

DEVELOPING A GAME-BASED INSTRUCTIONAL PACKAGE FOR ENHANCING INTEREST IN MALAYALAM OF SECONDARY SCHOOL STUDENTS

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ABSTRACT

Education plays a vital role in shaping students' linguistic abilities and cultural identity; however, the teaching of Malayalam at the secondary school level often relies on traditional methods that fail to sustain students' interest. The present study focuses on developing a Game-Based Instructional Package to enhance interest in Malayalam among secondary school students. The study addresses the need for innovative pedagogical strategies that can make language learning more engaging, interactive, and learner-centered. An experimental method with a pre-test post-test single group design was adopted for the study. The sample consisted of 34 students of standard VIII from a secondary school in Kollam district, Kerala. The developed instructional package incorporated various game-based activities related to Malayalam grammar topics such as Sandhi and Samasam. Data were collected using a standardized Interest Inventory in Malayalam. The collected data were analyzed using statistical techniques such as mean, standard deviation, and paired sample t-test. The findings of the study revealed that the game-based instructional package was highly effective in enhancing students' interest in Malayalam. A significant difference was observed between the pre-test and post-test scores, indicating a considerable improvement in students' interest levels after the intervention. The results also showed that the instructional package was equally effective for both boys and girls, with no significant difference in post-test scores based on gender. The integration of game elements such as competition, collaboration, and immediate feedback contributed to increased student engagement and motivation. The study concludes that game-based instructional strategies can serve as an effective pedagogical tool for promoting sustained interest in Malayalam language learning. It emphasizes the importance of adopting innovative, activity-based approaches in language classrooms to foster active participation and meaningful learning experiences.

Keywords: Game-Based Learning, Instructional Package, Interest in Malayalam, Secondary School Students

INTRODUCTION

Education is the base of how we grow as individuals and as a society. It helps us think critically and learn skills we need in life. The world is changing fast with science and technology and education helps us get ready for the challenges and opportunities that come with it. Education takes us away from not knowing things by helping us grow socially emotionally physically and mentally. A time ago Dewey (1961) said that the main goal of education is to make people responsible and capable so they can contribute to society in a meaningful way. So education is not just about learning facts it is a process that changes our attitudes, values and helps us learn throughout our lives. Learning a language our mother tongue is a big part of this process. It helps us communicate better understand our culture and grow mentally. For people in Kerala Malayalam is their mother tongue. It plays a big role in keeping their cultural heritage alive and helping them learn effectively.. When we teach Malayalam in secondary school we often use old methods where the teacher does all the talking. This can be boring for students. They might lose interest. As a result many students think that learning Malayalam, the grammar parts, like Sandhi and Samasam is hard and not fun. Learning is really fun when students are interested in what they're doing. Interest is a part of learning because it helps students pay attention and want to learn more. When students like what they're learning they will try harder and learn more. So it is very important to find ways to teach that will keep students interested, in Malayalam. One good way to do this is to use games to teach. Game-based learning is a way to teach because it is fun and students can work together. It also gives students a chance to compete and get feedback away. This makes learning Malayalam a lot fun and interesting.

NEED AND SIGNIFICANCE OF THE STUDY

Malayalam, being the mother tongue, is the most important subject in our school curriculum. It serves as the language of teaching for the majority of school subjects. The ability to effectively use the native language is frequently essential for gaining knowledge. It serves as the medium through which a significant portion of our thought processes occurs; therefore, enhancing our ability to use and respond to our native language leads to better thinking. As stated by Guerry (1958), learning a language is an intricate process that requires the development of different skills for effective language use. An effective educator should be well-versed in numerous techniques to share knowledge with their students. A successful instructional method will create a lasting impression on the learner's understanding of the subject. Educators ought to employ every available strategy and approach to enhance the effectiveness and engagement of their teaching. The child ought to be permitted to actively engage in the learning process, which simplifies learning and makes it more meaningful.

Using a language is the only way to learn it, and it takes constant practice. The constant repetition of traditional methods often wears out and bores learners. This issue can be effectively addressed in the classroom by using language games. A variety of language skills, such as vocabulary, sentence construction, and communication skills, can be developed in an enjoyable and stimulating learning environment through games.

