

The Effect of Online-based Gamification on the Speaking Accuracy and Fluency of Iranian Pre-intermediate EFL Learners

Samane Yaghoubi¹, Sara Kazemi*²

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Abstract

The need to use effective new strategies and instruments for the sake of reinforcing the EFL learners' speaking fluency and accuracy is the main goal of the language learners and teachers. Hence, the present research aimed to discover the effect of online-based gamification on Iranian pre-intermediate EFL learners' speaking accuracy and speaking fluency by using a quasi-experimental design. Forty Iranian pre-intermediate EFL learners from Gooyesh English Language Institute in Mashhad were selected through convenience sampling as the target participants of the study. At the outset of the study, a researcher-made pre-test of speaking fluency and accuracy was administered to the 40 participants of the study. Then, online-based games such as *What Happens Next Game*, *Picture that Story*, *Online ESL Jigsaw Activity*, *Show and Tell Game*, and *ESL A- B gap Fill Game* were used to expand the speaking fluency and accuracy of the experimental group's learners while traditional methods were utilized to teach speaking fluency and accuracy to the participants of the control group. Finally, a researcher-made speaking post-test was administered to the participants of both groups. Descriptive statistics and independent samples t-tests were calculated to answer the research questions. The findings displayed that online-based games significantly improved Iranian pre-intermediate EFL learners' speaking accuracy and fluency. However, there was no significant difference between the speaking accuracy and fluency of the participants of the experimental group after using the online-based gamification. Based on the findings of the study, gaming can be considered the most appropriate instrument in the process of learning speaking skills such as speaking fluency and accuracy.

Keywords: Accuracy; Fluency; Online-Based Gamification; Online Learning; Speaking Skills

¹ English Department, Tabaran Institute of Higher Education, Mashhad, Iran.
E-Mail: samaneyaghoubi7879@gmail.com

² English Department, Tabaran Institute of Higher Education, Mashhad, Iran.
E-Mail: kazemisara59@gmail.com

1. Introduction

Gamification, with the potential for online education, has recently been suggested as the most successful strategy to engage users. Gamification is a term that refers to the use of game elements in some contexts other than games to increase the users' activity. Following the success of gamification in commerce and industry, it has been successfully applied in educational institutions in the last decade (Deterding et al., 2011). Gamification can help with student engagement, accomplishment, and anxiety. Learning concerns and the usage of gamification are connected because gamification encourages enjoyment and entertainment in the course of learning (Deterding et al., 2011). Gamification is linked to flow theory, and anxiety is one critical component of this flow theory which has a significant impact on the path of play known as learning (Kim et al., 2018). Gamification is now being developed and used as a teaching medium. Gamification is a game-thinking technique that draws attention, stimulates action, enhances learning, and solves difficulties while gaining knowledge (Rabah & Cassidy, 2018).

Gamification augments text with illustrations (Alomari et al., 2019). Gamification emphasizes both the process and the outcome. Gamification is seen as an influencer that boosts student motivation and enhances English success via learning by doing (Rini et al., 2019). Furthermore, online games are those that are played through a computer network, most commonly the Internet. Online games can range from simple text-based games to those with intricate visuals and virtual worlds populated by several players at the same time (Kim et al., 2018). As a result, the current study used gamification as a medium to increase students' enthusiasm to speak English. According to Brown (2007), English is the most often studied foreign language. Learning English as an international language may help people have better education, employment, relationships, problem-solving skills, and even better daily activities which emphasizes the significance of studying and teaching English. Listening and reading (called receptive skills) and speaking and writing (called productive skills) are the four basic abilities of language. Speaking, according to Leong and Ahmadi (2017), is one of the talents that has been neglected in certain schools and colleges owing to factors such as the use of ineffective teaching techniques or an overemphasis on grammar.

However, as Harmer (2007) puts it, "success is measured in terms of the ability to carry out a conversation in the (target) language" (p. 39). Furthermore, speaking competency focuses mostly on speaking correctness and fluency. Speaking accuracy measures how well the language generated corresponds to target language standards (Yuan & Ellis, 2003), which includes proper pronunciation, vocabulary, and syntax. Speaking fluency is defined as the capacity to create spoken words without excessive pause or hesitation (Skehan, 2008). Speaking is one of the abilities that learners who want to demonstrate their expertise in the use of language find challenging. Indeed, speaking abilities such as fluency and accuracy are seen as difficult for all language learners, particularly non-native EFL learners (Afshar & Asakereh, 2016).

To develop or improve speaking fluency and accuracy, non-native English language learners, in particular Iranian EFL learners, experience some difficulties and weaknesses (Afshar & Asakereh, 2016). It is a demanding task, requiring skill and effort and the use of available tools by language teachers to provide sufficient input to the learners, to prepare

students to use the language effectively. In a foreign language, as there may be incorrect use of new words or grammatical mistakes, EFL students are not able to speak clearly and eloquently. Because in this situation, they believe that their classmates may have fled them. They're not talking so much as they should in this traditional way of teaching. The classroom environment must therefore be designed in such a way that EFL learners are motivated and do not become weary by it (Hayati, 2008). It has been observed in several institutes' English classrooms that students are either unwilling to participate in speaking activities or make erroneous phrases while speaking (Afshar & Asakereh, 2016).

The circumstance of online education, in particular, causes individuals to be inactive in class (Hayati, 2020). According to previous studies in Iran, EFL learners encounter some problems with linguistic variables such as grammar, vocabulary, pronunciation, and intonation; psycholinguistic variables like anxiety, self-confidence, and shyness, and sociolinguistics variables such as culture, identity, or sense of agency and these problems may greatly affect their speaking fluency and accuracy (Hayati, 2020; Afshar & Asakereh, 2016). The inclusion of games is thus one option to overcome the limitations and create possibilities for pupils to be taught language in both online and offline sessions (Klimova & Kacet, 2017). Face-to-face education is being substituted with online or distance education in the age of the COVID-19 epidemic. The rapid progress of technology in the twenty-first century, as well as the scenario generated by COVID-19, have had a considerable impact on the area of education, and technology has grown into an integral element of the educational system (Sari et al., 2020). The online class scenario, as well as the platforms utilized to organize the sessions, contributed to the complicated nature of teaching and developing speaking skills. Furthermore, research is scarce on the application of games in public speaking lessons (Hayati, 2020).

