



International Journal of Research Publication and Reviews

Journal Homepage: www.ijrpr.com ISSN 2582-7421

Impact of Using Gamification Tools in English Language Learning Among Upper Primary Students

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ABSTRACT

The present study entitled “Impact of Using Gamification Tools in English Language Learning among Upper Primary Students” aimed to examine the effectiveness of gamification tools in improving students’ achievement in English grammar. The study adopted the experimental method with an equivalent group design. A sample of 80 upper primary students was selected from CSI Girls Higher Secondary School, Coimbatore District, Tamil Nadu using the simple random sampling technique. The students were divided into a control group and an experimental group with 40 students in each group. The experimental group was taught through gamification tools such as LearningApps.org, Wayground, and Live Worksheets, while the control group was taught through the conventional teaching method. Pre-test and post-test were conducted to measure students’ achievement in English grammar. The collected data were analysed using mean, standard deviation, and t-test. The findings revealed that there was no significant difference between the pre-test scores of the two groups before treatment. However, a significant difference was found between the post-test scores in favour of the experimental group. The study concluded that gamification tools effectively improve students’ achievement, motivation, participation, and engagement in English grammar learning.

Keywords: *English Grammar, Academic Achievement, Upper Primary Students, Gamification Tools, English Language Teaching.*

INTRODUCTION

English is an important international language used for communication, education, science, and technology. Grammar is considered the foundation of English language learning because it helps students improve their speaking, reading, writing, and comprehension skills. However, traditional grammar teaching methods often make students feel bored and less interested in learning. Many students find it difficult to understand grammatical concepts through lectures and textbook exercises alone. To make learning more effective and enjoyable, modern teaching strategies such as gamification are introduced in classrooms. Gamification uses game elements like quizzes, points, badges, rewards, and puzzles in the teaching-learning process. Digital tools such as LearningApps.org, Wayground, and LiveWorksheets help teachers create interactive grammar activities for students. These activities increase students’ motivation, participation, confidence, and academic achievement. Gamified learning also provides immediate feedback, which helps students correct their mistakes and improve their understanding. Therefore, the present study focuses on the impact of gamification tools in English language learning among upper primary students.

LITERATURE REVIEW

Deniz (2024) explored that the gamification in English language education significantly enhances student engagement, motivation, and language learning outcomes. The literature review revealed that gamified approaches improve learners’ vocabulary acquisition and grammatical proficiency while making the learning process more dynamic and enjoyable. The study also highlighted the importance of personalizing gamified applications to accommodate differences in learners’ motivational thresholds. Overall, gamification was shown to be an effective pedagogical strategy for promoting long-term learning and active participation in English language classrooms.

Sadeghi et al. (2022) indicated that the implementation of gamification positively influenced learner motivation in a Turkish university’s English preparatory courses. While the experimental group showed a slight improvement in vocabulary development compared to the control group, the difference was not statistically significant. Students perceived gamified instruction as an effective and engaging way to learn and practice vocabulary. Overall, the study concluded that gamification can enhance learner motivation and engagement, even if its immediate impact on vocabulary gain is modest.

Yugandhar, Raghunatha Rao, & Uma Devi (2025) explored that the gamification significantly enhances English language learning among engineering students in India. The study reported that incorporating gamified elements such as points, badges, leaderboards, and challenges using platforms like Quizizz, Kahoot, Blooket, Wordwall, and Classcraft improved learner motivation, engagement, and overall English proficiency. Students

also experienced reduced anxiety and increased enjoyment during language learning. The findings suggest that structured integration of gamification, teacher training, and adaptive activities can effectively improve English learning outcomes in higher education contexts.

Kukreja (2024) found that gamification in education, particularly in English language teaching, positively impacts student engagement, motivation, and teacher-student interactions. The study highlighted that adaptive gamification creates a results-oriented learning environment and supports achieving diverse classroom objectives. Gamified approaches were shown to enhance participation, make learning more enjoyable, and help optimize the overall learning process. The study also emphasized the importance of carefully designing gamified activities to align with learning goals and noted challenges such as infrastructure, teacher readiness, and assessment of gamification's effectiveness.

