

Role Playing Supported by Picture Cards and Fourth-Grade Indonesian Language Achievement: A Classroom Action Study

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ABSTRACT

Indonesian language instruction requires students to listen, speak, read, and write in meaningful contexts, yet teacher-centred lessons can restrict participation and achievement. This classroom action study examined achievement changes among 28 fourth-grade students at SDN 02 Tilamuta, Indonesia, after role playing was combined with picture cards. The study comprised a baseline assessment and two iterative cycles of planning, action, observation, and reflection. Students studied the unit "Look Around" through traffic-safety dialogues, visual prompts, group role allocation, rehearsal, performance, peer observation, and teacher feedback. Achievement was measured using teacher-developed 10-item multiple-choice tests scored from 0 to 100, with mastery defined as at least 75. Student-level records were reanalysed using descriptive statistics, the Friedman test, Wilcoxon signed-rank tests with Holm correction, Kendall effect size, Cochran Q, and exact McNemar tests. Mean scores increased from 35.36 at baseline to 67.14 in Cycle I and 78.93 in Cycle II. The overall change was significant, $\chi^2(2) = 30.58$, $p < .001$, Kendall $W = .546$. Mastery rose from 17.9% to 50.0% and 85.7%, $\text{Cochran } Q(2) = 25.81$, $p < .001$. Cycle I gains were heterogeneous, with five students declining, whereas Cycle II produced no score decline and ten additional mastery transitions. The findings support role playing with picture cards as a promising classroom-improvement strategy. Causal claims remain limited by the absence of a comparison group, uncertain test equivalence, and unreported measurement reliability.

Keywords: *classroom action research; flashcards; Indonesian language; learning achievement; picture cards; role playing*

1. INTRODUCTION

Indonesian language learning in elementary school integrates listening, speaking, reading, and writing. These competencies develop through use, not through explanation alone. Students need opportunities to interpret messages, express ideas, respond to other speakers, read contextual information, and produce language for a clear social purpose. When instruction is dominated by teacher talk and routine written exercises, learners



may remember isolated information without developing confidence or flexible language use.

The problem addressed in this study was identified in Grade IV at SDN 02 Tilamuta. Classroom observation and a teacher interview indicated low participation, limited variation in instructional models, and learning media that did not attract sustained attention. The baseline achievement matrix confirmed the severity of the problem. Only 5 of 28 students reached the school mastery criterion of 75, and the mean score was 35.36. Classroom activity observations were also low, with a mean of 44.36% across 12 indicators.

Role playing provides an enacted form of language learning. Students interpret a scenario, negotiate roles, rehearse expressions, coordinate speech and gesture, and communicate before an audience. This sequence places language inside a social event rather than treating it as a list of decontextualised rules. Previous elementary studies have associated role playing with stronger motivation, speaking participation, and Indonesian language achievement (Hoerudin, 2024; Jennej et al., 2022; Saputri & Yamin, 2022; Solihin, 2023). However, role playing can also create cognitive and emotional demands. Students may feel embarrassed, misunderstand the sequence, or focus on performance rather than the target concept.

Picture cards can reduce these demands by providing concrete cues for characters, actions, settings, and key vocabulary. Their visual simplicity can support recall, direct attention, and clarify the relationship between a spoken line and the situation represented. In this study, picture cards were not used as a separate intervention. They functioned as scaffolds within the role-playing sequence. Students used them to understand traffic-safety scenes, organise dialogue, and connect verbal expressions with visible situations.

Classroom action studies commonly report only percentages of students who pass a criterion. Such percentages are useful for instructional decisions but can conceal individual instability. A class may show a higher overall mastery rate even when some students regress. The present conversion therefore reanalyses the complete score matrix across baseline, Cycle I, and Cycle II. The study asks: (1) how did achievement distributions change across the three occasions, (2) were the repeated changes statistically reliable, (3) how did individual mastery status change, and (4) did observed classroom activity show a parallel process pattern?

2. CONCEPTUAL FRAMEWORK

2.1 Role Playing as Enacted Language Learning

Role playing is a structured simulation in which learners represent characters or social situations and communicate according to a scenario. Its academic value depends on explicit learning goals, a comprehensible script, sufficient rehearsal, balanced participation, and feedback after performance. The model can make language visible as action. A command, invitation, warning, or explanatory sentence is connected to a speaker, listener, purpose, and consequence.