Due to the novelty of online instruction, previous research has not thoroughly studied the many strategies that may be employed in EFL online classrooms, particularly those linked to oral abilities. Accordingly, this research seeks to improve learners' speaking fluency and accuracy using gaming techniques and enhancing their participation in speaking classes. Due to the problems mentioned above and to help EFL learners cope with speaking fluency and accuracy problems, the present study was done to investigate the effect of using online-based gamification on Iranian pre-intermediate EFL learners' speaking accuracy and fluency.

Therefore, limited studies have been carried out in the context of EFL learning at Iranian educational institutions regarding the impacts of online gamification on spoken word accuracy and ability to speak. So, the first goal of the study was to assess the effect of using online-based gamification on the speaking accuracy of Iranian pre-intermediate EFL learners. The second goal of the study was to assess the effect of using online-based gamification on the speaking fluency of Iranian pre-intermediate EFL learners. The third goal was to assess any significant difference between the effect of using online-based gamification on speaking accuracy and fluency of Iranian pre-intermediate EFL learners. The research questions of this study were:

Q1. Does using online-based gamification have any significant effect on the speaking accuracy of Iranian pre-intermediate EFL learners?

Q2. Does using online-based gamification have any significant effect on the speaking fluency of Iranian pre-intermediate EFL learners?

Q3. Is there any significant difference between the speaking fluency and accuracy of Iranian pre-intermediate EFL learners after using online-based gamification?

2. Review of Literature

2.1. Speaking Skills

Speaking is one of the four fundamental language skills that EFL learners need to master if they are to be able to communicate successfully in different situations. According to experts, because speaking is the primary mode of human communication, the ability to speak in a language is equivalent to the ability to speak in a language that has been taught to them, (Lazarton, 2001). But the ability to speak has proven difficult for students of English as a Second Language, as some experts (Brown, 2007 & Lazarton, 2001), argue. For example, Brown (2007), argued that all aspects of speech contributed to the difficulty in speaking, had been colloquial language, reduced forms, performance coefficients, redundancy clusters, delivery rates, stress levels, rhythm, and intonation. Lazarton (2001) also believes that spoken English is difficult since it is almost always accomplished through interaction with at least one interlocutor. There are therefore factors that need to be observed and understood by the other speakers, thinking about one else's contribution, making a contribution or monitoring its effects, etc. In addition, learners need to develop connected speech, have interaction skills, speak in different contexts, balance accuracy with fluency, and talk about unfamiliar topics based on their knowledge (Lindsay & Knight, 2006), so that they can handle oral communication. According to Al Hosni (2014), even if an EFL student does not know the language, he or she may encounter numerous problems in developing his or her speech skills. The main reason for these difficulties is that they are not exposed directly to the target language (Shumin, 1997). In addition, Aleksandrzak (2011) finds that there is an insufficient range of speaking styles and opportunities in EFL classrooms compared to a multitude of varieties and genres in real-life situations. In Hojati and Afghari (2013) it is argued that speaking ability can be influenced by a range of language and nonlinguistic factors, in particular grammar, words, pragmatical variables, emotions, and so on, which together are detrimental to speech skills. To cope effectively with meaningful messages, EFL learners must not merely learn enough vocabulary and grammar knowledge but also pay close attention to both fluency and accuracy in the task that they are asked to carry out (Hinkel, 2006).

2.1.1. Speaking Accuracy and Fluency. The teaching of speaking skills has had significant changes since the 1950s, transitioning from a traditional teacher-centered approach (e.g., the Audio-Lingual Method) to a student-centered method (e.g., Communicative Language Learning) (Brown, 2007). There are two distinct teaching methods for speaking as part of that concept, both relating to the method of instruction (Brown, 2007). First, it is an accuracy-oriented approach that accepts the fact that linguistic errors do not have to be overlooked because they can constitute fossil fuel depletion. To prevent fossilization, errors must be corrected immediately. This approach focuses on the repetition of newly introduced forms and grammatical structures in speaking (Harmer, 2007). The second approach known as fluency-oriented emphasizes fluency and considers grammatical or pronunciation errors as

insignificant ones, mostly in the early stages. According to the fluency-oriented approach, corrections can hinder a learner's ability to speak.

2.1.1.1. Speaking Fluency. Fluency means a flow in which words join together when speaking fast enough (Harmer, 2007). It's a trait of the speaker. According to Brown (2007), a person is a fluent speaker when he is capable of using the language structure accurately" (p. 31). Mahfouz (2011) relates fluency to the creative and inventive use of the language. In the same way, Hinkel (2006) connects it to the natural use of language. It includes the features that give speech its natural and normal characteristics, such as native use of pause, rhythm, intonations, body language, stress, rate of conversation, interruptions, and interjections. This approach is based on nature, which looks at errors as harmless but potentially dangerous and that are signs of the development of a language.

2.1.1.2. Speaking Accuracy. Accuracy is defined as what it is clear and grammatically correct. Different from fluency, this is "best achieved by allowing students to focus on elements of phonology, grammar, and discourse in their spoken output" (Brown, 2007, p125). So, the need to combine accuracy and fluency in English-speaking classes and use them separately or together based on learners' needs, the levels of English, activity types, lessons' purpose, etc. would be the main correct answer to how to obtain authenticity in communication orally. Finally, it should be remembered that accuracy and consistency are not incompatible because they have a bearing on each other. Accuracy brings fluency and fluency brings further accuracy (Hinkel, 2006). Effective, real resources such as online games for EFL learners need to be used so that they can improve their linguistic ability and accuracy.