They reduce anxiety, promote active participation, and increase students' motivation and interest in the subject. As interest has a direct effect on the attention, engagement and persistence of the student, it is an integral part of the learning process. Because of the conventional approach followed in the learning process, which emphasizes memorizing and listening, the interest of secondary school students in the present educational setup tends to decline with regards to learning Malayalam. The conventional approach followed in the learning process does not encourage the student's interest in the learning process. For making the learning of Malayalam an interesting and significant task, it is imperative to adopt creative approaches. One such method is game-based learning, which includes various components of game, challenge, and interaction within learning. Game-based learning helps to develop a joyful learning environment wherein learning takes place without any pressure and a positive learning attitude is promoted among learners. However, it is not sufficiently emphasized within the school curriculum for the use of language games. Though teachers are aware of the importance of language games and their implications for learning, they do not prefer to implement this method due to various reasons and constraints. From the study and review of literature and previous studies, it is evident that various studies have been conducted on game-based learning and its implications for promoting learning engagement and positive attitudes among secondary school learners. Sripriya Sundaram and Rajendran Ramesh (2022) emphasized that game-based blended learning is highly beneficial for promoting learning engagement and positive attitudes among learners. Similarly, Karan Baweja (2023) emphasized that game-based learning helps learners to develop positive attitudes and promote learning engagement. However, there is limited research specifically focusing on the use of game-based approaches for enhancing interest in Malayalam at the secondary school level.

This gap highlights the need for developing a structured game-based instructional package specifically designed to enhance students' interest in Malayalam. Such a package can provide systematic guidance for teachers to implement engaging activities and innovative teaching strategies in the classroom. The present study is therefore significant as it aims to make Malayalam learning more dynamic, enjoyable, and learner-centered, ultimately fostering sustained interest and a positive attitude towards the language among secondary school students.

RESEARCH GAP

There is a growing body of research on innovative teaching methodologies, but studies on game-based methodologies to increase interest in regional languages such as Malayalam are scarce. Most existing studies concentrate on conventional teaching methodologies or conventional technology-based tools, which lack the interactive and engaging characteristics of gamification. Previous studies by Prensky (2001) and Kiili (2005) have identified the efficacy of game-based learning in increasing learner engagement, but in the context of global languages only. In the context of the Indian region, studies by Nair and Pillai (2017) identified the efficacy of interactive methodologies such as storytelling in learning Malayalam, but not gamification. This gap underscores the need for studies that develop and assess a game-based instructional package designed

improve to increase students' engagement and enthusiasm for the language. This study aims to fill this gap by blending gamification principles with the instruction of Malayalam grammar, ultimately enhancing the students' interest in learning the language.

HYPOTHESES FORMULATED FOR THE STUDY

1. Instructional Package on Game Based Learning is effective for enhancing Interest in Malayalam of Secondary School Students
2. There exists significant difference in the effectiveness of Game Based Instructional Strategy for enhancing Interest in Malayalam of secondary school students with respect to gender -boys and girls.

OBJECTIVES OF THE STUDY

1. To develop an Instructional Package on Game Based Learning for enhancing Interest in Malayalam of Secondary School Students.
2. To find out the effectiveness of Instructional Package on Game Based Learning for enhancing Interest in Malayalam of Secondary School Students.
3. To compare the effectiveness of Instructional Package on Game Based Learning for enhancing Interest in Malayalam of Secondary School Students with respect to gender- boys and girls.

METHODOLOGY IN BRIEF

Methodology refers to the different methods and procedures adopted, samples selected, tools used and statistical technique employed for the study (Best, J.W., & Kahn, J.V. 2006). The methodology for the present study is given under the following headings:

Method adopted for the Study

In the present study, the investigator intended to check whether the prepared package is effective for enhancing Interest in Malayalam of secondary school students based on grammatical competence. Hence the investigator selects experimental method for the present study.

Experimental Design Selected for the Study

Pretest -post-test single group design is selected for the present study.

