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Gamified VS Non-gamified Speaking Assessment for EFL in Higher Education

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ABSTRACT

Students of the eighth basic level must have an A1 level. After developing their speaking skills, a speaking assessment needs to be given to students in the class to know how good their speaking skills are. This research aimed to compare the gamified and non-gamified speaking assessments to the speaking scores of students. This research used an experimental design with a quantitative approach. The participants of this research were the students of STKIP PGRI Trenggalek English Language Learning Students chosen by purposive sampling technique. The instrument of this research used pre and post-test to determine the increase and difference between the two groups. The data collected were analyzed using SPSS software. The results showed that when the students' speaking skill was assessed utilizing gamified speaking assessment, it was easier for students to increase their score. This research result could provide a contribution to the basic literature on utilizing gamified speaking assessments to motivate students. Thus, they can enhance their speaking skill, leading to an increased speaking score.

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1. INTRODUCTION

Since speaking skills are seen to be the hardest competence to enhance in a culture where others do not speak it, EFL students encounter one of the most challenging components of the English learning process (Al-khresheh, 2020). This theory is based on the idea that speaking involves multiple skills, including pronunciation, grammar, vocabulary, and communication strategies, all of which must be practiced and integrated over time (Hinkel, 2017). Unlike reading and writing, which allow for editing and revision, speaking requires quick thinking and on-the-spot communication, making it more challenging for many learners (Bouzar, 2019). Therefore, learning to speak gives its user the ability to think harder to produce appropriate words.

Furthermore, language learners often struggle with anxiety, fear of making mistakes, and lack of confidence, which can further hinder their speaking abilities (Bashori, van Hout, Strik, & Cucchiarini, 2022). To overcome these challenges and develop fluency, learners must commit to regular and consistent practice, including exposure to authentic materials, conversation practice with native speakers, and self-reflection on their language learning goals and progress.

Other factors that prevent English language learners from developing their spoken production include the wrong application of grammar, which prevents people in creating the appropriate speech patterns, scarcity of words, fear of making mistakes and lack of motivation (Wahyuningsih & Afandi, 2020). Grammar is a fundamental component of language, and errors in grammar can lead to miscommunication, confusion, and even embarrassment (Chametzky, 2019). For many learners, this fear of making mistakes can lead to anxiety and reluctance to speak, particularly in front of native speakers or in formal settings. Therefore, they often choose to be silent rather than talk in English.

According to the Common European Framework of Reference (2020), students at level A1 must compose simple, mostly isolated sentences, describe simple elements, and utilize basic words and phrases provided they may prepare in advance. Students at the eighth basic level must have an A1 level. Achieving an A1 level in English is essential for learners to be able to communicate basic information and engage in simple conversations in English. It states that basic users need to be able to make basic sentences, engage with support, and ask and answer basic questions during a basic dialogue (Kashinathan & Aziz, 2021). They also need to be able to recognize some words and be able to use simple phrases to represent where they live.

After developing their skill in speaking skill, a speaking assessment are given to students in the class to know how good their speaking skill is. However, some instructors sometimes give speaking assessments that are not appropriate for students' level. Thus, they might gain lower scores. This is in line with the opinion of Khasawneh (2022), who stated that different types of assessments conducted by teachers will develop different scores gained by students. Therefore, students need to give an appropriate assessment.

One of the speaking assessments that can be utilized is gamification. According to Yanes & Bououd (2019), game-based assessments and serious games have recently gained more popularity in the field of English learning. According to Gaalen et al. (2021), gamification refers to incorporating game elements into non-game contexts, such as the workplace or education, and using game-like assessments that can be classified based on the level of gaming features they incorporate. These assessments can range from gamified tests like multimedia situational judgment tests (SJTs) that draw on different game genres such as Candy Crush or Flight Simulator. Therefore, with the use of gamified assessment to measure speaking skills, can also increase students' scores.

Some research that was conducted regarding the use of gamification for speaking was conducted by the previous researchers. First, León et al. (2020) stated that gamifying formative assessment can increase the speaking accuracy and motivations of EFL learners that are at the A2 level of English at CENID language centre of the Technical University of Babahoyo, Los Rios. Second, the research conducted by Ahmed (2021) stated that gamification programs can enhance the speaking skills and motivation of EFL secondary-stage students. Other than that, Yassin & Abugohar (2022) also researched the use of gamified mobile-assisted formative assessment to enhance the listening and speaking skills of undergraduate learners.

