the males (77.14% to 22.86%, respectively). Most of the participants (40.01%) were

in their 50s in age; 25.71% of the participants were in their 40s in age; 14.28% were in their 30s, and the rest 20%, were below 30 years old (Table 1). As Table 2 shows, more than 60% of the participants can be qualified as mid-career language professionals as they have more than five years of teaching experience, while only 38.57% were novice instructors with less than three years of experience.

Table 1. Gender and age distribution of population.

Criteria	Characteristics	Number	Percentage
Gender	Female	54	77.14%
	Male	16	22.86%
Age	Below 30 years	14	20.00%
	+30 years	10	14.28%
	+40 years	18	25.71%
	+50 years	28	40.01%
N=		70	

Table 2. Years of experience distribution.

Criteria	Characteristics	Number	Years of experience / percentage
Age	Below 30 years	9	0-3 years
		5	4-6 years
		0	+7 years
	+30 years	2	0-3 years
		2	4-6 years
		6	+7 years
	+40 years	6	0-3 years
		8	4-6 years
		4	+7 years
	+50 years	10	0-3 years
		10	4-6 years
		8	+7 years
Years of experience	0-3 years	27	38.57%
	4-6 years	25	35.71%
	+7 years	18	25.72%
N=		70	

Table 3. Type of education distribution.

Criteria	Characteristics	Number	Education / Percentage
Age	Below 30 years	7	Eparkeia
		3	University degree
		4	Postgraduate
	+30 years	2	Eparkeia
		2	University degree
		6	Postgraduate
	+40 years	6	Eparkeia
		8	University degree
		4	Postgraduate
	+50 years	10	Eparkeia
10		University degree	
8		Postgraduate	
Education	Eparkeia	25	35.71%
	University degree	23	32.86%
	Postgraduate	22	31.43%
N=		70	

Regarding their qualifications (Table 3), most participants (35.71%) reported holding a teaching license (Eparkeia) from the Hellenic State. The remaining participants had advanced their studies with a relevant university degree (32.86%) and postgraduate studies (31.43%). The participants self-rated their computer literacy from average to good (M= 3.44), while their internet literacy seems slightly better (M=3.66). All participants are well-acquainted with online games, although no one reported using a game console. One of the participating instructors commented that they often use Kahoot in their classes. Google Forms was chosen to administer the questionnaire based on its advantages. Google Forms is a free data-capturing poll, and its cross-platform compatibility since most participants

would access it via their different smart devices, whereas others from desktop computers. The data collection lasted approximately two months, from the beginning of November until December's Winter break.

The link to the questionnaire was emailed to the Director of Studies of the language schools so they may share it with the participants. It was made clear that participation was voluntary while the email capturing option in Google Forms had been deactivated to ensure the anonymity of the participants. In January 2023, the captured data were analyzed using descriptive statistics (medium, percentages).

3.3. Research Instrument

The teachers' questionnaire was adapted from Asiri (2019) Technology Acceptance Model (TAM) questionnaire and was widely used to measure people's attitudes and perceived usefulness towards the adoption of technology. TAM is a theory of information systems that models how people adopt and use new technologies. It holds that the acceptance of technology is predicted by the user's behavioral intention, which is in turn influenced by their perceptions of the technology's usefulness and perceived ease of use.

The end-user is the person who actually uses a system. Their behavioral intention to use technology is influenced by their attitude towards technology. Attitude (A), or overall opinion of technology, impacts the behavioral intention (BI) (Marikyan & Papagiannidis, 2023). The adoption and use of information technology can lead to both short-term and long-term advantages, such as improved performance, efficiency in terms of cost and time, and convenience, at both the individual and organizational levels. The potential for technology to be beneficial has long been a motivator for research into people's openness to new technologies. TAM has been widely used in the field of information systems to understand and predict user acceptance of new technologies (Charness & Boot, 2016). It has also been applied in various fields, such as healthcare, education, and e-commerce, to understand user acceptance of new technologies (Chuttur, 2009). Perceived usefulness and perceived ease of use are the two main factors that TAM has found to be predictive of technology acceptance. Perceived usefulness is the degree to which a user believes that a particular technology will improve their ability to perform their job. Perceived ease of use is the degree to which a user believes that using a particular technology would be effortless. TAM has been found to be a good predictor of user acceptance of new technologies. It has also been used to evaluate the effectiveness of various initiatives aimed at promoting technological adoption (Chuttur, 2009).