Population of the Study

In the present study, population comprises of all the secondary school students following Kerala State Syllabus.

Sample Selected for the Study

In the present study, the sample comprises of 34 students in standard VIII of GHSS SASTHAMCOTTA, KOLLAM following Kerala State Syllabus.

Variables Selected for the Study

- **Independent Variable**

Instruction based on Game Based learning package is the independent variable for the present study.

- **Dependent Variable**

Interest in Malayalam is the dependent variables for the present study

Tools and Materials Used for The Study

1. An instructional package based on Game Based learning for enhancing Interest in Malayalam of Secondary School Students
2. Interest Inventory in Malayalam (Developed by the Investigator)

Statistical Technique Used for the Study

The following statistical techniques are used for the study

- Descriptive statistics
 - Mean
 - Standard Deviation
 - Skewness
 - Kurtosis
- Paired sample t-test

ANALYSIS AND INTERPRETATION OF DATA

Descriptive Statistics for Pretest Scores On Interest In Malayalam Of Secondary School Students

Before the experiment, the Interest Inventory in Malayalam was administered as a pretest to the experimental group. The scores obtained were subjected to descriptive statistical analysis to understand the general nature of the group. The measures of Arithmetic Mean, Median, Mode, Standard Deviation, Variance, Skewness and Kurtosis were calculated. The results of the analysis are presented in Table 1.

Table.1

Descriptive Statistical Scores of Pre-test on Interest in Malayalam of Secondary School Students

Group	N	Mean	Median	SD	Variance	skewness	kurtosis
Experimental	34	27.85	26	7.24	52.47	0.62	- 0.71

The pretest results on Interest in Malayalam among the experimental group N = 34 are descriptively analysed in the table 1. The mean score is 27.85, and the median is 26, suggesting a central tendency in the mid-to-upper range. Moderate score variability is indicated by the variance of 52.47 and the standard deviation of 7.24. With a tail towards higher scores, the skewness value of 0.62 denotes a slight positive skewness. A distribution that is flatter than normal, with fewer extreme values and a more evenly distributed score, is reflected by the negative kurtosis of -0.71.

Descriptive Statistics For Post-Test Scores On Interest In Malayalam Of Secondary School Students

After the experiment, the Interest Inventory in Malayalam was administered as a post-test to the experimental group. The Arithmetic Mean, Median, Mode, Standard Deviation, Variance, Skewness and Kurtosis of the scores were calculated to get a general overview of the group’s performance. Table 2 presents the detailed analysis.

Table.2

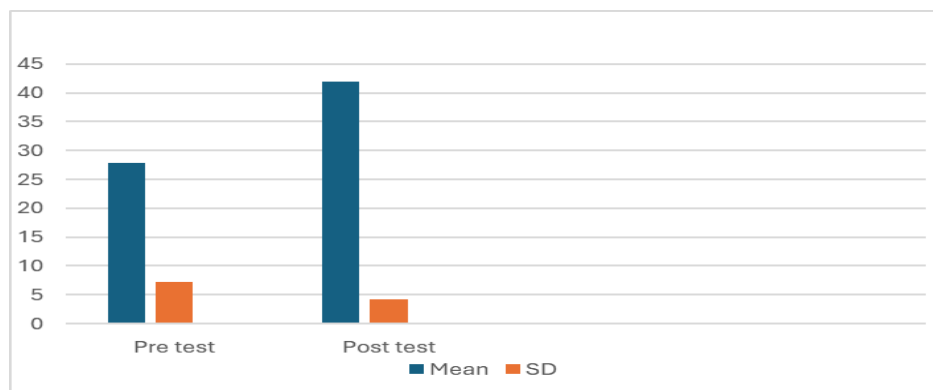
Descriptive Statistical Scores of Post-test on Interest in Malayalam of Secondary School Students

Group	N	Mean	Median	SD	Variance	skewness	kurtosis
Experimental	34	41.94	43	4.14	17.14	1.62	-1.38