Based on the previous research, it indicates that the only conducted research regarding the speaking assessment in speaking accuracy and motivations in higher education students. However, from the research conducted regarding gamification utilization, no research conducts research on the employing of gamification specifically for speaking assessment for each aspect of speaking scoring. Therefore, this research goal is to decide whether the use of gamified speaking assessment would gain higher scores for students compared with the scores gained by students assessed by non-gamified speaking assessment. The difference of this research and the previous study mentioned is that this research will include all assessment aspects such as pronunciation and intonation, grammar range and accuracy, vocabulary and lexical sources in using gamified and non-gamified speaking assessment.

2. METHODS

2.1. Research Design

This study was classified as experimental research. Researchers can evaluate the impact of experimental treatments due to the design of experimental research (Rogers & Revesz, 2019). It is possible to do experimental research in a lab, a classroom, or a field. In this study, students were used as the population for the experimental research that was conducted in the classroom. The researcher selected the design to examine the reliability of any conclusions that could be drawn from the data. This study used quasi-experimental research as its method. The nature of the quasi-experimental study permitted the researcher to manipulate the circumstances in the activity of teaching and learning. The researcher administered treatments to the group that was a part of the experimental group and then examined changes in the student's academic performance in comparison to the other group that was a part of the control group. The control group also received instruction without applying the treatment.

2.2. Research Subject

The students of STKIP PGRI Trenggalek English Language Learning Students were the subject of this study. Therefore, the fourth semester English Learning Teaching students of STKIP PGRI Trenggalek were decided to be the population. This research used two groups pre-post-test because quasi-experimental research needs a minimum of two groups to compare the findings at the study's conclusion. Purposive sampling refers to the method of sampling that was employed in this study. Purposive sampling is a kind of non-probability sampling where researchers utilize their judgment to choose people of the population to engage in research. The terms judgemental, selective, or subjective sampling were also used to describe it. Because the total offering class for the fourth semester of English Language Learning consists of two classes, all populations in this research are considered as the sample. Therefore, the first offering became the experimental class assessed using gamified assessment technique while the second offering became the control class assessed with the non-gamified assessment technique. The following is the information regarding the total number of students in fourth semester English Learning Teaching students of STKIP PGRI Trenggalek.

Table 1. Students' Total Number

No	Class	Student Number
1	Offering A	27
2	Offering B	27

2.3. Research Procedure

In this research, both classes are given different types of speaking assessments for the pre-test and post-test of each aspect delivered. The total meeting for conducting research is four, with different aspects taught.

In the first meeting, the students were invited to open the class and the teacher explained the research objective. After that, students were given the pre-test and given a speaking learning which aims to improve their pronunciation and intonation from reading the text given by teachers. Different from the control class, the experimental class was learning using text-to-speech to engage gamification assessment.

In the second meeting, the students were invited to open the class and the teacher explained the research objective. After that, students were given speaking learning which aimed to improve their grammar range and accuracy from dialoguing the scripts they made. Different from control class, the experimental class was learning using telecom message to engage gamification assessment.

In the third meeting, the students were invited to open the class and the teacher explained the research objective. After that, students were given speaking learning which aimed to improve their vocabulary and lexical sources by answering questions from teachers orally. Different from the control class, the experimental class was learning using quizziz to engage gamification assessment.

In the fourth meeting, the students were invited to open the class and the teacher explained the research objective. After that, students were given speaking learning which aims to improve their fluency from giving speech. Different from control class, the experimental class was learning using story stitcher to engage gamification assessment. Then, they were assessed on each aspect or post-test.

The table below shows the set of assessment techniques that researchers administered in each meeting to address the target problem of each material of speaking subject, according to Gapasin & Bautista (2022).