The questionnaire of 12 statements, seen in Table 4 had two parts.

- i. Teachers' attitudes toward intention of use of gamification in the EFL classroom,
- ii. Teachers' perceived usefulness of gamification in the EFL classroom.

A 5-point Likert scale (from 1= strongly disagree to 5= strongly agree) was used to assess the statements.

The face and content validity of the questionnaire was determined by two academics on assessment (Hoe, Lin, Bautista, Vrijhoef, & Lim, 2019) who commented on the content and the necessary changes were made. The questionnaire was piloted before being administered in November-December 2022.

Initially, the study tests the contribution in the explanatory power of the independent variables *UI* and *PU* on the dependent variables $[\widehat{\text{age range}}]$, $[\widehat{\text{education background}}]$, and $[\widehat{\text{teaching experience}}]$. To this end, we conduct F restricted-unrestricted tests under the null hypothesis H_0 stating that subsets of the independent variables *UI* and *PU* are statistically insignificant for each ordinary least-squares (OLS) regression model. In essence, we check if the coefficients of these independent variables are simultaneously zero at a 5% significance level. We also use the Durbin-Watson (DW) test statistic to test the null hypothesis that the residuals from the restricted OLS regressions are not auto-correlated against the alternative that the residuals follow an autoregressive AR1 model and that in the case of non-rejection of the null hypothesis the aforementioned regressions derive best linear unbiased estimators.

Table 4. Questionnaire (independent variables).

Part 1	Use intention (UI)
UI1	If I had enough time, I would use gamification in class.
UI2	I do not think I would ever need gamification in my classroom.
UI3	It would be easy for me to become skillful at incorporating gamification into my lessons.
UI4	Although I don't use gamification in my class now, I am confident I can use it in the future.
Part 2	Perceived usefulness (PU)
PU1	Gamification could make learning less engaging.
PU2	Using gamification could give me greater control over my work.
PU3	Using gamification could reduce the time needed for my work tasks.
PU4	Using gamification would improve the quality of my work.
PU5	Overall, gamification could be useful for my work.
PU6	My students' parents would think using gamification in class is a good idea.
PU7	My students would think using gamification in class is a good idea.
PU8	The director of studies would think using gamification in class is a good idea.

4. RESULTS

The results of the F restricted-unrestricted test are shown in Table 5. It should be noted that considering the dependent variable [education background] in the Use Intention case, we performed an F-overall test where we cannot reject the null hypothesis that all the independent variables' coefficients are equal to zero.

Table 5. F restricted - unrestricted test (5% significance level).

Regression	Dependent variable	Null hypothesis	F rest-unrest.	F critical	H _o
R1	Age range	$H_o: \hat{\beta}_{UI1} = \hat{\beta}_{UI2} = 0$	0.350	2.39	No rejection
R2	Education background	$H_o: \hat{\beta}_{UI1} = \hat{\beta}_{UI2} = \hat{\beta}_{UI3} = \hat{\beta}_{UI4} = 0$	1.379	2.04	No rejection
R3	Teaching experience	$H_o: \hat{\beta}_{UI2} = \hat{\beta}_{UI3} = \hat{\beta}_{UI4} = 0$	1.122	2.18	No rejection
R4	Age range	$H_o: \hat{\alpha}_{PU1} = \hat{\alpha}_{PU3} = \hat{\alpha}_{PU4} = \hat{\alpha}_{PU5} = \hat{\alpha}_{PU6} = \hat{\alpha}_{PU8} = 0$	0.895	2.25	No rejection
R5	Education background	$H_o: \hat{\alpha}_{PU1} = \hat{\alpha}_{PU2} = \hat{\alpha}_{PU4} = \hat{\alpha}_{PU5} = \hat{\alpha}_{PU7} = 0$	1.329	2.37	No rejection
R6	Teaching experience	$H_o: \hat{\alpha}_{PU2} = \hat{\alpha}_{PU3} = \hat{\alpha}_{PU5} = \hat{\alpha}_{PU6} = \hat{\alpha}_{PU7} = \hat{\alpha}_{PU8} = 0$	1.059	2.25	No rejection

Table 6. Use intention.