The table presents the descriptive statistical analysis of posttest scores on interest in Malayalam among the experimental group N= 34. The mean score of 41.94 and the median of 43 indicate that the central tendency is positioned toward the higher end of the scale, reflecting an increased level of interest after the intervention. The standard deviation (4.14) and variance (17.14) reveal relatively low variability, suggesting that the majority of students scored close to the mean and demonstrated a consistent level of interest. The skewness value of 1.62 indicates a positive skew, meaning that a larger number of students scored on the lower side while fewer attained higher scores. The kurtosis value of -1.38 shows a platykurtic distribution, suggesting a relatively flatter curve than a normal distribution, with scores spread more evenly across the range. Overall, these statistics suggest that while the experimental group generally exhibited improved interest in Malayalam, the distribution of scores reflects moderate variation with a slight concentration of scores below the mean. Graphical Representation of Descriptive Statistical Scores of Pre-test and Post-test scores Interest in Malayalam of Secondary School Students is given in Figure 1

Figure 1

Descriptive Statistical Scores of Pre-test and Post-test Scores Interest in Malayalam of Secondary School Students.



Test of Significance of Difference Between the Pretest and Post-test Mean Scores on Interest in Malayalam of Secondary School Students

To assess the effectiveness of the game-based instructional package in enhancing students' interest in Malayalam, a test of significance of difference was conducted between the pretest and post-test mean scores of the experimental group. The Arithmetic Mean, Standard Deviation, Variance, Skewness and Kurtosis of the pretest and post-test scores were compared. A *t*-test was employed to determine whether the difference between the two mean scores was statistically significant.

Table.3

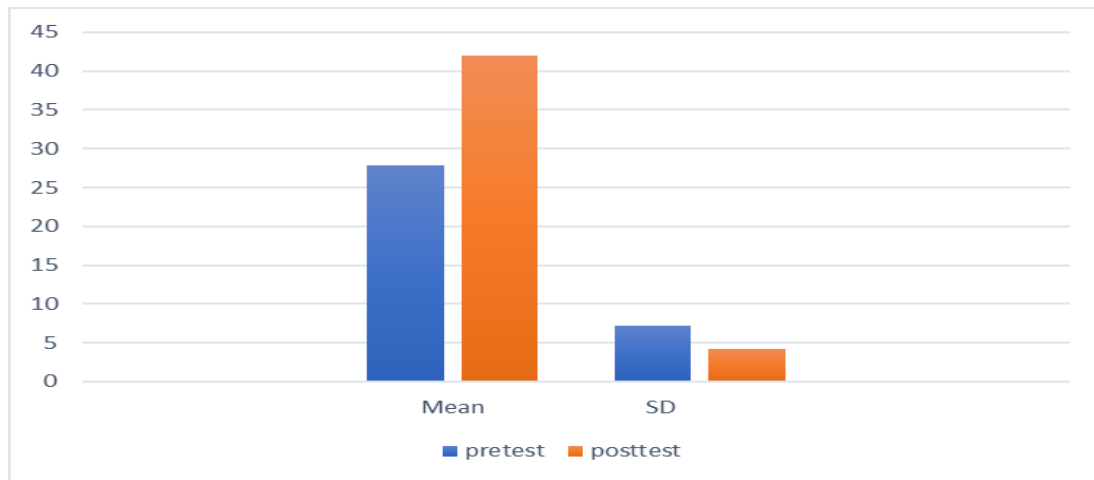
Test of Significance for Difference between the Mean Pretest and Posttest Scores on Interest in Malayalam of Secondary School Students.

Test	N	Mean	SD	t-value	Level of Sig.	Cohen's d
Pretest	34	27.39	6.95			
				13.45	0.01	2.53
Posttest	34	41.97	4.27			

The statistical analysis of data revealed that the obtained *t* value of 13.45 far exceeds the critical value of 1.96 at the 0.01 level of significance. The effect size, as measured by Cohen's *d*, is 2.53, which is much greater than 0.8 and indicates a large effect size. Thus, there exists a significant difference between the pretest and posttest scores of the sample. The posttest mean score 41.97 is notably higher than the pretest mean score 27.39. The results of the pretest and posttest indicate marked improvement, with posttest scores substantially exceeding pretest scores. The large effect size demonstrates that the instructional intervention produced a very substantial positive impact on student interest in Malayalam. From these findings, it can be inferred that the developed instructional approach was highly effective in enhancing student interest in Malayalam. Graphical representation of the Arithmetic Mean and Standard Deviation of the Pretest and Posttest Scores of the total sample is given in Figure 2.