Table 2. Speaking Assessment Technique

No	Speaking Assessment Aspect	Assessment Technique	Mechanism
1	Pronunciation and Intonation	**Experimental group:** Text-to-Speech	Students will arrange the jumbled series of events with their group in chronological order. After which, each member will read the arranged events according to what strip of paper they are holding
		Control Class: Reading text	Researchers will give students some texts and give students a chance to choose the text. Then, they will read the text using appropriate pronunciation and intonation.
2	Vocabulary or Lexical Resource	**Experimental Class:** Telecom Message	Each group member will fall in line vertically facing the blackboard, and the member near the blackboard will write the synonym or antonym of a word depending on what is being asked. The duty of the members in the middle will pass the question to the front. Lastly, the responsibility of the member at the back will read the question silently and pass it to the member in front of them. After revealing the answer, exchanging of roles may happen.
		Control Class: Dialogue	With their partner, students will make a dialogue regarding a situation researchers create and present it in front of the class.
3	Grammar Range and Accuracy	**Experimental Class:** Quizizz	These games are usually administered in their quiz, where they will read the grammatically correct sentences. These will help them and allow them to observe the proper usage of the words in a sentence, and they will not depend on their simple sentences. They are self-control paced, where they will see leader-boards on the monitor to monitor their rank and score compared to the other players (classmates). These games are not only offered individually but also administered by pairs and groups to allow them to speak and collaborate. The top three from these games are only recognized as winners.

No	Speaking Assessment Aspect	Assessment Technique	Mechanism
		Control Class: Answering questions	Researchers will give students tests and students will fill in the blank on the test answer sheet.
4	Fluency	**Experimental Research:** Story Stitcher	The students, together with the teacher, will form a circle, and to begin, the teacher will narrate a story and stop. The last student who is holding the ball will continue the story. The ball will continue to be passed until the music stops.
		Control Class: Giving speech	Students are asked to make their speech and present it in front of the class.

2.4. Data Collection Technique

A pre and post-test was used in this study to gather data, and it was given to both the control and experimental groups. The test consisted of a series of questions or exercises together with additional instruments used to assess knowledge of an individual or group, skills, abilities, or talents. The steps of setting up the same teaching strategies in experimental and control group classrooms, setting up the research tools and running test instruments using the appropriate assessment technique, and then managing post-test to both groups (control and experimental) to discover initial skills between the two groups, whose speaking assessment scores were equivalent. The test provided is based on Gapasin & Bautista (2022) and included 5 questions for each aspect. The indicator score is based on their scales of pronunciation and intonation, grammar range and accuracy, vocabulary and lexical sources, and fluency from Katherine et al. (2020).

2.5. Data Analysis Technique

After gathering the necessary data, the data was analyzed, and conclusions were drawn once the entire research study procedure had been completed (pre-test, post-test). Fluency, grammar, pronunciation, intonation, and vocabulary are the speaking skills that were evaluated. The data was analyzed quantitatively using SPSS software. The analysis method used includes two aspects which are for instrument test and the data analysis. This intrument test is aimed at determining whether the instruments are valid and reliable; thus, the tests measured were validity and reliability test. In addition to conclude the difference between gamified and non-gamified speaking assessment, the data was measured using (1) descriptive analysis to understand the whole data collected, (2) normality test to determine whether the data was normally distributed to determine the hypothesis test method, (3) hypothesis test to conclude whether the hypothesis is accepted.

2.6. Research Hypothesis

According to Ahmed (2021), the use of gamification in higher education has increased considerably over the past decades and it has the potential to improve students' performance and interests in academic domains. In addition, Mahbub et al. (2020) resulted from semi-structured interview carried out with EFL instructor and the samples of the students revealed that Duolingo facilitated him/her in managing the classwork and assessment. Moreover, Leon et al. (2020) stated that applying a gamified formative assessment process through Factile improved learners' speaking accuracy and it proved that the implementation of the innovation engaged learners and increase their motivation to use L2 in speaking and enhancing the process of speaking assessment. Therefore, the hypothesis formulated in this research is "H1= The use of gamification enhances the students' score of

speaking assessment rather than non-gamified speaking assessment." Based on the hypothesis formulated, the research framework of this research is in the following.