N = 70 5% significance level		Estimated coefficients (Standard errors)		
Coefficient	Variables	Age range	Education background	Teaching experience
		R1	R2	R3
$\hat{\beta}_o$	1	4.062 (0.400)	0 (0)	3.266 (0.243)
$\hat{\beta}_{UI1}$	UI1	0 (0)	0 (0)	-0.203 (0.064)
$\hat{\beta}_{UI2}$	UI2	0 (0)	0 (0)	0 (0)
$\hat{\beta}_{UI3}$	UI3	0.301 (0.142)	0 (0)	0 (0)
$\hat{\beta}_{UI4}$	UI4	-0.675 (0.149)	0 (0)	0 (0)
R square		0.543	0	0.428

Note: All the p-values < 0.05.

The results of the restricted regression models, the coefficients' values, and their standard errors are presented in Table 6 and Table 7 for both Use Intention and Perceived Usefulness cases, respectively. All the P-values of

the aforementioned coefficients are lower than 0.05 at 5% 2-sided significance level indicating that the coefficients are statistically significant.

Table 7. Perceived usefulness.

N = 70 5% significance level		Estimated coefficients (Standard errors)		
		Age range	Education background	Teaching experience
Coefficients	Variables	R4	R5	R6
$\hat{\alpha}_0$	1	5.251 (0.617)	3.846 (0.281)	4.094 (0.400)
$\hat{\alpha}_{PU1}$	PU1	0 (0)	0 (0)	-0.205 (0.091)
$\hat{\alpha}_{PU2}$	PU2	-0.325 (0.159)	0 (0)	0 (0)
$\hat{\alpha}_{PU3}$	PU3	0 (0)	-0.244 (0.079)	0 (0)
$\hat{\alpha}_{PU4}$	PU4	0 (0)	0 (0)	-0.362 (0.080)
$\hat{\alpha}_{PU5}$	PU5	0 (0)	0 (0)	0 (0)
$\hat{\alpha}_{PU6}$	PU6	0 (0)	0.239 (0.072)	0 (0)
$\hat{\alpha}_{PU7}$	PU7	-0.409 (0.167)	0 (0)	0 (0)
$\hat{\alpha}_{PU8}$	PU8	0 (0)	-0.329 (0.063)	0 (0)
R square		0.508	0.636	0.531

Note: All the p-values < 0.05.

The results of the DW test presented in Table 8 depict that there is no evidence of residual autocorrelation since the DW statistics are higher to d_U . Consequently, the OLS regressions derive best linear unbiased estimators, since they are efficient, with the exception of regression R4 where the WD lies between d_L and d_U and the case is inconclusive.

Table 8. Durbin - Watson (WD) test (5% significance level).

Regression	Null hypothesis	DW	d_L	d_U	H_0
R1	H_0 : No error autocorrelation	1.941	1.554	1.672	No rejection
R3	H_0 : No error autocorrelation	1.841	1.583	1.641	No rejection
R4	H_0 : No error autocorrelation	1.576	1.554	1.672	Inconclusive
R5	H_0 : No error autocorrelation	1.963	1.525	1.703	No rejection
R6	H_0 : No error autocorrelation	1.856	1.554	1.672	No rejection

5. DISCUSSION

This study aimed to explore teachers' attitudes towards the perceived usefulness and intention of using gamification in the EFL classroom. The literature review highlighted the potential benefits of gamification in promoting student engagement, motivation, and positive learning behavior, as well as the potential to address affective factors such as writing anxiety and improving specific language skills like idiomatic knowledge or speaking fluency. Despite these promising results, research on the effectiveness of gamification in EFL classrooms is still limited, and there is a need for further exploration of factors that may influence its success.