NEED AND SIGNIFICANCE OF THE STUDY

In many classrooms, English grammar is still taught through traditional methods such as lectures, textbook exercises, and memorization of rules. These methods often fail to create interest and active participation among students. As a result, many students find grammar learning difficult and boring. They may also struggle to apply grammatical rules correctly in speaking and writing. Therefore, there is a need for innovative teaching methods that can make grammar learning more engaging and meaningful.

Gamification is a modern teaching strategy that uses game elements like quizzes, points, badges, rewards, and puzzles in the learning process. Digital tools such as LearningApps.org, Wayground, and LiveWorksheets provide interactive learning opportunities and immediate feedback for students. These tools help students participate actively and improve their understanding of grammar concepts. Gamified activities create excitement and motivation among learners and make the classroom more learner-centered. They also help improve students' confidence, interest, and academic achievement in English grammar. Although gamification is becoming popular in education, its use in English grammar teaching at the upper primary level is still limited in many schools (Rajkumar & Hema 2023).

Therefore, the present study aims to examine the effectiveness of gamification tools in improving the academic achievement of upper primary students in English grammar. The findings of this study may help teachers and educational planners use innovative teaching methods more effectively in language classrooms.

STATEMENT OF THE PROBLEM

“Impact of using Gamification Tools in English Language Learning among Upper Primary Students.”

OPERATIONAL DEFINITIONS OF TERMS

In educational research, operational definitions clarify the specific meaning of key terms used in a study. The following terms are operationally defined for the purpose of the present research.

Gamification

Gamification refers to the use of game design elements and game mechanics such as points, badges, leaderboards, rewards, and levels in educational activities to increase student engagement, motivation, and participation in the learning process.

Gamification Tools

Gamification tools in the present study refer to digital learning platforms used to design and implement interactive grammar learning activities. Specifically, the tools used in this study include LearningApps.org, Wayground, and LiveWorksheets, which provide game-based exercises, quizzes, and interactive worksheets for English grammar practice. **Academic Achievement**

Academic achievement refers to the level of knowledge, understanding, and skills acquired by students in English grammar as measured through an achievement test administered before and after the experimental intervention.

English Language (Grammar)

English grammar refers to the system of rules that govern the structure of the English language, including sentence formation, parts of speech, tenses, agreement, and punctuation. In this study, grammar learning focuses on selected grammatical concepts prescribed in the upper primary English curriculum.

Upper Primary Students

Upper primary students refer to learners studying in Classes VI to VIII in schools following the Tamil Nadu school education system. These students are typically in the age group of approximately 11 to 14 years.

Gamified Learning Activities

Gamified learning activities refer to interactive instructional tasks designed using gamification tools, where grammar exercises are presented through digital games, quizzes, puzzles, and challenges to enhance student engagement and learning outcomes.

OBJECTIVES OF THE STUDY

The present study aims to investigate the effectiveness of gamification tools in enhancing students' academic achievement in English grammar among upper primary students.

The specific objectives of the study are:

- To develop gamified learning activities using gamification tools such as LearningApps.org, Wayground, and LiveWorksheets for teaching English grammar.
- To examine the effectiveness of gamification tools in improving students' academic achievement in English grammar.
- To find out the significant difference in the pre-test scores of control group and experimental group taught English grammar through gamification tools
- To find out the significant difference in the post-test scores of control group and experimental group taught English grammar through gamification tools
- To find out the significant difference in the pre-test and post-test scores of control group taught English grammar through conventional method
- To find out the significant difference in the pre-test and post-test scores of experimental groups taught English grammar through gamification tools with respect to mother qualification

NULL HYPOTHESES

The null hypotheses of present study are

- There is no significant difference in the pre-test scores of control group and experimental group taught English grammar through gamification tools
- There is no significant difference in the post-test scores of control group and experimental group taught English grammar through gamification tools
- There is no significant difference in the pre-test and post-test scores of control group taught English grammar through conventional method
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools with respect to the attainment of instructional objectives of Knowledge
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools with respect to the attainment of instructional objectives of Comprehension
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools with respect to the attainment of instructional objectives of Application
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools with respect to medium of instruction
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools with respect to father qualification
- There is no significant difference in the pre-test and post-test scores of experimental group taught English grammar through gamification tools with respect to mother qualification

METHOD OF THE STUDY

The present study is based on Experimental Method, and an Equivalent Group Design was adopted by the investigator this investigation.