The source procedure followed nine core steps: introducing the topic and objectives, presenting a story or dialogue, forming groups, assigning roles, explaining performance rules, modelling the activity, allowing rehearsal, selecting groups to perform, and



providing feedback or reward. These steps are consistent with the procedural descriptions reported by Setyowati et al. (2020). The second cycle strengthened preparation and feedback after the first cycle revealed hesitation, stiffness, and weak group interaction.

2.2 Picture Cards as Visual Scaffolds

Picture cards are compact visual representations accompanied, when needed, by words or short explanations. In elementary classrooms, they can make an abstract or verbally dense task more concrete. They can also support vocabulary recognition and reduce the amount of information that students must hold in working memory while preparing a performance (Nurhayati et al., 2022; Ruliandita et al., 2021; Sarnia et al., 2024).

The cards in this study represented traffic signs, actions, characters, and contextual cues. They supported the Indonesian language topic "Look Around" and the dialogue theme of orderly road use. The proposed mechanism was not simply increased enjoyment. Visual cues were expected to improve scenario comprehension, give students a shared reference during group discussion, and support more accurate use of invitations, commands, warnings, and explanatory language.

3. METHOD

3.1 Design, Setting, and Participants

The study used classroom action research with two cycles. Each cycle followed planning, action, observation, and reflection. The research was conducted from November to December 2025 in one Grade IV class at SDN 02 Tilamuta, Boalemo Regency, Gorontalo Province, Indonesia. All 28 students participated, comprising 14 boys and 14 girls. The intact-class design was appropriate for local instructional improvement but did not include randomisation or a comparison class.

3.2 Instructional Procedures

At baseline, students completed a 10-item multiple-choice assessment under conventional instruction. Cycle I was implemented on 13 November 2025. The teacher introduced the "Look Around" unit, organised students into groups, distributed dialogue scenarios and picture cards, explained the roles, modelled the procedure, allowed rehearsal, and invited groups to perform. Students observed other groups and completed a post-test after instruction.

Reflection after Cycle I identified limited confidence, stiff performances, and weak interaction in several groups. Cycle II retained the same instructional structure but increased guidance, made the learning sequence more attractive, addressed barriers observed in Cycle I, provided more explicit support for problem solving, and reinforced participation through feedback and recognition. The second post-test and observation were completed after the revised action.

3.3 Measures

Cognitive achievement was measured with teacher-developed 10-item multiple-choice tests. Each correct response contributed 10 points, producing scores from 0 to 100. The school criterion for mastery was 75. The thesis displayed a pre-test and a post-test form,



but it did not establish whether Cycle I and Cycle II used psychometrically equivalent forms or repeated the same post-test. Item validity, internal consistency, and test-retest properties were not reported.

Classroom activity was assessed with a 12-item binary observation checklist. Indicators covered readiness, understanding of objectives and role-playing rules, comprehension of dialogue, group discussion, character communication, gesture use, simulation, observation of peers, summarising, task completion, help-seeking, and orderly reflection. The percentage score represented the number of observed behaviours divided by the maximum. The source did not report inter-rater agreement. Activity results were therefore interpreted as process evidence rather than as an independently validated outcome.

The thesis also included affective and psychomotor rating sheets. Their coding labels were internally inconsistent across sections, and complete criterion-level data were not sufficiently transparent for defensible reanalysis. These ratings were not used as primary statistical outcomes in this article.

3.4 Statistical Reanalysis

All 28 student records were analysed as repeated observations. Scores and activity percentages were summarised using means, standard deviations, medians, interquartile ranges, and ranges. Because scores were discrete, bounded, and non-normally distributed, overall change was tested with the Friedman test. Pairwise changes used two-sided Wilcoxon signed-rank tests with Holm adjustment. Kendall W quantified the overall repeated-measures effect, and matched-pairs rank-biserial correlation quantified pairwise effects. Mastery proportions were compared using Cochran Q and exact McNemar tests with Holm adjustment. The analysis emphasised both class-level trends and individual transitions.