5.1. Intention to use Gamification in Class

5.1.1. Age Range vs. Intention of Using Gamification in Class

One key finding of this study was the significant impact of age on teachers' attitudes towards gamification.

$$R1 : [\widehat{\text{age range}}] = 4.062 + 0.301 * [UI3] - 0.675 * [UI4]$$

The F restricted-unrestricted test indicated that the coefficients of UI1 (If I had enough time, I would use gamification in class) and UI2 (I do not think I would ever need gamification in my classroom) were simultaneously equal to zero. Thus, the regressors UI1 and UI2 did not have any statistically significant impact on the age range dependent variable. However, as shown in Table 6, the UI3 independent variable had a small positive impact (0.301) on age range, showing a positive relationship between age and the easy incorporation of gamification into lessons. The increase in confidence for future use of gamification (UI4 regressor) had a strong negative impact (coefficient of UI4 = -0.64476) on age range, indicating that younger teachers were more confident in using gamification in the future. The regression equation for age range was: age range = 4.062 + 0.301 (UI3) - 0.675 (UI4).

The results showed that younger teachers were more confident and willing to use gamification in their lessons, while older teachers may need more support and training to effectively incorporate it into their teaching. This finding is consistent with previous research that suggests younger teachers may be more comfortable with technology (David & Aruta, 2022; Joiner et al., 2013) and more open to experimentation with new teaching methods (Tilfarlioglu & Anwer, 2017).

5.1.2. Teaching Experience vs. Intention of Using Gamification in Class

Another finding was that teaching experience had a small negative impact on teachers' intention to use gamification.

$$R3 : [\widehat{\text{teaching experience}}] = 3.266 - 0.203 * [UI1]$$

Based on the analysis (Table 6), there is a relationship between teaching experience and the intention to use gamification in class. The coefficient for UI1 was -0.203, indicating that teaching experience has a small negative impact on the intention to use gamification in class. This means that teachers with less experience are more likely to intend to use gamification in their classes compared to those with more experience. The results suggest that teachers who are relatively new to the profession may be more open to experimenting with new teaching methods, such as gamification, in order to engage their students and improve their learning outcomes. On the other hand, more experienced teachers may be more set in their ways and less willing to try out new teaching strategies.

Therefore, the results showed that teachers with less experience were more open to experimenting with new teaching methods, such as gamification, in order to engage their students and improve learning outcomes. This finding is also consistent with previous research that suggests experienced teachers may be more resistant to change or may feel more constrained by their existing teaching practices (Barz, Arndt, Dörrenbacher-Ulrich, Benick, & Perels, 2022; Howard & Mozejko, 2015). It is important to note that while teaching experience appears to play a role in teachers' intention to use gamification in class, it is not the only factor that influences this intention. Other factors, such as attitudes towards technology and student engagement, may also be important to consider when exploring teachers' willingness to incorporate gamification into their lessons.

5.1.3. Educational background vs. Intention of Using Gamification in Class

Interestingly, teachers' educational background did not seem to have a significant impact on their intention to use gamification. The study showed no correlation between educational background and the Intention of Using Gamification in Class. The F-overall test indicates that all the independent variables are not statistically significant jointly since we cannot reject the null hypothesis of zero coefficients.

5.2. Perceived Usefulness of Gamification in Class

5.2.1. Age Range vs. Perceived Usefulness of Gamification in Class

The results of the regression analysis show that there is a significant relationship between teachers' age range and their perceived usefulness of gamification in class.

$$R4 : [\widehat{\text{age range}}] = 5.251 - 0.325 * [PU2] - 0.409 * [PU7]$$

The coefficients of the variables indicate that both PU2 and PU7 have a negative effect on teachers' perceived usefulness of gamification. Teachers who agree with the statement "Using gamification could give me greater control over my work" are less likely to perceive gamification as useful in their classes. Similarly, those who agree with the statement "My students would think using gamification in class is a good idea" also have a lower perceived usefulness of gamification.

Overall, these findings suggest that teachers' age range and their perceptions of the usefulness of gamification are important factors to consider when designing interventions to promote the use of gamification in English language teaching.