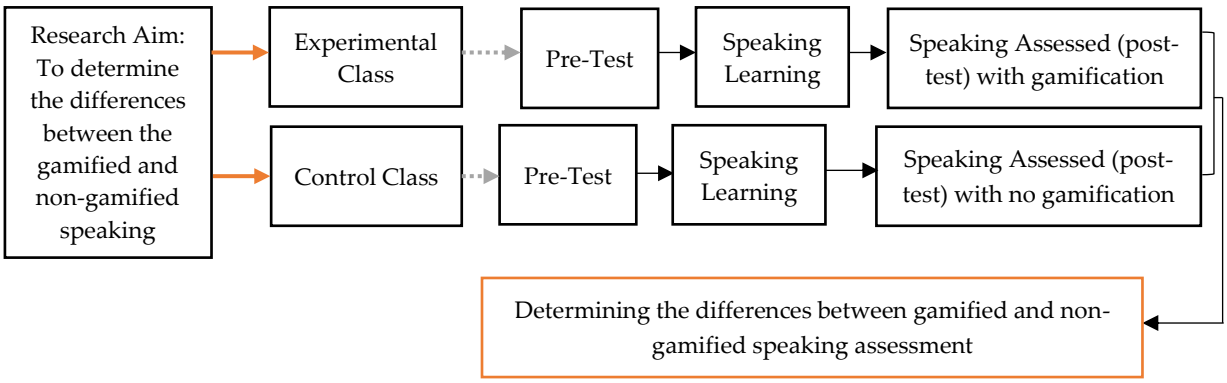

Figure 1. Research Framework

3. FINDINGS AND DISCUSSION

3.1. Findings

This research was analyzed quantitatively using SPSS software. The analysis method used includes two aspects which are for instrument test and the data analysis. This intrument tests were validity and reliability test. In addition to conclude the different between gamified and non-gamified speaking assessment, the data was measured using (1) descriptive analysis, (2) normality test, and (3) hypothesis test. The results of each test analysis is provided in the following.

3.1.1 Instrument Test

a. Validity Test

According to Shohamy (2020), the validity test is perhaps the most significant test of the design of any measurement tool used in academic study. It can be concluded that the term "validity" refers to a test's ability to accurately assess the variables it is designed to. If the researchers are not measuring what the researchers are trying to measure, no matter how excellent our research design and statistical analysis, the results will be useless. The validity test was identified by identifying the r-count from each variable. If the r-count is more than r-table, the instruments are considered valid. The results are identified as valid if these are more than r-table.

Table 3. Validity Test Results

		PR	VOC	GR	FL	SCORE_TOTAL
PR	Pearson Correlation	1	.686**	.652**	.592**	.866**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	34	34	34	34	34
VOC	Pearson Correlation	.686**	1	.549**	.565**	.812**
	Sig. (2-tailed)	.000		.001	.000	.000
	N	34	34	34	34	34
GR	Pearson Correlation	.652**	.549**	1	.755**	.866**
	Sig. (2-tailed)	.000	.001		.000	.000
	N	34	34	34	34	34
FL	Pearson Correlation	.592**	.565**	.755**	1	.860**
	Sig. (2-tailed)	.000	.000	.000		.000

	N	34	34	34	34	34
SCORE_TOTAL	Pearson Correlation	.866**	.812**	.866**	.860**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	34	34	34	34	34

**. Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows that the overall score of validity test results is 0.886, 0.812, 0.866, and 0.860. Because the r-table identified is 0.2221, the conclusion is all instrument tests are valid.

b. Reliability Test

The reliability test refers to the accuracy with which the language skill assessment result reflects the examinees' real level of proficiency. It implies that the instrument's dependability is necessary to ensure its consistency when employed at other moments. The reability test in this study is identified by knowing the score of cronbach's alpha. If the cronbach's alpha score remains more than r-table, the instruments are considered reliable. The results are identified as reliable if these are more than r-table (Shin, 2022).

Table 4. Reliability Test Results

Cronbach's Alpha	N of Items
.872	4

Table 2 shows the overall score of the reliability test result is 0.872. The r-table is 0.2221, it concluded that every instrument test is reliable.

3.1.2 Test Analysis

After the instruments were tested, the researchers then gave the instruments to the students. It purposed to measure the differences in class with gamified speaking assessment and non-gamified speaking assessment of the research subject. The analysis of the results was explained in the following.

a. Descriptive Statistics

Score data gained from the test given to both the experimental and control group were selected and collected to the provided score table to determine the increase and difference between the two groups. After that, the data were determined the minimum score and maximum score. The scores of each student in pre and post-test gained are written in the following diagram.