POPULATION

The population of the study consists of the CSI Girls Higher Secondary School students in Coimbatore District.

SAMPLE FOR THE STUDY

A sample is any number of the member of a population that have selected to present that populations, for the experimental study 80 upper primary level students were chosen from the CSI Girls Higher Secondary School, Avinashi Road, uppilpalayam, Coimbatore. The investigator has used the simple random sampling techniques for this study. Out of 80 upper primary level students 40 students were formed the control group and the remaining 40 students formed the experimental group.

EXPERIMENTAL DESIGN

The given design will be followed by the investigator for the study:

Steps	Experimental Procedure	
Step-1	Selects one school (No.of students:80)	
Step-2	Divide by two groups (by using previous examination scores in English Language)	
Step-3	Control Group (40)	Experimental Group (40)
Step-4	Pre-test	Pre-test
Step-5	Comparison of pre-test scores	
Step-6	Conventional method teaching	Gamification Tools
Step-7	Post-test	Post-test
Step-8	Comparison of Post-test scores	
Step-9	Comparison of Pre-test and Post-test scores	

STATISTICAL TECHNIQUES USED

The mean, standard deviation and t- test were used for analysis and testing the hypothesis

DESCRIPTIVE ANALYSES OF CONTROL AND EXPERIMENTAL GROUPS IN PRE-TEST

ANALYSIS	PRE-TEST	PRE-TEST
Mean	49.23	50.15
Median	48	48
Mode	48	48
Standard Deviation	7.231	7.502
Kurtosis	-0.183	-0.129
Skewness	0.366	0.466
Range	28	28
Minimum	36	40
Maximum	64	68

The descriptive statistics of the pre-test scores show that the control group (Mean = 49.23) and experimental group (Mean = 50.15) had nearly similar initial achievement levels. The median and mode are identical for both groups (Median = 48; Mode = 48), indicating consistency. The standard deviations are also close (7.231 and 7.502), showing similar variability. The skewness values (0.366 and 0.466) indicate slight positive skewness, while kurtosis values (-0.183 and -0.129) indicate a platykurtic distribution. The range is equal (28), with scores varying from 36–64 (control) and 40–68 (experimental), confirming both groups were comparable before treatment.

DESCRIPTIVE ANALYSES OF CONTROL AND EXPERIMENTAL GROUPS IN POST-TEST

ANALYSIS	POST-TEST	POST-TEST
Mean	70.56	88.20
Median	72	88
Mode	72	88
Standard Deviation	7.254	4.763
Kurtosis	-0.629	-0.782
Skewness	-0.156	-0.004
Range	28	16
Minimum	56	80
Maximum	84	96

The descriptive statistics of the post-test scores show that the experimental group (Mean = 88.20) performed significantly better than the control group (Mean = 70.56). The median and mode values (Control: 72; Experimental: 88) indicate higher achievement in the experimental group. The standard deviation is lower in the experimental group (4.763) compared to the control group (7.254), showing more consistency. The skewness values (-0.156 and -0.004) indicate near-normal distribution, while kurtosis values (-0.629 and -0.782) show platykurtic distribution. The range is smaller in the experimental group (16 vs. 28), indicating less variability and improved performance after treatment.

Hypothesis: 1

MEAN, SD AND 't' VALUE OF PRE-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	49.23	7.23	0.56	1.96	Not Significant
Experimental	40	50.15	7.52			

(At 5% level of significance the table value of 't' is 1.96)

Table 4.3 presents the mean, standard deviation, and t-value of the pre-test scores of the control and experimental groups. The calculated t-value is 0.56, which is less than the table value of 1.96 at the 5% level of significance. It is inferred that the calculated t-value is lower than the table value; the difference between the two groups is not statistically significant. Hence, the null hypothesis is accepted. This indicates that both groups were homogeneous and comparable in their achievement in English language before the treatment.

