

**Effectiveness of Emoji-Based Vocabulary Game Instruction on
Enhancing Comprehension Skills among VIII Standard
Students in Coimbatore District**

**AISWARYA. G
24PED003**

**A THESIS SUBMITTED TO
AVINASHILINGAM INSTITUTE FOR HOME SCIENCE
AND HIGHER EDUCATION FOR WOMEN
COIMBATORE-641043**

**In Partial Fulfilment of the Requirements for Degree of
MASTER OF EDUCATION**

APRIL 2026

**Effectiveness of Emoji-Based Vocabulary Game Instruction on
Enhancing Comprehension Skills among VIII Standard
Students in Coimbatore District**

AISWARYA. G

24PED003

UNDER THE GUIDANCE OF

Ms.M.VIJAYALAKSHMI

A THESIS SUBMITTED TO

AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND

HIGHER EDUCATION FOR WOMEN

COIMBATORE-641043

In Partial Fulfilment of the Requirements for the Degree of

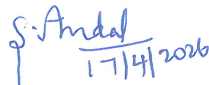
MASTER OF EDUCATION

APRIL 2026

CERTIFIED AS BONAFIDE RESEARCH WORK


M. Vijayalakshmi
17/4/26

Signature of Guide


S. Arundha
17/4/2026

**Signature of the
Head of the Department**


S. Indu
17/4/26

**Signature of the
Dean of Education**

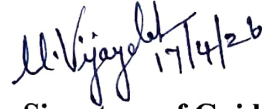
Declaration

DECLARATION

I, AISWARYA.G, hereby declare that the thesis entitled “**Effectiveness of Emoji-Based Vocabulary Game Instruction on Enhancing Comprehension Skills among VIII Standard Students in Coimbatore District**” submitted to Avinashilingam Institute for Home Science and a Higher Education for Women, Coimbatore, in partial fulfilment of the requirements for the award of the Degree of **Master of Education**, is a record of original and independent research work done by me during the period under the supervision and guidance of **Ms. M. VIJAYALAKSHMI, Assistant Professor**, **Department of Education**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, and it has not formed the basis for the award of any Degree / Diploma / Associateship / Fellowship or other similar title to any candidate of this or any other University.



Signature of Researcher



Signature of Guide

Acknowledgement

ACKNOWLEDGEMENT

The investigator wishes to convey heartfelt thanks to the **LORD ALMIGHTY** for the blessings received throughout this journey.

The investigator aims to honour **T.S. AVINASHILINGAM AYYA**, the **Founder** and **First Chancellor** of this respected university, and Hon. Colonel **RAJAMMAL P. DEVADAS**, **Former Chancellor** of the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for granting the invaluable opportunity and exposure to the vast realm of knowledge.

The investigator expresses profound appreciation and gratitude to **Dr. T.S.K. MEENAKSHISUNDARAM**, **Chancellor** of the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for the amenities provided during this research.

The investigator wishes to extend heartfelt thanks to **Dr. V. BHARATHI HARISHANKAR**, **Vice-Chancellor** of the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for supplying all necessary facilities for the study.

The investigator is grateful to **Dr. H. INDU**, **Professor**, **Registrar** of the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for the ongoing encouragement and support provided by the institution.

The investigator feels indebted to **Dr. H. INDU**, **Professor**, **Dean of the School of Education** at the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her constructive feedback, insightful guidance, and support in facilitating a smooth study.

The investigator expresses deep respect and gratitude to the **Head of the Department**, **Mrs. S. ANDAL**, **Assistant Professor (SS)** in the Department of Education at the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for offering necessary resources during the study.

The investigator feels fortunate to extend heartfelt appreciation to her esteemed guide **Ms.M.VIJAYALAKSHMI**, **Assistant Professor**, in the Department of Education at the Avinashilingam Institute for Home Science and Higher Education for Women,

Coimbatore, for the invaluable support, insightful guidance, and unwavering encouragement provided throughout the course of this study. The mentor's patience, expertise, and constant motivation played a pivotal role in shaping the research. Her dedication and belief in the researcher's potential have been deeply appreciated and instrumental to the successful completion of this work.

The investigator wishes to thank all staff members of the Department of Education and the Librarian for their unwavering support and encouragement throughout the study.

The investigator expresses deep respect and gratitude to the **Chief Educational Officer** of the Corporation Schools for granting permission to conduct the study in the selected school.

The investigator extends sincere thanks to the Headmistress of Corporation Middle School, Kottai for her cooperation, encouragement, and administrative support throughout the period of the study.

The investigator also conveys heartfelt appreciation to the teachers of Corporation Middle School, Kottai for their valuable assistance, constant support, and cooperation in the successful completion of the research work.

Words cannot fully convey the investigator's profound gratitude to her family and friends for their inspiration and loving encouragement during this research.

Table of Contents

TABLE OF CONTENTS

CHAPTER NO.	CONTENTS	PAGE NO.
1	INTRODUCTION	
1.1	Background of the Study	1
1.2	Concept of Vocabulary Instruction	2
1.3	Importance of Reading Comprehension	3
1.4	Concept of Comprehension Skills	3
1.4.1	Lexical Comprehension	3
1.4.2	Semantic Comprehension	4
1.4.3	Contextual Comprehension	4
1.4.5	Situational Comprehension	4
1.5	Emoji Based Vocabulary Game Instruction	4
1.6	Challenges Faced by VIII Grade Students in Vocabulary and Comprehension	5
1.7	Theoretical Framework	6
1.8	Statement of the Problem	6
1.9	Operational Definitions of Key Terms	7
1.9.1	Effectiveness	7
1.9.2	Emoji-Based Vocabulary Game Instruction	7
1.9.3	Vocabulary	7
1.9.4	Game-Based Learning	7
1.9.5	Emojis	7
1.9.6	Comprehension Skills	8
1.9.7	VIII Standard Students	8

CHAPTER NO.	CONTENTS	PAGE NO.
1.1	Need for the Study	8
1.11	Significance of the Study	9
1.12	Objectives of the Study	9
1.13	Hypothesis of the Study	11
1.14	Limitations of the Study	11
1.15	Delimitations of the Study	12
1.16	Organization of the Thesis	12
2	LITERATURE REVIEW	
2.1	Introduction to Literature Review	14
2.2	Conceptual and Theoretical Background	14
2.3	Studies Related to Vocabulary Learning and Retention	15
2.4	Studies Related to Vocabulary Knowledge and Comprehension	16
2.5	Studies Related to Emoji Use in Language Learning	17
2.6	Studies Related to Emoji-Based Vocabulary Learning and Semantic Interpretation of Emojis	18
2.7	Studies Related to Emoji Use, Digital Communication and Emotional/Contextual Cues in Language Learning	19
2.8	Critical Analysis of Literature Review	20
2.9	Research Gap	21
2.1	Summary of Literature Review	22
2.11	Conclusion	23
3	METHODOLOGY	
3.1	Introduction	24
3.2	Research Process	24

CHAPTER NO.	CONTENTS	PAGE NO.
3.3	Conceptual Framework	25
3.4	Research Method	26
3.5	Research Design	26
3.6	Variable of the Study	26
3.6.1	Independent Variable	27
3.6.2	Dependent Variable	27
3.7	Locale of the Study	27
3.8	Population of the Study	27
3.8.1	Target Population	27
3.8.2	Accessible Population	28
3.9	Sample of the Study	28
3.9.1	Sampling Technique	28
3.1	Control of Extraneous Variables	29
3.11	Tools for Data Collection	29
3.11.1	Vocabulary Achievement Test (VAT)	29
3.11.2	Attitude toward Emoji-Based Vocabulary Game Instruction Questionnaire	36
3.11.3	Observation	38
3.12	List of Experts for Validation of Tools	41
3.13	Instructional Intervention	41
3.14	Preparation of the Instructional Module	42
3.14.1	Use of Digital Application in the Instructional Modules	43
3.14.2	Implementation of Instructional Modules	43

CHAPTER NO.	CONTENTS	PAGE NO.
3.15	Data Collection Procedure	43
3.16	Data Analysis	45
3.17	Conclusion	45
4	RESULTS AND DISCUSSION	
4.1	Descriptive Analysis	46
4.1.1	Group-wise Descriptive Statistics of Comprehension Scores Across Pre-test, Post-test, and Delayed Post-test	47
4.1.2	Comparative Mean Scores of Experimental and Control Groups Across Various Vocabulary Levels and Multiple Testing Phases	49
4.2	Differential Analysis	51
4.2.1	Testing of Assumptions for Parametric Analysis	51
4.2.1.1	Normality of Data (Shapiro–Wilk Test)	51
4.2.1.2	Homogeneity of Variance (Levene’s Test)	53
4.2.2	Analysis of Pre-test Equivalence	53
4.2.3	Level of Comprehension of VIII Standard Students Taught through Emoji-Based Vocabulary Game Instruction	54
4.2.4	Level of Attitude towards Emoji-Based Vocabulary Game Instruction	55
4.2.5	Difference between Pre-test and Post-test Comprehension Scores of VIII Standard Students in the Experimental Group	56
4.2.6	Difference between Experimental and Control Groups in Comprehension Scores	58
4.2.7	Difference in Post-Test Comprehension Scores Based on Selected Demographic Variables	60
4.2.7 (a)	Gender	60
4.2.7 (b)	Language of Instruction	61

CHAPTER NO.	CONTENTS	PAGE NO.
4.2.8	Relationship between Emoji Familiarity and Comprehension	63
4.2.9	Effect of Time, Group, and Interaction on Comprehension Skills (Mixed ANOVA)	64
4.2.10	Difference Between Post-Test and Delayed Post-Test Comprehension Scores of the Experimental Group	68
4.2.11	Difference in Retention of Comprehension Skills Between Experimental and Control Groups	70
4.3	Overall Discussion	72
4.4	Conclusion	72
5	SUMMARY AND CONCLUSION	
5.1	Findings of the Study	73
5.2	Educational Implications	76
5.3	Recommendations of the Study	76
5.4	Suggestions for Further Research	77
5.5	Conclusion	77
	BIBLIOGRAPHY	78
	ANNEXURE	82

List of Tables

LIST OF TABLES

TABLE NO.	TITLE	PAGE NO.
3.1	Sample of the study	28
3.2	Blueprint of Vocabulary Achievement Test	31
3.3	Weightage to objectives	31
3.4	Weightage to Content	32
3.5	Weightage to Questions	33
3.6	Difficulty Level Weightage	33
3.7	Scoring procedure	34
3.8	Rating scale used in observation	39
3.8	List of Experts for Validation of Tools	41
3.1	Data collection procedure	44
4.1	Group-wise Descriptive Statistics of Comprehension Scores Across Pre-test, Post-test, and Delayed Post-test	47
4.2	Comparative Mean Scores of Experimental and Control Groups Across Various Vocabulary Levels and Multiple Testing Phases	49
4.3	Assessment of Data Normality Using Shapiro–Wilk Test for Pre-test, Post-test, and Delayed Post-test Scores	51
4.4	Comparative Analysis of Pre-test Scores Between Experimental and Control Groups of VIII Standard Students	53
4.5	Level of Comprehension of VIII Standard Students in the Experimental Group in Post-test after Exposure to Emoji-Based Vocabulary Game Instruction	54
4.6	Level of Attitude of VIII Standard Students towards Emoji-Based Vocabulary Game Instruction in the Experimental Group	55
4.7	Significance of Difference between Pre-test and Post-test Comprehension Scores of VIII Standard Students in the Experimental Group	56

TABLE NO.	TITLE	PAGE NO.
4.8	Significance of Difference between Experimental and Control Groups in Pre-test, Post-test, Gain Scores and Delayed Post-test	58
4.9	Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Gender	60
4.10	Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Language of Instruction	61
4.11	Correlation between Familiarity with Emojis and Post-Test Comprehension Scores of VIII Standard Students	63
4.12	Mean Scores of Experimental and Control Groups Across Dimensions of Comprehension Level and Test Phases of VIII Standard Students	64
4.13	Mixed ANOVA Results Across Dimensions of Comprehension Level of VIII Standard Students	65
4.14	Paired Samples t-test Results Comparing Post-Test and Delayed Post-Test Comprehension Scores of VIII Standard Students	68
4.15	Comparison of Retention of Comprehension Skills Between Experimental and Control Groups Based on Delayed Post-test Scores	70

List of Figures

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE NO.
1.1	Theoretical framework	6
3.1	Steps in the research process	24
3.2	Conceptual framework	25
4.1	Group-wise Descriptive Statistics of Comprehension Scores Across Pre-test, Post-test, and Delayed Post-test	48
4.2	Mean Scores of Experimental and Control Groups Across Lexical, Contextual, Semantic, and Situational Levels at Pre-test, Post-test, and Delayed Post-test Phases	50
4.3	Assessment of Data Normality Using Shapiro–Wilk Test for Pre-test, Post-test, and Delayed Post-test Scores	52
4.4	Comparative Analysis of Pre-test Scores Between Experimental and Control Groups of VIII Standard Students	54
4.5	Significance of Difference between Pre-test and Post-test Comprehension Scores of VIII Standard Students in the Experimental Group	57
4.6	Significance of Difference between Experimental and Control Groups in Pre-test, Post-test, Gain Scores and Delayed Post-test of VIII Standard Students	59
4.7	Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Gender	61
4.8	Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Language of Instruction	62
4.9	Comparison of ANOVA Effect Sizes for Time, Group, and Interaction across Lexical, Semantic, Contextual, and Situational Levels	67
4.10	Paired Samples t-test Results Comparing Post-Test and Delayed Post-Test Comprehension Scores of VIII Standard Students	69
4.11	Comparison of Retention of Comprehension Skills Between Experimental and Control Groups Based on Delayed Post-test Scores	71

Introduction

CHAPTER 1

INTRODUCTION

Language is a key medium for expressing ideas and knowledge, involving listening, speaking, reading, and writing, and extends to meaningful use in context (IGI Global, n.d.). Literacy is viewed as a socially situated practice (Street, 1984; Baynham & Prinsloo, 2009; Purcell-Gates, 2007, as cited in Musa et al., 2012), where reading comprehension is essential for academic success. Vocabulary plays a central role in comprehension, yet its acquisition remains challenging in second language learning, and effective vocabulary learning is critical for language proficiency (Gu, 2003; Meara, 1983; Nation, 2001; Schmitt, 2000, 2019 as cited in Nemati, 2009; Karatas et al., 2025).

Comprehension, the ultimate goal of language learning (Oxford Advanced Learner's Dictionary, 2024), is often limited by inadequate vocabulary, especially at the middle school level. In the digital era, traditional methods may not engage learners effectively. Emojis, as visual representations of meaning (Kendall, 2025), offer a novel approach by integrating visual learning with gamification to enhance engagement, retention, and comprehension.

Therefore, this study examines the effectiveness of emoji-based vocabulary game instruction on improving comprehension skills among VIII grade students in Coimbatore district.

1.1 Background of the Study

Language teaching methodologies have evolved from traditional grammar-translation approaches to communicative and technology-integrated methods. In vocabulary instruction, conventional practices relying on memorization, repetition, and textbook exercises (Cameron, 2001) often result in short-term retention without promoting deeper understanding or contextual application. This necessitates more engaging and cognitively effective strategies beyond rote learning.

With advancements in Information and Communication Technology (ICT), classrooms increasingly incorporate digital tools and interactive platforms. Modern learners, often termed “digital natives,” are familiar with visual forms of communication

such as emojis, which convey emotions and ideas efficiently. Their visual simplicity makes them a valuable resource for vocabulary learning, where meaning representation is crucial.

The use of visuals in learning is supported by cognitive theories. Mayer's (2001) Cognitive Theory of Multimedia Learning emphasizes improved understanding through the integration of verbal and visual elements, while Paivio's (1971) Dual Coding Theory highlights the effectiveness of processing information through both channels. Additionally, game-based learning promotes motivation, engagement, teamwork, and immediate feedback. In contexts like Coimbatore district, where English is a second language, students often struggle with vocabulary acquisition and comprehension, and traditional methods may not address diverse learning needs. In this regard, emojis act as visual supports that enhance understanding, retention, and recall. Therefore, integrating emoji-based vocabulary instruction offers a theoretically grounded approach to improving learners' comprehension and engagement.

1.2 Concept of Vocabulary Instruction

Vocabulary instruction is a key component of language learning, supporting comprehension, academic achievement, and overall language proficiency (Zeng et al., 2025). Effective instruction goes beyond memorization by promoting meaningful engagement, repeated exposure, and contextual use of words for deeper understanding and retention.

In modern education, vocabulary instruction is viewed as an interactive and learner-centered process that incorporates contextual learning and visual support to enhance comprehension (Zeng et al., 2025). At the middle school level, it must be cognitively engaging and developmentally appropriate to strengthen language foundations.

In this study, vocabulary instruction is organized into four levels: lexical, semantic, contextual, and situational. The lexical level focuses on basic word meanings supported by emojis, the semantic level develops word relationships, the contextual level emphasizes meaning from text, and the situational level promotes real-life application (Krylovska, 2024; Vocabulary.com, n.d.; Elgort et al., 2015; Li, 2025).

Thus, vocabulary instruction is conceptualized as a multi-level process that enhances comprehension, retention, and effective language use in both academic and real-life contexts.

1.3 Importance of Reading Comprehension

Reading comprehension is a critical skill that enables learners to derive meaning from written texts and transform words into meaningful ideas. It goes beyond mere word recognition and involves understanding, interpreting, and connecting information within a text (Brandon, 2021). Effective comprehension supports academic success by helping students process content across subjects, retain information, and apply knowledge appropriately. It also involves active strategies such as goal setting, questioning, and visualization, which enhance deeper understanding and engagement with texts (Eastern Washington University, 2022). Furthermore, as students expand their vocabulary and prior knowledge, their ability to comprehend improves, making reading more meaningful and effective. Thus, reading comprehension is essential not only for academic achievement but also for lifelong learning and communication.

1.4 Concept of Comprehension Skills

Comprehension skills refer to learners' ability to understand, interpret, and derive meaning from language, forming a foundation for effective communication and academic success in ESL contexts. Vocabulary knowledge plays a crucial role in comprehension, as understanding words directly influences meaning-making from texts (Zeng et al., 2025). At the VIII standard level, developing comprehension skills is essential as English serves as a primary medium of instruction.

In this study, comprehension is viewed at a basic level, focusing on clear meaning construction rather than higher-order skills. It is assessed through four progressive levels—lexical, semantic, contextual, and situational—representing stages of meaning development and increasing complexity in vocabulary processing.

1.4.1 Lexical Comprehension

Lexical comprehension refers to the ability of learners to recognize words and understand their direct or literal meanings. At this level, students demonstrate comprehension

by identifying the meaning of individual vocabulary items drawn from the prescribed syllabus. This forms the foundational stage of comprehension, as understanding word meaning is essential before processing sentences or larger texts (Krylovska, 2024). In the present study, lexical comprehension reflects students' basic level of meaning recognition.

1.4.2 Semantic Comprehension

Semantic comprehension involves understanding the relationships between words and their conceptual meanings. At this level, learners identify connections such as synonyms, antonyms, and simple associations, which help in developing deeper understanding beyond isolated meanings. This ability to recognize meaning relationships enhances overall language interpretation and supports comprehension development (Vocabulary.com, n.d.).

1.4.3 Contextual Comprehension

Contextual comprehension refers to the ability to infer the meaning of words based on the context in which they are used. Learners analyze surrounding words, sentences, or textual clues to determine appropriate meanings. This level highlights the importance of learning vocabulary through meaningful exposure and repeated encounters in context, which strengthens comprehension and retention (Elgort et al., 2015).

1.4.5 Situational Comprehension

Situational comprehension involves understanding and applying vocabulary in real-life or familiar situations. At this level, learners interpret meaning based on scenarios, actions, or emotional contexts and select appropriate vocabulary accordingly. This reflects practical language use and supports meaningful communication, aligning with experience-based and situational learning approaches (Li, 2025).

1.5 Emoji Based Vocabulary Game Instruction

Emoji-based vocabulary game instruction is an innovative approach that integrates visual symbols with interactive learning. Emojis—derived from *e* (picture) and *moji* (character)—are digital pictograms representing emotions, actions, and ideas, and can be used to teach vocabulary meaningfully. According to Emojipedia's People Emoji List, they include facial expressions, gestures, activities, roles, and relationships. Research shows that emojis act as effective visual-semantic cues supporting comprehension (Danesi, 2019;

Kralj Novak et al., 2015) and are closely linked to language and sentiment (Barbieri et al., 2017; Hu et al., 2017).

Studies suggest that emoji-based activities may enhance engagement, participation, and vocabulary learning; however, there is limited empirical evidence on their effectiveness in improving comprehension skills among middle school ESL learners in specific classroom contexts (Sivaraja et al., 2025; Li & Zhong, 2025; Al-aajam, 2019; Sanhas et al., 2025). Technological research further supports their relevance by showing that emojis can be systematically linked to emotions and enhance communication (Anchana et al., 2021; Karulkar et al., 2025).

In addition to pedagogical benefits, technological advancements further strengthen the applicability of emoji-based instruction. Research by Anchana et al. (2021) demonstrates that emojis can be systematically generated and linked to human emotions using deep learning, reinforcing their cognitive and contextual relevance. Studies on digital communication, such as Karulkar et al. (2025), emphasize that emojis enhance emotional engagement and understanding in text-based interactions. These findings collectively support the use of emoji-based vocabulary games as an effective instructional strategy, as they combine visual learning, emotional connection, and interactive engagement to improve vocabulary comprehension and overall language learning outcomes among students.

1.6 Challenges Faced by VIII Grade Students in Vocabulary and Comprehension

VIII standard students face several challenges in developing vocabulary and comprehension in English as a second language. Limited vocabulary knowledge affects their ability to understand texts at lexical and contextual levels (Aida, 2021; Kaphle, 2024), while grammatical complexity and weak semantic understanding further hinder meaning construction. Many learners rely on memorization instead of effective strategies, leading to poor retention (Kaphle, 2024), along with issues like low motivation, poor concentration, and limited exposure to English (Aida, 2021). These challenges highlight the need for engaging, structured, and context-based instructional approaches to improve vocabulary and comprehension skills..

1.7 Theoretical Framework

The present study, titled “*Effectiveness of Emoji-Based Vocabulary Game Instruction on Enhancing Comprehension Skills among VIII Grade Students in Coimbatore District,*” is grounded in theories supporting active and multimodal learning. Constructivism emphasizes learners’ active knowledge construction through interaction, facilitated by emoji-based games. Dual Coding Theory (Paivio, 1971) and Multimedia Learning Theory (Mayer, 2001) highlight improved comprehension through the integration of visual and verbal elements. Game-Based Learning promotes motivation and engagement, while Social Constructivism (Vygotsky, 1978) underscores collaborative learning. Cognitive Load Theory (Sweller, 1988) supports the use of simple visuals like emojis to reduce cognitive overload. Together, these theories provide a strong foundation for enhancing comprehension through emoji-based vocabulary instruction.

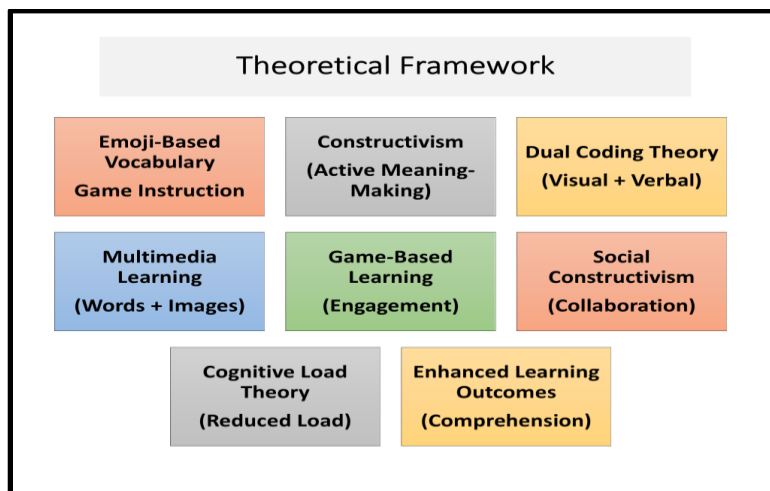


Figure: 1.1

Theoretical framework

1.8 Statement of the problem

The problem statement for educational research is a short statement that describes the particular problem which the researcher is interested in investigating. The present study investigates whether emoji-based vocabulary game instruction significantly enhances comprehension skills among VIII grade students in Coimbatore district. It examines the effect of this instructional strategy on improving students’ understanding and use of language.