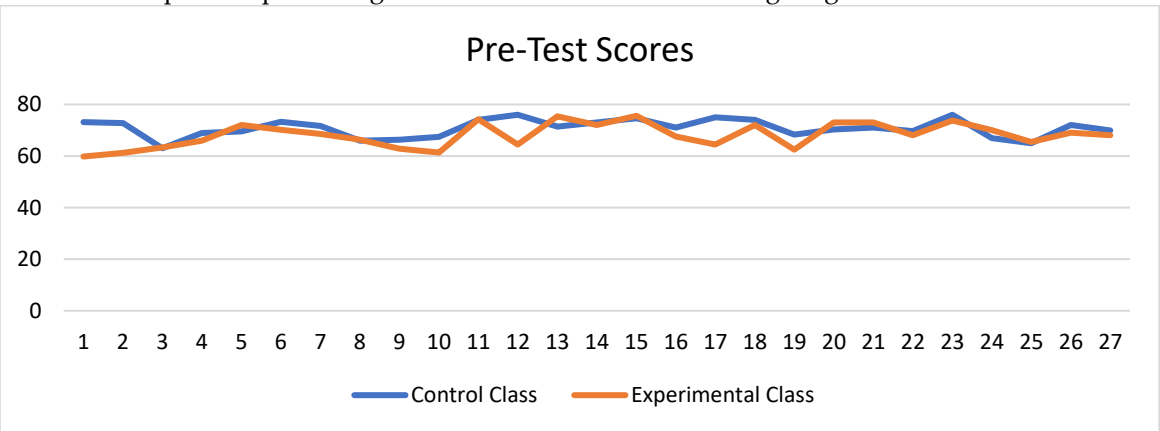

Figure 2. Pre-Test Score of Control and Experimental Class

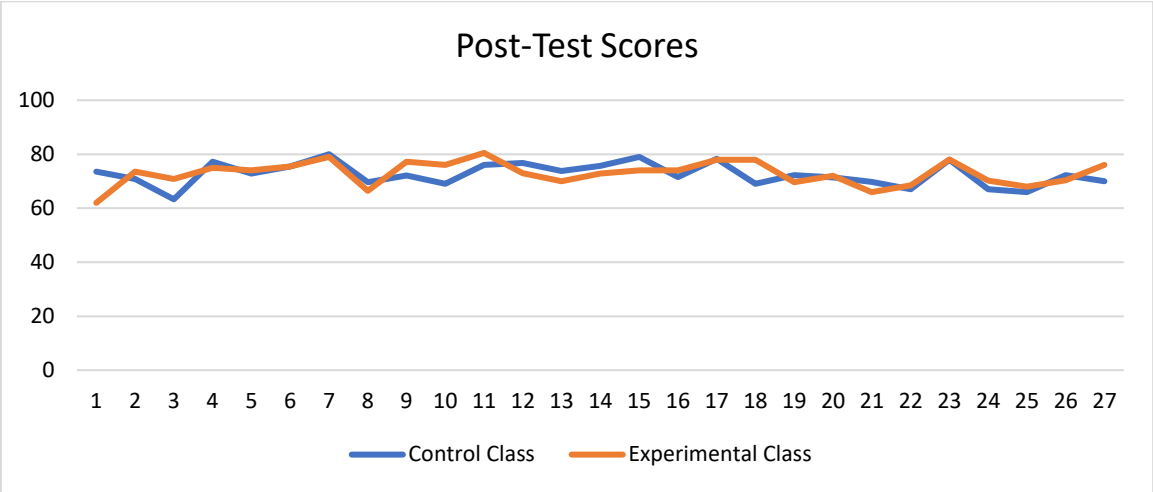

Figure 3. Post-Test Scores of Control and Experimental Class

To understand whole data, the score data's mean and standard deviation were calculated in the following.

Table 5. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PRE_C	34	63.00	76.00	70.9118	3.75191
POST_C	34	63.30	80.00	71.3412	3.84244
PRE_EX	34	59.80	74.30	66.9559	3.85567
POST_EX	34	62.00	80.50	72.6971	4.24617
Valid N (listwise)	34				

Table 3 shows that the minimum pre-test score that the control class gained is 63 and the highest score is 76; while the minimum pre-test score of the experimental class is 59.80 and the highest score is 74.30. However, in the post-test of the control class the minimum score students get is 63.30 and the maximum is 80; while in the post-test of the experimental class, the lowest score is 62 while the highest score is 80.50.

In diagram, the differences between the pre-test and post-test scores between control and experimental class remain in the following.

