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The Effect of Scattergories Game on Students' Vocabulary Mastery at Seventh Grade of Junior High School

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Abstract
Mastering vocabulary continues to be a core yet difficult aspect of teaching English as a Foreign Language (EFL) in junior high schools, given that traditional techniques such as memorizing word lists and translation drills often fail to keep learners engaged over time. This research set out to determine whether playing the Scattergories Game could improve the vocabulary ability of seventh graders at MTs Raudlatusshibyan NW Belencong. A quantitative, quasi-experimental design with a nonequivalent control group and pretest-posttest measurement was applied, involving 26 learners who received Scattergories-based instruction (experimental class) and 25 learners taught via Communicative Language Teaching (control class). A 25-item multiple-choice test assessing word-form recognition, comprehension of meaning, contextual application, and semantic grouping was used to gather data, which were then examined through Shapiro-Wilk normality testing, Levene's test of homogeneity, and an Independent Samples t-Test. Results revealed no meaningful gap between the two groups at the pretest stage (Sig. = 0.531), indicating similar starting vocabulary levels, while the posttest results showed a clear difference (t = 4.816, df = 49, Sig. = 0.000), with the experimental class (M = 69.38) scoring notably higher than the control class (M = 54.24). Overall, the study demonstrates that the Scattergories Game meaningfully boosts students' vocabulary achievement and provides English teachers with a practical, low-cost, game-based option for vocabulary teaching.

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1. INTRODUCTION

Language learning rests heavily on vocabulary knowledge; learners who lack an adequate stock of words struggle both to understand what they hear or read and to express themselves clearly in a second language (Schmitt & Schmitt, 2020). According to Bauer and Nation (2022), building learners' word knowledge continues to be the central teaching priority in junior high school, a stage in which students are still developing the basic lexical foundation required for both academic achievement and everyday communication. Nation (2022) adds that how well vocabulary is taught at this level shapes students' long-term ability to both understand and produce language.

A narrow vocabulary creates major obstacles for language learners. Research by Uchihara et al. (2021) identifies limited vocabulary size as one of the most powerful predictors of poor reading outcomes among EFL students, while a meta-analytic study by Zhang and Plonsky (2021) links weak vocabulary knowledge to greater anxiety, lower willingness to communicate, and diminished self-confidence. Much of this weakness can be traced to teaching methods that still depend heavily on memorization, bilingual vocabulary

lists, and translation-based drills, approaches that tend to produce only shallow word knowledge that fades quickly (Nation, 2022). Papi and Hiver (2021) and Bauer and Nation (2022) note that vocabulary lessons offering little variation, interaction, or enjoyment are often experienced by students as a chore rather than an opportunity to learn.

One approach frequently recommended to overcome this issue is learning through games. Mayer (2022) argues that game-based formats keep students focused and supply instant feedback, which in turn supports more thorough vocabulary processing. Similarly, Sundqvist and Wikström (2023) observed that learners who acquire vocabulary through games tend to show stronger motivation, reduced anxiety, and a greater readiness to use English. Lamb et al. (2022) add that word games involving competition can raise both motivation and participation among teenage learners, and Nation (2022) explains that tasks requiring categorization reinforce the semantic connections in learners' memory, making words easier to recall later.

A similar situation appears at MTs Raudlatusshibyan NW Belencong, where seventh graders continue to find English vocabulary difficult to master. Information gathered from the class's English teacher indicates that student involvement in lessons varies considerably, and only around half of the students currently meet the school's Minimum Mastery Criterion (KKM) score of 75. Instruction so far has centered mainly on memorizing definitions and completing written tasks, leaving little room for varied, participation-driven activities. The Scattergories Game—an activity in which players must think of words that fit a given category and start with a chosen letter, all within a time limit—presents a fitting alternative, since it pushes students to actively retrieve, identify, and apply vocabulary instead of simply recognizing or memorizing it.

A number of earlier studies have examined how the Scattergories Game affects vocabulary learning. Anggraini and Salmiah (2024) documented notable gains among eighth graders using a pre-experimental design, Arafah (2024) reported markedly higher vocabulary results in a quasi-experimental study that included a control group, and Octaviana et al. (2025) also verified the game's usefulness through a pre-experimental design. Nonetheless, these studies mostly relied on single-group designs or focused only on eighth-grade learners, leaving unanswered how the game compares against an active control treatment specifically for seventh graders. What sets the current research apart is its use of a quasi-experimental design with a nonequivalent control group involving seventh-grade students at MTs Raudlatusshibyan NW Belencong, which allows the Scattergories Game to be directly compared with Communicative Language Teaching.

Given this background, the research question guiding this study is: does the Scattergories Game significantly affect the vocabulary mastery of seventh graders at MTs Raudlatusshibyan NW Belencong? Accordingly, the study aims to determine whether such an effect exists, framed through two hypotheses: Ha states that the Scattergories Game significantly affects students' vocabulary mastery, whereas H0 states that no significant effect exists.