1.9 Operational definitions of key terms

1.9.1 Effectiveness

Effectiveness according to the Oxford dictionary means “the quality of producing an intended or desired result”. In this study effectiveness is measured by comparing the mean scores of the pre test and post test result of comprehension skill learnt. The result reveals a noticeable improvement in the students' understanding skills by using emoji based vocabulary game instruction.

1.9.2 Emoji-Based Vocabulary Game Instruction

Emoji-based vocabulary game instruction refers to a structured teaching–learning method in which vocabulary from the VIII standard English textbook (Tamil Nadu State Board syllabus) is taught through game-based activities using emojis as visual cues. In this study, it involves the use of digital platforms such as LearningApps and Wordwall to conduct activities like matching, grouping, and quizzes.

1.9.3 Vocabulary

Vocabulary refers to the set of words selected from Unit 7 of the VIII standard English textbook, including prose, poetry, and supplementary sections, focusing on their meanings, usage, and contextual understanding.

1.9.4 Game-Based Learning

Game-based learning refers to the use of structured game elements such as rules, challenges, and interactive activities to facilitate vocabulary learning and enhance student engagement during instruction.

1.9.5 Emojis

The word emoji originated from 2 Japanese words : “e” meaning “picture” and “moji” meaning “written character” . Emojis are a digital pictogram that are used in texting , social media and other computer mediated interactions. It is used to convey a variety of concepts, ideas and emotions (Kendall, 2025). Emojis refer to visual symbols or pictorial representations used in digital communication to convey meanings, emotions, or ideas. In this study, emojis are used as instructional aids to support vocabulary learning.

1.9.6 Comprehension Skills

According to the Oxford dictionary,” comprehension means the ability to understand”. According to Oxford owl, “it relies on 2 interconnected abilities: word reading (being able to decode the symbols on the page) and language comprehension (being able to understand the meaning of the words and sentence)”. Comprehension skills refer to the ability of students to understand, interpret, and derive meaning from words and texts. In this study, it includes lexical, semantic, contextual, and situational understanding, measured through achievement test scores.

1.9.7 VIII Standard Students

VIII standard students refer to learners studying in Grade VIII in selected schools of Coimbatore District under the Tamil Nadu State Board syllabus.

1.10 Need for the study

1. Many middle school students in India, especially in ESL contexts, have inadequate vocabulary, which hinders comprehension and overall academic performance (Nation, 2022).
2. Conventional vocabulary teaching methods such as memorization and textbook-based learning often fail to engage learners or support long-term retention.
3. As digital-native learners respond better to visual and interactive content, integrating emojis as instructional tools aligns with Dual Coding Theory (Paivio, 1971) and may enhance understanding and recall.
4. There is limited experimental research validating the effectiveness of emoji-based vocabulary instruction in real classroom settings, particularly among VIII grade students in Tamil Nadu.
5. Emoji-based vocabulary games offer a low-cost, adaptable teaching strategy suitable for diverse school environments, supporting current educational reforms (NCERT, 2005; NEP, 2020).

1.11 Significance of the Study

- Vocabulary knowledge is a strong predictor of reading comprehension and overall academic achievement, particularly at the middle school level. As emphasized by Nation (2022), adequate vocabulary is essential for understanding texts and effective language use. This study is significant in strengthening vocabulary and comprehension skills among VIII standard students, thereby supporting their academic and cognitive development.
- The study bridges the gap between informal digital communication and formal classroom instruction by utilizing emojis as visual-semantic tools. Since students frequently use emojis in daily communication, integrating them into learning can enhance engagement, motivation, and participation, aligning with the preferences of digital-age learners.
- It contributes to the limited body of experimental research in school education by providing empirical evidence through a structured pre-test, post-test, and delayed post-test design. This data-driven approach enhances the credibility of innovative teaching strategies and supports evidence-based educational practices.
- The study has strong practical applicability, especially in Indian school contexts with limited resources. Emoji-based vocabulary games are cost-effective, adaptable, and easy to implement using simple materials, making them suitable for government and aided schools.
- The approach aligns with current educational reforms such as the National Curriculum Framework (NCERT, 2005) and the National Education Policy (NEP, 2020), which emphasize experiential learning, learner-centered pedagogy, and the integration of technology in education.

1.12 Objectives of the study

Development and Validation

- To develop and validate an emoji-based vocabulary game instructional module for VIII standard students.

- To construct and validate an attitude questionnaire towards emoji-based vocabulary game instruction.
- To develop and validate an achievement test to measure vocabulary acquisition and comprehension skills.

Descriptive Analysis

- To determine the level of comprehension skills among VIII standard students taught through emoji-based vocabulary game instruction.
- To assess the level of students' attitude towards emoji-based vocabulary game instruction.

Differential and Comparative Analysis

- To examine the difference between pre-test and post-test comprehension scores of VIII standard students.
- To compare the effectiveness of emoji-based vocabulary game instruction and conventional teaching methods on comprehension skills among VIII standard students.
- To examine the differences in post-test comprehension scores of VIII standard students based on the following variables:
 - Gender
 - Language of instruction

Relationship Analysis

- To analyse the relationship between familiarity with emojis and comprehension skills of VIII standard students.

Mixed ANOVA and Retention Analysis

- To analyse the effect of emoji-based vocabulary game instruction on comprehension skills of VIII standard students across time (pre-test, post-test, and delayed post-test) and groups (experimental and control).
- To examine the retention effect of emoji-based vocabulary game instruction on comprehension skills of VIII standard students.

1.13 Hypothesis of the study

- H01: There is no significant level of comprehension skills among VIII standard students taught through emoji-based vocabulary game instruction.
- H02: There is no significant level of attitude towards emoji-based vocabulary game instruction among VIII standard students.
- H03: There is no significant difference between the pre-test and post-test comprehension scores of VIII standard students.
- H04: There is no significant difference between the mean comprehension scores of experimental and control groups.
- H05: There is no significant difference in the mean post-test comprehension scores of VIII standard students based on the selected demographic variables.
- H06: There is no significant relationship between familiarity with emojis and comprehension skills of VIII standard students.
- H07: There is no significant effect of time, group, and their interaction on the comprehension skills of VIII standard students.
- H08: There is no significant difference between post-test and delayed post-test comprehension scores of VIII standard students.
- H09: There is no significant difference in retention of comprehension skills between experimental and control groups.

1.14 Limitations of the Study

1. The findings of the study may not be generalizable to students of other grades, regions, or educational boards, as the study is confined to VIII standard students from selected schools in Coimbatore District.
2. The results may not reflect comprehensive vocabulary acquisition across the entire syllabus, since the instructional intervention is restricted to Unit 7 (prose, poetry, and supplementary) of the Tamil Nadu State Board English textbook.

3. The study focuses primarily on basic levels of comprehension—namely lexical, semantic, contextual, and situational understanding—and does not address higher-order skills such as critical analysis and creative interpretation.
4. The effectiveness of the intervention may be influenced by the use of specific digital tools, such as LearningApps and Wordwall; therefore, the results may vary if different digital tools or instructional environments are employed.

1.15 Delimitations of the study

The present study is delimited in the following aspects:

1. The study is confined to VIII standard students studying in selected schools in Coimbatore District.
2. It is limited to students following the Tamil Nadu State Board syllabus.
3. The study focuses only on the English language, particularly the vocabulary components.
4. The content coverage is restricted to Unit 7 of the VIII standard English textbook, including prose, poetry, and supplementary sections.
5. The instructional intervention is limited to the use of emoji-based vocabulary game instruction, implemented through digital activities.
6. The study is confined to assessing selected aspects of vocabulary, namely: lexical, semantic, contextual, and situational understanding

1.16 Organization of the Thesis

Chapter 1: Introduction

This chapter introduces the study and establishes its foundation. It includes the background, need and significance, statement of the problem, objectives, hypotheses, and other essential aspects. It also presents the operational definitions of key terms, identifies the independent and dependent variables, and outlines the delimitations and limitations of the study.

Chapter 2: Review of Related Literature

This chapter provides a comprehensive review of literature relevant to the study. It covers vocabulary instruction, comprehension skills, the role of visual symbols and emojis in learning, game-based learning strategies, and the use of technology in English education. It also examines both theoretical and empirical studies related to emoji-based interventions in improving comprehension skills.

Chapter 3: Methodology

This chapter explains the research design and procedures followed in the study. It includes details of the sample, sampling techniques, research instruments, and their reliability. It also describes the development and implementation of the emoji-based vocabulary game instruction used as the intervention.

Chapter 4: Results and Discussion

This chapter presents and analyzes the data collected through the vocabulary comprehension test and other tools. Results are organized according to the objectives, hypotheses are tested, and the findings are interpreted. The educational implications of the results are also discussed.

Chapter 5: Conclusion

This chapter summarizes the major findings and draws conclusions based on the results. It highlights the educational implications for teachers, curriculum developers, and policymakers, and provides recommendations for further research and practical applications of emoji-based vocabulary game instruction.

Literature Review

CHAPTER II

LITERATURE REVIEW

2.1 Introduction to literature review

A literature review serves as a crucial part of any research project. It entails a methodical review and evaluation of prior research, including books, articles, and other academic sources that are relevant to the subject being studied. The goal of reviewing the literature is to gain insight into current knowledge within the field, recognize key ideas and theories, and analyze the results from previous studies. It also assists the researcher in preventing redundant efforts and in recognizing areas that need additional exploration.

In educational research, examining related literature offers a theoretical and evidence-based basis for the study. It allows the researcher to grasp the different approaches, methods, and strategies that have been employed in comparable studies. By going through this process, the researcher learns about how various factors have been examined and what findings have been achieved.

In this study, the researcher examines existing literature on emoji-based learning, visual learning approaches, vocabulary growth, and the application of digital tools in language instruction. The review encompasses both national and international research that examines creative teaching approaches aimed at enhancing vocabulary skills in students. These studies offer useful insights regarding the effectiveness of learning methods that incorporate visual elements and technology support.

2.2 Conceptual and theoretical background

The present study is grounded in established learning theories that emphasize the importance of visual representation, active engagement, and meaningful learning in enhancing comprehension skills. Constructivism highlights that learners actively construct knowledge through interaction and experience. In this study, students interpret emojis and connect them with vocabulary through game-based activities, facilitating deeper understanding.

Dual Coding Theory proposed by Paivio (1971) suggests that learning is enhanced when information is processed through both verbal and visual channels. The use of emojis alongside words supports this dual processing, improving memory and retention. Similarly,

Multimedia Learning Theory emphasizes that combining words and images enhances understanding, making emoji-based instruction an effective strategy.

Game-Based Learning further supports this approach by promoting engagement, motivation, and active participation. Social Constructivism highlights the importance of interaction and collaboration in learning, which is facilitated through group-based emoji activities. In addition, Cognitive Load Theory explains that simple visual elements like emojis reduce mental effort and support efficient information processing.

Thus, these theoretical perspectives provide a strong foundation for the use of emoji-based vocabulary game instruction in enhancing comprehension skills among 8th standard students.

2.3 Studies related to vocabulary learning and retention

Karatas et al. (2025) investigated the impact of memory enhancement techniques—retrieval practice, spaced repetition, and feedback—on second language vocabulary learning using an experimental design with a pre-test and two post-tests. The findings showed that the optimized approach led to significantly higher improvement (18%) compared to the standard method (8%), indicating its effectiveness in vocabulary acquisition and retention.

Nguyen (2022) examined the effectiveness of rote memorization and contextual learning in vocabulary retention using a comparative experimental design with immediate and delayed tests. The findings revealed that contextual learning was more effective than rote memorization, particularly in enhancing immediate understanding and overall vocabulary retention.

Na & Trang (2022) investigated the effect of using pictures on EFL learners' vocabulary retention through an experimental design with pre-test, post-test, and delayed test. The findings showed that while both groups improved, the group taught with pictures performed significantly better, indicating the effectiveness of visual support in vocabulary learning.

Bates & Son (2020) examined the effect of simplified picture-based representations on vocabulary acquisition using an experimental design with multiple

assessments. The findings showed that picture-based learning led to higher recall and positive learner attitudes, highlighting the effectiveness of visual cues in enhancing vocabulary retention.

Allanazarova (2020) explored vocabulary retention from a cognitive perspective through a qualitative case study of an ESL learner. The findings showed that factors like interference and neurolinguistic blocking affect retention, while the use of visual materials such as pictorial texts improved both short- and long-term vocabulary retention.

Maria Suganthi (2021) examined the effect of gamification on attention and memory among prospective teachers using an experimental design with control and experimental groups. The findings showed that gamified instruction significantly improved attention, engagement, and memory compared to traditional methods. This indicates that game-based learning enhances cognitive engagement and learning outcomes.

Ghorbani & Riabi (2011) investigated the effect of memory strategies on EFL vocabulary retention based on the depth of processing hypothesis using an experimental design. The study employed immediate and delayed post-tests and independent sample t-tests for analysis. The findings showed that the experimental group performed better in delayed post-tests, indicating improved long-term vocabulary retention through memory strategies.

Nemati (2009) examined the effectiveness of memory-based strategies on vocabulary acquisition and retention through an experimental study with pre-university students. The findings showed that learners taught using memory strategies performed significantly better than those with traditional methods, demonstrating improved short- and long-term vocabulary retention.

2.4 Studies related to vocabulary knowledge and comprehension

Brooks et al. (2023) investigated the role of vocabulary in reading comprehension among EAL learners using a quantitative approach. The findings showed that vocabulary knowledge was the strongest predictor of comprehension, with higher vocabulary levels leading to better understanding of texts. This highlights the critical role of vocabulary development in improving learners' overall comprehension skills and academic performance.

Luo et al. (2021) examined the impact of vocabulary breadth and depth on English listening comprehension using a quantitative design. The findings revealed that vocabulary depth had a stronger influence than breadth, especially in inferential comprehension tasks. This indicates that deeper word knowledge is essential for effective listening comprehension.

Durbahn et al. (2020) examined the relationship between vocabulary knowledge and viewing comprehension among EFL learners using a quantitative approach. The findings showed a moderate positive relationship, indicating that stronger vocabulary enhances understanding of audiovisual content. This highlights the role of vocabulary in both literal and inferential comprehension and its importance in multimodal learning contexts.

Rahman & Iqbal (2019) examined the relationship between vocabulary breadth, depth, and reading comprehension using a quantitative approach. The findings revealed that vocabulary depth had a stronger influence than breadth, highlighting its key role in improving reading comprehension. This indicates that deeper word knowledge is essential for effective understanding of texts.

Masrai (2019) examined the relationship between vocabulary knowledge at different frequency levels and reading comprehension using a quantitative approach. The findings showed that high- and mid-frequency vocabulary had a strong impact, while low-frequency vocabulary also supported advanced learners. This highlights the importance of vocabulary knowledge across different levels for effective comprehension.

2.5 Studies related to emoji use in language learning

Karulkar et al. (2025) examined the impact of emojis on sentiment and engagement using tweet analysis and VADER sentiment analysis. The findings showed that emojis enhance comprehension, emotional response, and interaction. This suggests that emojis can support vocabulary learning by improving understanding, retention, and learner engagement.

Sivaraja et al. (2025) investigated a gamified storytelling approach using emojis to support English learning among primary students. The activities helped learners connect emojis with vocabulary and build stories collaboratively. The findings showed improved participation, contextual understanding, and stronger word–image associations, indicating enhanced vocabulary comprehension, retention, and engagement.

Sanhas et al. (2025) reviewed 22 studies on the use of emojis in kindergarten English learning. The review found that emojis help connect images to word meanings, express emotions, and support interactive communication. They also enhance vocabulary development, emotional understanding, and collaboration, creating an engaging learning environment. These findings indicate that visual emoji-based tools can support vocabulary comprehension and learner engagement in early education.

Anchana et al. (2021) used computer vision and deep learning to generate emojis by mapping facial expressions and classifying emotions. The study found that emojis can be systematically linked to emotional and contextual cues, strengthening their cognitive relevance. This supports their use in vocabulary learning by enhancing meaning association, comprehension, and memory retention.

Al-aajam (2019) examined the use of emojis and emoticons in vocabulary learning among EFL students through an experimental design. The findings showed improved vocabulary learning, motivation, and engagement in the experimental group, highlighting the effectiveness of visual digital symbols.

Barbieri et al. (2017) examined the role of emojis in second language vocabulary recognition using a 2×2 experimental design with English-speaking learners of Chinese. The findings showed improved speed and accuracy when emojis accompanied words, indicating that visual symbols support vocabulary recognition and comprehension. This suggests that emojis function as meaningful cues that can enhance vocabulary learning and understanding in instructional settings.

2.6 Studies Related to Emoji-Based Vocabulary Learning and Semantic Interpretation of Emojis

Klein, Aydin, & West (2024) explored Emojinize, a system that converts text into emoji sequences using large language models. The findings showed that emoji-based representations improved word-guessing performance, indicating that emojis effectively convey meaning and support comprehension. This supports the present study by reinforcing that emojis can function as visual cues to enhance vocabulary understanding and learning outcomes, regardless of how they are selected.

Danesi (2022) examined emojis as a visual language used to express emotions, tone, and intention in digital communication. The study found that emojis convey emotional and contextual meanings that are often expressed through non-verbal cues in face-to-face interaction. This supports the present study by indicating that emojis can function as visual aids to enhance learners' understanding of word meanings and contextual use, thereby improving vocabulary comprehension and engagement.

Robertson et al. (2021) examined how emoji meanings change over time using Twitter data and computational linguistics methods. The findings showed that emoji meanings evolve based on context, events, and usage patterns, indicating their dynamic semantic nature.

Danesi (2019) explored emojis as a visual language used to express emotions, attitudes, and communicative intent in digital communication, helping users interpret tone, meaning, and context through symbolic representations. This supports the present study by indicating that emojis can function as visual cues to enhance vocabulary comprehension and retention among learners.

Hu et al. (2017) investigated emojis as non-verbal signals in online communication and found that different types of emojis influence how messages are interpreted by conveying emotional tone and intent. This supports the present study by indicating that emojis function as visual cues that enhance learners' understanding of meaning and context in vocabulary learning.

Danesi (2016) analyzed emojis as elements of visual language in online communication and found that they convey emotions, tone, and contextual meaning similar to non-verbal cues in face-to-face interaction. This supports the present study by indicating that emojis can function as visual cues in vocabulary learning to improve comprehension and retention.

2.7 Studies related to emoji use, digital communication and emotional/contextual cues in language learning

Khan, Majumdar, & Mondal (2025) explored the role of emojis in improving sentiment analysis using machine learning models, showing that emojis enhance the

accuracy of interpreting emotional and contextual meaning in digital communication. This supports the present study by indicating that emojis function as effective visual cues that convey meaning beyond words, thereby aiding vocabulary comprehension and contextual understanding in language learning.

Kelly & Watts (2024) examined how emojis are used in digital communication to express emotions, intentions, and relational meanings. Based on interview data, the study found that users creatively employ emojis to enhance emotional expression and interpersonal connection. This supports the present study by indicating that emojis can function as clear visual cues for conveying meaning and context, which can be applied in language learning to improve vocabulary understanding and comprehension.

Barbieri, Ballesteros, & Saggion (2023) investigated the predictability of emojis from written text using NLP techniques and LSTM models to analyze semantic relationships between words and emojis. The findings showed that emojis have consistent semantic links with language, indicating they function as meaningful visual elements. This supports the present study by suggesting that emojis can serve as visual cues in vocabulary learning to enhance comprehension and retention.

Kralj Novak et al. (2015) analyzed emoji usage in over 1.6 million tweets to examine their emotional expressions and developed the Emoji Sentiment Ranking. The findings showed that emojis consistently convey emotions and enhance message tone across languages. This supports the present study by indicating that emojis can function as universal visual cues that help learners associate vocabulary with emotions and context, improving comprehension and retention.

2.8 Critical analysis of literature review

- The reviewed literature highlights the importance of vocabulary knowledge, particularly its depth and breadth, in enhancing reading and listening comprehension (Rahman & Iqbal, 2019; Masrai, 2019; Luo et al., 2021). However, these studies mainly focus on traditional instructional approaches and often overlook interactive and multimodal strategies, indicating a need for innovative methods such as emoji-based and game-oriented instruction.

- Research on emoji-based learning (Bates & Son, 2020; Sivaraja et al., 2025; Robertson et al., 2018; Klein et al., 2020) shows that visual symbols improve engagement, memory, and contextual understanding. Yet, most studies are conducted in controlled or adult learning contexts, with limited evidence from school classrooms, particularly at the middle school level.
- Similarly, gamified instruction has been shown to improve motivation, attention, and retention, but there is limited research on its integration with emoji-based learning. Studies in digital communication and NLP (Barbieri et al., 2023; Kelly & Watts, 2024; Kralj Novak et al., 2015) further confirm that emojis function as meaningful visual and emotional cues, though their classroom application remains underexplored.
- Methodologically, existing studies often use small samples, adult participants, or short-term assessments, with limited focus on classroom implementation and long-term learning outcomes. Overall, while prior research supports the value of emojis and gamification, there is a clear gap in classroom-based, curriculum-aligned studies for school learners. The present study addresses this gap by focusing on VIII standard students, integrating emoji-based game instruction, examining comprehension skills, and providing practical classroom insights.

2.9 Research gap

The analysis of existing literature shows that several studies have examined vocabulary development, visual learning strategies, and the role of emojis in digital communication. Research on vocabulary breadth and depth highlights their strong influence on reading and listening comprehension, while studies on visual aids such as images and gestures show improved vocabulary retention through meaningful associations. Recent studies also emphasize that emojis function as visual symbols conveying emotions, contextual meaning, and semantic cues, and can enhance engagement and vocabulary recognition. Computational and technological research further supports their role in improving emotional understanding and text interpretation.

However, important gaps remain. Most studies focus on emojis in digital communication or computational contexts rather than their structured use as classroom instructional tools. Limited research exists on integrating emojis with game-based learning for vocabulary and comprehension development. In addition, most studies are conducted in international contexts, with little focus on Indian school settings.

There is also a lack of research on the systematic use of emoji-based activities to enhance comprehension skills among middle school students, particularly at the VIII standard level. Moreover, the combined use of emojis and game-based instruction as an integrated teaching strategy remains underexplored, especially in the context of Coimbatore District, Tamil Nadu, where students learn English as a second language.

2.10 Summary of literature review

The reviewed literature highlights the growing importance of innovative instructional approaches such as visual aids, multimedia integration, and gamified learning in improving vocabulary acquisition and comprehension skills. Studies consistently show that vocabulary depth and breadth significantly influence reading and listening comprehension, emphasizing the need for meaningful, context-based learning rather than rote memorization (Rahman & Iqbal, 2019; Masrai, 2019; Luo et al., 2021). In this context, emojis have been identified as effective visual symbols that represent meaning, emotion, and context, thereby strengthening word–meaning associations and improving learner engagement, motivation, and retention (Bates & Son, 2020; Sivaraja et al., 2025; Robertson et al., 2018; Klein, Aydin & West, 2020; Kralj Novak et al., 2015).

Further studies on game-based learning indicate that gamified instructional strategies enhance attention, memory, and active participation, making vocabulary learning more engaging and effective (L, 2021; Henning Klein, Aydin & West, 2020). When combined with emojis, these strategies create a multimodal learning environment that supports lexical recognition, semantic understanding, contextual interpretation, and situational application. Overall, the literature supports the effectiveness of integrating emojis with game-based learning to enhance vocabulary and comprehension skills, providing a strong theoretical foundation for the present study focused on VIII standard students in Coimbatore District.

2.11 Conclusion

In conclusion, the reviewed literature provides a strong theoretical and empirical foundation for the present study. It highlights the importance of visual, digital, and gamified approaches in enhancing vocabulary acquisition and comprehension skills. However, the need for empirical validation in real classroom contexts remains evident. The present study contributes to this area by examining the effectiveness of emoji-based vocabulary game instruction in improving the comprehension skills of secondary school students.