2.2. Online-based Gamification

Gamification is in demand as a way to deal with education issues raised by the COVID-19 project. This strategy uses game components like badges, points, leaderboards, virtual currency, and other game dynamics in a non-gaming situation such as business administration, marketing, health care, and education (Yeung et al., 2019). Gamification of education increases student participation and involvement while contributing to the improvement in a learner's attitude as measured by Yeung et al. (2019). Gamification can be used a lot in education and training (Park & Kim, 2021). Gamification in online learning improves the exchange of information by encouraging interactivity between learners (Park & Kim, 2021).

Furthermore, gamification is much more common and has also been employed across a variety of contexts where it applies the principles of play. Gamification reduces the stress that learners experience with learning on the Internet and boosts their (Pandey & Kulshrestha, 2021). By using game mechanics and rules, online gamified content provides learners with new learning experiences. This new learning experience can improve the motivation and attitude of learners towards participation and reduce their academic stress.

Student engagement in a gamified learning system may be regarded as a journey that includes exploration, onboarding, interaction, and an end game (Conejo, 2014). Some gamification studies (e.g., Conejo, 2014; Yeung et al., 2019) assert that game components give

users motivating affordances along the journey, helping them to develop a higher feeling of ability, independence, and connection.

Several researches (Alfulaih & Elsayed, 2018; Cheng, 2018) on the application of gamification to learners' speaking abilities have been undertaken. In their study of the impact of games on the development of Saudi female EFL students' speaking skills, Alfulaih and Elsayed (2018) proposed that using online games might inspire students and help them to become more inclined to participate in discussions which can improve their speaking skills. Cheng (2018) studied the effectiveness of board games from a psychological standpoint and searched about the relationship it has with students' oral performance and discovered that employing board games lowers students' anxiety, leads to higher performance, and develops oral abilities.

Hayati (2020) used a quantitative method to determine the efficacy of gaming tactics on students' speaking accuracy. 125 Iranian EFL learners participated in the study. He found a better improvement in students' speaking skills in classes where a digital guessing game was applied. Abadi (2022) surveyed to see if the gamification method could enhance the public-speaking anxiety and ability of student engineers at a technical institution. The purpose of this research was also to explore the association between public speaking fear and public speaking skills. The findings showed that the participants' public speaking anxiety decreased greatly as a result of using the game. The gamification approach significantly reduced anxiety and boosted the competence of the participants in this study. The study also showed that gamification was capable of increasing the confidence of students and making it easier for them to manage their anxiety. In another study, Phi Ho1 et al. (2020) investigated the effect of employing games on students' speaking abilities in the classroom. The results showed that games considerably increased the trainees' speaking abilities and their motivation in speaking fluency and accuracy. Moreover, Hadi and Atallah (2021) employed a gamification platform (Quizizz) to describe students' perceptions of their speaking fluency competency. The findings showed that the gamification platform had a great impact on the speaking fluency of Iranian pre-intermediate EFL learners. Ahmadvpour et al., (2022) investigated the effect of using gaming techniques on students' oral language abilities in EFL online classes. To do the study, 36 female high school students in Marand were selected to participate in the study, and their ages ranged from 13-14. The results of the study indicated an improvement in students' oral skills after using game-based techniques.

Method

3.1. Participants and Setting

The participants of this study were 40 Iranian pre-intermediate EFL learners (based on the delimitation of the study) who were selected out of 50 EFL learners at Gooyesh English language institute in Mashhad. The participants' age range was 16-19. Their level of English language proficiency was determined on the basis of their scores in the Oxford Quick Placement Test (OQPT). Both male (N=20, 50%) and female (N=20, 50%) pre- intermediate EFL learners participated in the current study. They were native speakers of Persian. The participants' first language was Persian and they were selected through using non- random sampling method. The participants were randomly divided into two equal groups of 20

members each; one control group and one experimental group. Furthermore, the raters were two male English language teachers who were teaching English in Ferdowsie university of Mashhad.

3.2. Instrumentation

3.2.1. *Oxford Quick Placement Test (OQPT)*. The first instrument which was used in the present study to homogenize the participants was the OQPT. It helped the researchers to have a greater understanding of what level (i.e., pre-intermediate, intermediate, upper intermediate) participants were at. This test includes 60 multiple-choice items measuring grammatical knowledge, vocabulary knowledge and reading comprehension ability of the students with 30 questions each. The maximum score is 60. According to the scoring scale of the Oxford Placement test, the learners whose band score was between 30-36 (out of 60) were considered as the pre-intermediate learners based on the scoring scale of OQPT. The reliability of the test was reported to be .78. The results showed that all of the participants of the study were at the intermediate level of language proficiency.

3.2.2. *Pre- Test and Post-test Administration*. The second and third instruments for gathering the speaking fluency and accuracy of EFL learners were a researcher-made speaking pre-test and post-test. The post-test was similar to the pre-test in form but different on topics. The difficulty level of the topics was the same in the pre and post-tests. The main features of the pre-test and post-test were:

- The test made a great deal of effort to represent a thorough vantage point of the learners' speaking fluency and accuracy, thereupon recognizing the criterion of 'situational authenticity'. This was accomplished through including a wide variety of oral exchanges in the test (semi-structured conversations, interviews, question and answer exchanges, arguments, problem-solving, information and opinion gap tasks) reflecting the characteristics of the target-use situations as much as possible. On that account, the test elicited both long and short turns and the learners got opportunities to speak in different contexts reflecting genres and functions taught in the study. This eventually means that the test tasks prompted different grammatical structures, vocabulary, discourse skills and pragmatic strategies.
- The test mirrored 'interactional' genuineness. This was realized by triggering an interactional rather than a susceptible atmosphere. The test consisted mainly of reciprocal exchanges where both the examiner and the student had to adjust messages and take each other's contributions into account.
- Questions in each task were somewhat presented according to the degree of their difficulty so that they ranged from easy to difficult (starting with yes/no questions and controlled responses and moving to more open-ended questions).