2. RESEARCH METHODS

This research followed a quantitative, experimental framework, adopting a quasi-experimental nonequivalent-control-group pretest-posttest design (Creswell & Creswell, 2023). It took place among seventh-grade students within the English Education program at MTs Raudlatusshibyan NW Belencong. Because the school does not allow students to be reshuffled across existing classes, the study worked with already-formed classroom groups rather than randomly assigned participants.

Table 1. Research Design Scheme

Group	Pre-Test	Treatment	Post-Test
Experimental (n = 26)	T1	X — Scattergories Game	T2
Control (n = 25)	T3	X — Communicative Language Teaching	T4

Notes: T1 and T3 denote the pretest scores of the experimental and control groups, respectively; T2 and T4 denote their posttest scores; X represents the treatment given to each group.

The population targeted in this study included every seventh-grade student enrolled at MTs Raudlatusshibyan NW Belencong during the 2025/2026 academic year, spread across four classes totaling 101 students. Two classes with comparable curricula, materials, and teaching hours were then selected through purposive sampling, decided in coordination with the English teacher. Of these, one class (26 students) was designated the experimental group and taught via the Scattergories Game, while the other (25 students) served as the control group and was taught through Communicative Language Teaching, as detailed in Table 2.

Table 2. Population and Sample Distribution

Class	N (Population)	Group	N (Sample)
Class VII-A	25	—	—
Class VII-B	26	Experimental	26
Class VII-C	25	Control	25
Class VII-D	25	—	—

Data collection relied on a 25-item multiple-choice vocabulary test given at both the pretest and posttest stages, targeting four indicators drawn from Nation's (2022) vocabulary knowledge framework: recognizing word forms, understanding word meaning, using words in context, and categorizing words semantically. A correct response earned 1 point and an incorrect one earned 0; the raw score was then converted to a 0–100 scale via the formula Score = (Number of Correct Answers ÷ Total Number of Items) × 100. The resulting scores were interpreted according to the classification scheme shown in Table 3.

Table 3. Vocabulary Mastery Score Classification (Adapted from Nurgiyantoro, 2021)

Score Range	Category	Description
85–100	Excellent	Students demonstrate very accurate recognition, understanding, and use of vocabulary across diverse contexts.
70–84	Good	Students accurately recognize and understand most vocabulary items, with only occasional minor mistakes.
55–69	Sufficient	Students are able to recognize vocabulary items but continue to face challenges applying them in context.
40–54	Poor	Students recognize only a small portion of the vocabulary and commit frequent errors.

0–39	Very Poor	Students largely fail to recognize, understand, or appropriately use the target vocabulary.

The data-gathering process moved through three phases: a pretest, the instructional treatment, and a posttest. Across four sessions, the experimental class practiced with the Scattergories Game, generating words that matched assigned categories and starting letters under time pressure, followed each time by discussion and feedback. The control class attended the same number of sessions and covered identical vocabulary content, but through Communicative Language Teaching rather than the game. SPSS was used to process the resulting data. Mean scores and standard deviations were computed to summarize pretest and posttest performance in both groups. Because each group had fewer than 50 participants, the Shapiro-Wilk test was applied to check normality (Pallant, 2020), and Levene's Test was used to assess whether variances between the groups were equal. Finally, an Independent Samples t-Test compared the posttest scores of the two groups, with the two-tailed significance value serving as the decision criterion: H0 would be rejected in favor of Ha whenever Sig. fell below 0.05.

3. RESULTS AND DISCUSSION

This part presents what the data analysis revealed and connects those findings back to the study's aims. The results are reported first, followed by a discussion situating them within relevant theory and prior research.

a. Research Results

As Table 4 and Figure 1 illustrate, the experimental group's average score climbed from 46.92 at pretest to 69.38 at posttest — a rise of 22.46 points — whereas the control group improved only from 44.32 to 54.24, a smaller gain of 9.92 points.

Table 4. Descriptive Statistics of Pretest and Posttest Scores

Group / Test	N	Mean	Std. Deviation	Min–Max
Experimental – Pre-test	26	46.92	15.942	20–72
Experimental – Post-test	26	69.38	11.754	52–88
Control – Pre-test	25	44.32	13.363	24–76
Control – Post-test	25	54.24	10.651	40–80