Methodology

CHAPTER III

METHODOLOGY

3.1 Introduction

This chapter presents the methodology adopted for the study titled “Effectiveness of Emoji-Based Vocabulary Game Instruction on Enhancing Comprehension Skills among VIII Standard Students in Coimbatore District.” It describes the research design, variables, sample, data collection procedure, and methods of data analysis.

The study follows an experimental design to examine the effect of emoji-based vocabulary game instruction (independent variable) on students’ comprehension skills of VIII standard students (dependent variable). It also outlines the sampling procedure, implementation of the experiment, and statistical techniques used for data analysis to ensure a systematic evaluation of the intervention.

3.2 Research Process

The research process involves a systematic sequence of steps that are essential for the successful execution of a study.

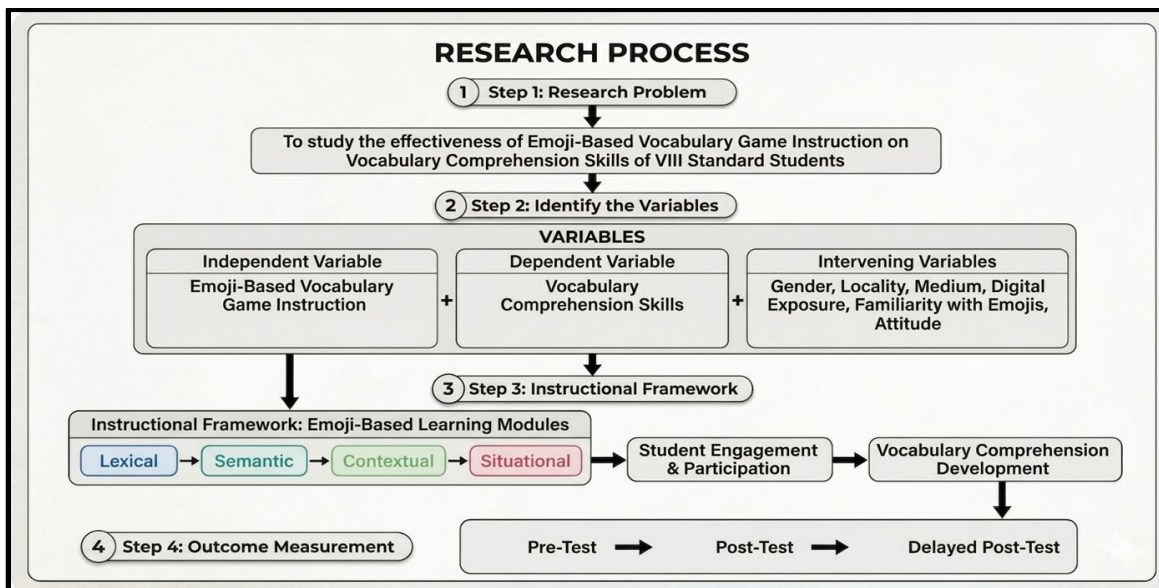


Figure 3.1

Steps in the research process.

3.3 Conceptual framework

The conceptual framework is defined as the pictorial representation of the relationship between the variables in a study and the manner in which the research is carried out (Creswell, 2017). In the present study, the independent variable is the instruction provided through the emoji-based vocabulary game method, while the dependent variable is the vocabulary comprehension skills of VIII standard students. The instructional strategy is structured into four levels—lexical, semantic, contextual, and situational—to facilitate students’ progression from basic understanding to meaningful real-life application. Certain factors such as gender, locality, medium of instruction, and familiarity with emojis are considered as intervening variables, as they may influence the effectiveness of the instructional method. The impact of the instruction is assessed through a pre-test, post-test, and delayed post-test, enabling the researcher to measure both immediate and sustained improvement in students’ comprehension skills.

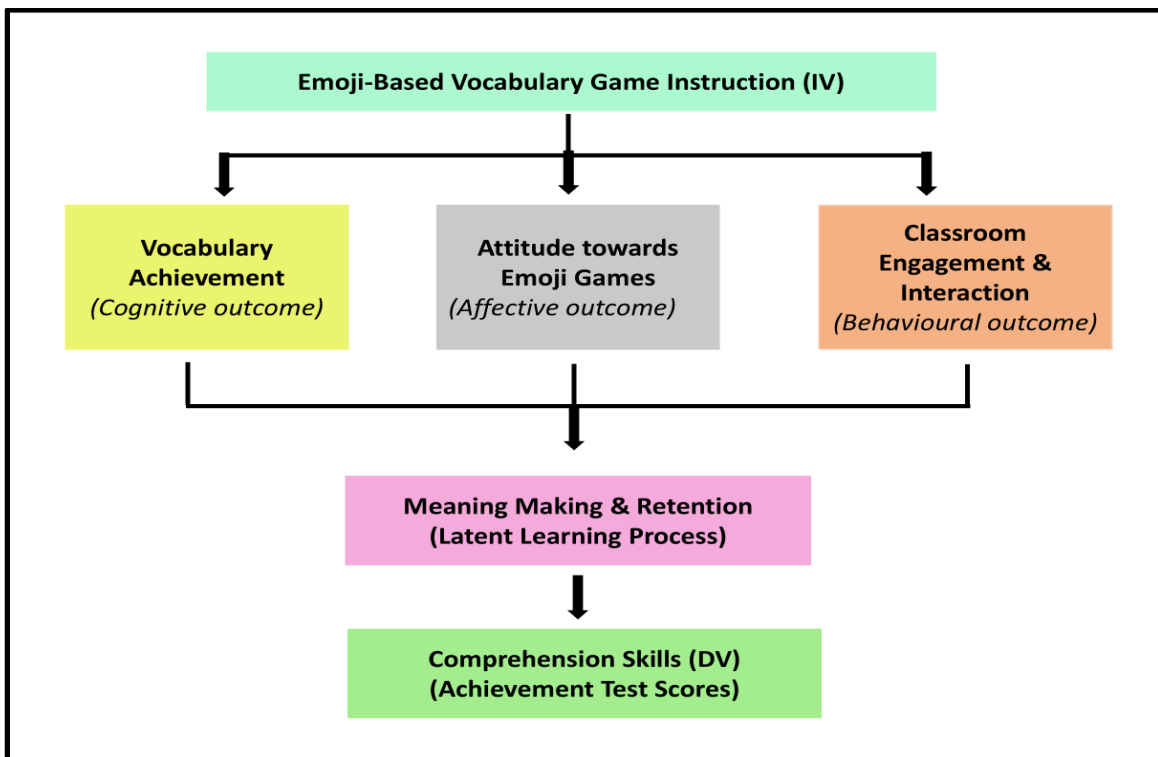


Figure 3.2

Conceptual framework

3.4 Research method

This study examines the effect of emoji-based vocabulary game instruction on VIII standard students' comprehension using a mixed-method approach within a quasi-experimental design. The quantitative component includes a researcher-developed vocabulary achievement test administered as pre-test, post-test, and delayed post-test for both experimental and control groups to assess the effectiveness of the intervention, along with an attitude questionnaire to measure students' responses to the instructional strategy.

The qualitative component involves classroom observation to record students' participation, engagement, and interaction during learning activities. Overall, the integration of quantitative and qualitative methods enables a comprehensive evaluation of both academic improvement in vocabulary comprehension and changes in students' attitudes and learning behavior.

3.5 Research design

Research design refers to the systematic plan used to conduct the study and collect data. This study adopts a quasi-experimental design with a pre-test, post-test, and delayed post-test control group design to examine the effectiveness of emoji-based vocabulary instruction on students' vocabulary comprehension.

The study includes an experimental group and a control group. Both groups are given a pre-test to assess initial vocabulary levels. The experimental group is taught using emoji-based vocabulary game instruction, while the control group is taught using traditional methods. After the intervention, a post-test is conducted, followed by a delayed post-test after three weeks to measure retention. The comparison of scores across the three tests is used to determine the effectiveness of the instructional strategy.

3.6 Variable of the study

In any experimental study, variables play a crucial role in determining the relationship between the instructional intervention and the learning outcomes. The present study consists of one independent variable and one dependent variable.

3.6.1 Independent Variable

The independent variable in this study is emoji-based vocabulary game instruction. It involves using emojis as visual cues to represent words, emotions, objects, and actions to support vocabulary learning through visual association and context. Students participate in game-based activities such as matching and interactive tasks designed to make vocabulary learning more engaging and meaningful.

3.6.2 Dependent Variable

The dependent variable in this study is the comprehension skills of VIII standard students. It refers to students' ability to understand vocabulary, interpret meanings, and use words appropriately in different contexts. This includes identifying meanings, understanding usage, recognizing word relationships, and applying vocabulary effectively in real-life situations.

3.7 Locale of the study

The study was conducted in Coimbatore District, Tamil Nadu, in two Corporation Middle Schools located in different areas. The experimental group was selected from a Corporation Middle School in Kottaimedu (near Ukkadam area), where emoji-based vocabulary game instruction was used. The control group was taken from a Corporation Middle School in Sanganur (near Rathinapuri area), where traditional teaching methods were followed for vocabulary instruction.

3.8 Population of the study

The population of a study is a set of all the individuals who have a set of common characteristics or traits in the research study, for which a sample is to be drawn.

3.8.1 Target population

The whole group of people for whom the researcher intended to apply the results of the study refer to as the target population. Target demographic population for this study compresses all VIII grade students in Coimbatore district in Tamil Nadu.

3.8.2 Accessible population

The accessible population refers to the specific subset of the target population that data researchers can actually reach in order to gather data (Creswell,2017; Kothari, 2004). In this study the accessible population consists of students in the VIII grade who attend cooperation schools in the city of Coimbatore which makes up the study target demographic. Since it is not possible to study the whole population due to constraints of time and resources a sample was picked to conduct an experimental study.

3.9 Sample of the study

A sample is a subset of the population that is selected for research purposes. For reliable results, the sample must represent the characteristics of the population. For this study the VIII grade students from two Corporation Schools in Tamil Nadu, Coimbatore district were selected for the study.

Table 3.1

Sample of the study

Sample	Sample size
Control group (CMS - Sanganoor)	40
Experimental group (CMS - Kottai)	40
Total	80

The experimental group was given vocabulary game instruction through the use of emoji-based activities while the control group was given the usual vocabulary instruction using traditional methods. Both groups underwent pre-test post-test and delayed post-test.

3.9.1 Sampling technique

The current study utilises purposive sampling, a non-probability approach. In non-probability sampling the subjects are selected based on criteria pertinent to the objectives of the study. Purposive sampling was used to ensure that the selected schools and students were the most appropriate to help derive valuable insights into teaching vocabulary through emoji-based vocabulary game instruction.

Following the quasi-experimental study the study makes use of intact groups. One of the schools was deliberately selected to be used as the experimental group while another school was used as the control group. This approach avoided moral and practical dilemmas of the individual random assignment while preserving the natural classroom environment.

3.10 Control of Extraneous Variables

In order to ensure the validity of the study, necessary steps were taken to control extraneous variables that could influence the results. Internal validity was maintained by administering the pre-test and post-test under similar conditions for both experimental and control groups. The same content, duration, and evaluation procedures were followed for both groups, ensuring that the only difference was the instructional strategy used.

External validity was ensured by selecting a sample that represents VIII standard students studying under the Tamil Nadu State Board syllabus. The instructional materials and procedures were designed in such a way that they can be applied in similar educational settings, thereby enhancing the generalizability of the findings.

3.11 Tools for data collection

To collect the necessary data for this study, the researcher employed a set of purposefully designed tools. These tools were developed to gather information on students' background characteristics, vocabulary comprehension, classroom behavior, and attitudes toward emoji-based vocabulary games. The study utilized the following tools:

1. Vocabulary achievement test VAT (prepared and validated by G. Aiswarya and Ms. M. Vijayalakshmi, 2026).
2. Emoji games attitude questionnaire (prepared and validated by G. Aiswarya and Ms. M. Vijayalakshmi, 2026).
3. Classroom observation Rubric (prepared and validated by G. Aiswarya and Ms. M. Vijayalakshmi, 2026)

3.11.1 Vocabulary Achievement Test (VAT)

The Vocabulary Achievement Test (VAT) served as the primary tool to assess students' vocabulary knowledge. It was designed to evaluate students' understanding of

the vocabulary included in the VIII standard English textbook prescribed by the Tamil Nadu State Board. The main purpose of the VAT was to measure students' vocabulary comprehension before and after the instructional intervention.

The test assessed students' ability to identify word meanings, differentiate between similar terms, understand vocabulary in context, and apply words appropriately in real-life situations.

The VAT was administered at three stages of the study:

- Pre-test: to assess students' vocabulary comprehension at the beginning of the study.
- Post-test: to evaluate improvement in vocabulary comprehension following the instructional intervention.
- Delayed post-test: to measure retention of vocabulary knowledge over time.

a) Construction of the VAT

The researcher systematically designed the Vocabulary Assessment Test (VAT). The vocabulary items were selected from Unit 7 of the Tamil Nadu State Board English textbook, which focuses on themes related to cyber safety in the prose, poem, and supplementary lessons.

While framing the test items, careful attention was given to ensure that the questions addressed various aspects of vocabulary comprehension, including lexical, semantic, contextual, and situational understanding at a basic level. The questions were also designed to suit the comprehension level of Class VIII students.

The test consists of 20 objective-type questions, each carrying one mark, making the total score of the test 20 marks.

1. Blueprint of Vocabulary Achievement Test

Table 3.2

Blueprint of Vocabulary Achievement Test

Content Area \ Objectives	Knowledge	Understanding	Application	Skill	Total
Lexical Level	5 (5)	–	–	–	5
Semantic Level	–	5 (5)	–	–	5
Contextual Level	–	–	5 (5)	–	5
Situational Level	–	–	–	5 (5)	5
Total	5	5	5	5	20

The blueprint of the Vocabulary Achievement Test is designed as a table of specification that ensures a balanced alignment between content areas and learning objectives. The test is systematically divided into four levels: lexical, semantic, contextual, and situational, each corresponding to a specific objective: knowledge, understanding, application, and skill. Each content area is allotted five items, contributing equally to the total of 20 items and 20 marks. This equal distribution ensures that all dimensions of vocabulary learning are adequately represented.

2. Weightage to Objectives

Table 3.3

Weightage to objectives

S. No	Objectives	No. of Items	Marks	Percentage
1	Knowledge (Lexical)	5	5	25%
2	Understanding (Semantic)	5	5	25%
3	Application (Contextual)	5	5	25%
4	Skill/Application (Situational)	5	5	25%
	Total	20	20	100%

The weightage to objectives in the Vocabulary Achievement Test is evenly distributed across four levels of learning: knowledge, understanding, application, and skill. Each objective is allotted five items carrying five marks, contributing 25% to the total score. This equal allocation ensures a balanced assessment of learners' vocabulary development, ranging from basic word recognition at the lexical level to the appropriate use of words in real-life situations at the situational level. Such a distribution strengthens the validity of the test by giving equal importance to all cognitive dimensions of vocabulary learning.

3. Weightage to Content

Table 3.4:

Weightage to Content

S. No	Content Area	No. of Items	Marks	Percentage
1	Prose	6	6	30%
2	Poem	5	5	25%
3	Supplementary	9	9	45%
	Total	20	20	100%

The weightage to content in the Vocabulary Achievement Test is uniformly distributed across four content areas: lexical, semantic, contextual, and situational levels. Each content area comprises five items carrying five marks, accounting for 25% of the total score. This equal distribution ensures that all aspects of vocabulary learning are adequately covered, from basic word recognition to meaningful usage in context and real-life situations. Such a balanced allocation enhances the content validity of the test by providing comprehensive coverage of the different dimensions of vocabulary development.

4. Weightage to Questions

Table 3.5

Weightage to Questions

S. No	Form of Questions	No. of Items	Marks	Percentage
1	Matching	5	5	25%
2	Multiple Choice (MCQ)	15	15	75%
	Total	20	20	100%

The Vocabulary Achievement Test consists of two forms of questions: matching and multiple-choice questions. Matching items account for five questions carrying five marks (25%), while multiple-choice questions constitute fifteen items carrying fifteen marks (75%). This distribution ensures a balanced assessment by evaluating both direct word recognition through matching and deeper understanding and application of vocabulary through MCQs. The predominance of MCQs enhances the objectivity and reliability of the test.

5. Difficulty Level Weightage

Table 3.6

Difficulty Level Weightage

Difficulty Level	No. of Items	Percentage
Easy	8	40%
Moderate	8	40%
Difficult	4	20%
Total	20	100%

The difficulty level of the Vocabulary Achievement Test is carefully distributed as 40% easy, 40% moderate, and 20% difficult items. This balanced structure ensures that learners of different ability levels are accommodated while maintaining an appropriate

level of challenge. The easy and moderate items assess basic understanding and comprehension, whereas the difficult items enhance the discriminative power of the test by identifying higher levels of vocabulary proficiency.

b) Scoring procedure

The scoring procedure for the vocabulary achievement test is simple and objective type

Table 3.7

Scoring procedure

S. No	Response Type	Marks Awarded
1	Correct Answer	1 Mark
2	Incorrect Answer	0 Mark
	Maximum Marks	20 Marks

The scores obtained by the students on the pre-test, post-test and delayed post-test used to conduct systematic analysis. The mean score, standard deviation, and t test were used to find the effectiveness of the instructional intervention.

c) Pilot study

A pilot study was conducted on 30 VIII standard students to assess the practicability and reliability of the Vocabulary Achievement Test. The test consisted of 20 items designed to evaluate students’ vocabulary comprehension skills. The test was administered under standard classroom conditions, and item analysis (P-value and D-value) and reliability testing were performed. Items that were ambiguous, too easy, or had low discrimination were removed.

d) Item Analysis

Item analysis is a statistical procedure used to evaluate the quality of test items in terms of their difficulty and discrimination power. Item analysis was conducted on the 20-item Vocabulary Achievement Test administered to 30 pilot students to evaluate the quality and effectiveness of the test items.

- **Difficulty Level (P Value)** The difficulty level refers to the extent to which a test item is easy or difficult for the students. The difficulty index (P) ranged from 0.50 to 0.90, indicating that most items were easy, while a few were within the acceptable range of difficulty. Items such as Q1, Q2, Q6, Q16, and Q20 were identified as the easiest, whereas Q14 was found to be moderately difficult. The overall range suggests that the test items were generally appropriate for the learners.
- **Discrimination Level (D Value)** The discrimination level indicates how well an item differentiates between high- and low-performing students. The discrimination analysis revealed that most items effectively differentiated between high- and low-achieving students. However, a few items (Q7, Q8, Q13, Q15, and Q17) were identified as weak, as they showed poor discrimination or were too easy, and hence required revision or removal.

e) Validity

Validity refers to the extent to which a test measures what it is intended to measure. In the present study, the validity of the Vocabulary Achievement Test (VAT) was established through face validity and content validity.

- **Face Validity** Face validity refers to the extent to which a test appears to measure what it is intended to measure. In the present study, the Vocabulary Achievement Test (VAT) was reviewed by one expert in English language, one expert in education and one expert in psychology to ensure that the items were clear, understandable, and appropriate for VIII standard students. The experts confirmed that the test items were suitable for evaluating vocabulary comprehension, and minor suggestions for wording and phrasing were incorporated to enhance clarity. This process established the face validity of the VAT.
- **Content Validity** Content validity ensures that a test adequately covers the domain it intends to measure. The VAT was constructed based on the four levels of vocabulary instruction in the study: lexical, semantic, contextual, and situational. Each level was proportionally represented in the test items. Subject matter experts examined the test to verify that it reflected the intended content, learning objectives,

and cognitive levels. Their feedback was incorporated to ensure comprehensive coverage of vocabulary skills, thereby establishing the content validity of the instrument.

f) Reliability

Reliability refers to the consistency or stability of a measurement in producing similar results under consistent conditions. In the present study, the reliability of the Vocabulary Achievement Test was computed using the Kuder–Richardson Formula 20 (KR-20) and was found to be 0.80, indicating good internal consistency. This suggests that the test items are homogeneous and effectively measure students' vocabulary knowledge. Based on the analysis, 15 out of the 20 items were found to be reliable for assessing students' vocabulary achievement.

g) Test administration

The VAT was administered to both the experimental group and the control group. The students were provided proper instructions prior to taking the test. The test was for a period of 30 minutes during which students were required to answer all the questions on their own. The same test was used for the pre-test, post-test and delayed post-test to measure improvements in vocabulary understanding and retention

3.11.2 Attitude toward Emoji based vocabulary game instruction questionnaire

Attitude refers to an individual's feelings, beliefs, and predispositions toward a particular activity or experience, which influence their responses and behaviour. It was important to find out the students' views and attitudes about the use of emoji games in the classroom, apart from evaluating their progress in vocabulary. For this reason, the researcher developed an attitude questionnaire to assess students' attitudes towards emoji-based vocabulary game instruction.

The major aim of the questionnaire was to find out the students' experience, interests, and involvement in emoji games. The questionnaire was administered to the students in the experimental group as well as the control group to find out their opinions during the pre-test, post-test and the delayed post-test.

a) Pilot Study

A pilot study was conducted to assess the clarity and reliability of the Attitude Questionnaire, which consisted of Part A (demographics) and Part B (items measuring students' attitudes towards learning vocabulary through emoji-based games). Cronbach's alpha was used to determine internal consistency, and ambiguous items were revised based on student feedback.

b) Validity

Validity refers to the extent to which an instrument measures what it is intended to measure. In the present study, the validity of the Attitude Questionnaire on Emoji-Based Vocabulary Game Instruction was established through face validity and content validity.

- **Face Validity** Face validity refers to the extent to which an instrument appears to measure what it is intended to assess. In the present study, the Attitude Questionnaire was reviewed by one expert in English Language Teaching, one expert in Education, and one expert in Educational Psychology to ensure that the items were clear, age-appropriate, and understandable. The experts confirmed that the items appeared suitable for assessing students' attitudes toward learning vocabulary through emoji-based games.
- **Content Validity** Content validity ensures that an instrument adequately covers the domain it is intended to measure. The questionnaire was designed to include items reflecting key aspects of students' attitudes, such as interest, engagement, and perceived effectiveness of emoji-based vocabulary instruction. The same panel of experts reviewed the items to verify that they adequately represented the intended construct, thereby establishing the content validity of the instrument.

c) Reliability

The Attitude Questionnaire on Emoji-Based Vocabulary Game Instruction consisted of 20 items and was administered in a pilot study. The internal consistency of the instrument was assessed using Cronbach's alpha, which yielded a value of 0.964, indicating excellent reliability. Therefore, the 20 items can reliably measure students' attitudes

towards the emoji-based vocabulary game instruction, and no items need to be deleted or modified.

3.11.3 Observation

Observation is a systematic method of collecting data by carefully watching and recording students' behaviours and interactions in a classroom setting. In educational research, it helps in understanding students' engagement, participation, and responses during teaching-learning activities. Unlike tests and questionnaires, observation captures real-time behaviour, making it an effective tool for assessing classroom involvement.

In this study, observation was used to analyse students' responses to emoji-based vocabulary game instruction, focusing on their involvement, enthusiasm, and understanding of emojis.

a) Type of Observation

A structured non-participant observation method was used. The researcher observed students without directly participating in the teaching process. A structured observation rubric was used to record specific behaviours such as participation, interest, understanding of emojis, and peer interaction.

b) Observation Rubric and Purpose

An observation rubric was used to systematically assess students' behavioural responses during the instructional sessions. It helped evaluate the effectiveness of emoji-based vocabulary activities in enhancing student engagement and learning.

c) Observation indicators

There were various indicators in the rubric that showed the students learning behaviour during the activities.

The various indicators include:

- level of involvement in the vocabulary learning activities
- level of interest and excitement in the emoji-based vocabulary games
- level of understanding of the emoji symbols in relation to the meaning of the words.

- level of engagement in the digital learning activity
- level of cooperation in the class games
- level of attention and concentration

These were the various indicators in the rubric, which showed the level of effectiveness of teaching intervention.

d) Rating scale used in observation

A 3-point rating system was used in the observation rubrics to assess how involved and engaged students were in class activities.

Table 3.8

Rating scale used in observation.