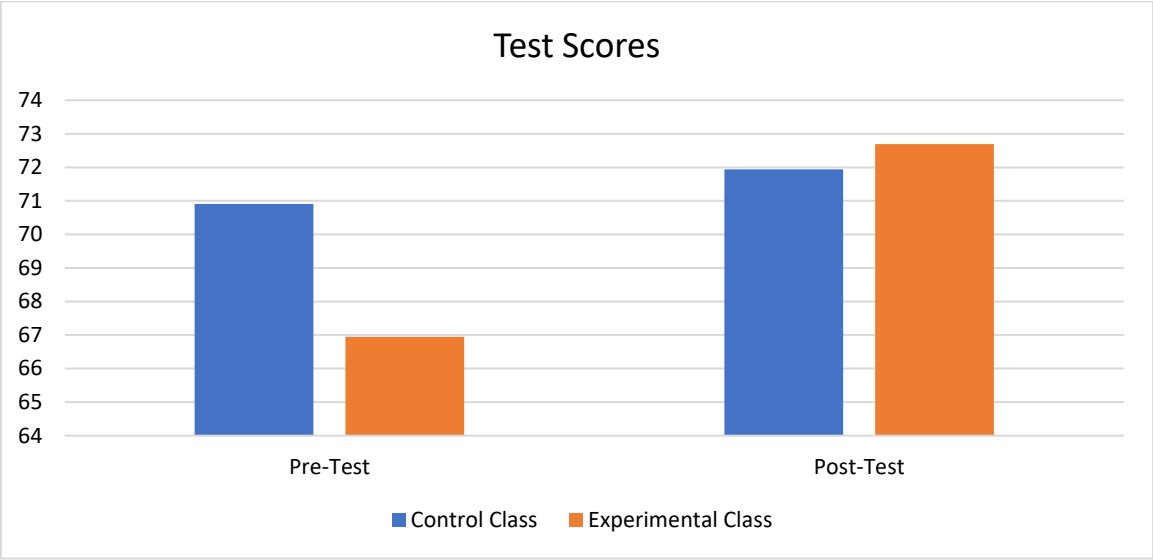

Figure 4. Difference between Test Score Results

From the results of differences above, it can be identified that the test score of pre-test seemed that the data mean from experimental class was lower than the control class. However, it seems that after the treatment was given to the experimental research, the scores increased. This is seen from the pos-test results of mean in experimental score was higher that the post-test score of control class.

b. Normality Test

A normality test examines if the sample data came from a population that was normally distributed. It is typically done to see if a research project's data set has a normal distribution. If the significance level is bigger than 0.05, the data are considered to be normally distributed.

Table 6. Normality Test Results

		Kolmogorov-Smirnov[a]		
	Class	Statistic	Df	Sig.
Result	Pretest Control	.144	34	.070
	Posttest Control	.114	34	.200*
	Pretest Experiment	.061	34	.200*
	Posttest Experiment	.085	34	.200*

Table 4 shows that the significance level identified in this research is 0.70 for the control class pre-test and 0.200 for the post-test. However, the significance level identified in this research is 0.200 for each test for the experimental class. It is concluded that all data is distributed normally.

3.1.3 Hypothesis Test

An alternative test of two paired samples is the paired sample t-test. Despite being the same subject, paired samples receive various treatments. To examine the research model before and after, a distinct test model is used. The fundamental premise of this test is that each pair of observations or studies must be conducted under identical circumstances. A mean difference is required to be normally distributed.

The basis for deciding to accept or reject Ha in this test is as follows.

1. If the significant value is more than 0.05, either Ho or Ha is accepted (the performance difference is not significant).
2. If the significant value < 0.05, Ho is rejected or Ha is accepted (significant performance difference).

Table 7. Hypothesis Test Results

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRE_C - POST_C	-.42941	1.29299	.22175	-.88056	.02174	-1.936	33	.061
Pair 2	PRE_EX - POST_EX	-5.74118	3.69645	.63394	-7.03093	-4.45143	-9.056	33	.000

Table 7 shows that the significance value of the first pair is 0.061 (>0.05) which is concluded that a significant difference is not available in the control class that implemented a non-gamified speaking assessment during the treatment. However, in the experimental class, the dissimilarity between the pre and post-test has a significant value of 0.000 (<0.05). It is shown that the gamified speaking assessment improved the English-speaking skill of students.