Figure 2

Arithmetic Mean and Standard Deviation of the Pretest and Posttest Scores of Total Samples.



Comparison of Pretest Mean Scores of Interest in Malayalam of Secondary School Students with respect to Gender – Boys and Girls

Table.4

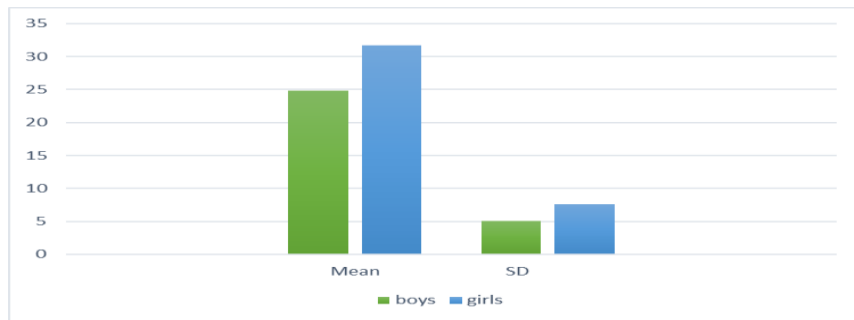
Comparison of Pretest Mean Scores on Interest in Malayalam of Boys and Girls of Secondary School level

Gender	N	Mean	SD	CR	Level of Sig.	Cohen’s d
Boys	18	24.82	5.04			
				3.109	0.01	1.09
Girls	16	31.75	7.58			

The statistical analysis of data in Table 4 shows a notable difference between boys and girls in their pretest mean scores on interest in Malayalam. The obtained t value 3.109 exceeds the critical value of 1.96 at the 0.01 level of significance, demonstrating statistical significance. The effect size, as measured by Cohen’s d, is 1.09, which is greater than 0.8 and indicates a large effect size. The mean score for girls 31.75 is substantially higher than that for boys 24.82, with girls showing greater variability in scores SD = 7.58 compared to boys SD = 5.04. These results suggest that girls have a significantly higher level of interest in Malayalam compared to boys, and the large effect size implies a strong difference between the two groups. Graphical representation showing the comparison of pretest mean scores of girls and boys is given in Figure 3.

Figure 3

Comparison of Pretest Mean Scores on Interest in Malayalam of Boys and Girls of Secondary School level



Comparison of Post-test Mean Scores on Interest in Malayalam of Secondary School Students with Respect to Gender – Boys and Girls

Table.5

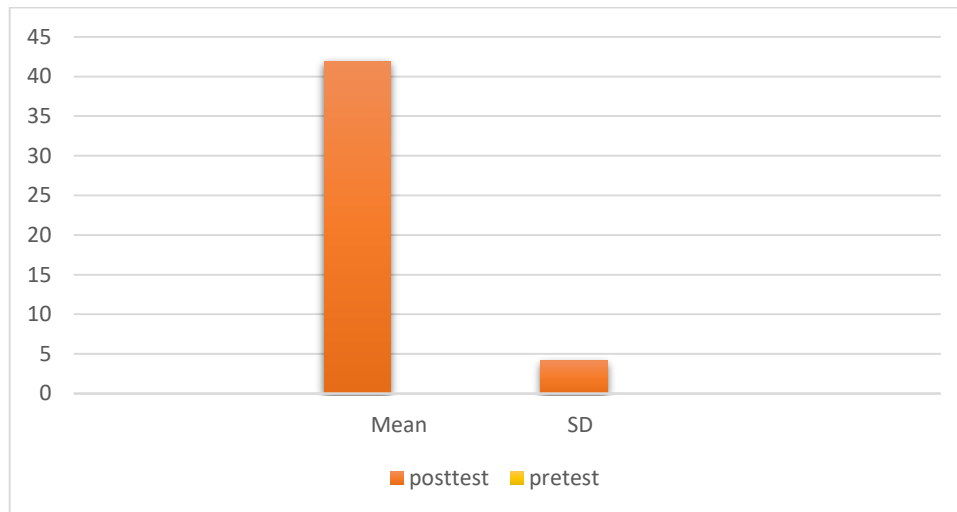
Comparison of Post-test Mean Scores on Interest in Malayalam of Boys and Girls of Secondary School level