5.2.2. Teaching Experience vs. Perceived Usefulness of Gamification in Class

The regression analysis showed a significant relationship between English language teachers' perceived usefulness of gamification in their classes and their teaching experience.

$$R6 : [\widehat{\text{teaching experience}}] = 4.094 - 0.205 * [PU1] - 0.362 * [PU4]$$

The model explained 53.1% of the variance in teachers' perceived usefulness of gamification in their classes ($R^2 = 0.531$). The negative coefficient of PU1 ($-0.21, p < 0.05$) suggests that teachers with more teaching experience were less likely to perceive gamification as making learning less engaging. On the other hand, the negative coefficient of PU4 ($-0.36, p < 0.05$) suggests that teachers with more teaching experience were less likely to perceive using gamification as improving the quality of their work. Overall, these findings indicate that English language teachers' perceptions of the usefulness of gamification in their classes are related to their teaching experience. More experienced teachers may not see gamification as positively impacting the quality of their work, but they may also be less likely to see it as making learning less engaging. These results have implications for how gamification can be implemented in language classrooms and how it can be perceived by teachers with different levels of experience.

5.2.3. Educational Background vs. Perceived Usefulness of Gamification in Class

The analysis of the relationship between teachers' academic background and their perceived usefulness of gamification in class revealed interesting findings.

$$R5 : [\widehat{\text{education background}}] = 3.846 - 0.244 * [PU3] + 0.239 * [PU6] - 0.329 * [PU8]$$

The coefficients showed that perceived usefulness of gamification was negatively related to PU1 ($\beta = -.25, p < .05$), PU3 ($\beta = -.25, p < .05$), and PU8 ($\beta = -.25, p < .05$). This means that teachers who perceived gamification as making learning less engaging (PU1), reducing the time needed for their work tasks (PU3), or not receiving support from their director of studies (PU8) were less likely to see the usefulness of gamification in their classes.

On the other hand, the coefficient for PU6 was positive ($\beta = .24, p < .05$), indicating that teachers who believed that using gamification in class would be approved by their students' parents were more likely to see the usefulness of gamification in their classes. The regression model also showed a significant intercept value ($\beta = 3.85, p < .05$), indicating that teachers who had a more positive perception of gamification perceived it as more useful in their classes regardless of their academic background.

Overall, the results suggest that teachers' perceptions of gamification are influenced by a range of factors, including their academic background and their perceived level of support from key stakeholders such as their director of studies and their students' parents. The findings suggest that there is a need to consider these factors when introducing gamification in English language teaching contexts (Helvich, Novak, Mikoska, & Hubalovsky, 2023).

To conclude, this study showed that regardless of their educational background, English language teachers had a baseline level of intention to use gamification in their teaching. This suggests that regardless of their training, teachers recognize the potential benefits of gamification (Yacobson, Toda, Cristea, & Alexandron, 2021) in promoting student engagement and motivation (Hassan et al., 2023). The study also found that younger teachers were more

likely to perceive gamification as beneficial, while older teachers may need more convincing to see its benefits. This finding suggests that age may be an essential factor in determining how teachers perceive the potential benefits of gamification and that efforts to promote its use may need to be targeted to different age groups.

Finally, the study found that teachers prioritizing control and structure in their lessons were less likely to perceive gamification as useful. This suggests that some teachers may resist using gamification because they feel it may disrupt their structure or control over their lessons. This finding highlights the importance of addressing teacher concerns about using gamification and developing strategies that can effectively incorporate it into existing teaching practices (Psoinos, 2021; Thuy & Hung, 2021).

In conclusion, this study adds to our understanding of teachers' attitudes towards using gamification in the EFL classroom. The results suggest that gamification can be a helpful tool for engaging students and improving learning outcomes. However, its effectiveness may depend on factors such as teachers' age, experience, and attitudes towards technology and control. Future research should explore these factors in more depth and develop effective strategies for incorporating gamification into EFL classrooms.

6. CONCLUSION AND RECOMMENDATIONS

Based on the results provided, the following conclusions can be drawn:

- Age is a significant factor in teachers' intention to use gamification in class. Younger teachers are more confident and willing to use gamification in their lessons, while older teachers may need more support and training to incorporate gamification effectively.
- Teachers' educational background does not seem to have a significant impact on their intention to use gamification in class. English language teachers, regardless of their educational background, have a baseline level of intention to use gamification in class.
- Teaching experience has a small negative impact on teachers' intention to use gamification in class. Teachers with less experience are more open to experimenting with new teaching methods, such as gamification, in order to engage their students and improve their learning outcomes.
- Teachers' age range is a significant factor in their perceived usefulness of gamification in class. Younger teachers are more likely to perceive gamification as useful, while older teachers may need more convincing to see the benefits of using gamification.
- Teachers who agree with the statement "Using gamification could give me greater control over my work" are less likely to perceive gamification as useful. This suggests that teachers who prioritize control and structure in their lessons may be less open to using gamification.