The four parts of the speaking pre-test and post-test were:

- First Part: This part was a conversation between the examiner and examinee. At this stage, the learners must talk about themselves, give some information about their past experiences and future plans. This part was in the form of an interview and lasted 3 minutes.

- The Second Part: The examiner offered a photograph (based on the American English File 2) to each participant and asked them to talk about that. The participants should speak about the photograph by comparing and contrasting the picture, describing the materials and expressing their opinions. This part was in the form of Long Turn and lasted one minute for each participant.
- The Third Part: In this part, the learners took part in a two-way conversation and they must participate in the decision-making tasks (such as making decision for selecting a good partner). The learners should exchange information and express their opinions in order to reach a decision. This part was in the form of collaborative task and lasted 3 minutes for each participant.
- The Fourth Part: The examiner asked the participants to discuss regarding the selected topic (such as sports) and used different expressions to describe the topic. This part was in the form of a discussion and lasted 4 minutes.

3.2.3. The Assessment Rubric for Speaking Tests. The next instrument employed was the speaking checklist containing scoring rubric (Harris, 2003). It was used to aid in assessing how the two raters score the participants' speech. The two raters scored the participants' speech based on five criteria namely pronunciation, accuracy, vocabulary, fluency and comprehension. For each criterion, the scores rated from 5 to 1 based on the quantifications mentioned in the checklist. The maximum score for the fluency section of the test was 20 and the maximum score for the accuracy section of the test was 20 (based on the speaking scoring scale of the Harris (2003) rubric).

3.3. Procedures

To conduct the present study, the researcher visited Gooyesh English language institute in Mashhad and gave OQPT to 50 Iranian EFL learners to determine their level of English proficiency as pre-intermediate EFL learners. Then, the researchers non-randomly selected 40 pre-intermediate EFL learners and divided them into two groups of 20 each; one control group and one experimental group. Then, both groups were pretested by administering a researcher-made speaking test to determine their homogeneity in speaking accuracy and fluency before the experiment. Then, the treatment was started.

The instruction lasted 15 sessions of 90 minutes each. The experimental group used online based gamification to improve their speaking fluency and accuracy. First of all, 15 topics of speaking from the American English 2 were chosen to teach. The participants of the experiment group utilized the online Big Blue Button platform to improve their speaking fluency and accuracy. In the experimental group, in the pre-speaking stage, the topic and vocabulary were inductively introduced to the learners through using pictures, or videos and discussion strategy. The teacher provided some warming-up tasks such as brainstorming, discussion about the topics in order to activate background knowledge of the learners. Learners were asked to deal with the tasks individually or in pairs. Some prompting questions were posed by the teacher so as to get learners involved in the pre-speaking stage. Learners were often be asked to work in pairs to discuss the guiding questions and then removed the

information gaps with the teacher's facilitation. The teacher explained the grammar rule or topic if necessary.

Then, the learners were divided into small groups to work together cooperatively. The learners used 'what happens next game', 'picture that story', 'online ESL jigsaw activity', 'show and tell game' and 'ESL A- B gap fill game' related to the topic of the lesson through using their mobile phone in a group which was made in Telegram. During this stage, the teacher used games through communicative, reading and listening to help learners get involved in each task. The learners were asked to produce the structures by real-life situations, especially their own real-life through games activities. Learners were provided wider opportunities to keep on participating in one or two of such speaking activities: 'what happens next game', 'picture that story', 'online ESL jigsaw activity', 'show and tell game' and 'ESL A- B gap fill game'. The games are described as follows:

- **What Happens Next:** In this game the teacher selected some interesting pictures and display them in odd or strange situations. Then, he revealed the pictures to learners and gave them four minutes to figure out what they think happened before the picture and what will happen after that. Then the learners could discuss in pairs or as the whole class what they thought happened and the picture awarded points for the most realistic, creative or funny comments. Furthermore, the learners could have a free talking fluency practice or they could drill down on some grammar with grammatical forms.

- **Picture That Story:** In this game, the teacher selected 10 pictures and ask the learners to state the related verbs regarding the pictures and then he examined the pictures again with the learners and ask them to tell a story including all the 10 pictures by using the verbs. Sometimes, the learners could select their own pictures and tell a story about those pictures.

- **Online ESL Jigsaw Activity:** In this game, the teacher selected an online article based on the topics of the book for the learners. Then, each student received one of the paragraphs and this was a great way to differentiate between the higher and lower level EFL learners. She gave the more detailed and complex paragraphs to higher level students and shorter fewer complex paragraphs to lower-level students. After that, she asked the learners to read their paragraph carefully and summarize the main points of the paragraph into two or three bullet points. Students did this part individually. After they had done the game, they then needed to use zoom breakout rooms to work in pairs to explain their paragraph to their partner. Students then changed partners to check their summaries. By the end everyone should have summary notes of each of the different paragraphs. Afterwards, they could follow up with some group discussion depending on what the article was about.

- **EFL A-B Gap Fill:** The teacher took two copies of an article that interested the learners and removed the keywords from the article, things like place names, dates, people's names, and other such details. She removed these words from even number paragraphs from one copy and removed from odd number paragraphs in the other copy. Then, she gave the learners some time to figure out what questions they need to ask their partner in order to fill in the blanks correctly.

During the treatment, the teacher monitored and corrected the mistakes in a supporting manner. The teacher had a facilitator role in the class. As the post-task activity, the researcher provided different tasks and activities based on the games in order to assist the learners to

expand their speaking fluency and accuracy. However, the participants of the control group used traditional methods to improve their speaking accuracy and fluency. The learners just listened to the conversation and then the teacher asked them to give a summary of the conversation.

Finally, at the end of the study, a post-test of speaking was administered to the participants of both groups to investigate the effect of using online-based gamification on the speaking accuracy and fluency of Iranian pre-intermediate EFL learners. Then, SPSS software was used to analyze the data gathered from the main instruments of the study.