3.2. *Discussion*

This study addresses the research question of whether the implementation of gamification strategies might lead to improved results in students' speaking assessments. The research challenge was developed and the hypothesis was derived from the preceding data presented. The research posits the hypothesis that the utilisation of gamification leads to an improvement in students' scores on speaking assessments compared to non-gamified speaking assessments.

From the data analysis conducted in this research is that the research results comparing gamified and non-gamified speaking assessments for EFL learners in higher education found that the gamified speaking assessment significantly enhances students' scores compared to the traditional, non-gamified speaking assessment. The results showed that students in the gamified assessment group had significantly higher scores compared to those in the non-gamified group. The gamified assessment was found to be more engaging, motivating, and effective in improving students' speaking proficiency.

The gamified assessment also provided immediate feedback, allowing learners to identify areas for improvement and adjust their performance accordingly. The results of this research are in line with research conducted by Hassan & Yusof (2019), who stated that gamified assessment can enhance students' motivation and engagement in database design course. In addition, Zainuddin et al., (2020) also stated that the use of gamified formative assessment can increase the higher education students' learning and engagement.

Due to its capacity to grab people's attention, engage them in a desired activity, and even affect their behavior, gamification is a potent tool. The concept of gamification appears to be taking off in a variety of industries, including business and education. The phrase cites "the phenomenon of creating gameful experiences" or, more specifically, "the usage of game mechanics in non-gaming environments." This gamification tool can be implemented in different types of situations and conditions in teaching and learning activities, such as in speaking assessment activities based on the results of this research.

The implementation of gamification in educational settings is anticipated to have a significant impact on students' learning practises, as it has been observed to affect motivation levels, alleviate anxiety, and discourage students from engaging in verbal communication and active participation during speaking exercises. The utilisation of gamification is essential in facilitating the development of various fundamental aspects of language acquisition, such as vocabulary, grammar, pronunciation, fluency speaking methods, and speaking skills. This is mostly due to the fact that students require ample exposure to speaking activities, tasks, and materials in order to attain fluency.

The number of learners to benefit from the implementation of the current research is quite small but, it should be the beginning of bigger studies in the field of gamification to contribute to increasing the number of students with better speaking skills. The strategy of gamification will be implemented to, hopefully, improve the levels of proficiency or speaking skills of English students. Besides, teachers can use gamification in scoring their skills based on the assessment assessed by the students. The assessment of speaking can be a highly prejudicial matter, wherein people frequently distinguish between native and non-native speakers based on pronunciation which people are likely to bear on native/non-native speakers based on pronunciation. Additionally, language proficiency is necessary for speaking in terms of being able to pronounce sounds, knowing enough words, and being adept at grammar or structural elements. Functional competence is another requirement for speaking, which entails giving thorough and logical answers to inquiries. Another skill is strategic competence, which enables the speaker to apply recovery techniques when a conversation stalls. When the students' speaking skill is assessed utilizing gamified speaking assessment, it will be easier for students to increase their score.

These findings have important implications for language teaching and learning, particularly in higher education. The use of gamified assessments can enhance students' motivation and engagement in learning, making language learning a more enjoyable and effective experience. Gamified assessments can also provide immediate and targeted feedback, allowing learners to identify areas for improvement and adjust their performance accordingly. However, it is important to note that gamified assessments should be designed and implemented carefully to ensure their effectiveness. The game elements should be relevant and appropriate for the learning goals and should not distract learners from the language learning objectives. Moreover, gamified assessments should be used in conjunction with other forms of assessment and should not be used as the sole means of evaluating learners' proficiency.

4. CONCLUSION

Based on the finding of this research, we can determine that the students in the gamified assessment group had significantly higher scores compared to those in the non-gamified group. The gamified assessment was found to be more engaging, motivating, and effective in improving students' speaking proficiency. Besides, when the students' speaking skill was assessed utilizing gamified speaking assessment, it was easier for students to increase their score. This research result provided a contribution to the basic literature on utilizing gamified speaking assessments to motivate students thus they could enhance their speaking ability led to an increased score of their speaking score. This study's results suggest that gamified speaking assessments can be an effective and engaging approach for assessing EFL learners' speaking proficiency in higher education. However, further research is needed to explore the potential of gamified assessments in other language skills and in different educational contexts.

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