Overall, the results suggest that gamification can be a useful tool for engaging students and improving learning outcomes, but its effectiveness may depend on factors such as teachers' age, experience, and attitudes towards technology and control. Teachers who are younger and less experienced may be more open to using gamification, while those who prioritize control and structure in their lessons may need more convincing.

Regarding limitations, this study focuses on the attitudes of private language schools' teachers towards gamification. Further research is necessary to determine the attitude of public school EFL teachers. Further research should also be undertaken leading to the development of effective strategies for incorporating gamification into EFL classrooms.

Considering the above, the following recommendations can be made:

- Developing targeted training programs that cater to the specific needs of older teachers, providing them with the necessary knowledge and skills to effectively incorporate gamification into their lessons.
- Developing mentoring or peer support programs where experienced gamification users can guide and assist their colleagues in adopting this teaching approach.

- Opening of forums or communities to increase awareness and encourage teachers to exchange ideas, discuss challenges, and provide support to each other. Fostering a culture of collaboration can help teachers exchange ideas, discuss challenges, and provide mutual support for implementing gamification in their classrooms.

Funding: This study received no specific financial support.

Institutional Review Board Statement: The Ethical Committee of the Research Committee of the Liberal Arts Department – The American University of the Middle East has granted approval for this study on 19 February 2023 (Ref. No. BRAID9352).

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

REFERENCES

- Al-Azawi, R., Al-Faliti, F., & Al-Blushi, M. (2016). Educational gamification vs. game based learning: Comparative study. *International Journal of Innovation, Management and Technology*, 7(4), 132-136.
- Asiri, M. J. (2019). Do teachers' attitudes, perception of usefulness, and perceived social influences predict their behavioral intentions to use gamification in EFL classrooms? Evidence from the Middle East. *International Journal of Education and Practice*, 7(3), 112-122. <https://doi.org/10.18488/journal.61.2019.73.112.122>
- Barz, N., Arndt, P., Dörrenbächer-Ulrich, L., Benick, M., & Perels, F. (2022). *Pre-service teachers' player types and their relation to self-efficacy with digital media*. Paper presented at the In ECGBL 2022 16th European Conference on Game-Based Learning. Academic Conferences and Publishing Limited.
- Charness, N., & Boot, W. R. (2016). Technology, gaming, and social Networking. In K. Warner Schaie, & S. L. Willis (Eds.) *Handbook of the Psychology of Aging*. In (8th ed., pp. 389-407): Academic Press. <https://doi.org/10.1016/B978-0-12-411469-2.00020-0>.
- Chuttur, M. Y. (2009). *Overview of the technology acceptance model: Origins, developments and future directions*. *All Sprouts Content*. Retrieved from https://aisel.aisnet.org/sprouts_all/290
- David, A. P., & Aruta, J. J. B. R. (2022). Modeling Filipino teachers' intention to use technology: A MIMIC approach. *Educational Media International*, 59(1), 62-79. <https://doi.org/10.1080/09523987.2022.2054114>
- Flores-Aguilar, G., Prat-Grau, M., Fernández-Gavira, J., & Muñoz-Llerena, A. (2023). "I learned more because i became more involved": Teacher's and students' voice on gamification in physical education teacher education. *International Journal of Environmental Research and Public Health*, 20(4), 3038. <https://doi.org/10.3390/ijerph20043038>
- Giannikas, C. N. (2011). L1 in English language learning: A research study in a Greek regional context. *International Journal of Applied Linguistics*, 21(3), 319-339. <https://doi.org/10.1111/j.1473-4192.2011.00282.x>
- Giannikas, C. N., & Nikitaki, S. (2022). The language teachers' perspective on parental involvement: A focus on primary state schools in Greece. *School Community Journal*, 32(2), 229-248.
- Gironella, F. (2023). Gamification pedagogy: A motivational approach to student-centric course design in higher education. *Journal of University Teaching & Learning Practice*, 20(3), 04. <https://doi.org/10.53761/1.20.3.04>
- Gregory, D. J. (1994). *The preferred learning styles of Greek EFL students and Greek EFL teachers*. Dissertations and Theses Paper No. 4836.
- Hassan, M. S., Emam, H. E., & Sayed, F. R. A. (2023). Using gamification to enhance sixth grade pupils' motivation. *The Scientific Journal of the College of Education*, 15(44), 226-239. <https://doi.org/10.21608/sjsw.2023.288031>
- Helvich, J., Novak, L., Mikoska, P., & Hubalovsky, S. (2023). A systematic review of gamification and its assessment in EFL teaching. *International Journal of Computer-Assisted Language Learning and Teaching*, 13(1), 1-21. <http://doi.org/10.4018/IJCALLT.322394>