3.4. Study Design

The quasi-experimental design was implemented to conduct the study since the learners were selected non- randomly. Online based gamification was the independent variable of the study and speaking accuracy, speaking fluency of the EFL learners were the dependent variables of the study. Furthermore, this study used quantitative method to answer the main research questions of the study.

3.5. Data Analysis Method

To analyze the data collected from the main instruments of the study such as placement test, pre-test and post-test, SPSS software version 26th was used. To show the inter-reliability of the scores given by the two raters to the pre- test and post- test of EFL learners, Pearson correlation was used. Shapiro-Wilk test was utilized to show the normal distribution of the data gathered from the pre-test and post-test of speaking accuracy and fluency. To answer the three research questions of the study, descriptive statistics and independent sample t- test were used.

4. Results

4.1. Results of the First Research Question

The first goal of the study was to assess the effect of using online based-gamification on the speaking accuracy of Iranian pre-intermediate EFL learners. To gather the required data, a pre-test of speaking accuracy before the treatment and a pos-test of speaking accuracy after the treatment were administered to the participants of the control and experimental groups. To analyze the data gathered form the pre-test and post-test, descriptive statistics and independent samples t-test were utilized. The maximum score for the pre-test and post-test was 20. Table 1 shows the results of the descriptive statistics for the speaking accuracy pre-test of both groups.

Table 1

Results of the Descriptive Statistics for the Speaking Accuracy Pre-Test of Both Groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest A	Control Group	20	7.75	2.57	.57
	Experimental Group	20	8.35	2.47	.55

Based on the results of Table 1, the number of participants in each group was 20. The mean of the participants of the control group was 7.75 and the mean of the participants of the experimental group was 8.35. To show any significant difference between the pre-test of both groups, independent samples t-test was used.

Based on the results of Table 2, the df was 38 and t-value was .75. Furthermore, the mean difference was .60 and the level of significance was .45. Since the level of significance was more than 0.05, it can be concluded that there was no significant difference between the speaking accuracy of the participants of both group before the treatment. Indeed, they were homogeneous in speaking accuracy before the treatment.

Table 2

Results of the Independent Samples T-test for the Speaking Accuracy Pre-Test of Both Groups

	Levene's Test for Equality of Variances		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Pretest A									
Equal variances assumed	.15	.69	-.75	38	.45	-.60	.79	-2.21	1.01
Equal variances not assumed			-.75	37.94	.45	-.60	.79	-2.21	1.01

At the end of the study, a post-test of speaking was administered to the participants of the both groups. To analyze the data gathered from the pre-test and post-test, descriptive statistics and independent samples t-test were utilized. Table 3 shows the results of the descriptive statistics for the speaking accuracy post-test of both groups.

Table 3

Results of the Descriptive Statistics for the Speaking Accuracy Post-Test of Both Groups

Group	N	Mean	Std. Deviation	Std. Error Mean
Posttest A				
Control Group	20	9.20	2.23	.50
Experimental Group	20	14.20	2.30	.51

Based on the results of Table 3, the number of participants in each group was 20. The mean of the participants of the control group was 9.20 and the mean of the participants of the experimental group was 14.20. To show any significant difference between the post-test of both groups, independent samples t-test was used.

Table 4

Results of the Independent Samples T-test for the Speaking Accuracy Post-Test of Both Groups

	Levene's Test for Equality of Variances		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
PosttestA									
Equal variances assumed	.16	.69	-6.95	38	.000	-5.00	.71	-6.45	-3.54
Equal variances not assumed			-6.95	37.96	.000	-5.00	.71	-6.45	-3.54

Based on the results of Table 4, the df was 38 and t-value was 6.95. Furthermore, the mean difference was 5.00 and the level of significance was .00. Since the level of significance was less than 0.05, it can be concluded that there was a significant difference between the speaking accuracy of the participants of both group after the treatment. Indeed, online-based gamification had a significant effect on the speaking accuracy of Iranian pre-intermediate EFL learners.

4.2. Results of the Second Research Question

The second goal of the study was to assess the effect of using online based-gamification on the speaking fluency of Iranian pre-intermediate EFL learners. To analyze the data gathered from the pre-test and post-test, descriptive statistics and independent samples t-test were utilized. The maximum score for the pre-test and post-test was 20. Table 5 shows the results of the descriptive statistics for the speaking fluency pre-test of both groups.

Table 5

Results of the Descriptive Statistics for the Speaking Fluency Pre-Test of Both Groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest F	Control Group	20	7.45	2.25	.50
	Experimental Group	20	7.15	1.84	.41

Based on the results of Table 5, the number of participants in each group was 20. The mean of the participants of the control group was 7.45 and the mean of the participants of the experimental group was 7.15. To show any significant difference between the pre-test of both groups, independent samples t-test was used.

Table 6

Results of the Independent Samples T-test for the Speaking Fluency Pre-Test of Both Groups

	Levene's Test for Equality of Variances		T-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
PretestF	Equal variances assumed	.76	.38	.46	38	.64	.30	.65	-1.01	1.61
	Equal variances not assumed			.46	36.53	.64	.30	.65	-1.02	1.62

Based on the results of Table 6, the df was 38 and t-value was .46. Furthermore, the mean difference was .30 and the level of significance was .64. Since the level of significance was more than 0.05, it can be concluded that there was no significant difference between the speaking fluency of the participants of both group before the treatment. Indeed, they were homogeneous in speaking fluency before the treatment.

At the end of the study, a post-test of speaking was administered to the participants of the both groups. To analyze the data gathered from the post-test, descriptive statistics and independent samples t-test were utilized. Table 7 shows the results of the descriptive statistics for the speaking accuracy post-test of both groups.