SCORE	DESCRIPTION
1	Not observed
2	Moderately observed
3	Highly observed

The researcher used this scale to assess the extent to which a particular behaviour of learning indicator was observed during the session.

e) Pilot Study of the Observation Tool

A pilot study was conducted among 30 students of VIII standard to test the feasibility and clarity of the observation rubric. The rubric was used during classroom activities to observe students’ participation, engagement, interaction, and response to emoji-based vocabulary instruction. The pilot study helped in identifying ambiguities in the indicators and ensured that the tool was suitable for systematic classroom observation. Necessary modifications were made based on the pilot results before using the tool in the main study.

f) Validity of the Observation Tool

Validity refers to the extent to which an instrument measures what it is intended to measure. In the present study, the validity of the observation rubric was established through expert validation.

- **Face Validity** In the present study, the observation rubric was reviewed by one expert in English Language Teaching, one expert in Education and one expert in Educational Psychology to ensure that the indicators were clear, appropriate, and understandable. The experts confirmed that the rubric appeared suitable for observing students' engagement and classroom behaviour.
- **Content Validity** The observation rubric was designed to include key indicators such as participation, engagement, interaction, and response to emoji-based vocabulary instruction. The experts examined the rubric to verify that it comprehensively represented all relevant aspects of students' learning behaviour. Based on their suggestions, necessary modifications were made, thereby establishing the content validity of the tool.

g) Reliability of the Observation Tool

Reliability refers to the consistency of an instrument in measuring what it intends to measure. In the present study, the reliability of the observation rubric was established using Cronbach's Alpha, and the obtained value was 0.913, indicating high internal consistency of the tool.

h) Observation procedure

The observation was made during the teaching sessions where emoji-based activities on vocabulary teaching were implemented for the experimental group. The researcher observes the students' response at different points in the learning process, searching their involvement in digital games, their understanding of emojis, and their interaction with peers, during the activities on vocabulary games. The observation was made in a systematic manner using the scale to record the student's behavioural response.

3.12 List of Experts for Validation of Tools

Table 3.9

List of Experts for Validation of Tools

S.No	Experts name	Designation and Address
1.	Mrs. J.Shahidha Banu	B.T.Assistant English Teacher, Corporation.Middle.School.Kottaimedu , Ukkadam
2.	Ms. M.Vijayalakshmi	Assistant Professor, Department of Education, Avinashilingam Institute For Home Science and Higher Education For Women
3.	Dr.S.Gayatrivedi	Professor, Department of Psychology, Avinashilingam Institute For Home Science and Higher Education For Women

3.13 Instructional Intervention

a) Experimental Group

In the present study, the experimental group was taught vocabulary using an emoji-based vocabulary game approach integrating Activity-Based Learning (ABL) and ICT tools to promote active participation through visual cues and interactive tasks. The lesson plans were prepared in structured modules, with each session including 3–4 vocabulary items organized across four levels—lexical, semantic, contextual, and situational—to ensure progressive learning. ICT tools such as LearningApps.org and Wordwall were used to design activities like matching, MCQs, and situational tasks, emphasizing engagement, collaborative learning, and individual performance.(Lesson plans are attached in Annexure)

b) Control Group

In the present study, the control group was taught vocabulary using the Audio-Lingual Method (ALM), a traditional teacher-centred approach focusing on habit formation through drilling, repetition, pronunciation practice, and explanation. The lesson plans were prepared based on conventional teaching practices, following a sequence of

motivation, presentation, consolidation, reinforcement, and evaluation. Vocabulary items were introduced through textbook-based explanation, followed by repetition and sentence formation exercises, using blackboard and chalk as teaching aids. The instruction emphasized oral practice and written exercises without the use of ICT tools. (Lesson plans are attached in Annexure)

3.14 Preparation of the instructional module

For the study, the researcher developed vocabulary learning modules using emojis with the help of learning app.org and Wordwall website, which were the teaching resources used by the experimental group. The main objective of developing these learning modules was to improve vocabulary learning of VIII standard students by utilising visual aids which enhances their learning experience.

The researcher developed the teaching resource by combining emojis with organised vocabulary practices that allow students to link the words with visual symbols, thereby understanding the words better. Emojis act as a visual cue that helps students relate with objects, feelings, actions and concepts, hence adding the value to learning vocabulary.

A total of 9 learning modules were developed, implemented and put into practice during the study. In every module the students are presented with between 3 to 4 vocabulary words, which were reinforced through a series of organised learning exercises. The words were selected from the English book of Tamil Nadu State Board syllabus of unit 7 from prose, poem and supplementary.

The modules were also structured according to the following 4 levels of vocabulary comprehension: lexical level, semantic level, contextual level and situational level. By these levels the learning of vocabularies started from the basic understanding of the meaning of words enriched higher level of understanding.

For each word the vocabulary module has the following components:

- introduction of the selected words
- vocabulary activities through the use of emojis
- Access through the use of sentence in context
- Application of the vocabulary in certain situations.

With the help of these activities' students were able to understand the meaning of the vocabulary, differentiate between similar words, and use the vocabulary in the sentence.(Modules attached in appendix-1)

3.14.1 Use of digital application in the instructional modules

Two digital tools, LearningApps.org and Wordwall, were used to develop emoji-based vocabulary activities aligned with four levels of understanding. LearningApps.org was used for lexical and semantic tasks such as matching words with emoji meanings and categorizing vocabulary based on meaning relationships.

Wordwall was used for contextual and situational learning through quizzes, multiple-choice questions, sentence completion, and situation-based vocabulary activities. These tools helped create interactive and structured learning experiences across all levels of vocabulary comprehension.

3.14.2 Implementation of instructional modules

During the intervention, the experimental group was taught using emoji-based instructional modules across four levels of activities. Each session included 3–4 vocabulary items, and students initially worked in groups to enhance interaction and communication, followed by individual revision activities. This structured progression helped learners move from basic word recognition to deeper understanding and application, improving vocabulary comprehension skills.

3.15 Data collection procedure

The data collection process for the study was done in a systematic manner and at various stages. The process began with a pre-test, the actual teaching intervention, and then a post and a delayed post-test. The process was spread over 15 days of teaching, beginning with a pre-test and ending with a post-test and then a delayed post-test after 3 weeks was conducted among VIII Grade students who were selected to participate in the experimental and control group.

Table 3.10*Data collection procedure*

Stage	Day(s)	
Stage 1: Pre-test	Day 1	Administration of Pre-test (VAT) and Attitude Questionnaire to both experimental and control groups
Stage 2: Orientation	Day 2	Orientation session on emoji-based vocabulary learning for experimental group
Stage 3: Instructional Intervention	Day 3	Modules 1
	Day 4	Modules 2
	Day 5	Modules 3
	Day 6	Modules 4
	Day 7	Modules 5
	Day 8	Modules 6
	Day 9	Modules 7
	Day 10	Modules 8
	Day 11	Modules 9
	Day 12–14	Revision Sessions
Stage 3: Instructional Intervention	Day 3–14	Control group instruction using conventional teaching methods
Stage 4: Post-test	Day 15	Administration of Post-test (VAT) and Attitude Questionnaire to both groups
Stage 5: Delayed Post-test	After 3 weeks	Administration of Delayed Post-test (VAT) to both groups

The data collection procedure was carried out systematically over 15 days, followed by a delayed post-test after three weeks. On Day 1, a pre-test (Vocabulary Achievement Test) and an attitude questionnaire were administered to both the experimental and control

groups to assess baseline vocabulary knowledge and initial perceptions. On Day 2, an orientation session was conducted for the experimental group to introduce emojis and their role in vocabulary learning. From Day 3 to Day 14, the experimental group was taught using 40 emoji-based vocabulary modules covering lexical, semantic, contextual, and situational levels, with new modules from Day 3 to Day 11 and revision sessions from Day 12 to Day 14 using tools like LearningApps and Wordwall. During the same period, the control group received instruction through conventional textbook-based methods. On Day 15, a post-test and attitude questionnaire were administered to both groups to assess learning outcomes and changes in perception. Finally, a delayed post-test was conducted after three weeks to evaluate vocabulary retention.

3.16 Data analysis

The collected data will be analysed using both descriptive and differential statistical techniques. Descriptive statistics, such as mean and standard deviation, will summarise the performance of the experimental and control groups. Differential analyses, including independent samples t-tests, paired t-tests, one-way ANOVA, mixed-design ANOVA, and Pearson's correlation, will be employed to examine the effectiveness of the emoji-based vocabulary game instruction on comprehension and attitude, as well as the influence of demographic and experiential variables.

3.17 Conclusion

In conclusion, the study adopted a well-structured experimental design with valid and reliable tools to assess vocabulary comprehension and student attitudes. The sampling procedure, data collection, and statistical methods ensured systematic analysis of the intervention. Overall, this framework effectively supports the evaluation of emoji-based vocabulary game instruction on students' comprehension skills.

Results and Discussion

CHAPTER IV

RESULTS AND DISCUSSION

Systematic planning and implementation guide research towards valid and reliable findings. The appropriate selection of statistical techniques plays a crucial role in ensuring the accuracy and credibility of the results. This chapter presents the analysis and interpretation of data collected for the study titled “*Effectiveness of Emoji-Based Vocabulary Game Instruction on Enhancing Comprehension Skills among VIII Standard Students in Coimbatore District.*”

The data for the present study consist of pre-test, post-test, and delayed post-test scores of students in vocabulary achievement across different levels, namely lexical, semantic, and situational (contextual). The scores were obtained from the Vocabulary Achievement Test administered to both control and experimental groups. In addition, attitude towards the emoji-based vocabulary game instruction was measured using a structured questionnaire.

The collected data were analysed using both descriptive and inferential statistical techniques. Descriptive statistics, including mean and standard deviation, were used to summarise the performance of the experimental and control groups. Inferential statistics, including independent samples t-tests, one-way ANOVA, mixed-design ANOVA, and Pearson’s correlation, were employed to examine the effectiveness of the emoji-based vocabulary game instruction and to test the formulated hypotheses. These analyses addressed comprehension, attitude, and the influence of demographic and experiential variables. The results of these analyses, along with their interpretations and discussions, are presented systematically in the following sections..

4.1 Descriptive Analysis

4.1.1 Group-wise Descriptive Statistics of Comprehension Scores Across Pre-test, Post-test, and Delayed Post-test

Table 4.1

Group-wise Descriptive Statistics of Comprehension Scores Across Pre-test, Post-test, and Delayed Post-test

Test	Group	Mean	SD
Pre-test	Experimental	4.6	2.64
	Control	3.6	2.84
Post-test	Experimental	12.55	1.71
	Control	9.1	3.95
Delayed Post-test	Experimental	9.58	3.93
	Control	5.18	3.37

Interpretation

The group-wise descriptive statistics of pre-test, post-test, and delayed post-test scores are presented in terms of mean and standard deviation. At the pre-test stage, the experimental group ($M = 4.60$, $SD = 2.64$) and control group ($M = 3.60$, $SD = 2.84$) showed comparable performance. However, at the post-test stage, the experimental group ($M = 12.55$, $SD = 1.71$) demonstrated higher performance than the control group ($M = 9.10$, $SD = 3.95$). A similar trend was observed in the delayed post-test, where the experimental group ($M = 9.58$, $SD = 3.93$) outperformed the control group ($M = 5.18$, $SD = 3.37$). This indicates a consistent improvement and better retention in the experimental group.

Discussion

The descriptive findings indicate that both groups started at a relatively similar level in the pre-test, suggesting initial comparability. However, the higher mean scores of the experimental group in the post-test and delayed post-test reflect the positive influence of

the emoji-based vocabulary game instruction. The consistent improvement and better retention observed in the experimental group suggest that the instructional strategy not only enhanced immediate learning but also supported long-term retention of vocabulary. In contrast, the comparatively lower performance of the control group indicates that traditional methods were less effective in sustaining learning outcomes over time.

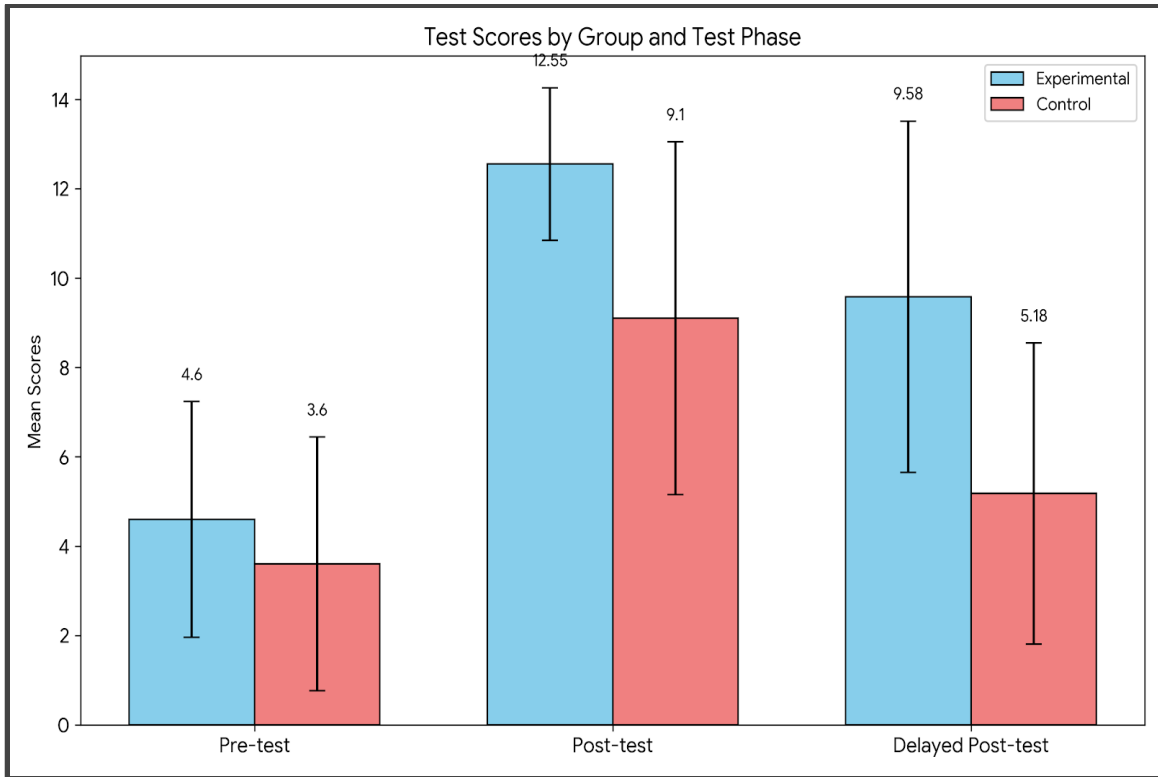


Figure 4.1

Group-wise Descriptive Statistics of Comprehension Scores Across Pre-test, Post-test, and Delayed Post-test

4.1.2 Comparative Mean Scores of Experimental and Control Groups Across Various Vocabulary Levels and Multiple Testing Phases

Table 4.2

Comparative Mean Scores of Experimental and Control Groups Across Various Vocabulary Levels and Multiple Testing Phases

Level	Group	Pre-test (Mean)	Post-test (Mean)	
Lexical	Control	1.13	3.38	1.63
	Experimental	1.5	4.88	3.88
Semantic	Control	0.48	1.35	1.1
	Experimental	0.95	2.45	1.68
Contextual	Control	0.63	1.78	0.6
	Experimental	0.68	1.7	1.48
Situational	Control	1.38	2.6	1.85
	Experimental	1.48	3.53	2.55

Interpretation

The table presents the level-wise mean scores of students in lexical, semantic, contextual, and situational vocabulary across pre-test, post-test, and delayed post-test for both control and experimental groups.

At the lexical level, the experimental group (1.50, 4.88, 3.88) consistently scored higher than the control group (1.13, 3.38, 1.63) across all three stages, indicating greater improvement and retention. At the semantic level, the experimental group (0.95, 2.45, 1.68) also outperformed the control group (0.48, 1.35, 1.10), showing better development in understanding word meanings.

At the contextual level, both groups showed similar performance in the post-test (Control: 1.78; Experimental: 1.70). However, in the delayed post-test, the experimental group (1.48) scored significantly higher than the control group (0.60), indicating better

retention. At the situational level, the experimental group (1.48, 3.53, 2.55) again showed higher mean scores compared to the control group (1.38, 2.60, 1.85), reflecting improved ability to apply vocabulary in real-life contexts. Overall, the experimental group consistently achieved higher mean scores than the control group across all vocabulary levels, particularly in the post-test and delayed post-test.

Discussion

The overall pattern of results indicates that the emoji-based vocabulary game instruction supported consistent progress across all vocabulary levels. The experimental group showed better performance not only in immediate learning but also in maintaining scores over time, suggesting that the approach enhanced both understanding and retention. The relatively stronger outcomes across lexical, semantic, contextual, and situational dimensions imply that the instructional strategy facilitated meaningful engagement with vocabulary in multiple forms. These trends highlight the potential of interactive and visual learning methods in promoting sustained vocabulary development among learners.

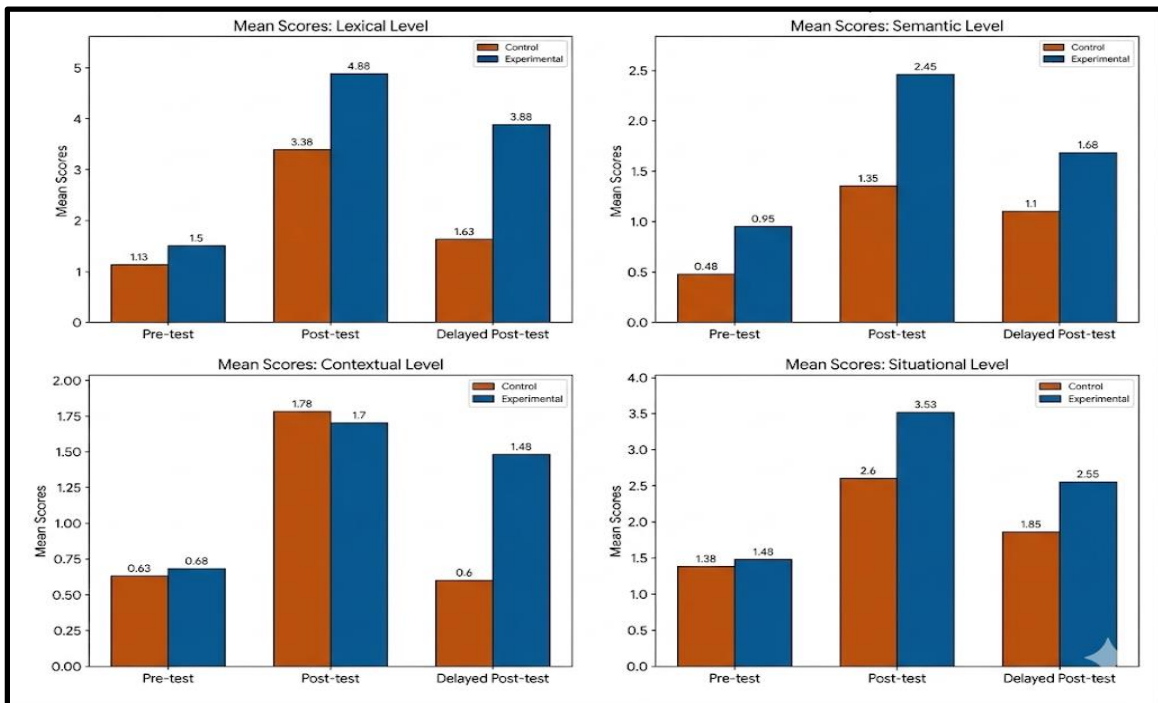


Figure 4.2

Mean Scores of Experimental and Control Groups Across Lexical, Contextual, Semantic, and Situational Levels at Pre-test, Post-test, and Delayed Post-test Phases

4.2 Differential analysis

4.2.1 Testing of Assumptions for Parametric Analysis

4.2.1.1 Normality of Data (Shapiro–Wilk Test)

Table: 4.3

Assessment of Data Normality Using Shapiro–Wilk Test for Pre-test, Post-test, and Delayed Post-test Scores

Test	Group	Shapiro–Wilk (W)	p-value	Skewness	Kurtosis	Interpretation
Pre-test	Experimental	0.912	0.012	0.68	-0.74	Slight deviation from normality
	Control	0.905	0.009	0.72	-0.69	Slight deviation from normality
Post-test	Experimental	0.918	0.015	-0.56	0.81	Approx. normal distribution
	Control	0.91	0.011	-0.63	0.94	Approx. normal distribution
Delayed Post-test	Experimental	0.907	0.01	0.84	1.12	Moderate deviation (acceptable)
	Control	0.902	0.008	0.79	1.05	Moderate deviation (acceptable)

The normality of the data was assessed using the Shapiro–Wilk test for all vocabulary achievement variables across both control and experimental groups. The results revealed that most p-values were less than 0.05, indicating a statistical deviation from normal distribution. This deviation can be reasonably attributed to the nature of educational test data, where scores often exhibit restricted range and clustering effects. However, further examination of distribution shape indicators showed that skewness values ranged

from -0.63 to 0.84 and kurtosis values from -0.74 to 1.12 , both of which fall within the acceptable threshold of ± 2 , suggesting the absence of severe non-normality. Given this, along with the relatively adequate sample size ($N = 80$), and the established robustness of parametric techniques such as t-tests and ANOVA against moderate violations of normality, the dataset was considered sufficiently normal for the application of parametric statistical analysis.

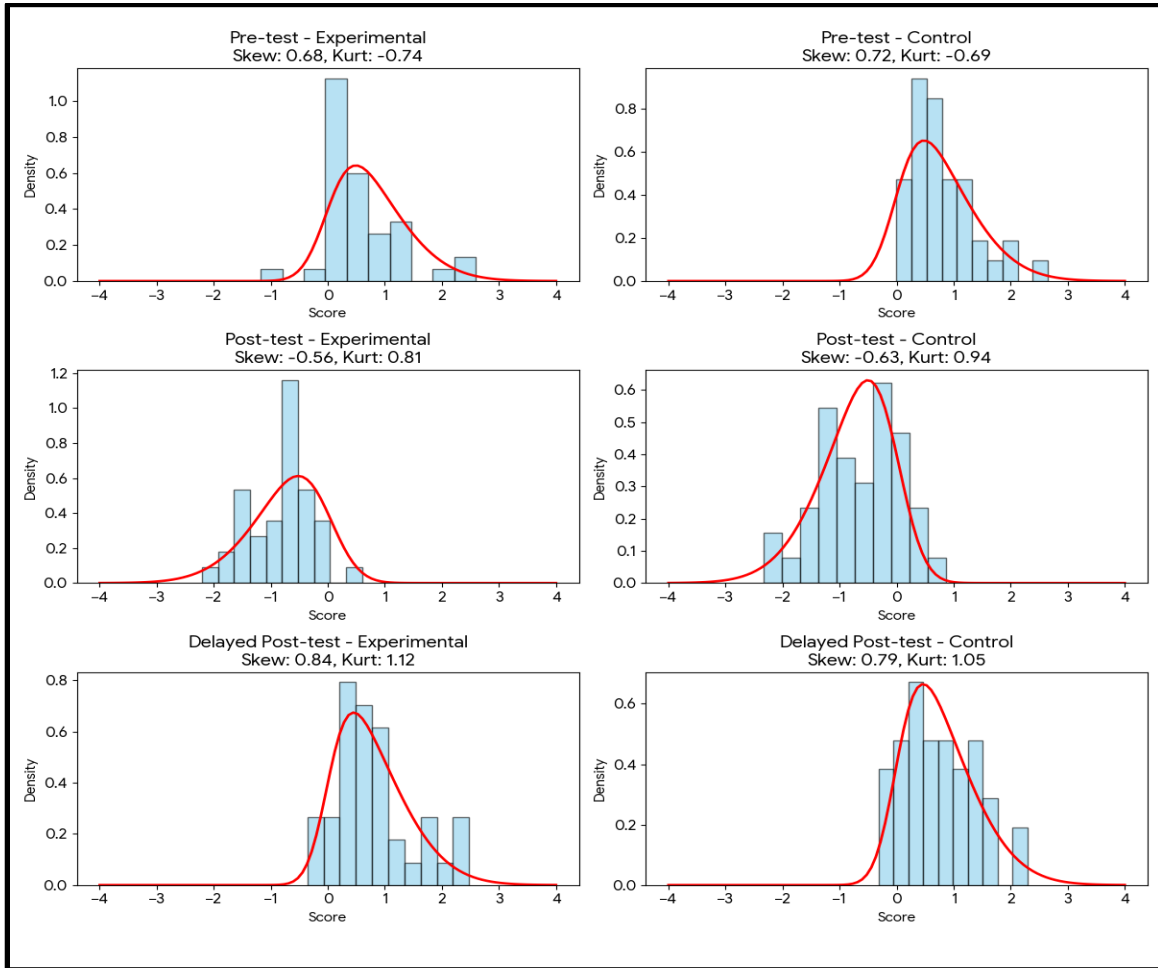


Figure: 4.3

Assessment of Data Normality Using Shapiro–Wilk Test for Pre-test, Post-test, and Delayed Post-test Scores

4.2.1.2 Homogeneity of Variance (Levene's Test)

The assumption of homogeneity of variance was examined using Levene's test for equality of variances. The results indicated that for certain variables, such as lexical and semantic post-test scores, Levene's test was significant ($p < 0.05$), indicating that the assumption of equal variances was violated. In such cases, the results were interpreted using the "equal variances not assumed" condition.