- Hoe, R., Lin, W., Bautista, M. A. C., Vrijhoef, H. J. M., & Lim, T. W. (2019). Validation of a questionnaire measuring patient knowledge of atrial fibrillation in an Asian cohort. *Heart Asia*, 11(1), e011143. <https://doi.org/10.1136/heartasia-2018-011143>
- Howard, S., & Mozejko, A. (2015). Considering the history of digital technologies in education. In M. Henderson & G. Romeo (Eds.), *Teaching and Digital Technologies: Big Issues and Critical Questions*. In (pp. 157-168). Cambridge: Cambridge University Press.
- Ibhadode, A., & Ugoji, E. P. (2019). *Gamification as a cost-effective tool to bridge the education and industrial sector divide*. Paper presented at the 7th African Engineering Education Association (AEEA) International Conference, University of Lagos, Nigeria, 24 - 27 September, 2019.
- Ivanjko, T., Pavlina, K., & Grubješić, I. (2020). *The role of gamification in language learning in higher education*. Paper presented at the INTED2020 Proceedings.
- Jiménez-Sánchez, M., & Gargallo-Camarillas, N. (2020). Gamification and students' motivation: Using Quizizz in the English as a foreign language (EFL) classroom. *Acta Marisensis Philologia*, 2(1), 1-13. <https://doi.org/10.2478/amph-2022-0035>
- Joiner, R., Gavin, J., Brosnan, M., Cromby, J., Gregory, H., Guiller, J., . . . Moon, A. (2013). Comparing first and second generation digital natives' Internet use, Internet anxiety, and Internet identification. *Cyberpsychology, Behavior, and Social Networking*, 16(7), 549-552. <https://doi.org/10.1089/cyber.2012.0526>
- Kirstavridou, D., Kousaris, K., Zafeiriou, C., & Tzafilkou, K. (2020). Types of game-based learning in education: A brief state of the art and the implementation in Greece. *The European Educational Researcher*, 3(2), 87-100. <https://doi.org/10.31757/euer.324>
- Kostoulas, A., & Stelma, J. (2017). Understanding curriculum change in an ELT school in Greece. *Elt Journal*, 71(3), 354-363. <https://doi.org/10.1093/elt/ccw087>
- Kotsifakos, D., Karali, M.-G., Katzola, E., Kravvari, A., & Douligeris, C. (2022). A web gamification platform inspired by the maritime tradition museum in Perama, Greece, for students in the sector of maritime professions in vocational education and training. *European Journal of Engineering and Technology Research*, 49-52. <https://doi.org/10.24018/ejeng.2022.1.cie.2963>
- Lazou, C., Panagiotou, N., & Tsinakos, A. (2021). *Digital and media literacy skills enhancement in the Greek EFL context during the COVID-19 pandemic*. In A. Palalas & C. Lazou (Eds.) *Blended language learning: Evidence-based trends and applications*. International Association for Blended Learning and Power Learning Solutions.
- Legaki, N.-Z., Xi, N., Hamari, J., Karpouzis, K., & Assimakopoulos, V. (2020). The effect of challenge-based gamification on learning: An experiment in the context of statistics education. *International Journal of Human-Computer Studies*, 144, 102496. <https://doi.org/10.1016/j.ijhcs.2020.102496>
- Liontou, T. (2015). Intermediate Greek EFL learners' attitudes to on-line teaching practices: A blended task-based English language learning approach. *Teaching English with Technology*, 15(2), 81-93.
- Louangrath, P., & Sutanapong, C. (2019). Minimum sample size calculation using cumulative distribution function. *International Journal of Research & Methodology in Social Science*, 5(1), 101-113.
- Marikyan, D., & Papagiannidis, S. (2023). *Technology acceptance model: A review*. In S. Papagiannidis (Ed), *TheoryHub Book*. Retrieved from <http://open.ncl.ac.uk/>
- Marin-Pacurucu, B. A., & Garzón, A. L. A. (2022). Gamification strategies and speaking fluency in EFL elementary students. *Iustitia Socialis: Refereed Journal of Legal and Criminal Sciences*, 7(1), 77-95. <https://doi.org/10.35381/raji.v7i1.1702>
- Mila, H., & Mahbub, M. A. (2022). An alternative board game to promote EFL learners grammatical skill. *EnJourMe (English Journal of Merdeka): Culture, Language, and Teaching of English*, 7(1), 78-87. <https://doi.org/10.26905/enjourme.v7i1.7043>
- Panmei, B., & Waluyo, B. (2022). The pedagogical use of gamification in English vocabulary training and learning in higher education. *Education Sciences*, 13(1), 1-22. <https://doi.org/10.3390/educsci13010024>
- Psoinos, D. I. (2021). *Adapting approaches and methods to teaching english online*. Cham: Springer.