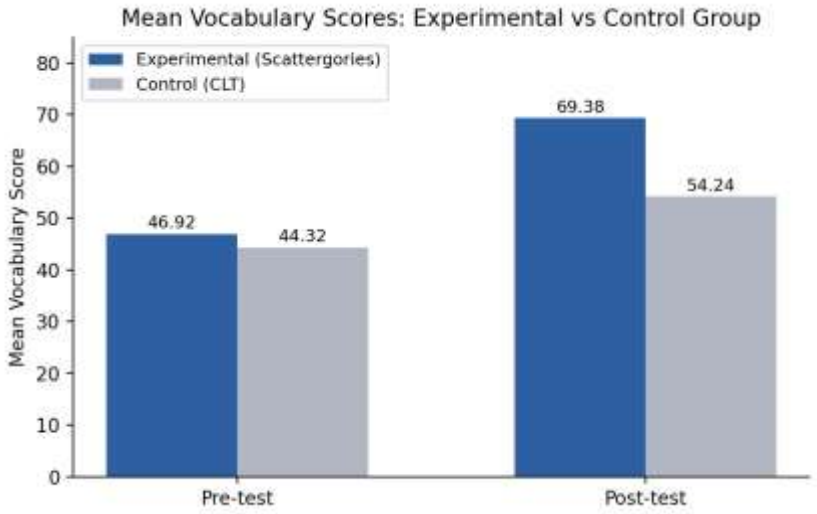


Figure 1. Mean Vocabulary Scores of the Experimental and Control Groups

According to the Shapiro-Wilk results in Table 5, both the pretest and posttest data of the experimental group followed a normal distribution (Sig. = 0.094 and 0.130, respectively, both above 0.05), while the control group's data at both time points departed from normality (Sig. = 0.008 and 0.012, both below 0.05). Since the Independent Samples t-Test tolerates moderate normality violations reasonably well when group sizes are fairly large and similar (n = 26 and n = 25), the t-Test was still used, with this normality issue noted as a limitation of the study.

Table 5. Shapiro-Wilk Test of Normality

Group / Test	Statistic	df	Sig.
Experimental – Pre-test	0.933	26	0.094
Experimental – Post-test	0.939	26	0.130
Control – Pre-test	0.884	25	0.008
Control – Post-test	0.891	25	0.012

Levene's Test, generated together with the Independent Samples t-Test, indicated equal variances between the groups at both the pretest (F = 3.630, Sig. = 0.063) and posttest (F = 0.742, Sig. = 0.393) stages, as both significance figures exceeded 0.05. At pretest, the experimental group's mean (46.92) did not differ significantly from the control group's mean (44.32), t(49) = 0.631, Sig. (2-tailed) = 0.531, verifying that both groups started with roughly equal vocabulary ability. By posttest, however, a significant gap emerged between the experimental group (69.38) and the control group (54.24), t(49) = 4.816, Sig. (2-tailed) = 0.000, reflecting a 15.15-point advantage for the experimental group. As this p-value is below 0.05, H0 is rejected while Ha is supported, confirming that the Scattergories Game produced a statistically significant improvement in students' vocabulary mastery, as summarized in Table 6.

Table 6. Statistical Summary of the Independent Samples t-Test

Statistic	Pre-test	Post-test	df	Sig. (2-tailed)
Levene's F (homogeneity)	3.630	0.742	—	0.063 / 0.393

Mean Difference (Exp. − Control)	2.60	15.15	—	—
t value	0.631	4.816	49	0.531 / 0.000

b. Discussion

Overall, the results confirm that the Scattergories Game produced a favorable and statistically meaningful improvement in vocabulary mastery. This aligns with Maulana and Safitri (2023), who observed markedly greater enthusiasm and engagement among learners taking part in Scattergories sessions compared with those taught conventionally, and with Rohmah and Widiastuti (2021), who argued that the game promotes active retrieval of words from memory, deeper semantic processing through categorization, and repeated exposure across varied category contexts.

The greater improvement seen in the experimental group echoes findings from Anggraini and Salmiah (2024), Arafah (2024), and Octaviana et al. (2025), each of whom reported meaningful vocabulary gains after introducing the Scattergories Game in their own educational contexts. Theoretically, this pattern makes sense because the game demands that players find words fulfilling both a semantic category and a designated starting letter simultaneously, a task that requires deeper lexical organization and therefore supports longer-lasting retention than rote memorization does (Nation, 2022). The game's tendency to reward unusual or original answers also encouraged students to draw on a broader vocabulary range rather than defaulting to the most familiar words, matching the motivational process described by Rohmah and Widiastuti (2021).

That said, some caution is warranted when interpreting these findings. The control group's data did not meet the normality assumption, and because the design used a nonequivalent control group, factors tied to individual teachers or specific classrooms cannot be entirely excluded as contributing influences. Even so, the fact that both groups began at a similar level, combined with the significant posttest gap and the 15.15-point mean difference, offers fairly convincing support that the Scattergories Game — rather than other outside variables — was primarily responsible for the stronger gains seen in the experimental group.

4. CONCLUSION

Taken together, these findings support the conclusion that the Scattergories Game effectively improved vocabulary mastery among seventh-grade students at MTs Raudlatusshibyan NW Belencong. No significant difference appeared between the two groups' pretest scores, confirming similar starting abilities, whereas the posttest scores showed a significant advantage for the experimental group (Sig. = 0.000). This pattern supports accepting the alternative hypothesis and rejecting the null hypothesis, confirming a significant effect of the Scattergories Game on vocabulary mastery. Future studies would benefit from lengthening the treatment period, applying random assignment wherever the institution permits it, and investigating related outcomes such as vocabulary retention, motivation, or classroom engagement, all of which would help strengthen and broaden the evidence supporting the Scattergories Game as an EFL vocabulary teaching tool.

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