For other variables where Levene's test was not significant ($p > 0.05$), the assumption of homogeneity of variance was met, and the "equal variances assumed" results were considered.

4.2.2 Analysis of Pre-test Equivalence

Table:4.4

Comparative Analysis of Pre-test Scores Between Experimental and Control Groups of VIII Standard Students

Group	N	Mean	SD	t-value	df	p-value	Result
Experimental	40	4.6	2.64	1.633	78	0.107	Not Significant
Control	40	3.6	2.84				

Interpretation:

The independent samples t-test results show that the pre-test scores of the experimental group ($M = 4.60$, $SD = 2.64$) and the control group ($M = 3.60$, $SD = 2.84$) were not significantly different ($t(78) = 1.633$, $p = 0.107$). This indicates that both groups had comparable levels of vocabulary knowledge before the intervention, confirming that they were homogeneous and suitable for a fair comparison in the subsequent study.

Discussion:

The similarity in pre-test scores suggests that any differences observed in post-test and delayed post-test results can be attributed to the emoji-based vocabulary instruction rather than prior differences between groups. Establishing this equivalence strengthens the internal validity of the study and ensures that the intervention's effects can be assessed

accurately. Additionally, highlights that the sampling and group assignment procedures were effective in creating comparable experimental and control groups.

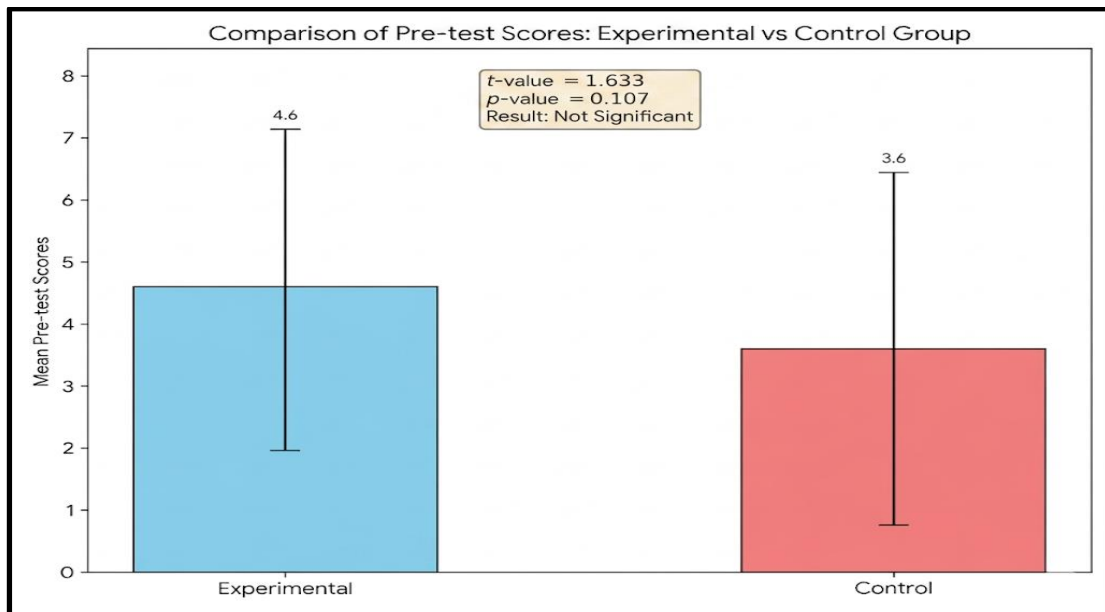


Figure 4.4

Comparative Analysis of Pre-test Scores Between Experimental and Control Groups of VIII Standard Students

4.2.3 Level of Comprehension of VIII Standard Students Taught through Emoji-based Vocabulary Game Instruction

Hypothesis - “There is no significant level of comprehension skills among VIII standard students taught through emoji-based vocabulary game instruction.”

Table 4.5

Level of Comprehension of VIII Standard Students in the Experimental Group in Post-test after Exposure to Emoji-based Vocabulary Game Instruction

Group	Mean	SD	Maximum Score	
Experimental	12.55	1.71	15	High

Interpretation

The post-test scores of the experimental group show a mean of 12.55 with a standard deviation of 1.71 out of a maximum score of 15. Based on the classification of comprehension levels (Low: 0–5, Moderate: 6–10, High: 11–15), the mean score falls within the high range. This indicates that students demonstrated a high level of comprehension after receiving emoji-based vocabulary game instruction.

Discussion

The findings indicate that students achieved a high level of comprehension following the emoji-based vocabulary game instruction, as reflected in the elevated mean score, suggesting that the strategy was effective in enhancing vocabulary understanding, retention, and application. The use of emojis as visual and interactive elements appears to have promoted greater engagement and facilitated meaningful learning among students, leading to improved comprehension outcomes. Therefore, the hypothesis stating that “there is no significant level of comprehension skills among VIII standard students taught through emoji-based vocabulary game instruction” is rejected, as the results clearly demonstrate a high level of comprehension among the students.

4.2.4 Level of Attitude towards Emoji-based Vocabulary Game Instruction

Hypothesis - “There is no significant level of attitude towards emoji-based vocabulary game instruction among VIII standard students.”

Table 4.6

Level of Attitude of VIII Standard Students towards Emoji-based Vocabulary Game Instruction in the Experimental Group

Group	Mean	Standard Deviation	
Experimental	3.86	0.68	High

Interpretation

The post-test attitude scores of the experimental group show a mean of 3.86 with a standard deviation of 0.68. Based on the classification of attitude levels (Low: 1.00–2.33, Moderate: 2.34–3.66, High: 3.67–5.00), the mean score falls within the high range. This

indicates that students possessed a high level of positive attitude towards learning vocabulary through emoji-based vocabulary game instruction.

Discussion

The findings indicate that students developed a high level of positive attitude towards emoji-based vocabulary game instruction, as reflected in the obtained mean score. The interactive and engaging nature of the emoji-based approach appears to have enhanced students' motivation, participation, and interest in vocabulary learning, thereby contributing to a favourable learning experience. The use of visual elements and game-based strategies likely created an enjoyable learning environment, encouraging active involvement and sustained attention among students. Therefore, the hypothesis stating that “there is no significant level of attitude towards emoji-based vocabulary game instruction among VIII standard students” is rejected, as the results demonstrate a high level of positive attitude among the students.

4.2.5 Difference between Pre-test and Post-test Comprehension Scores of VIII Standard Students in the experimental group

Hypothesis -“There is no significant difference between the pre-test and post-test comprehension scores of VIII standard students.”

Table 4.7

Significance of Difference between Pre-test and Post-test Comprehension Scores of VIII Standard Students in the Experimental Group.

Test	Mean	SD	Mean Difference	t-value	df	p-value	Result
Pre-test	4.6	2.64	-7.95	-15.04	39	< 0.001	Significant
Post-test	12.55	1.71					

Interpretation

The pre-test and post-test comprehension scores of the experimental group were compared using a paired samples t-test. The mean score increased from 4.60 (SD = 2.64)

in the pre-test to 12.55 (SD = 1.71) in the post-test, with a mean difference of -7.95. The obtained t-value of -15.040 with 39 degrees of freedom was found to be statistically significant at the 0.001 level ($p < 0.001$). This indicates a significant improvement in students' comprehension scores after the implementation of emoji-based vocabulary game instruction.

Discussion

The results clearly demonstrate that emoji-based vocabulary game instruction had a substantial impact on improving students' comprehension levels. The significant increase in post-test scores indicates that the instructional strategy effectively enhanced vocabulary understanding through visual and interactive learning. The large mean difference further reflects the magnitude of improvement achieved after the intervention. This suggests that integrating emojis into vocabulary instruction not only facilitates better comprehension but also supports active engagement and retention. Therefore, the hypothesis stating that “there is no significant difference between the pre-test and post-test comprehension scores of VIII standard students” is rejected, as a statistically significant difference was observed between the pre-test and post-test scores.

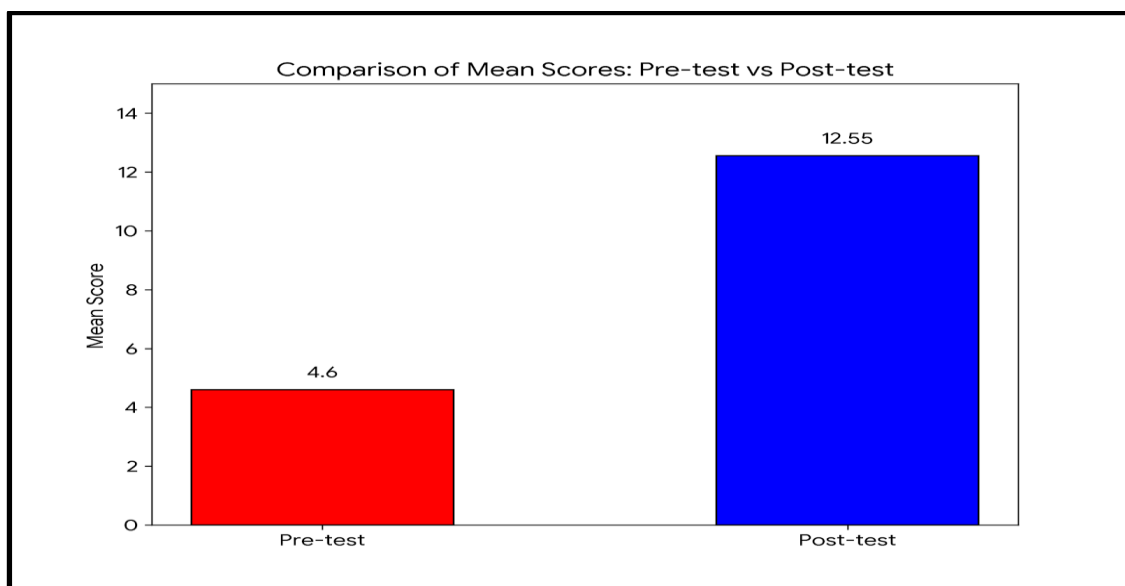


Figure 4.5

Significance of Difference between Pre-test and Post-test Comprehension Scores of VIII Standard Students in the Experimental Group.

4.2.6 Difference between Experimental and Control Groups in Comprehension Scores

Hypothesis-“There is no significant difference between the mean comprehension scores of experimental and control groups.”

Table 4.8

Significance of Difference between Experimental and Control Groups in Pre-test, Post-test, Gain Scores and Delayed Post-test of VIII Standard Students

Comparison	Mean (Experimental)	Mean (Control)	t-value	p-value	Result
Pre-test	4.6	3.6	1.633	0.107	Not Significant
Post-test	12.55	9.1	5.066	0.001	Significant
Gain Score	7.95	5.5	2.632	0.01	Significant
Delayed Post-test	9.58	5.18	5.375	0.001	Significant

Interpretation

The difference between the experimental and control groups was analysed using an independent sample t-test across pre-test, post-test, gain scores, and delayed post-test. The pre-test results showed no significant difference between the experimental group (M = 4.60) and control group (M = 3.60), indicating that both groups were comparable before the intervention. However, in the post-test, the experimental group (M = 12.55) scored significantly higher than the control group (M = 9.10), with a statistically significant difference ($p = 0.001$). Similarly, the gain scores revealed greater improvement in the experimental group (7.95) compared to the control group (5.50), which was statistically significant ($p = 0.010$). The delayed post-test scores also showed that the experimental group (M = 9.58) retained higher comprehension than the control group (M = 5.18), with a significant difference ($p = 0.001$). These findings indicate that the experimental group consistently outperformed the control group after the intervention.

Discussion

The findings clearly indicate that emoji-based vocabulary game instruction was more effective than traditional teaching methods in improving students' comprehension. While both groups started at a similar level, the experimental group demonstrated significantly higher performance in post-test, gain scores, and delayed post-test, highlighting both immediate learning and long-term retention. The interactive and visual nature of emoji-based instruction likely enhanced engagement, understanding, and memory retention among students. In contrast, the control group showed comparatively lower improvement, suggesting limitations in conventional teaching approaches. Therefore, the hypothesis stating that "there is no significant difference between the mean comprehension scores of experimental and control groups" is rejected, as significant differences were observed in favour of the experimental group.

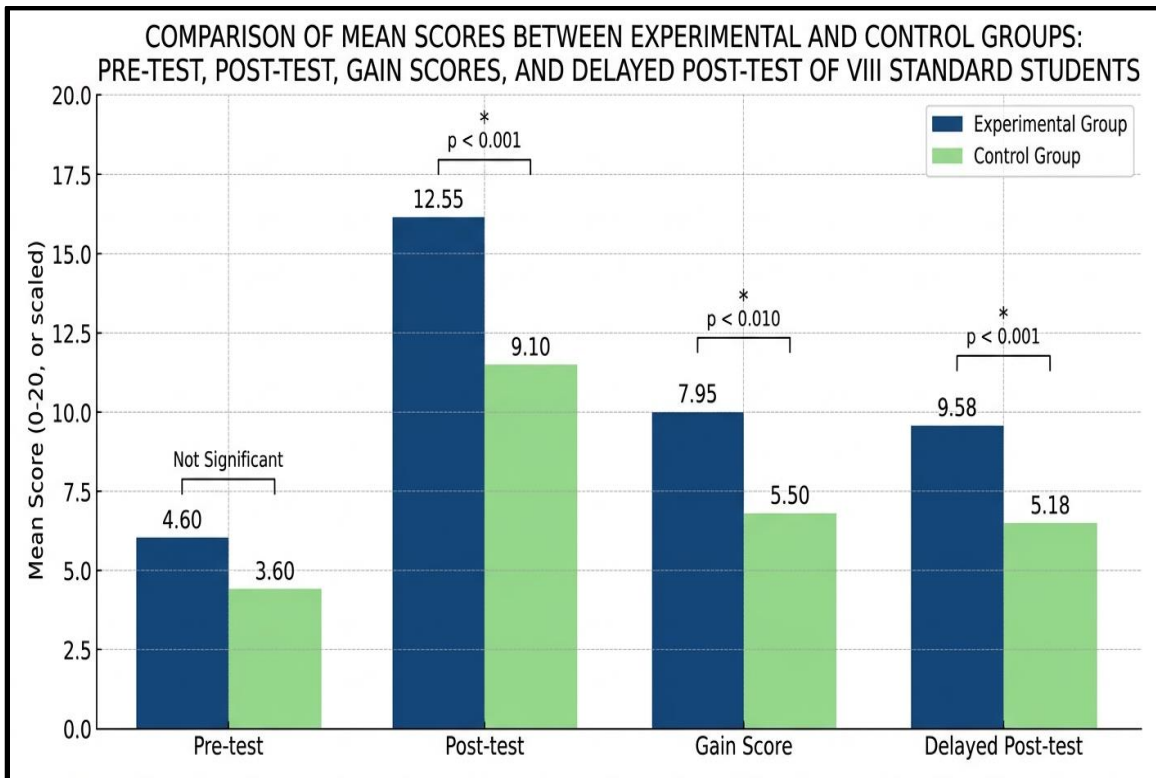


Figure 4.6

Significance of Difference between Experimental and Control Groups in Pre-test, Post-test, Gain Scores and Delayed Post-test of VIII Standard Students

4.2.7 Difference in Post-Test Comprehension Scores Based on Selected Demographic Variables

1. H5 (a): Gender

Hypothesis-“ There is no significant difference in the mean post-test comprehension scores of VIII standard students with respect to gender.”

Table: 4.9

Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Gender

Gender	N	Mean	SD	t-value	p-value	Result
Male	30	12.1	1.65	-3.21	0.003	Significant
Female	10	13.9	1.1			

Interpretation

The difference in post-test comprehension scores between male and female students in the experimental group was examined. Female students (N = 10) obtained a mean score of 13.90 (SD = 1.10), while male students (N = 30) scored a mean of 12.10 (SD = 1.65). The independent samples t-test yielded $t = -3.21$ with a p-value of 0.003, which is below the 0.05 significance level. This indicates that the observed difference in scores between male and female students is statistically significant.

Discussion

The results indicate a significant gender difference in comprehension scores, with female students scoring higher than male students in the post-test. This may be due to differences in engagement or learning strategies in visually rich instructional settings. Therefore, the hypothesis stating that “there is no significant difference in the mean post-test comprehension scores of VIII standard students with respect to gender.” is rejected, as a statistically significant difference was found between male and female students.

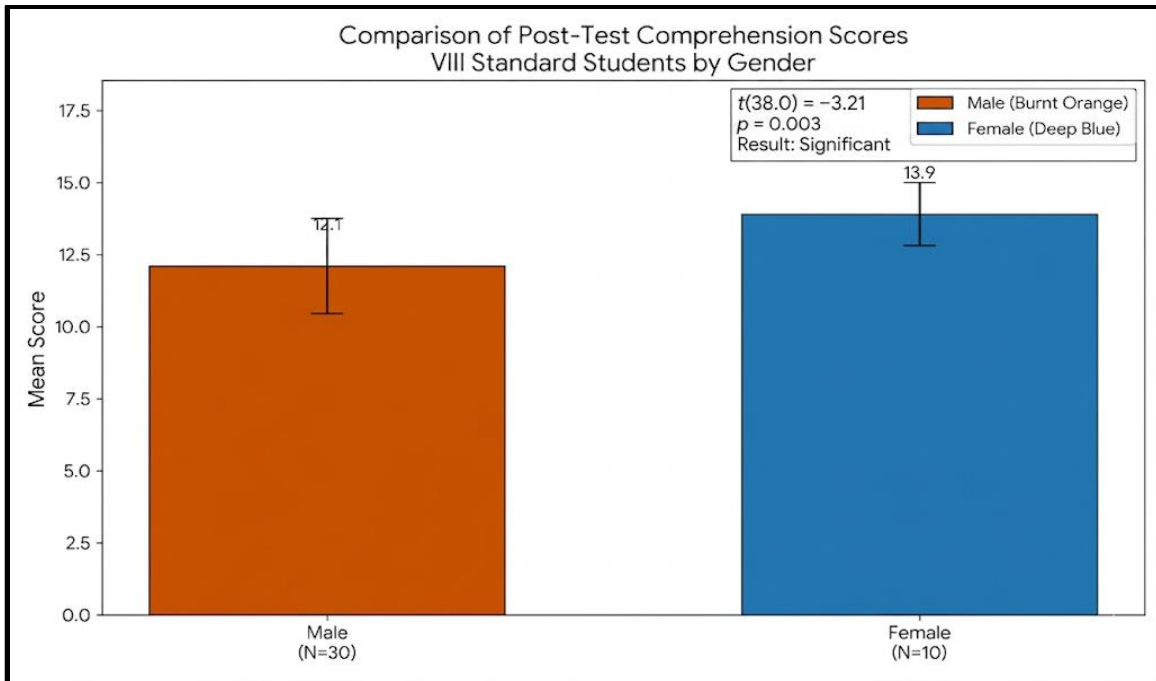


Figure 4.7

Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Gender

2. H5 (b): Language of Instruction

Hypothesis-“ There is no significant difference in the mean post-test comprehension scores of VIII standard students with respect to language of instruction.”

Table: 4.10

Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Language of Instruction.

Language of Instruction	Mean	SD	t-value	p-value	Result
English	12.79	1.53	2.261	0.03	Significant
Tamil	11.17	2.14			

Interpretation

The post-test comprehension scores of students were compared based on their language of instruction. English medium students (N = 34) achieved a mean score of 12.79 (SD = 1.53), whereas Tamil medium students (N = 6) had a mean of 11.17 (SD = 2.14).

The independent samples t-test yielded a t-value of 2.261 with a p-value of 0.030, which is below the 0.05 significance level. This indicates that the difference in comprehension scores between the two language groups is statistically significant.

Discussion

The results indicate that the medium of instruction significantly influences students' comprehension in emoji-based vocabulary learning, with English medium students performing better than their Tamil medium counterparts. This may be attributed to greater exposure to English vocabulary, digital content, or familiarity with emojis in English contexts, which could enhance engagement and understanding. The findings suggest that while emoji-based instruction is effective, language proficiency may moderate the level of comprehension achieved. Therefore, the hypothesis states that “there is no significant difference in the mean post-test comprehension scores of VIII standard students with respect to language of instruction.” is rejected, as a statistically significant difference was observed between English and Tamil medium students.

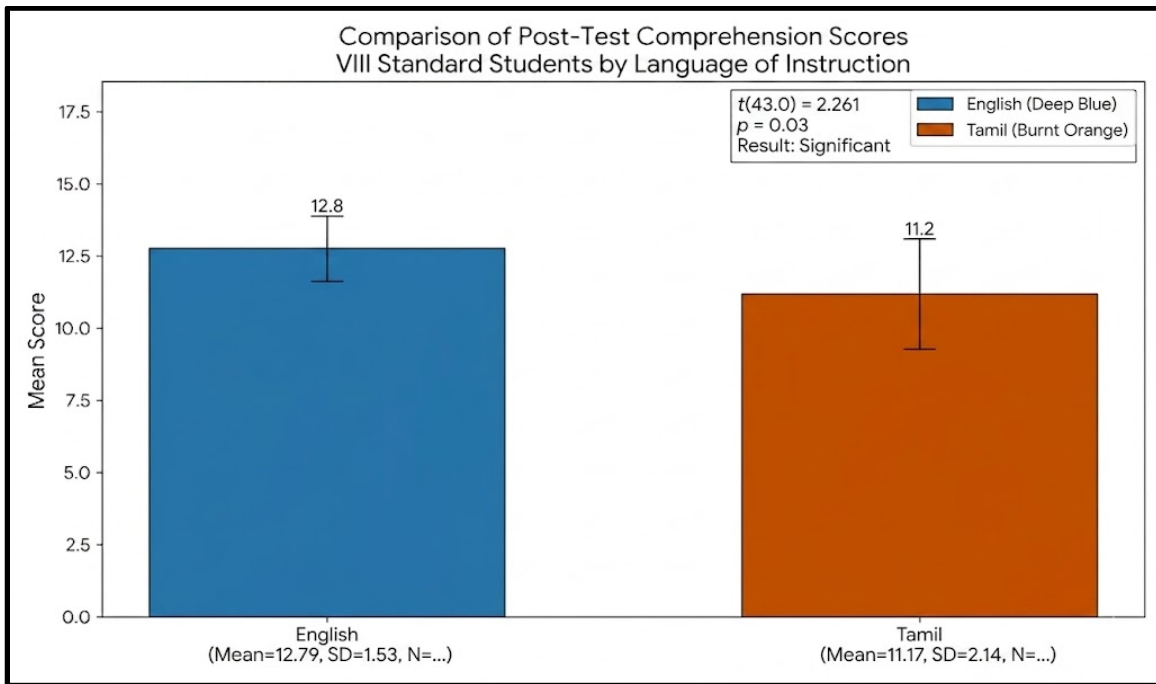


Figure 4.8

Comparison of Post-Test Comprehension Scores of VIII Standard Students with Respect to Language of Instruction

4.2.8 Relationship between Emoji Familiarity and Comprehension

Hypothesis-“There is no significant relationship between familiarity with emojis and comprehension skills of VIII standard students.”