Gender	N	Mean	SD	CR	Level of Sig.
Boys	18	41.11	5.04		
Girls	16	42.94	2.86	1.37	NS

The statistical analysis of data Table 5 revealed that the obtained t value of 1.37 is less than the critical value of 1.96 at the 0.05 level of significance. The effect size, as measured by Cohen’s d, is 0.44, which falls between 0.2 and 0.5 and indicates a medium effect size. The posttest mean score of boys 41.11 is slightly lower than that of girls 42.94, but the difference is statistically not significant. This suggests that girls have a somewhat higher level of interest in Malayalam after the intervention compared to boys, though the practical difference is moderate. Graphical representation showing the comparison of posttest mean scores of girls and boys is given in Figure 4.

Figure 4

Comparison of Post-test Mean Scores on Interest in Malayalam of Boys and Girls at Secondary School level



MAJOR FINDINGS OF THE STUDY

The major findings of the study are as follows,

1. The interest in Malayalam of secondary school students before the intervention was found to be low.
2. The test of significance of difference between the mean pretest and post-test scores on Interest in Malayalam of Secondary School students revealed that the intervention was effective in enhancing their interest.
3. The comparison of pretest Mean scores of Interest in Malayalam with respect to gender (boys and girls) showed a significant difference between them. This indicates that before the intervention, boys and girls differed in their levels of Interest in Malayalam.
4. The comparison of post-test Mean scores of Interest in Malayalam with respect to gender revealed no significant difference, indicating that after the administration of the Game-based Instructional Package, boys and girls exhibited similar levels of Interest in Malayalam.
5. The analysis of post-test descriptive statistics indicated a shift towards higher scores in Interest in Malayalam, showing the effectiveness of the Instructional Package.
6. The findings suggest that the Game-based Instructional Package based on Malayalam Grammar is effective in enhancing Interest in Malayalam of Secondary School Students.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The findings of the present study have several implications for the field of education, particularly language teaching at the secondary school level:

1. The results highlight the importance of integrating game-based learning into the Malayalam language curriculum. This approach enhances interest in Malayalam.

2. Teachers can adopt language games as a regular classroom practice to make learning more engaging, meaningful, and effective.
3. Game-based strategies provide opportunities for active participation, collaborative learning, and joyful classroom experiences, which improve interest.
4. Since the package was equally effective for both boys and girls, teachers can confidently use it without the concern of gender differences in learning outcomes.
5. The Interest inventory can be adapted by teachers as formative assessment tools to monitor students' progress continuously.
6. Teacher education programmes should include modules on game-based pedagogy, enabling teachers to design, develop, and implement instructional games effectively.
7. Educational authorities and curriculum planners can consider incorporating game-based instructional strategies at the policy level to improve language teaching standards.
8. The success of this package suggests that game-based learning can also be extended to other areas of the school curriculum to foster creativity, motivation, and lifelong learning.

CONCLUSION

The present study also proved the effectiveness of the game-based instructional package in enhancing interest in Malayalam language learning among secondary school students. This can be proved on the basis of the significant difference found in the pre-test and post-test scores of the students. The comparison of the mean values also clearly shows the effectiveness of the game-based instructional package on the interest of the students in learning Malayalam language. The instructional package provides an attractive learning environment for the students, motivating them to participate in the classroom learning activities. The game-based instructional package has been proved to be more effective in comparison to the conventional instructional methods in sustaining the interest of the students and creating a favourable attitude in their minds. Based on the findings of the study, it can be concluded that the game-based instructional package is an effective strategy for enhancing interest in Malayalam language learning among secondary school students.

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