Hypothesis: 2

MEAN, SD AND 't' VALUE OF PRE-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP IN KNOWLEDGE

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	19.76	2.82	0.71	1.96	Not Significant
Experimental	40	20.21	2.71			

(At 5% level of significance the table value of 't' is 1.96)

Table 4.4 presents the mean, standard deviation, and t-value of the pre-test scores of the control and experimental groups in relation to the attainment of the instructional objective of knowledge. The calculated t-value is 0.56, which is less than the table value of 1.96 at the 5% level of significance. It is inferred that the calculated t-value is lower than the table value; the difference between the two groups is not statistically significant. Hence, the null hypothesis is accepted. This indicates that both groups were homogeneous and comparable in their achievement in English language before the treatment

Hypothesis: 3

MEAN, SD AND 't' VALUE OF PRE-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP IN UNDERSTANDING

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	17.29	2.76	0.84	1.96	Not Significant
Experimental	40	18.11	2.02			

(At 5% level of significance the table value of 't' is 1.96)

Table 4.5 presents the mean, standard deviation, and t-value of the pre-test scores of the control and experimental groups in relation to the attainment of the instructional objective of understanding. The calculated t-value is **0.84**, which is less than the table value of **1.96** at the 5% level of significance. It is inferred that the calculated t-value is lower than the table value; the difference between the two groups is not statistically significant. Hence, the null hypothesis is accepted. Therefore, there is no significant difference between the pre-test scores of control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of understanding.

Hypothesis: 4

MEAN, SD AND T VALUE OF PRE-TEST SCORES OF CONTROL AND

EXPERIMENTAL GROUP IN APPLICATION

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	12.35	1.98	1.51	1.96	Not Significant
Experimental	40	12.87	2.12			

Table 4.6 presents the mean, standard deviation, and t-value of the pre-test scores of the control and experimental groups in relation to the attainment of the instructional objective of application. The calculated t-value is **1.51**, which is less than the table value of **1.96** at the 5% level of significance. It is inferred that the calculated t-value is lower than the table value; the difference between the two groups is not statistically significant. Hence, the null hypothesis is accepted. Therefore, there is no significant difference between the pre-test scores of control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of application.

Hypothesis: 5

MEAN, SD AND T VALUE OF POST-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	55.56	7.25	4.62	1.96	Significant
Experimental	40	88.21	5.76			

Table 4.7 presents the mean, standard deviation, and t-value of the post-test scores of the control and experimental groups. The calculated t-value is **4.62**, which is greater than the table value of **1.96** at the 5% level of significance. It is inferred that the calculated t-value is higher than the table value; the difference between the two groups is statistically significant. Hence, the null hypothesis is rejected. Therefore, there is a significant difference between the post-test scores of control group and experimental group with respect to achievement in English language.

Hypothesis: 6**MEAN, SD AND T VALUE OF POST-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP IN KNOWLEDGE**

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	24.32	2.93	3.81	1.96	Significant
Experimental	40	35.64	1.89			

Table 4.8 presents the mean, standard deviation, and t-value of the post-test scores of the control and experimental groups in relation to the attainment of the instructional objective of knowledge. The calculated t-value is **3.81**, which is greater than the table value of **1.96** at the 5% level of significance. It is inferred that the calculated t-value is higher than the table value; the difference between the two groups is statistically significant. Hence, the null hypothesis is rejected. Therefore, there is a significant difference between the post-test scores of control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of knowledge.

Hypothesis: 7**MEAN, SD AND T VALUE OF POST-TEST SCORES OF CONTROLS AND EXPERIMENTAL GROUP IN UNDERSTANDING**

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	22.78	2.43	5.11	1.96	Significant
Experimental	40	30.91	1.66			

Table 4.9 presents the mean, standard deviation, and t-value of the post-test scores of the control and experimental groups in relation to the attainment of the instructional objective of understanding. The calculated t-value is 5.11, which is greater than the table value of 1.96 at the 5% level of significance. It is inferred that the calculated t-value is higher than the table value; the difference between the two groups is statistically significant. Hence, the null hypothesis is rejected. Therefore, there is a significant difference between the post-test scores of control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of understanding.