Table 4.11

Correlation between Familiarity with Emojis and Post-Test Comprehension Scores of VIII Standard Students

Variables	r-value	p-value	Result
Familiarity & Post-test Scores (Experimental Group)	-0.186	0.25	Not Significant

Interpretation

The relationship between students’ familiarity with emojis and their comprehension scores was analysed using Pearson’s correlation. The experimental group (N = 40) produced a correlation coefficient of $r = -0.186$, indicating a very low negative relationship between emoji familiarity and comprehension. The p-value associated with this correlation was 0.25, which exceeds the 0.05 significance threshold. This indicates that the relationship is not statistically significant, suggesting that students’ prior experience with emojis does not meaningfully impact their comprehension performance during emoji-based vocabulary instruction.

Discussion

The findings suggest that the effectiveness of emoji-based vocabulary game instruction does not depend on whether students were already familiar with emojis. Students with varying levels of prior exposure to emojis performed comparably in comprehension, indicating that the visual and interactive nature of the instructional method can support learning for all learners regardless of prior familiarity. This highlights the inclusivity and adaptability of emoji-based learning, as it can engage students without requiring pre-existing emoji knowledge. Therefore, the hypothesis stating that “there is no significant relationship between familiarity with emojis and comprehension skills of VIII standard students” is accepted, as the correlation between the variables was found to be statistically not significant.

4.2.9 Effect of Time, Group, and Interaction on Comprehension Skills

Hypothesis- “There is no significant effect of time, group, and their interaction on the comprehension skills of VIII standard students across lexical, semantic, contextual, and situational levels.”

Table 4.12

Mean Scores of Experimental and Control Groups Across Dimensions of Comprehension Level and Test Phases of VIII standard students.

Comprehension Level	Group	Pre-test Mean	Post-test Mean	
Lexical	Control	1.13	3.38	1.63
	Experimental	1.5	4.88	3.88
Semantic	Control	0.48	1.35	1.1
	Experimental	0.95	2.45	1.68
Contextual	Control	0.63	1.78	0.6
	Experimental	0.68	1.7	1.48
Situational	Control	1.38	2.6	1.85
	Experimental	1.48	3.53	2.55

Table 4.13

Mixed ANOVA Results Across Dimensions of Comprehension Level of VIII standard students.

Comprehension Level	Source	df	F-value	p-value	Partial η^2	Result
Lexical	Time	2,156	34.54	<0.001	0.307	Significant
	Group	1,78	28.79	<0.001	0.27	Significant
	Time \times Group	2,156	3.89	0.022	0.047	Significant
Semantic	Time	2,156	39.27	<0.001	0.335	Significant
	Group	1,78	41.08	<0.001	0.345	Significant
	Time \times Group	2,156	3.12	0.047	0.038	Significant
Contextual	Time	2,156	25.38	0.001	0.245	Significant
	Group	1,78	7	0.01	0.082	Significant
	Time \times Group	2,156	5.57	0.005	0.067	Significant
Situational	Time	2,156	47.39	0.001	0.378	Significant
	Group	1,78	23.72	0.001	0.233	Significant
	Time \times Group	2,156	3.21	0.043	0.04	Significant

Interpretation

The comprehension scores of VIII standard students across lexical, semantic, contextual, and situational levels were analysed using Mixed ANOVA to examine the effects of time, group, and their interaction. Across all comprehension levels, the experimental group demonstrated higher mean scores in the post-test and delayed post-test compared to the control group, indicating better learning gains and retention following the intervention.

The results of Mixed ANOVA revealed a significant main effect of time for lexical ($F(2,156) = 34.54, p < 0.001$), semantic ($F(2,156) = 39.27, p < 0.001$), contextual ($F(2,156) = 25.38, p = 0.001$), and situational ($F(2,156) = 47.39, p = 0.001$) comprehension levels. This indicates that students' comprehension scores changed significantly across pre-test, post-test, and delayed post-test phases.

The main effect of group was also found to be significant across all comprehension levels, including lexical ($F(1,78) = 28.79, p < 0.001$), semantic ($F(1,78) = 41.08, p < 0.001$), contextual ($F(1,78) = 7.00, p = 0.010$), and situational ($F(1,78) = 23.72, p = 0.001$), indicating that the experimental group consistently outperformed the control group.

Furthermore, the time \times group interaction effect was significant across all levels: lexical ($F(2,156) = 3.89, p = 0.022$), semantic ($F(2,156) = 3.12, p = 0.047$), contextual ($F(2,156) = 5.57, p = 0.005$), and situational ($F(2,156) = 3.21, p = 0.043$). This indicates that the pattern of improvement and retention over time differed significantly between the experimental and control groups, with the experimental group showing stronger improvement and better retention.

Discussion

The findings indicate that emoji-based vocabulary game instruction had a significant positive effect on students' comprehension skills across all four dimensions—lexical, semantic, contextual, and situational. The significant main effects of time and group, along with the significant interaction effect, confirm that students in the experimental group showed greater improvement and better retention compared to the control group across all test phases. This demonstrates that the instructional intervention was effective in enhancing both immediate learning and delayed retention of vocabulary-based comprehension skills.

Among the four comprehension levels, lexical comprehension showed the highest improvement, as evidenced by the comparatively higher post-test and delayed post-test mean scores in the experimental group, indicating strong gains in word-level understanding. Situational comprehension also showed notable improvement, suggesting that students were able to effectively apply learned vocabulary in practical and context-based situations. In contrast, semantic and contextual comprehension showed relatively

moderate gains, with contextual comprehension demonstrating the least stability over time, particularly in comparison with lexical and situational levels. Overall, the results suggest that emoji-based instruction was most effective in strengthening foundational vocabulary knowledge and applied usage, while its impact on deeper semantic and contextual processing, though significant, was comparatively moderate. Therefore, the null hypothesis stating that “there is no significant effect of time, group, and their interaction on the comprehension skills of VIII standard students” is rejected, as significant main effects and interaction effects were found across all comprehension dimensions.

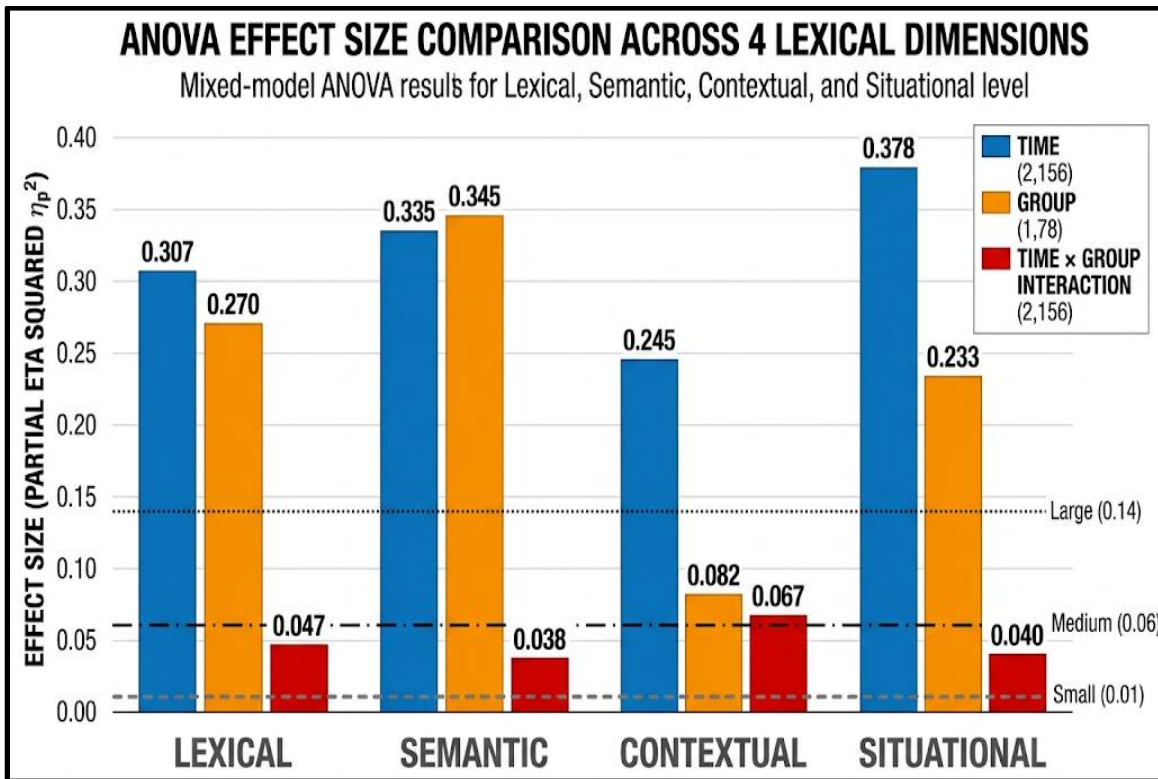


Figure 4.9

Comparison of ANOVA Effect Sizes for Time, Group, and Interaction across Lexical, Semantic, Contextual, and Situational Levels.

4.2.10 Difference Between Post-Test and Delayed Post-Test Comprehension Scores of the experimental group

Hypothesis-“There is no significant difference between post-test and delayed post-test comprehension scores of VIII standard students.”

Table 4.14

Paired Samples t-test Results Comparing Post-Test and Delayed Post-Test Comprehension Scores of VIII Standard Students

Test	Mean	SD	Mean Difference	t-value	df	p-value	Result
Post-test	12.55	1.71	2.98	4.85	39	< 0.001	Significant
Delayed Post-test	9.58	3.93					

Interpretation

The comprehension scores of VIII standard students were analysed using a paired samples t-test to compare post-test and delayed post-test performance. The results show that the mean score decreased from the post-test (M = 12.55, SD = 1.71) to the delayed post-test (M = 9.58, SD = 3.93), with a mean difference of 2.98. The obtained t-value of 4.850 at df = 39 was statistically significant at $p < 0.001$. This indicates that there is a significant difference between post-test and delayed post-test comprehension scores, showing a decline in performance over time.

Discussion

The findings suggest that although students achieved higher comprehension scores immediately after the intervention, their performance reduced in the delayed post-test, indicating a decline in retention over time. This shows that while the instructional intervention was effective in producing strong immediate learning gains, some level of forgetting occurred when there was no continued reinforcement or practice.

However, despite this decline, the post-test performance still reflects that meaningful learning had taken place through the intervention. The reduction in delayed

post-test scores highlights the importance of reinforcement strategies to sustain long-term vocabulary retention. Therefore, the results indicate that while the instructional method is effective for immediate comprehension improvement, additional revision or practice may be required to maintain learning over time. Hence, the null hypothesis stating that “there is no significant difference between post-test and delayed post-test comprehension scores of VIII standard students” is rejected, as a significant difference was found between the two testing phases.

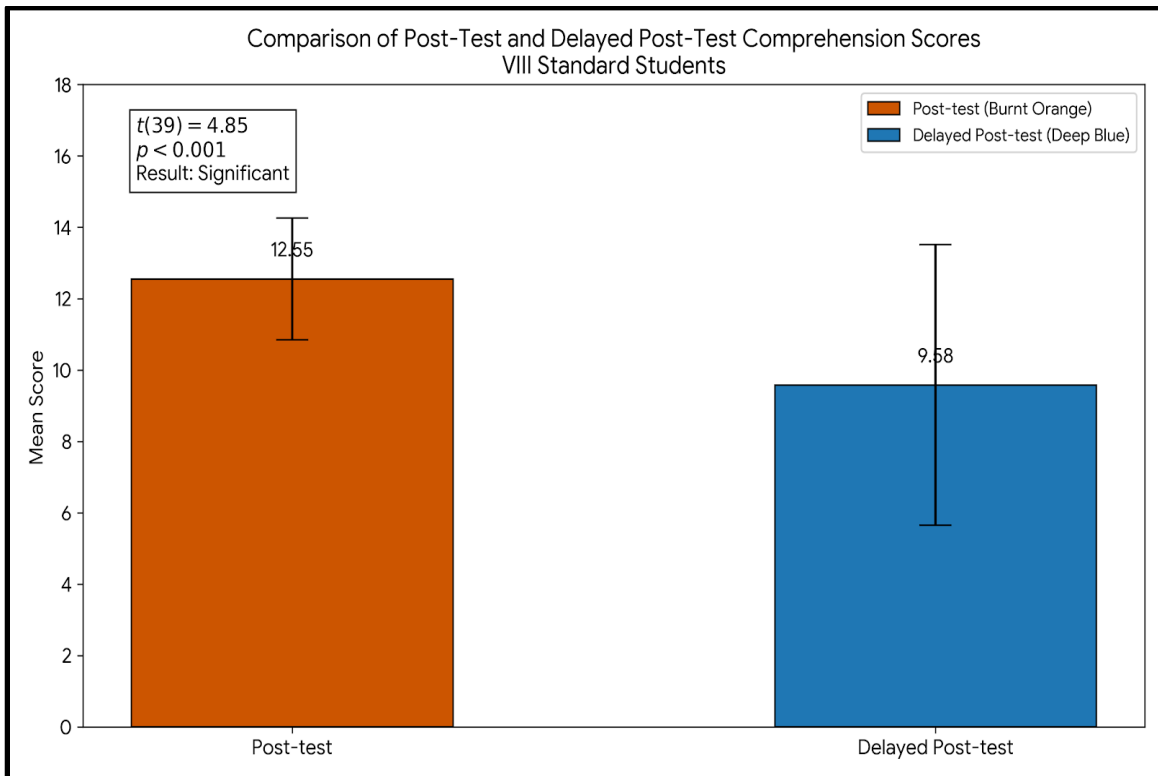


Figure 4.10

Paired Samples t-test Results Comparing Post-Test and Delayed Post-Test Comprehension Scores of VIII Standard Students

4.2.11 Difference in Retention of Comprehension Skills Between Experimental and Control Groups

Hypothesis-“There is no significant difference in retention of comprehension skills between experimental and control groups.”

Table 4.15

Comparison of Retention of Comprehension Skills Between Experimental and Control Groups Based on Delayed Post-test Scores

Vocabulary Level	Control Mean	Experimental Mean	Mean Difference	
Lexical	1.63	3.88	2.25	Highest magnitude of retention
Semantic	1.1	1.68	0.58	Moderate retention
Contextual	0.6	1.48	0.88	Strongest retention effect
Situational	1.85	2.55	0.7	Moderate retention

Interpretation

The delayed post-test scores indicate that the experimental group retained vocabulary better than the control group across all four levels. The lexical level showed the largest numerical gain (+2.25), reflecting substantial retention of word forms. Semantic vocabulary retention was moderate (+0.58), while the contextual level showed a notable retention effect despite similar post-test performance, highlighting the lasting impact of the instructional intervention. At the situational level, the experimental group maintained higher scores (+0.70), demonstrating sustained ability to apply vocabulary in real-life contexts. These results collectively suggest that emoji-based vocabulary instruction enhanced long-term retention across all dimensions.

Discussion

The findings suggest that the emoji-based vocabulary game not only improved immediate learning but also supported durable retention. Lexical gains were the most pronounced numerically, yet the contextual level showed the most meaningful retention,

indicating that embedding vocabulary in meaningful contexts helped students internalize and recall words over time. Similarly, higher delayed scores at semantic and situational levels demonstrate that the interactive and visual nature of emojis facilitates memory consolidation and practical application, making the learning experience both engaging and effective for long-term retention. Therefore, the null hypothesis stating that “there is no significant difference in retention of comprehension skills between experimental and control groups” is rejected, as significant differences in retention were observed between the two groups.

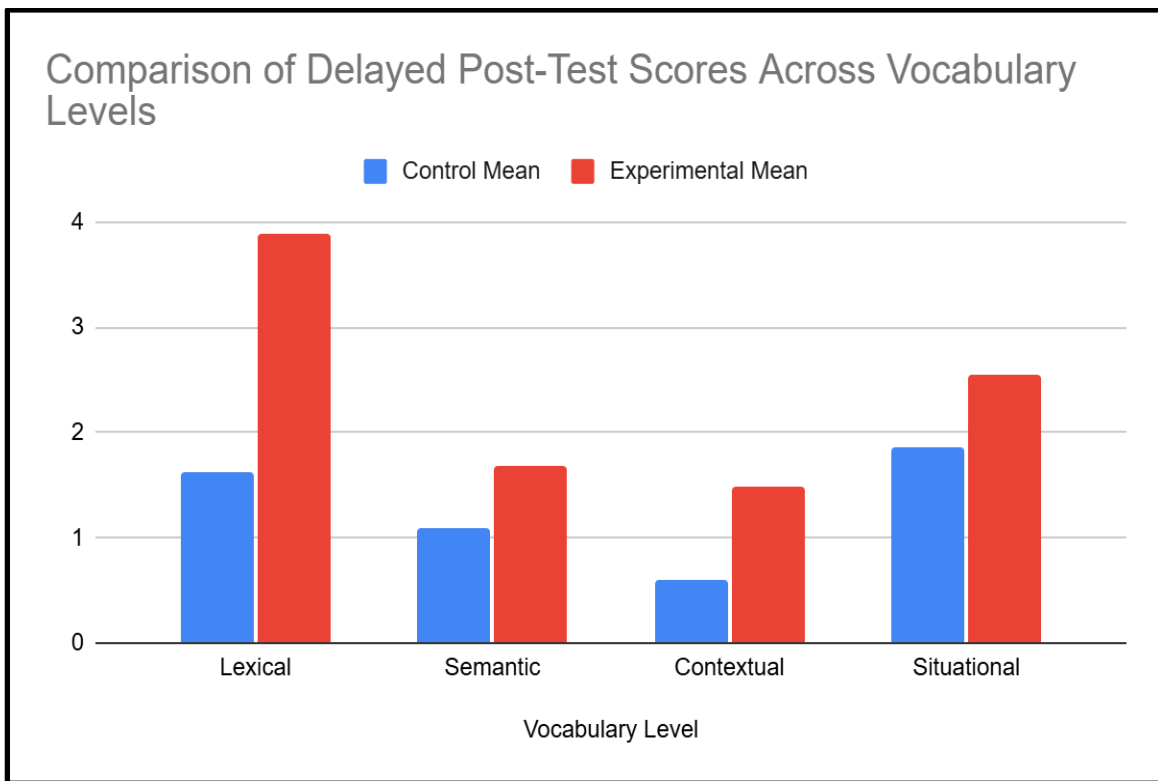


Figure 4.11

Comparison of Retention of Comprehension Skills Between Experimental and Control Groups Based on Delayed Post-test Scores

4.3 Overall Discussion

The findings show that emoji-based vocabulary game instruction had a significant positive impact on students' comprehension skills across lexical, semantic, contextual, and situational levels, with clear advantages over traditional teaching. The experimental group consistently outperformed the control group in both post-test and delayed post-test scores, indicating effective learning and better retention over time.

Among the comprehension levels, lexical comprehension showed the highest immediate improvement, while situational comprehension demonstrated the strongest applied learning and relatively better retention stability. Semantic comprehension showed the strongest statistical effect in the Mixed ANOVA results, indicating deeper conceptual understanding, whereas contextual comprehension showed comparatively lower and less stable gains over time.

Retention analysis confirmed that the experimental group maintained higher performance across all levels in the delayed post-test, especially in lexical and situational domains. The Mixed ANOVA further confirmed significant effects of time, group, and their interaction, establishing that the intervention influenced both learning progress and retention patterns.

Students also expressed a highly positive attitude towards the instructional method, and most demographic variables did not significantly influence outcomes, indicating broad applicability. Overall, the study confirms that emoji-based vocabulary game instruction is an effective strategy for improving comprehension and supporting both immediate learning and long-term retention among VIII standard students.

4.4 Conclusion

The study concludes that emoji-based vocabulary game instruction is an effective method for enhancing students' comprehension and vocabulary learning. It not only improves immediate performance but also supports better retention over time. Students showed a positive attitude towards this method, indicating that it is engaging and motivating. Overall, the approach can be considered a useful and learner-friendly strategy for improving vocabulary and comprehension skills among students.

Summary and Conclusion

CHAPTER V

SUMMARY AND CONCLUSION

This chapter presents a comprehensive summary of the study along with the major findings, conclusions, educational implications, recommendations, and suggestions for further research. The study was undertaken to examine the effectiveness of emoji-based vocabulary game instruction on enhancing comprehension skills among VIII standard students in Coimbatore district. The data collected through achievement tests and attitude scales were analysed using appropriate statistical techniques, including descriptive and inferential methods, to arrive at meaningful interpretations.

Based on the analysis and interpretation of data presented in the previous chapter, this chapter consolidates the key outcomes of the study in a systematic manner. It highlights the significant findings related to comprehension, retention, attitude, and the influence of selected demographic variables. Further, the chapter draws conclusions derived from these findings and outlines their educational implications. It also provides practical recommendations for teachers, curriculum planners, and educational institutions, along with suggestions for future research in this area.

5.1 Findings of the study

1. The descriptive analysis shows that both groups improved from pre-test to post-test, but the experimental group showed a much greater increase (4.60 to 12.55) and better retention in the delayed post-test (9.58) compared to the control group (3.60 to 9.10; 5.18). Although scores declined over time in both groups, the experimental group consistently performed higher, indicating that emoji-based vocabulary game instruction was more effective in improving comprehension and sustaining learning than traditional methods.
2. The level-wise analysis shows that the experimental group consistently outperformed the control group across all vocabulary dimensions. Higher gains were observed in lexical (1.50, 4.88, 3.88) and semantic (0.95, 2.45, 1.68) levels, while contextual learning showed similar post-test performance but better retention in the experimental group (1.48 vs 0.60). Situational vocabulary also improved

- more in the experimental group (1.48, 3.53, 2.55), indicating better application in real-life contexts. Overall, emoji-based instruction enhanced vocabulary learning across all levels, with stronger effects in lexical and situational domains and better retention over time.
3. The independent sample t-test showed that the experimental group ($M = 4.60$, $SD = 2.64$) and control group ($M = 3.60$, $SD = 2.84$) did not differ significantly at the pre-test stage ($t = 1.633$, $p = 0.107$). This confirms that both groups were homogeneous and comparable before the intervention, ensuring that any later differences are due to the effect of emoji-based vocabulary game instruction.
 4. The analysis of post-test comprehension scores of the experimental group showed a mean of 12.55 ($SD = 1.71$) out of 15, which falls under the high comprehension category (11–15). The low standard deviation indicates consistent performance among students. This suggests that emoji-based vocabulary game instruction was highly effective in enhancing students' comprehension, retention, and application of vocabulary.
 5. The attitude scores of the experimental group showed a mean of 3.86 ($SD = 0.68$), which falls within the high attitude category (3.67–5.00). The low standard deviation indicates consistent responses among students. This indicates that students had a highly positive attitude towards emoji-based vocabulary game instruction, suggesting it was engaging, motivating, and well accepted.
 6. The paired samples t-test comparing pre-test and post-test scores of the experimental group showed a significant increase from 4.60 ($SD = 2.64$) to 12.55 ($SD = 1.71$), with a mean difference of 7.95. The result was statistically significant ($t = -15.04$, $df = 39$, $p < 0.001$), indicating a strong improvement in comprehension after the intervention. This confirms that emoji-based vocabulary game instruction had a significant positive effect on students' vocabulary comprehension skills.
 7. The independent samples t-test comparing the experimental and control groups revealed no significant difference at the pre-test stage ($M = 4.60$ vs 3.60 ; $t = 1.633$, $p = 0.107$), confirming initial equivalence. However, significant differences were found in the post-test ($M = 12.55$ vs 9.10 ; $t = 5.066$, $p = 0.001$), gain scores

- (7.95 vs 5.50; $t = 2.632$, $p = 0.010$), and delayed post-test (9.58 vs 5.18; $t = 5.375$, $p = 0.001$). This indicates that the experimental group consistently outperformed the control group, showing that emoji-based vocabulary game instruction was more effective in improving comprehension and retention than traditional methods.
8. The independent samples t-test comparing post-test comprehension scores based on gender showed a significant difference ($t = -3.21$, $p = 0.003$), with female students ($M = 13.90$, $SD = 1.10$) scoring higher than male students ($M = 12.10$, $SD = 1.65$). This indicates better comprehension performance among female students after the intervention.
 9. The independent samples t-test comparing post-test comprehension scores based on language of instruction showed a significant difference ($t = 2.261$, $p = 0.030$), with English medium students ($M = 12.79$, $SD = 1.53$) scoring higher than Tamil medium students ($M = 11.17$, $SD = 2.14$). This indicates that language of instruction influenced comprehension, with better performance among English medium students after the intervention.
 10. The Pearson correlation analysis between emoji familiarity and post-test comprehension scores showed a very low negative relationship ($r = -0.186$, $p = 0.25$), which is not statistically significant. This indicates that emoji familiarity did not influence comprehension performance, suggesting the effectiveness of the instruction is independent of prior exposure to emojis.
 11. The Mixed ANOVA on lexical, semantic, contextual, and situational comprehension levels showed significant effects of time, group, and their interaction across all levels ($p < 0.05$). The experimental group consistently outperformed the control group, with the highest gains in lexical comprehension, followed by situational, semantic, and contextual levels, and also showed different improvement patterns over time. This confirms that emoji-based vocabulary game instruction significantly enhanced comprehension across all dimensions.
 12. The paired samples t-test comparing post-test and delayed post-test comprehension scores of the experimental group showed a significant decrease ($t = 4.85$, $p < 0.001$), with the mean dropping from 12.55 to 9.58. This indicates a significant decline in retention over time, though the scores still reflect meaningful learning from the intervention.