Table 7

Results of the Descriptive Statistics for the Speaking Fluency Post-Test of Both Groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Posttest F	Control Group	20	9.00	2.10	.47
	Experimental Group	20	13.10	1.99	.44

Based on the results of Table 7, the number of participants in each group was 20. The mean of the participants of the control group was 9.00 and the mean of the participants of the experimental group was 13.10. To show any significant difference between the post-test of both groups, independent samples t-test was used.

Table 8

Results of the Independent Samples T-test for the Speaking Fluency Post-Test of Both Groups

		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PosttestF	Equal variances assumed	.00	.98	-6.32	38	.000	-4.10	.64	-5.41	-2.78
	Equal variances not assumed			-6.32	37.90	.000	-4.10	.64	-5.41	-2.78

Based on the results of Table 8, the df was 38 and t-value was 6.32. Furthermore, the mean difference was 4.10 and the level of significance was .00. Since the level of significance was less than 0.05, it can be concluded that there was a significant difference between the speaking fluency of the participants of both group after the treatment. Indeed, online-based gamification had a significant effect on the speaking fluency of Iranian pre-intermediate EFL learners.

The third goal of the study was to assess any significant difference between the speaking fluency and accuracy of Iranian pre-intermediate EFL learners after using online-based gamification. To analyze the data gathered from the post-test of fluency and accuracy of the participants of the experimental group, descriptive statistics and independent samples t-test were utilized. Table 9 shows the results of the descriptive statistics for the speaking fluency and accuracy post-test of the experimental group.

Table 9

Results of the Descriptive Statistics for the Speaking Fluency and Accuracy Post-Test of the Experimental Group

	Group2	N	Mean	Std. Deviation	Std. Error Mean
Post-test	Fluency	20	13.10	1.99	.44
	Accuracy	20	14.20	2.30	.51

Based on the results of Table 9, the mean of the participants in the post-test of fluency was 13.10 and the mean of the participants of the experimental group in the post-test of

accuracy was 14.20. To show any significant difference between the mean score of the participants in the post-test of speaking fluency and accuracy, independent samples t-test was used. Based on the results of Table 10, the df was 38 and t-value was .1.61. Furthermore, the mean difference was 1.10 and the level of significance was .11. Since the level of significance was more than 0.05, it can be concluded that there was no significant difference between the speaking fluency and accuracy of the participants of the experimental group after the treatment.

Table 10

Results of the Independent Samples T-test for the Speaking Fluency and Accuracy Post-Test of the Experimental Group

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
posttetsfa	Equal variances assumed	1.10	.29	-1.61	38	.11	-1.10	.68	-2.48	.28
	Equal variances not assumed			-1.61	37.23	.11	-1.10	.68	-2.48	.28

5. Discussion

The purpose of this study was to determine the impact of online-based gamification on the speech accuracy and fluency of Iranian pre-intermediate EFL learners. According to the findings, adopting online-based gamification had a substantial influence on the speaking accuracy of Iranian pre-intermediate EFL learners. Furthermore, the findings revealed that employing online-based gamification had a substantial impact on the speaking fluency of Iranian pre-intermediate EFL learners. Finally, there was no significant difference in the speaking fluency and accuracy of Iranian pre-intermediate EFL learners after adopting online-based gamification.

The study's findings are consistent with the findings of Alfulaih and Elsayed (2018), who investigated the impact of using games on developing Saudi female EFL students' speaking fluency and accuracy. They found that gaming techniques motivated students and helped them become more confident to participate in conversations, resulting in improved speaking skills such as fluency and accuracy. The study's findings are consistent with the findings of Cheng (2018), who investigated the efficiency of board games from a psychological standpoint and its correlation with student oral performance, and discovered that using board games could reduce students' anxiety, leading to better performance and imp The findings are consistent with the findings of Hadi and Atallah (2021), who used a gamification platform (Quizizz) to describe students' perceptions of their speaking fluency competency. The results revealed that the gamification platform had a substantial influence on the speaking fluency of Iranian pre-intermediate EFL learners, and the students were enthusiastic about the effect of the gamification platform on their speaking fluency. The study's findings were consistent with those of Phi Ho1 et al. (2020), who evaluated the impact of employing games on students' speaking abilities in the classroom .The findings revealed that games considerably enhanced the trainees' speaking abilities and their motivation in speaking fluency and accuracy. They claimed that employing games had a substantial impact on the learners' motivation and autonomy during the process of learning a foreign language. Furthermore, the study's findings

are consistent with the findings of Hayati (2020), who used a quantitative way to determine the effectiveness of gaming tactics on students' speaking accuracy and viewpoints. The findings revealed that games had a substantial influence on EFL learners' speaking accuracy, and they had a good attitude towards the use of games in the process of developing speaking abilities. According to the study's findings, gaming may be deemed the most ideal method method for developing speaking abilities such as speaking fluency and accuracy. According to Kapp (2012), using games in online classrooms can inspire students to continue studying and participate in class while also assisting teachers in making desired changes in the students' behavior. By establishing an engaging and collaborative atmosphere, gaming may also give a chance for active learning. Furthermore, choosing appropriate online games is critical. Using gaming tactics in class has several advantages, including engaging students and assisting them with psychological issues by lowering their anxiety levels, all of which result in improved oral performance. Students participated actively in the learning processes and learnt how to speak English eloquently and properly in the classroom by playing online games. Furthermore, the students were more motivated to demonstrate their speaking abilities; games might provide them greater confidence to perform in front of the class (Hayati, 2020).

In summary, the current findings demonstrated that employing games in the speaking classroom was advantageous to students' speaking ability; it did appeal to students' interests in speaking themes through the use of cooperative activities. Games clearly play an important part in training students to speak because of the numerous benefits that students and teachers may get from them during the teaching/learning process. First, games can help students relax while learning and practicing the target language. Second, games keep learners interested, motivated, and involved all the time. Third, games improve students' ability to use the language effectively inside and outside of class. Finally, students are able to learn and play in a competitive environment and communicate effectively with their peers.