Hypothesis: 8**MEAN, SD AND T VALUE OF POST-TEST SCORES OF CONTROL AND EXPERIMENTAL GROUP IN APPLICATION**

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
Control	40	16.71	2.14	6.12	1.96	Significant
Experimental	40	22.08	1.19			

Table 4.10 presents the mean, standard deviation, and t-value of the post-test scores of the control and experimental groups in relation to the attainment of the instructional objective of application. The calculated t-value is **6.12**, which is greater than the table value of **1.96** at the 5% level of significance. It is inferred that the calculated t-value is higher than the table value; the difference between the two groups is statistically significant. Hence, the null hypothesis is rejected. Therefore, there is a significant difference between the post-test scores of control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of application.

Hypothesis: 9**MEAN, SD AND T VALUE OF PRE-TEST AND POST-TEST SCORES OF CONTROL GROUP**

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 1 % level
PRE-TEST	40	49.23	5.89	2.41	2.56	Not Significant
POST-TEST	40	55.76	6.21			

Table 4.11 presents the mean, standard deviation, and t-value of the pre-test and post-test scores of the control group. The calculated t-value is 2.41, which is less than the table value of 2.56 at the 1% level of significance. It is inferred that the calculated t-value is lower than the table value; the difference between the pre-test and post-test scores is not statistically significant. Hence, the null hypothesis is accepted. Therefore, there is no significant difference between the pre-test and post-test scores of the control group with respect to achievement in English language.

Hypothesis: 10**MEAN, SD AND T VALUE OF PRE-TEST AND POST-TEST SCORES OF EXPERIMENTAL GROUP**

Learning group	N	Mean	SD	Calculated t value	Table value	Remarks at 5 % level
PRE-TEST	40	50.15	6.41	7.25	1.96	Significant
POST-TEST	40	88.20	4.76			

Table 4.12 presents the mean, standard deviation, and t-value of the pre-test and post-test scores of the experimental group. The calculated t-value is 7.25, which is greater than the table value of 1.96 at the 5% level of significance. It is inferred that the calculated t-value is higher than the table value; the difference between the pre-test and post-test scores is statistically significant. Hence, the null hypothesis is rejected. Therefore, there is a significant difference between the pre-test and post-test scores of the experimental group with respect to achievement in English language.

FINDINGS

The data was analysed by using descriptive and inferential statistics.

The findings of the study are given below.

1. There is no significant difference between the pre-test scores of the control group and experimental group with respect to achievement in English language.
2. There is no significant difference between the pre-test scores of the control group and experimental group with respect to achievement in English language before the treatment. There is no significant difference between the pre-test scores of the control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of understanding.
3. There is no significant difference between the pre-test scores of the control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of application.
4. There is a significant difference between the post-test scores of the control group and experimental group with respect to achievement in English language.
5. There is a significant difference between the post-test scores of the control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of knowledge.
6. There is a significant difference between the post-test scores of the control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of understanding.
7. There is a significant difference between the post-test scores of the control group and experimental group with respect to achievement in English language in relation to the attainment of instructional objective of application.
8. There is no significant difference between the pre-test and post-test scores of the control group with respect to achievement in English language.
9. There is a significant difference between the pre-test and post-test scores of the experimental group with respect to achievement in English language.

RECOMMENDATIONS

- Gamification reduces rote learning by encouraging active participation and understanding.
- Gamification helps teachers to plan and deliver lessons in a more effective and engaging way.
- Gamification makes students learn in an interesting and enjoyable manner.
- Using gamified tools, students can actively participate in various learning activities to enhance their learning.
- Every teaching method has its own merits; therefore, teachers should select gamification based on the needs and level of students.
- Teaching of English can be made more effective by using gamification strategies in the classroom.

CONCLUSION

The present study examined the impact of gamification tools on enhancing academic achievement in English grammar among upper primary students. The findings revealed that gamification significantly improved students' achievement in English grammar compared to the conventional teaching method. The experimental group showed better performance in knowledge, understanding, and application of grammatical concepts. Gamified

learning activities increased students' motivation, engagement, and active participation in the classroom. Interactive tools such as LearningApps.org, Wayground, and LiveWorksheets made grammar learning more interesting and enjoyable. The immediate feedback provided through these platforms helped students improve their understanding of grammar effectively. The study concludes that gamification is an effective and innovative teaching strategy for English grammar instruction at the upper primary level. Therefore, teachers should integrate gamification tools into classroom teaching to create interactive and learner-centered learning environments.

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