13. The comparison of delayed post-test scores between the experimental and control groups showed that the experimental group had higher retention across all vocabulary levels. At the lexical level (3.88 vs 1.63; MD = 2.25), the experimental group showed the highest retention, followed by contextual (1.48 vs 0.60; MD = 0.88), situational (2.55 vs 1.85; MD = 0.70), and semantic levels (1.68 vs 1.10; MD = 0.58). These results indicate that the experimental group consistently retained more vocabulary than the control group, demonstrating the effectiveness of emoji-based vocabulary game instruction in supporting long-term comprehension retention across all dimensions.

5.2 Educational Implications

1. Emoji-based vocabulary instruction can be effectively used to enhance students' comprehension and retention in language learning.
2. The use of emojis supports visual learning, helping students understand vocabulary more clearly and quickly.
3. Game-based approaches promote active participation and student engagement, making learning more meaningful.
4. The strategy is inclusive and applicable across diverse learner backgrounds, as most demographic variables did not influence learning.
5. A positive student attitude indicates that such methods can increase motivation and interest in vocabulary learning.

5.3 Recommendations of the Study

1. Teachers should incorporate emoji-based vocabulary games into regular classroom instruction.
2. Educators should adopt interactive and visual teaching methods to improve vocabulary learning outcomes.
3. Curriculum planners should include emoji-supported vocabulary activities and digital content in instructional materials.

4. Teachers should provide regular reinforcement and practice activities to improve long-term retention.
5. Instruction should consider learner differences such as language of instruction and gender for better effectiveness

5.4 Suggestions for Further Research

1. Similar studies can be conducted at different educational levels to test effectiveness across age groups.
2. Future research may use a larger sample size and different regions to improve generalization.
3. Comparative studies can be carried out between emoji-based learning and other teaching methods.
4. Further research can explore the effect on other language skills like reading, writing, speaking, and listening.
5. Long-term studies can be conducted to examine retention over extended periods.

5.5 Conclusion

The present study examined the effectiveness of emoji-based vocabulary game instruction on enhancing comprehension skills among VIII standard students in Coimbatore District. The findings clearly show that the experimental group performed significantly better than the control group, with higher post-test and delayed post-test scores, indicating improved learning and retention over time. Level-wise analysis revealed superior performance across lexical, semantic, contextual, and situational dimensions, with stronger gains in lexical and situational understanding.

The study also found that students had a highly positive attitude towards emoji-based learning, indicating that the method is engaging and learner-friendly. Among the demographic variables, only gender and language of instruction showed significant differences in comprehension scores. Overall, the study concludes that emoji-based vocabulary game instruction is an effective and inclusive pedagogical approach that enhances comprehension, promotes retention, and fosters positive learning experiences.

Bibliography

REFERENCES

- Aida, A. (2021). Students' difficulties in reading comprehension at the eighth grade students of SMPN 22 Kota Jambi. *JR-ELT (Journal of Research in English Language Teaching)*, 5(1), 1–11. <https://doi.org/10.30631/jr-elt.v5i1.14>
- Al-aajam, S. M. R. (n.d.). *The impact of using emoji and emoticons to enhance Iraqi EFL students in vocabulary acquisition at intermediate school*.
- Allanazarova, M. A. (2020). Vocabulary retention in cognitive theory. *Bulletin of Science and Practice*, 6(9), 414–419.
- Anchana, K., Priya Das, R., Sharvanthi Priya, N., Ramya, D., & P, K. R. (2021). Emoji creation with image dataset using deep learning. *International Journal for Scientific Research and Development*, 9(2), 16–18.
- Barbieri, F., Ballesteros, M., & Saggion, H. (2017). Are emojis predictable? In *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics* (Vol. 2, pp. 105–111).
- Bates, J., & Son, J. B. (2020). English vocabulary learning with simplified pictures. *TESL-EJ*, 24(3), Article n3.
- Brooks, G., Clenton, J., & Fraser, S. (2023). Exploring the importance of vocabulary for English as an additional language learners' reading comprehension. In *EAL research for the classroom* (pp. 35–58). Routledge.
- Cameron, L. (2001). *Teaching languages to young learners*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511733109>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.
- Danesi, M. (2016). *The semiotics of emoji: The rise of visual language in the age of the internet*. Bloomsbury Academic
- Danesi, M. (2019). Emoji and the expression of emotion in writing. In *The Routledge handbook of language and emotion* (pp. 242–257). Routledge.
- Danesi, M. (2022). Emotional wellbeing and the semiotic translation of emojis. In *Exploring the translatability of emotions* (pp. 323–344). Springer. https://doi.org/10.1007/978-3-030-91748-7_12

- Durbahn, M., Rodgers, M., & Peters, E. (2020). The relationship between vocabulary and viewing comprehension. *System*, 88, 102166.
- Eastern Washington University. (2022, December 28). The impact of reading comprehension on learning. <https://online.ewu.edu/degrees/education/med/reading-literacy/reading-comprehension-on-learning/>
- Elgort, I., Perfetti, C. A., Rickles, B., & Stafura, J. Z. (2015). Contextual learning of L2 word meanings: Second language proficiency modulates behavioural and event-related brain potential (ERP) indicators of learning. *Language, Cognition and Neuroscience*, 30(5), 506–528. <https://doi.org/10.1080/23273798.2014.942673>
- Ghorbani, M. R., & Riabi, N. K. (2011). The impact of memory strategy instruction on learners' EFL vocabulary retention. *Theory and Practice in Language Studies*, 1(9), 1222–1226.
- Hu, T., Guo, H., Sun, H., Nguyen, T. V., & Luo, J. (2017). Spice up your chat: The intentions and sentiment effects of using emojis. In *Proceedings of the International AAAI Conference on Web and Social Media* (Vol. 11, No. 1, pp. 102–111).
- IGI Global. (n.d.). *What is language learning*. <https://www.igi-global.com/dictionary/language-learning/16624>
- Karatas, N. B., Özemir, O., Lovelett, J. T., Demir, B., Erkol, K., Veríssimo, J., & Ullman, M. T. (2025). Improving second language vocabulary learning and retention by leveraging memory enhancement techniques: A multidomain pedagogical approach. *Language Teaching Research*, 29(1), 112–149.
- Karulkar, Y., Vora, D., Vaddepalli, S., & Thakur, Y. (2025). Are emojis the new words? A sentiment analysis of social media brand conversations. *Journal of International Technology and Information Management*, 33(1), 144–181. <https://doi.org/10.58729/1941-6679.1610>
- Kaphle, K. R. (2024). Challenges of learning English vocabulary. *Janaprakash Journal of Multidisciplinary Research*, 2(1), 31–43. <https://doi.org/10.3126/jjmr.v2i1.75170>
- Kelly, R., & Watts, L. (2015). Characterising the inventive appropriation of emoji as relationally meaningful in mediated close personal relationships. In *Experiences of technology appropriation*.
- Kendall, E. (2025, January 14). *Emoji: Definition, examples, history, & facts*. Britannica. <https://www.britannica.com/topic/emoji>

- Khan, A., Majumdar, D., & Mondal, B. (2025). Sentiment analysis of emoji fused reviews using machine learning and BERT. *Scientific Reports*, *15*, 7538. <https://doi.org/10.1038/s41598-025-92286-0>
- Klein, L. H., Aydin, R., & West, R. (2024). *Emojinize: Enriching any text with emoji translations*. arXiv. <https://arxiv.org/abs/2403.03857>
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Kralj Novak, P., Smailović, J., Sluban, B., & Mozetič, I. (2015). Sentiment of emojis. *PLOS ONE*, *10*(12), e0144296.
- Krylovska, Y. (2024). Lexical level in linguistic (semantic and textual) expertise. *Bulletin of Luhansk Taras Shevchenko National University*, *2*(361), 57–63. [https://doi.org/10.12958/2227-2844-2024-2\(361\)-57-63](https://doi.org/10.12958/2227-2844-2024-2(361)-57-63)
- Li, Y., & Zhong, Z. (2025). Disentangling the facilitation effect of emoji in vocabulary recognition. *Frontiers in Psychology*, *16*, 1629078.
- Luo, Y., Song, H., Wan, L., & Zhang, X. (2021). The effect of vocabulary depth and breadth on English listening comprehension. *Frontiers in Psychology*, *12*, 657573.
- Maria Suganthi, L. (2021). *Effect of gamification on attention and memory retention among prospective teachers*.
- Masrai, A. (2019). Vocabulary and reading comprehension revisited. *SAGE Open*, *9*(2).
- Mayer, R. E. (2001). *Multimedia learning*. Cambridge University Press.
- Ministry of Human Resource Development. (2020). *National education policy 2020*. Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
- Musa, N. C., Lie, K. Y., & Azman, H. (2012). Exploring English language learning and teaching in Malaysia. *GEMA Online Journal of Language Studies*, *12*(1), 35–51.
- Na, D. R. T., & Trang, N. H. (2022). The effects of using pictures on EFL learners' vocabulary retention. *International Journal of Emerging Trends in Social Sciences*, *13*(1), 1–13.
- Nation, I. S. P. (2022). *Learning vocabulary in another language*. Cambridge University Press.
- National Council of Educational Research and Training. (2005). *National curriculum framework 2005*. <https://educationforallindia.com/wp-content/uploads/2020/12/National-Curriculum-Framework-2005-NCERT-English.pdf>

- Nemati, A. (2009). Memory vocabulary learning strategies and long-term retention. *International Journal of Vocational and Technical Education*, 1(2), 14–24.
- Nguyen, T. C. D. (2022). The impact of context on EFL learners' vocabulary retention. *European Journal of Foreign Language Teaching*, 6(2).
- Oxford University Press. (n.d.). *Comprehension*. <https://www.oxfordlearnersdictionaries.com/definition/english/comprehension>
- Paivio, A. (1971). *Imagery and verbal processes*. Holt, Rinehart and Winston.
- Rahman, Z. U., & Iqbal, Z. (2019). Relationship of vocabulary knowledge and reading comprehension. *Bulletin of Education and Research*, 41(3), 89–100.
- Robertson, A., Liza, F. F., Nguyen, D., McGillivray, B., & Hale, S. A. (2021). *Semantic journeys: Quantifying change in emoji meaning*. arXiv.
- Sanhas, T., Maulina, M., Rahim, T. R., & Flores, R. B. (2025). The emoji speaks. *Journal of English Language and Education*, 10(5), 491–502.
- Sivaraja, H., et al. (2025). Emoji story quest. In *Innovation in action: Turning ideas into reality* (pp. 331–335).
- Vocabulary.com. (n.d.). *Semantics*. <https://www.vocabulary.com/dictionary/semantics>
- Zeng, Y., Kuo, L.-J., Chen, L., Lin, J.-A., & Shen, H. (2025). Vocabulary instruction for English learners: A systematic review connecting theories, research, and practices. *Education Sciences*, 15(3), 262. <https://doi.org/10.3390/educsci15030262>

Annexure

APPENDIX I

Breakup of the Content and Emoji-Based Vocabulary Modules for all sessions

MODULE 1				
Module title	CYBER SECURITY PART-1			
Phases	Lexical Level (Meaning Recognition)	Semantic Level (Meaning Discrimination)	Contextual Level (Sentence Use)	Situational Level (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between similar words using emoji-supported grouping	Understanding vocabulary usage in sentences with emoji hints	Applying vocabulary in real-life situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between closely related words using emoji support	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported grouping/discrimination (LearningApps)	Emoji-assisted MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match words with meanings using emoji clues	Students group/select words based on emoji-supported meaning categories	Students complete sentences using emoji-supported MCQs	Students choose appropriate words for emoji-based situations
Example	1. Ping – To send a brief message 📱🔔✉️	Group 1 (🔊 Sound): Ping, Shriek Group 2 (📶 No signal): Offline, Airplane mode ✈️📱	I could not use the internet 🌐📶 → _____ a) Ping b) Offline c) Shriek	You send a short message 📱 → _____ a) Ping b) Offline
Feedback	Students correctly interpret emojis to identify meanings	Students distinguish similar words using emoji clues	Students understand contextual usage with emoji support	Students apply vocabulary correctly in situations using emojis
Evaluation	Matching with emoji clues	MCQs with emoji grouping	MCQs with emoji context	MCQs with emoji situations

MODULE 2				
Module title	CYBER SECURITY PART-2			
Phases	Lexical Level 2 (Meaning Recognition)	Semantic Level 2 (Meaning Discrimination)	Contextual Level 2 (Sentence Use)	Situational Level 2 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between similar words using emoji-supported comparison	Understanding vocabulary usage in sentences with emoji hints	Applying vocabulary in real-life online situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between closely related words using emoji support	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported MCQs for discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match online predator, bother, and cyber with meanings using emoji clues	Students choose correct words by distinguishing meanings using emoji-supported options	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations

MODULE 2				
Module title	CYBER SECURITY PART-2			
Example	1. Online predator – person harming others online ☹️👤👤👤	Group 1 (⚠️ Danger): Online predator, thief Group 2 (🌐 Internet): Cyber, offline	Someone is troubling you online ☹️👤 → _____ a) Bother b) Cyber c) Predator	A stranger is harming children online ⚠️👤 → _____ a) Online predator B) Bother
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between similar words accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji-based discrimination	MCQs with emoji-supported context	MCQs with emoji-based situations

MODULE 3				
Module title	CYBER SECURITY PART-3			
Phases	Lexical Level 3 (Meaning Recognition)	Semantic Level 3 (Meaning Discrimination)	Contextual Level 3 (Sentence Use)	Situational Level 3 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between contrasting words using emoji-supported comparison	Understanding vocabulary usage in cyber-related sentences with emoji hints	Applying vocabulary in real-life digital behaviour situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between opposite or closely related words using emoji support	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported MCQs for discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match aggressive and beneficial with meanings using emoji clues	Students choose correct words by distinguishing meanings using emoji-supported options	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Aggressive – attacking or angry 😡👤👤👤	Group 1 (😞 Negative): Aggressive, rude Group 2 (👍 Positive): Beneficial, helpful	He sends angry messages online 😡👤 → _____ a) Aggressive b) Beneficial	A person insults others in online chats 😡👤 → _____ a) Aggressive b) Beneficial
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between contrasting words accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji-based discrimination	MCQs with emoji-supported context	MCQs with emoji-based situations

MODULE 4				
Module title	MY COMPUTER NEEDS A BREAK PART-1			
Phases	Lexical Level 4 (Meaning Recognition)	Semantic Level 4 (Meaning Discrimination)	Contextual Level 4 (Sentence Use)	Situational Level 4 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between closely related or contrasting words using emoji-supported comparison	Understanding vocabulary usage in poetic and everyday sentences with emoji hints	Applying vocabulary in real-life situations using emoji cues

MODULE 4				
Module title	MY COMPUTER NEEDS A BREAK PART-1			
Learning outcome	To identify meanings of words using emojis	To differentiate between closely related words using emoji support	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported MCQs for discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match brainy, absent-minded, and vanish with meanings using emoji clues	Students choose correct words by distinguishing meanings using emoji-supported options	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Brainy – very intelligent 🧠👉🧠	Group 1 (🧠 Intelligence): Brainy, clever Group 2 (🧠 Forgetfulness): Absent-minded, careless	He solves problems quickly 🧠👉 → _____ a) Brainy b) Vanish	She forgets things often 🧠? → _____ a) Brainy b) Absent-minded
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between related words accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji-based discrimination	MCQs with emoji-supported context	MCQs with emoji-based situations

MODULE 5				
Module title	MY COMPUTER NEEDS A BREAK PART-2			
Phases	Lexical Level 5 (Meaning Recognition)	Semantic Level 5 (Meaning Discrimination)	Contextual Level 5 (Sentence Use)	Situational Level 5 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between similar or related words using emoji-supported comparison	Understanding vocabulary usage in poetic and everyday sentences with emoji hints	Applying vocabulary in real-life situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between closely related words using emoji support	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported MCQs for discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match dreadful, gobbled, erratically, and squirm with meanings using emoji clues	Students choose correct words by distinguishing meanings using emoji-supported options	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Dreadful – very bad 😞👉👎 discomfort 😞👉👎	Group 1 (😞 Negative): Dreadful, terrible Group 2 (🍴 Eating fast): Gobbled, devoured	He ate his food very fast 🍴👉 → _____ a) Gobbled b) Squirm	The child moved uncomfortably on the chair 😞👉 → _____ a) Squirm b)
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between similar words accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji-based discrimination	MCQs with emoji-supported context	MCQs with emoji-based situations

MODULE 6				
Module title	THE MYSTERY OF THE CYBER FRIEND PART -1			
Phases	Lexical Level 6 (Meaning Recognition)	Semantic Level 6 (Meaning Discrimination)	Contextual Level 6 (Sentence Use)	Situational Level 6 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between similar or confusing words using emoji-supported grouping	Understanding vocabulary usage in cyber-related and daily-life sentences with emoji hints	Applying vocabulary in real-life cyber and daily situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between related words using grouped meaning categories	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported grouping/discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match Friends net, FOMO, wonders, and nap with meanings using emoji clues	Students group/select words based on emoji-supported meaning categories	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Friends net – online platform 📱💬	Group 1 (📱 Online / Digital): Friends net, FOMO, social media, online Group 2 (🧠 Thinking / Feeling): Wonders, thinks, feels	She feels worried about missing updates 📱 → _____ a) FOMO b) Nap	He joins a website to meet new people 📱 → _____ a) Friends net b) FOMO
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between grouped vocabulary accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji grouping	MCQs with emoji context	MCQs with emoji situations
MODULE 7				
Module title	THE MYSTERY OF THE CYBER FRIEND PART -2			
Phases	Lexical Level 7 (Meaning Recognition)	Semantic Level 7 (Meaning Discrimination)	Contextual Level 7 (Sentence Use)	Situational Level 7 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between similar or confusing words using emoji-supported grouping	Understanding vocabulary usage in cyber and emotional contexts with emoji hints	Applying vocabulary in real-life communication and emotional situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between related words using grouped meaning categories	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported grouping/discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match ping, offline, and shriek with meanings using emoji clues	Students group/select words based on emoji-supported meaning categories	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Ping – send a message 📱🔔✉️	Group 1 (📱 Communication): Ping, message, notify Group 2 (🌐 Internet Status): Offline, disconnected, no signal	I sent a quick message 📱 → _____ a) Ping b) Shriek	She screamed loudly in fear 😱🔊 → _____ a) Shriek b) Ping

MODULE 7				
Module title	THE MYSTERY OF THE CYBER FRIEND PART -2			
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between grouped vocabulary accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji grouping	MCQs with emoji context	MCQs with emoji situations
MODULE 8				
Module title	THE MYSTERY OF THE CYBER FRIEND PART -3			
Phases	Lexical Level 8 (Meaning Recognition)	Semantic Level 8 (Meaning Discrimination)	Contextual Level 8 (Sentence Use)	Situational Level 8 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between related or confusing words using emoji-supported grouping	Understanding vocabulary usage in cyber safety and trust-related sentences with emoji hints	Applying vocabulary in real-life digital safety and trust situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between related words using grouped meaning categories	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported grouping/discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match imposter, confide, and cyber safety with meanings using emoji clues	Students group/select words based on emoji-supported meaning categories	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Imposter – someone pretending 🗑️🗑️🗑️	Group 1 (👤 Identity / People): Imposter, stranger, fake person Group 2 (🗉 Trust / Communication): Confide, share, trust	He pretends to be someone else online 🗑️🗑️ → _____ a) Imposter b) Confide	You should use the internet safely 🗑️🗑️ → _____ a) Cyber safety b) Imposter
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between grouped vocabulary accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji grouping	MCQs with emoji context	MCQs with emoji situations
MODULE 9				
Module title	THE MYSTERY OF THE CYBER FRIEND PART -4			
Phases	Lexical Level 9 (Meaning Recognition)	Semantic Level 9 (Meaning Discrimination)	Contextual Level 9 (Sentence Use)	Situational Level 9 (Application)
Module duration	15 min	10 min	10 min	15 min
Module overview	Recognising meanings of vocabulary words using emoji cues	Distinguishing between related or contrasting words using emoji-supported grouping	Understanding vocabulary usage in cyber safety and emotional sentences with emoji hints	Applying vocabulary in real-life online safety and emotional situations using emoji cues
Learning outcome	To identify meanings of words using emojis	To differentiate between related words using grouped meaning categories	To interpret correct word usage in sentences with emoji clues	To select appropriate words in real-life situations using emoji cues
Pedagogical strategy	Emoji-based matching activity (LearningApps)	Emoji-supported grouping/discrimination (LearningApps)	Emoji-assisted contextual MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)

MODULE 9				
Module title	THE MYSTERY OF THE CYBER FRIEND PART -4			
Activity	Students match cyber crime and scary with meanings using emoji clues	Students group/select words based on emoji-supported meaning categories	Students complete sentences using emoji-supported MCQs	Students select appropriate words for emoji-based real-life situations
Example	1. Cyber crime – illegal online activity 📱⚠️🔒	Group 1 (📱 Online Danger): Cyber crime, hacking, fraud Group 2 (😱 Emotion / Fear): Scary, frightening, fearful	Stealing data online is a crime 📱🔒 → _____ a) Cyber crime b) Scary	Hacking someone’s account is an _____ 📱🔒 → _____ a) Cyber crime b) Scary
Feedback	Students correctly identify meanings using emoji cues	Students distinguish between grouped vocabulary accurately	Students understand contextual usage with emoji support	Students apply vocabulary correctly in real-life situations
Evaluation	Matching with emoji clues	MCQs with emoji grouping	MCQs with emoji context	MCQs with emoji situations

MODULE 10				
Module title	REVISION MODULE			
Phases	Lexical Level R1 (Meaning Recall)	Semantic Level R1 (Meaning Consolidation)	Contextual Level R1 (Sentence Reinforcement)	Situational Level R1 (Application Mastery)
Module duration	15 min	10 min	10 min	15 min
Module overview	Revising meanings of previously learned vocabulary using emoji cues (most words from Sessions 2–9 included)	Reinforcing understanding by grouping and differentiating vocabulary across broad categories	Strengthening sentence-level understanding using mixed vocabulary	Applying learned vocabulary in real-life cyber safety and daily situations
Learning outcome	To recall meanings of vocabulary using emojis	To differentiate and group vocabulary based on meaning categories	To interpret correct word usage in sentences	To apply appropriate vocabulary in real-life situations
Pedagogical strategy	Emoji-based mixed matching (LearningApps)	Emoji-supported grouping/classification (LearningApps)	Emoji-assisted mixed MCQs (Wordwall)	Emoji-based situational MCQs (Wordwall)
Activity	Students match mixed vocabulary from Sessions 2–9 with meanings using emoji clues	Students group words into categories such as Online / Emotion / Action	Students complete mixed sentences using previously learned vocabulary	Students solve real-life situations using appropriate vocabulary
Example	1. Offline – not connected to internet 📱🔒❌	Group 1 (📱 Online / Technology): Offline, cyber safety, Friends net, ping Group 2 (😱 Emotion / Behaviour): Scary, FOMO, aggressive, shriek	The computer is not connected to the internet 📱❌ → _____ a) Offline b) Confide	A person creates a fake profile online 📱🔒 → _____ a) Imposter b) Cyber safety
Feedback	Students recall meanings accurately using emoji cues	Students correctly group and differentiate vocabulary	Students demonstrate understanding in sentence usage	Students apply vocabulary correctly in real-life contexts
Evaluation	Mixed matching with emoji clues	MCQs with grouping/classification	MCQs with mixed context	MCQs with real-life situations