6. Conclusion

As previously stated, the primary goal of the study was to evaluate the impact of online-based gamification on the speaking accuracy and fluency of Iranian pre-intermediate EFL learners. According to the findings, online gamification had a substantial impact on the speaking accuracy and fluency of Iranian pre-intermediate EFL learners. However, after using online-based gamification, there was no significant difference in the speaking fluency and accuracy of Iranian pre-intermediate EFL learners. Based on the findings of the study, gaming can be considered as the most appropriate instrument in the process of learning speaking skills such as speaking fluency and accuracy. First, it could be considered as a combination of other methods if the right kind of gaming is selected. Second, it creates a meaningful context for learning. As Kapp (2012) stated, the utilization of games in online classrooms can encourage students to keep learning and participate in class and also help the teacher to make desirable changes in the students' behavior. Gaming can also provide an opportunity for active learning by creating an entertaining and collaborative environment. Furthermore, selecting suitable online games is of great importance. Using gaming techniques in classes has many benefits, including motivating the students and helping them with the psychological aspects by reducing their anxiety levels, which all ultimately result in a better oral performance. The overall conclusion of this study suggests that facilitators should focus more on assisting students in developing their speaking skills, such as fluency, accuracy, and interaction, by designing a syllabus that includes activities that allow learners to practice speaking in addition to improving their English through using online-based games.

It is vital to note that using innovative teaching methods and technologies like using online-based games in classes can assist students learn the English language more successfully,

particularly speaking abilities. The EFL teachers can also consider games to be activities that should be included in syllabi in order to enhance not just speaking abilities in the second language, but also other skills. Teachers should incorporate more games into their lessons to keep pupils engaged and motivated throughout the course. To avoid boredom, EFL teachers should vary the kind of games they employ on a regular basis. Before introducing the game to the class, teachers should explain the rules and instructions so that all students understand them. Indeed, because they lack sufficient understanding about technology and games and their application in the language classroom, in-service teachers should be encouraged to adopt online-based games in their foreign language lessons by providing them with in-service training. Students should be encouraged to practice their English through gamification while English is taught in a foreign language environment since they do not have any opportunity to speak the language. Furthermore, students and instructors should be aware of new educational games and how to utilize them as a tool to improve teaching and learning.

Online game learning tool research is still in its infancy, and relevant empirical research is rare. Researchers may benefit from the conceptual framework and research approach employed in this study in the future to investigate the impact of online gaming from many viewpoints. The sample for this study was drawn at random from Gooyesh English language institutes. As a result, it cannot be generalized to other circumstances. As a result, researchers can conduct studies in the future to examine the influence of online-based games on the speaking skills of high school or university students. Moreover, the training period was insufficient to validate the benefits of games on all other areas. More study should be conducted to address these concerns. Furthermore, the length of time spent playing games and the number of games used in each training block were not taken into account in this study. Only pre-intermediate EFL learners participated in the current study; other levels of language competency were ignored. More study may be conducted to evaluate the influence of online gaming on the speaking fluency and accuracy of intermediate and advanced EFL learners. Furthermore, several tests were done to acquire the necessary data. Using questionnaires and interviews, several studies may be conducted to investigate learners' perceptions on the influence of online-based games on their speaking fluency and accuracy. Finally, while gender differences were not the primary focus of this study, more research might be conducted to evaluate the influence of online-based gamification on the speaking accuracy and fluency of male and female EFL learners.

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References

- Abadi, O., Feroz, F., & Raus, M. (2022). The effects of gamification on undergraduate engineers' public speaking anxiety and competency. *Hong Kong Journal of Social Science*, 59. 126-134. DOI: <http://hkjoss.com/index.php/journal/article/viewFile/544/540>.

- Afshar, H. S., & Asakereh, A. (2016). Speaking skills problems encountered by Iranian EFL freshmen and seniors from their own and their English instructors' perspectives. *Electronic Journal of Foreign Language Teaching*, 13(1), 130-142. DOI: <https://www.researchgate.net/profile/Ahmad-Asakereh/publication/304476668>.
- Ahmadpour, F., Mohammadi, S., & Lotfi Dehgan, Z. (2022). The Effect of Using Gaming Techniques on Students' Oral Language Abilities in EFL Online Classes: An Action Research. *Journal of Research in Techno-based Language Education*, 2(2), 31-48.
- Aleksandrzak, M. (2011). Problems and challenges in teaching and learning speaking at advanced learning. *Glottodidactica*, 37, 37–48. DOI: <https://repozytorium.amu.edu.pl/items/beae2743-06a0-44fa-ba7f-37dbdc432f67>
- Alfulaih, W. (2018). The impact of using games on developing Saudi female EFL students' speaking skills. *British Journal of Humanities and Social Sciences*, 12, 125-135. DOI: [http://www.ajournal.co.uk/HSPdfs/HSvolume19\(2\)/HSVol.19%20\(2\)%20Article%203](http://www.ajournal.co.uk/HSPdfs/HSvolume19(2)/HSVol.19%20(2)%20Article%203)
- Al Hosni, S. (2014). Speaking difficulties encountered by young EFL learners. *International Journal on Studies in English Language and Literature*, 2(6), 22–30. DOI: <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=2f6da3bfa1031cf46aba76>
- Alomari, I., Al-Samarraie, H., & Yousef, R. (2019). The role of gamification techniques in promoting student learning. *Journal of Information Technology Education; Research*, 18, 395–417. <https://doi.org/10.28945/4417>, <https://doi.org/10.28945/4417>
- Brown, H. D. (2007). *Principles of Language Learning and Teaching* (5th Ed.). New York: Longman. DOI: <http://angol.uni-miskolc.hu/wp-content/media/2016/10>
- Cheng, Y. Ch. (2018). *The effect of using board games in reducing language anxiety and improving oral performance* (Master's Thesis, Department of Modern Languages the University of Mississippi, Mississippi, United States). Retrieved from <https://egrove.olemiss.edu/etd/899>.
- Conejo, F. (2014). Loyalty 3.0: How to revolutionize customer and employee engagement with big data and gamification. *Journal of Consumer Marketing*, 12, 135-145. DOI: https://library.ipmi.ac.id/index.php?p=show_detail&id=8547
- Deterding, S., Dixon, D., Khaled, R. & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environment*, 13. <https://dl.acm.org/doi/abs/10.1145/2181037.2181040>
- . Hadi, M.& Atallah, N. (2021). Gamification's effectiveness in online English teaching in the pandemic era. *Jurnal Studi Guru dan Pembelajaran*, 4, (2).282-286. DOI: <file:///C:/Users/m/Downloads/590-Article%20Text-2142-1-10-20210710>.
- Harmer, J. (2007). *The Practice of English language teaching*. Longman: London and New York.
- Harris, D. (2003). *Testing English as a second Language*. New York: MC. Graw Hill.
- Hayati, A. M. (2020). Teaching English for special purposes in Iran: Problems and suggestions. *Arts and Humanities in Higher Education*, 7(2), 149-164. <https://journals.sagepub.com/doi/abs/10.1177/1474022208088645>
- Hinkel, E. (2006). Current perspectives on teaching the four skills. *TESOL Quarterly*, 4(1), 109–131. <https://onlinelibrary.wiley.com/doi/abs/10.2307/40264513>