- Rabah, J., Cassidy, R., & Beauchemin, R. (2018). *Gamification in education: Real benefits or edutainment*. *Research Gate*. Retrieved from https://www.researchgate.net/profile/Robert_Cassidy4/publication/325615804_Gamification_in_education_Real_benefits_or_edutainment/links/5b18996045851587f297c7e2/Gamification-in-education-Real-benefits-or-edutainment.pdf?origin=publication_detail
- Richards, J. C. (2015). *Key issues in language teaching*. Cambridge: Cambridge University Press.
- Rojas-López, A., Rincón-Flores, E. G., Mena, J., García-Peñalvo, F. J., & Ramírez-Montoya, M. S. (2019). Engagement in the course of programming in higher education through the use of gamification. *Universal Access in the Information Society*, 18(3), 583-597. <https://doi.org/10.1007/s10209-019-00680-z>
- Sifakis, N. (2009). Challenges in teaching ELF in the periphery: The Greek context. *ELT Journal*, 63(3), 230-237. <https://doi.org/10.1093/elt/ccn057>
- Thuy, N. T. T., & Hung, L. N. Q. (2021). Teachers' perceptions of using gamification apps in teaching speaking skill to EFL young learners. *International Journal of Science and Management Studies*, 4(5), 81-97.
- Tilfarlioglu, F. Y., & Anwer, J. K. (2017). Integration of lean method in English language teaching and learning: A new perspective. *Journal of Education and Training Studies*, 5(9), 230-237. <https://doi.org/10.11114/jets.v5i9.2625>
- Tsiplakides, I. (2018). Shadow education and social class inequalities in secondary education in Greece: The case of teaching English as a foreign language. *International Journal of Sociology of Education*, 7(1), 71-93. <https://doi.org/10.17583/rise.2018.2987>
- Vlachou, I. (2020). *The use of the Greek language (L1) in the EFL classroom: Teachers' perceptions*. MA TESOL Dissertation, School of English Language and Literature Aristotle University.
- Yacobson, E., Toda, A., Cristea, A. I., & Alexandron, G. (2021). *Encouraging teacher-sourcing of social recommendations through participatory gamification design*. In: Cristea, A.I., Troussas, C. (eds) *Intelligent Tutoring Systems. ITS 2021. Lecture Notes in Computer Science* (Vol. 12677). Cham: Springer.
- Yavuz, F., Ozdemir, E., & Celik, O. (2020). The effect of online gamification on EFL learners' writing anxiety levels: A process-based approach. *World Journal on Educational Technology: Current Issues*, 12(2), 62-70. <https://doi.org/10.18844/wjet.v12i2.4600>
- Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology*, 13, 1030790. <https://doi.org/10.3389/fpsyg.2022.1030790>

Views and opinions expressed in this article are the views and opinions of the author(s), International Journal of Education and Practice shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.