Control group lesson plan (session 1-9)

Session Details	Objectives	TLM	Motivation	Presentation (ALM Method)	Consolidation & Reinforcement	Evaluation	Remedial & Follow-up
S1: Cyber Safety (Prose) – Vocabulary: screw gauge, browse, frightened	Understand meanings, sentence usage & contextual application	Textbook, Blackboard, Chalk	Questions on tools, internet use, fear situations	Words written on board; pronunciation drill; meanings explained using simple contexts; example sentences; student reading & responses	Oral recall, repetition, sentence framing, correction	Oral matching, fill-ups, sentence formation, notebook check	Extra explanation, repetition; write sentences & complete exercises
S2: Cyber Safety (Prose) – Vocabulary: online predator, bother, cyber	Same as above	Same as above	Questions on internet communication and disturbances	Blackboard presentation; pronunciation; contextual explanation; examples; oral responses	Recall, repetition, sentence formation	Oral & written activities; observation	Additional support; write sentences; textbook exercises
S3: Cyber Safety (Prose) – Vocabulary: aggressive, beneficial	Same as above	Same as above	Questions on behaviour and helpful actions	Blackboard teaching; pronunciation; contextual explanation; examples	Recall, repetition, sentence practice	Matching, fill-ups, sentence writing	Extra explanation; practice; exercises
S4: Poem – My Computer Needs a Break – Vocabulary: brainy, absent-minded, vanish	Same as above	Same as above	Questions on intelligence, forgetfulness, disappearance	Words written; pronunciation; explanation using daily life & poem context	Recall, repetition, sentence formation	Oral & written evaluation	Additional support; writing task; exercises
S5: Poem – Vocabulary: dreadful, gobbled, erratically, squirm	Same as above	Same as above	Questions on unpleasant experiences, eating habits, irregular actions	Blackboard teaching; pronunciation; explanation with examples	Recall, repetition, sentence practice	Oral questioning, fill-ups, sentence formation	Extra examples; practice; exercises
S6: Supplementary – Mystery of the Cyber Friend – Vocabulary: Friends net, FOMO, wonders, nap	Same as above	Same as above	Questions on social media, curiosity, routines	Blackboard method; pronunciation; contextual explanation	Recall, repetition, sentence formation	Oral and written evaluation	Additional explanation; practice; exercises
S7: Supplementary – Vocabulary: ping, offline, shriek	Same as above	Same as above	Questions on notifications, internet use, reactions	Blackboard teaching; pronunciation; explanation with examples	Recall, repetition, sentence formation	Matching, fill-ups, sentence writing	Extra support; writing task; exercises
S8: Supplementary – Vocabulary: imposter, confide, cyber safety	Same as above	Same as above	Questions on trust, online safety	Blackboard presentation; pronunciation; contextual explanation	Recall, repetition, sentence formation	Oral & written evaluation	Additional explanation; practice; exercises
S9: Supplementary – Vocabulary: cyber crime, scary	Same as above	Same as above	Questions on online crimes and fear	Blackboard teaching; pronunciation; explanation using context	Recall, repetition, sentence formation	Matching, fill-ups, sentence writing	Extra explanation; practice; exercises

APPENDIX II

TOOLS (REVISED AND VALIDATED VERSION)

Achievement Test (BEFORE VALIDATION)

(Pre and Post Test Questions)

Vocabulary Comprehension Test

Total Marks: 20

I. Lexical Level – Meaning Recognition

(Matching – $5 \times 1 = 5$ marks)

Column A	Column B
1. Screw gauge	a. Disappear
2. Browse	b. Tool used for measuring very small thickness
3. Vanish	c. To look through casually
4. Aggressive	d. Prone to attack or argue
5. Beneficial	e. Helpful or good

Options

1. A – b, B – c, C – a, D – d, E – e
2. A – a, B – b, C – c, D – d, E – e
3. A – b, B – a, C – c, D – e, E – d
4. A – c, B – b, C – a, D – e, E – d

II. Semantic Level – Discrimination Between Close Meanings

(MCQs – $5 \times 1 = 5$ marks)

Choose the most appropriate word.

6. The child felt _____ after hearing a loud noise.

- a) frightened
- b) excited
- c) curious
- d) relaxed

7. The hacker committed a serious _____ using the internet.

- a) cyber safety
- b) cyber crime
- c) friends net
- d) offline

8. She is very _____ and always scores high marks.

- a) absent-minded
- b) dreadful
- c) brainy
- d) scary

9. He ate the food _____ because he was very hungry.

- a) gobbled
- b) tasted
- c) chewed slowly
- d) shared

10. The man was an _____ who used a fake identity online.

- a) imposter
- b) predator
- c) browser
- d) wander

III. Contextual Level – Meaning in Sentence-Level Use

(MCQs – $5 \times 1 = 5$ marks)

11. The baby began to _____ when it felt uncomfortable.

- a) squirm
- b) sleep
- c) laugh
- d) jump

12. She decided to _____ in her best friend about the problem.

- a) confide
- b) shriek
- c) bother
- d) vanish

13. The phone is _____ because it is not connected to the internet.

- a) cyber
- b) offline
- c) aggressive
- d) beneficial

14. He sent a quick _____ to his friend.

- a) ping
- b) call
- c) message
- d) letter

15. The movie was so _____ that the children felt afraid.

- a) scary
- b) beneficial
- c) brainy
- d) absent-minded

IV. Situational Level – Appropriateness of Word Choice

(Situational MCQs – $5 \times 1 = 5$ marks)

16. Someone who targets and manipulates children through the internet for harmful purposes is called an _____.

- a) imposter
- b) online predator
- c) cyber user
- d) digital participant

17. Safe and responsible use of the internet is known as _____.

- a) cyber crime
- b) cyber safety
- c) offline
- d) friends net

18. The anxiety caused by constantly checking social media to avoid missing updates is known as _____.

- a) distraction
- b) FOMO
- c) notification stress
- d) social habit

19. A sudden loud scream due to fear is called a _____.

- a) shriek
- b) squirm
- c) gobble
- d) browse

20. A short sleep during the day is called a _____.

- a) nap
- b) rest
- c) break
- d) pause

1. Vocabulary Achievement Test (AFTER VALIDATION)

(Pre and Post Test Questions)

Total Marks: 20

I. Lexical Level – Meaning Recognition

(Matching – 5 × 1 = 5 marks)

Column A	Column B
1. Screw gauge	a. Disappear
2. Browse	b. Tool used for measuring very small thickness
3. Vanish	c. To look through casually
4. Aggressive	d. Prone to attack or argue
5. Beneficial	e. Helpful or good

Options

1. A – b, B – c, C – a, D – d, E – e
2. A – a, B – b, C – c, D – d, E – e
3. A – b, B – a, C – c, D – e, E – d
4. A – c, B – b, C – a, D – e, E – d

II. Semantic Level – Discrimination Between Close Meanings

(MCQs – 5 × 1 = 5 marks)

Choose the most appropriate word.

6. The child felt _____ after hearing a loud noise.

- a) frightened
- b) excited
- c) curious
- d) relaxed

7. He ate the food _____ because he was very hungry.

- a) gobbled
- b) tasted
- c) chewed slowly
- d) shared

8. The man was an _____ who used a fake identity online.

- a) imposter
- b) predator
- c) browser
- d) wander

III. Contextual Level – Meaning in Sentence-Level Use

(MCQs – $5 \times 1 = 5$ marks)

9. . The baby began to _____ when it felt uncomfortable.

- a) squirm
- b) sleep
- c) laugh
- d) jump

10. She decided to _____ in her best friend about the problem.

- a) confide
- b) shriek
- c) bother
- d) vanish

11. He sent a quick _____ to his friend.

- a) ping
- b) call
- c) message
- d) letter

IV. Situational Level – Appropriateness of Word Choice

(Situational MCQs – $5 \times 1 = 5$ marks)

12. Someone who targets and manipulates children through the internet for harmful purposes is called an _____.

- a) imposter
- b) online predator
- c) cyber user
- d) digital participant

13. The anxiety caused by constantly checking social media to avoid missing updates is known as _____.

- a) distraction
- b) FOMO
- c) notification stress
- d) social habit

14. A sudden loud scream due to fear is called a _____.

- a) shriek
- b) squirm
- c) gobble
- d) browse

15. A short sleep during the day is called a _____.

- a) nap
- b) rest
- c) break
- d) pause

2. Attitude Questionnaire of Emoji-based Vocabulary Game Instruction

Demographic Variable Sheet

S. No.	Variable	
1	Gender	Male / Female
2	Medium of Instruction	English / Tamil

S. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Emojis help me understand the meaning of new words easily. புதிய வார்த்தைகளின் அர்த்தத்தை எளிதில் புரிந்துகொள்ள எமோஜிகள் எனக்கு உதவுகின்றன.					
2	Learning vocabulary through emojis is simpler than traditional methods. எமோஜிகள் மூலம் சொல்லகராதி கற்றல் பாரம்பரிய முறைகளை விட எளிமையானது.					
3	Emojis help me remember word meanings for a longer time. எமோஜிகள் வார்த்தையின் அர்த்தங்களை நீண்ட நேரம் நினைவில் வைத்திருக்க உதவுகின்றன.					
4	I can recall vocabulary faster when emojis are used. எமோஜிகளைப் பயன்படுத்தும்போது என்னால் சொற்களஞ்சியத்தை வேகமாக நினைவுபடுத்த முடியும்.					
5	Emoji-based games help me understand sentences better. எமோஜி அடிப்படையிலான கேட்கள் வாக்கியங்களை நன்றாகப் புரிந்துகொள்ள உதவுகின்றன.					
6	I can comprehend passages more easily after learning vocabulary with emojis. எமோஜிகள் மூலம் சொற்களஞ்சியத்தைக் கற்றுக்கொண்ட பிறகு என்னால் பத்திகளை எளிதாகப் புரிந்துகொள்ள முடியும்.					
7	Emojis help me connect word meanings with the context of the text. வார்த்தையின் அர்த்தங்களை உரையின் சூழலுடன் இணைக்க எமோஜிகள் எனக்கு உதவுகின்றன.					

S. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8	My reading comprehension has improved through emoji-based vocabulary games. ஈமோஜி அடிப்படையிலான சொல்லகராதி விளையாட்டுகள் மூலம் எனது வாசிப்புப் புரிதல் மேம்பட்டுள்ளது.					
9	Emoji-based games motivate me to learn new English words. ஈமோஜி அடிப்படையிலான கேம்கள் புதிய ஆங்கில வார்த்தைகளைக் கற்றுக்கொள்ள என்னைத் தூண்டுகின்றன.					
10	I feel confident while learning vocabulary through emoji-based games. ஈமோஜி அடிப்படையிலான கேம்கள் மூலம் சொல்லகராதியைக் கற்கும்போது நான் நம்பிக்கையுடன் உணர்கிறேன்.					
11	I look forward to English classes that include emoji activities. ஈமோஜி செயல்பாடுகளை உள்ளடக்கிய ஆங்கில வகுப்புகளை எதிர்பார்க்கிறேன்.					
12	Emoji games reduce my fear of learning difficult words. ஈமோஜி கேம்கள் கடினமான வார்த்தைகளைக் கற்றுக்கொள்வதற்கான எனது பயத்தைக் குறைக்கின்றன.					
13	Emoji-based vocabulary games make English learning interesting. ஈமோஜி அடிப்படையிலான சொல்லகராதி விளையாட்டுகள் ஆங்கிலக் கற்றலை சுவாரஸ்யமாக்குகின்றன.					
14	I enjoy participating in vocabulary activities that use emojis. ஈமோஜிகளை பயன்படுத்தி சொற்கள் கற்றல் செயல்பாடுகளில் கலந்து கொள்வது எனக்கு மகிழ்ச்சியளிக்கிறது.					
15	Emoji games keep me attentive during English class. ஆங்கில வகுப்பின் போது ஈமோஜி கேம்கள் என்னைக் கவனிக்க வைக்கின்றன.					
16	I feel actively involved when learning words through emojis. ஈமோஜிகள் மூலம் வார்த்தைகளைக் கற்கும் போது சுறுசுறுப்பாக ஈடுபடுவதை உணர்கிறேன்.					
17	Emoji-based vocabulary games should be used regularly in English classes. ஆங்கில வகுப்புகளில் ஈமோஜிகளை அடிப்படையாகக் கொண்ட சொல்வளம் விளையாட்டுகளை வழக்கமாக பயன்படுத்த வேண்டும்.					

S. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18	Learning through games is more effective than memorizing word lists. வார்த்தை பட்டியலை மனப்பாடம் செய்வதை விட விளையாட்டுகள் மூலம் கற்றல் மிகவும் பயனுள்ளதாக இருக்கும்.					
19	I prefer emoji-based learning over traditional vocabulary teaching. பாரம்பரிய சொல்லகராதி கற்பித்தலை விட ஈமோஜி அடிப்படையிலான கற்றலை நான் விரும்புகிறேன்.					
20	I would recommend emoji-based vocabulary games to other students. மற்ற மாணவர்களுக்கு ஈமோஜி அடிப்படையிலான சொல்லகராதி விளையாட்டுகளை பரிந்துரைக்கிறேன்.					

3. Observation Rubric Sheet

School Name: **Date:** **Day:** Day 1 / Day 7 / Day 14 **Class:** VIII **Observer Name:**

S. No.	Observable Indicator	1	2	3
1	Students pay attention during emoji-based activities			
2	Students show interest and enthusiasm during activities			
3	Students correctly associate emojis with vocabulary words			
4	Students recall vocabulary using emojis			
5	Students understand sentence meaning with emoji support			
6	Students answer comprehension questions correctly			
7	Students voluntarily respond during classroom activities			
8	Students show confidence while using emojis			

APPENDIX-III

1. Item Analysis (for 20 items)

Item	P Value	Interpretation (P)	D Value	Interpretation (D)	Decision
Q1	0.9	Too easy	0.37	Good	Keep / slight revision
Q2	0.9	Too easy	0.37	Good	Keep
Q3	0.86	Too easy	0.5	Excellent	Keep
Q4	0.86	Too easy	0.5	Excellent	Keep
Q5	0.86	Too easy	0.5	Excellent	Keep
Q6	0.9	Too easy	0.37	Good	Keep / slight revision
Q7	1	Very easy	0	Poor	Revise or discard
Q8	1	Very easy	0	Poor	Revise or discard
Q9	0.76	Too easy	0.5	Excellent	Keep
Q10	0.6	Acceptable	0.5	Excellent	Keep (best item)
Q11	0.8	Too easy	0.62	Excellent	Keep
Q12	0.76	Too easy	0.5	Excellent	Keep
Q13	0.76	Too easy	0.12	Poor	Revise
Q14	0.5	Acceptable	0.5	Excellent	Keep (best item)
Q15	1	Very easy	0	Poor	Revise or discard
Q16	0.9	Too easy	0.37	Good	Keep / slight revision
Q17	1	Very easy	0	Poor	Revise or discard
Q18	0.86	Too easy	0.37	Good	Keep / slight revision
Q19	0.7	Acceptable	0.37	Good	Keep
Q20	0.9	Too easy	0.37	Good	Keep / slight revision

2. Final selected item of 15 questions (KR-20 reliability analysis)

Item	P Value	q = (1 - P)	p × q	
Q1	0.9	0.1	0.09	0.09
Q2	0.9	0.1	0.09	0.09
Q3	0.86	0.14	0.1204	0.1204
Q4	0.86	0.14	0.1204	0.1204
Q5	0.86	0.14	0.1204	0.1204
Q6	0.9	0.1	0.09	0.09
Q9	0.76	0.24	0.1824	0.1824
Q10	0.6	0.4	0.24	0.24
Q11	0.8	0.2	0.16	0.16
Q12	0.76	0.24	0.1824	0.1824
Q14	0.5	0.5	0.25	0.25
Q16	0.9	0.1	0.09	0.09
Q18	0.86	0.14	0.1204	0.1204
Q19	0.7	0.3	0.21	0.21
Q20	0.9	0.1	0.09	0.09
Total (Σpq)	—	—	2.1564	2.1564
KR-20 Value	—	—	—	0.80 (High Reliability)

3. Cronbarg alpha for Attitude Questionnaire on Emoji-Based Vocabulary Game Instruction.

S. No	Tool Name	No. of Items	Sample Size	Cronbach's Alpha (α)	Interpretation
1	Attitude Questionnaire on Emoji-Based Vocabulary Game Instruction	20	30	0.913	High Reliability

4. Cronbarg alpha for observation rubric sheet.

S. No	Tool Name	No. of Items	Sample Size	Cronbach's Alpha (α)	Interpretation
1	Observation Rubric Sheet	8	24	0.913	High Reliability

APPENDIX IV

Attachments of documents (IHEC & CEO Permission letter)\

கோயம்புத்தூர் மாநகராட்சி கல்வி அலுவலர் அலுவலகம் செயல்முறைகள் முன்மீளல் - திட்டமிடல் குறைகேள், எம்.எல்.சி., எம்.எ., எம்.பி.சி.,
நாள் : 02.2026.
நா.எண். 764/2026 கே.1
மேற்கோள் - 2055 / குறாதி / தே

பெயர்: நிர்வாகம் - கல்வி - கோயம்புத்தூர் மாநகராட்சி - பள்ளியில் ஆராய்ச்சி திட்டம் பணிகளை மேற்கொள்ள அனுமதி வழங்க கோரியது - அனுமதி வழங்கி உத்தரவிடுதல் - 08/11/2026
பள்ளியை: L.R.B.A. (திருமதி) ஆர்.அழகவேலு, தலைவர் (ஐ.சி), கல்வித் துறை, கோயம்புத்தூர், அமைச்சரிடம் மனவழிப்பு மற்றும் உட்கட்சித் துறையை அளவளவி விண்ணப்பம் நாள்: 27.01.2026.

பள்ளியில் உள்ள கடிதத்தில், மார்ச் 25 முதல் தொடங்கும் பாதிக்கப்பட்ட ஒரு மாதிரி, இவ்வாறு II M.E.D., மாணவர் ஒரு ஆராய்ச்சி திட்டம் பணியை மேற்கொள்ளவும், இது சம்பந்தமாக கோயம்புத்தூர் அமைச்சர் மாநகராட்சி பள்ளிகளில் ஆராய்ச்சி திட்டத்தை 20 நாட்கள் கீழ்க்கண்ட தலைப்புகளில் ஆராய்ச்சி திட்டம் பணியை மேற்கொள்ள அனுமதி கோரியிருக்கிறது.

S.No.	Reg.No.	Name	Topic
1.	24PED004	Aneesa S	"Effectiveness of Video Lessons from the Manakani App in Learning English among Middle School Students in Coimbatore District."
2.	24PED008	Keerthana K	"Effectiveness of Digital Storytelling on Vocabulary Acquisition among Middle School Students."
3.	24PED003	Aiswarya G	"Effectiveness of Emoji - Based Vocabulary Game Instruction on Enhancing Comprehension Skills among VIII Standard Students in Coimbatore District."

விண்ணப்பத்தை ஏற்று கீழ்க்கண்ட பள்ளிகளுக்கு,
 1. மாநகராட்சி நடுநிலைப்பள்ளி, கே.எ.எ...
 2. மாநகராட்சி நடுநிலைப்பள்ளி, ஓரூரூர் நகம்.
 3. மாநகராட்சி நடுநிலைப்பள்ளி, சங்கராள்.


நிபந்தனைகள் :
 1. பள்ளியில் ஆராய்ச்சி-கடிதத்தை செயல்படுத்தும் பாதிக் கால வகையில் உத்தரவு வெளியிடும்.
 2. இந்த நடவடிக்கைகள் அனைத்தும் கடிதம், பாதுகாப்பு மற்றும் வளக்கத்தின் ஒழுங்காக பாதிக் காலம் மேற்கொள்ளப்படும்.
 3. பள்ளிச் கவர்களில் துணைப் பிள்ளை, வருவாய் கூடாது.
 4. சம்பந்தப்பட்ட பள்ளித் தலைவர் ஆசிரியர்களிடம் கலந்துகொள்க கோண்டும்.
 5. சம்பந்தப்பட்ட பள்ளியில் மேற்கொள்ளும் பணியை மேற்கொள்ள வேண்டும்.
 6. முன்னறிவிப்பின்றி அனுமதி வழங்கப்படாத கடிதம் திரும்பி வரக்கூடாது (முழு உட்கட்சி உட்கட்சி).
 7. அனைத்து பாதுகாப்பு கலந்துரை மற்றும் பள்ளி விவகாரங்கள் கண்டிப்பாகப் பின்பற்ற வேண்டும்.

மேற்கண்ட நிபந்தனைகளுக்கு உட்பட்டு ஆராய்ச்சி திட்டப்பணியை மேற்கொள்ள அனுமதி வழங்கி உத்தரவிடப்படுகிறது.

ம.பி.சி. அலுவலர்
 மாநகராட்சி கல்வி அலுவலர்
 கோயம்புத்தூர் மாநகராட்சி.

பெயர்:-
 Dr.(Mrs.)R. Vajjayaanthi,
 Head (I/c), Department of Education,
 School of Education,
 Avinashilingam Institute for Home Science and Higher Education for Women,
 Coimbatore - 641 043.

நகல்:- சம்பந்தப்பட்ட பள்ளித் தலைவரையறிவிக்க.


Avinashilingam Institute for Home Science and Higher Education for Women
 Deemed-to-be-University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
 Re-accredited with 'A++' Grade by NAAC CGPA 3.65/4, Category 1 by UGC
 Coimbatore-641 043, Tamil Nadu, India
Institutional Human Ethics Committee (IHEC)

Date: 4/3/2026

Chairman
Dr. Sudha Ramalingam
 Director, Research and Innovation
 Professor, Community Medicine
 PSG Institute of Medical Sciences
 & Research, Coimbatore

To
 Aiswarya.G
 24PED003
 Department of Education
 Avinashilingam Institute for Home Science and
 Higher Education for Women, Coimbatore 641043


Member Secretary
 Dr. Shubashini K. Sripathi
 Professor of Chemistry
 School of Physical Sciences and
 Computational Sciences

Dear Ms Aiswarya.G
 Ref: Your application IHEC 2026/EDN2
 Effectiveness of Emoji-Based Vocabulary Game Instruction
 on Enhancing Comprehension Skills among VIII Standard
 Students in Coimbatore District submitted for approval of
 IHEC

Members
 Thiru J.V. Raj (Legal Expert)
 Dr. C.Madhan Mohan (Medical Officer)
 Dr. S. Ganbhamathi (Internal Expert)
 Dr. K. Sambath Rani (Internal Expert)
 Dr. Vanthamani (Internal Expert)
 Dr. S. Gayathri Devi (Internal Expert)
 Dr. P. Rajeswari (Internal Expert)
 Dr. S. Srividya (Internal Expert)
 Dr. M.Priya (Internal Expert)
 Mrs. M.Priya (Lay Person)

The Institutional Human Ethics Committee of Avinashilingam Institute for Home Science and Higher Education for Women after careful scrutiny and review of your application, hereby grants approval to your application titled "Effectiveness of Emoji-Based Vocabulary Game Instruction on Enhancing Comprehension Skills among VIII Standard Students in Coimbatore District". The approval number for the same is IHEC 2026/EDN2/ XPD
 This certificate is issued for the study period specified in your application.

Best Wishes,


Dr. Shubashini K. Sripathi
 Member Secretary