- Hojat, A., & Afghari, A. (2013). An investigation of speaking-associated problems from students and instructors' perspectives. *Iranian EFL Journal*, 9(4), 9–31. DOI: <https://www.researchgate.net/profile/Seyyed-Ahmad-Mousavi-2/publication/277405119>
- Kim, S., Song, K., Lockee, B. & Burton, J. (2018). *Gamification in learning and education*. Berlin, Germany: Springer. DOI: <https://games.jmir.org/2021/2/e14746>
- Klimova, B., & Kacet, J. (2017). Efficacy of computer games on language learning. *TOJET: The Turkish Online Journal of Educational Technology*, 16(4), 19-26. DOI: <https://eric.ed.gov/?id=EJ1160637>
- Kapp, K. M. (2012). *The Gamification of learning and instruction: game-based methods and strategies for training and education*. San Francisco, CA: Wiley.
- Lazarton, A. (2001). Teaching oral skills. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language*. Boston, MA: Heinle & Heinle. DOI: <https://www.academia.edu/36244291>
- Leong, L. & Ahmadi, A, B. M. (2017). Teaching English as a second language: Factors affecting learning speaking skills. *International Journal of Engineering Research & Technology (IJERT)*, 1(7), 1-6. DOI: <https://www.sid.ir/paper/349619>
- Lindsay, C., & Knight, P. (2006). *Learning and teaching English: A course for teachers*. Oxford: Oxford University press. DOI: <http://epedagogium.upol.cz/pdfs/epd/2008/02/15>
- Mahfooz, A. (2011). The effect of using audiovisual chat on developing English as a foreign language learners' fluency and productivity of authentic oral texts. *International Journal of Linguistics*, 6(3), 85-108. DOI: <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=853bd995f8b183>
- Rini, G. A. D. P., Nitiasih, P. K., Mahayanti, N. W. S., & Budiarta, L. G. R. (2019). A descriptive study of the teacher's technique on controlling the students' misbehavior in Smpn 1 Sukasada. *International Journal Of Language And Literature*, 3(2), 56-60. <https://doi.org/10.23887/Ijll.V3i2.20838>.
- Pandey, D., & Kulshetra, A. (2021). Research into the implications of e-learning on higher education. *Ilkogretim Online*, 20, (3), 120-132. DOI: <https://www.ilkogretim-online.org/index.php?fulltxt=74571&fulltxtj=218&fulltxtp=218-1618822026>
- Park, S., & Kim, F. (2021). Gamification teaching English with technology, 19(1), 83–92. DOI: <https://link.springer.com/article/10.1007/s11042-021-11149-8>
- Phi Ho1, P., Thien, M., Thi My An, N., & Hoang, N. (2020). The effects of using games on EFL students' speaking performances. *International Journal of English Linguistics*, 10 (1), 183-196. DOI: <https://ccsenet.org/journal/index.php/ijel/article/view/0/41596>
- Rabah, J., & Cassidy, R. (2018). Gamification in education: real benefits or edutainment? *Journal Of English and Education*, (June),12,120-135. <https://doi.org/10.13140/RG.2.2.28673.56162>.
- Sari, K. B. P., Nitiasih, P. K. & Budiarta, L. R. (2020). Gamification based on local stories' effect on students' learning motivation. *International Journal of Language and Literature*, 4 (2), 69- 80. DOI: <https://ejournal.undiksha.ac.id/index.php/IJLL/article/view/30291>
- Shumin, K. (1997). Developing adult EFL students' speaking abilities. In J. C. Richards & W. A. Renandya (Eds.), *Methodology in language teaching: An anthology of current practice* (pp. 204–211). Cambridge: CUP. <https://doi.org/10.1017/CBO9780511667190.028>

-
- Skehan, P. (2008). Second language acquisition research and task-based instruction. In J. Willis, & D. Willis (Eds.), *Challenge and Change in Language Teaching* (pp. 17-30). Oxford: Heinemann. DOI: <https://www.scirp.org/1776506>
- Yeung, C. L., Zhou, L., & Armatas, C. (2019, November). An overview of benchmarks regarding quality assurance for elearning in higher education. In *2019 IEEE Conference on e-Learning, e-Management & e-Services (IC3e)* (pp. 1-6). IEEE. 10.1109/IC3e47558.2019.8971808.
- Yuan, F., & Ellis, R. (2003). The effects of pre-task planning and on-line planning on fluency, complexity and accuracy in L2 monologic oral production. *Applied Linguistics*, 24(1), 1-27. <http://dx.doi.org/10.1093/applin/24.1.1>.