3.5 Ethical and Reporting Considerations

The thesis reports school-based research permission and uses student names in the original classroom tables. This article reports only aggregated, de-identified results. No institutional ethics committee number, parental consent procedure, or child assent documentation was stated in the source manuscript. No such information has been invented. Before submission, the author and institution should ensure that the available school authorisation and consent records meet the target journal requirements.

4. RESULTS

4.1 Achievement Distribution and Mastery

Achievement increased across all three occasions, but the distributional pattern changed as well as the mean. Baseline scores were widely dispersed and concentrated below mastery. Cycle I shifted the median to 75 but retained a broad range from 10 to 90. Cycle II produced a higher median of 80 and a narrower standard deviation, indicating that improvement became more consistent across the class. The final mastery rate of 85.7% exceeded the study success criterion of 80%.



Table 1
Achievement Scores and Mastery Across the Three Measurement Occasions

Occasion	M	SD	Median	IQR	Range	Mastery, n (%)
Baseline	35.36	27.82	30	10-50	0-90	5 (17.9)
Cycle I	67.14	23.07	75	60-80	10-90	14 (50.0)
Cycle II	78.93	13.15	80	80-90	40-90	24 (85.7)

Note. Scores range from 0 to 100. Mastery was defined by the school criterion of at least 75. IQR = interquartile range. Percentages are calculated from the student-level matrix for 28 participants.

4.2 Repeated-Measures Change

The Friedman test indicated a statistically reliable and large overall change. Pairwise analysis showed that baseline to Cycle I improvement was strong but not universal. Twenty-two students improved, five declined, and one was unchanged. The Cycle I to Cycle II pattern was more stable: 18 students improved, 10 were unchanged, and no student declined. This difference is important because it shows that the second cycle did more than raise the class mean. It reduced implementation instability and eliminated downward score movement.

Table 2
Repeated-Measures and Pairwise Achievement Analyses

Analysis	Statistic	p	Holm-adjusted p	Effect size	Individual pattern
Friedman test	chi-square(2) = 30.58	< .001	Not applicable	Kendall W = .546	Overall increase
Baseline vs Cycle I	Wilcoxon W = 52.50	.001	.001	r_rb = .722	22 higher, 5 lower, 1 equal
Cycle I vs Cycle II	Wilcoxon W = 0.00	< .001	< .001	r_rb = 1.000	18 higher, 10 equal
Baseline vs Cycle II	Wilcoxon W = 5.00	< .001	< .001	r_rb = .969	23 higher, 2 lower, 3 equal

Note. n = 28. Pairwise tests were two-sided Wilcoxon signed-rank tests with zero differences excluded. The three pairwise p values were adjusted using the Holm procedure. r_rb = matched-pairs rank-biserial correlation. Kendall W was calculated as chi-square/[n(k - 1)].

4.3 Mastery Transitions

Mastery-status analysis provides a stricter view of instructional progress. Between baseline and Cycle I, 11 students newly reached mastery, but two students who had mastered the baseline test fell below the criterion. From Cycle I to Cycle II, ten additional students reached mastery and none lost it. The strongest transition occurred across the full study, with 19 newly mastered students and no final loss of mastery among those who began above the criterion.



Table 3
Transitions in Mastery Status

Comparison	Newly mastered	Lost mastery	Unchanged	Exact McNemar p	Holm-adjusted p
Baseline to Cycle I	11	2	15	.022	.022
Cycle I to Cycle II	10	0	18	.002	.004
Baseline to Cycle II	19	0	9	< .001	< .001

Note. Cochran Q across the three occasions was 25.81, $df = 2$, $p < .001$. Newly mastered indicates movement from below 75 to at least 75. The first cycle included two students who moved from mastery to non-mastery; no such loss occurred from Cycle I to Cycle II.

4.4 Classroom Activity

Observed activity increased in parallel with achievement. Mean activity rose by 16.39 percentage points from baseline to Cycle I and by a further 12.96 points in Cycle II. The overall repeated change was statistically significant with a large effect. However, the observation checklist was scored within the action-research setting and lacked reported reliability. The activity trajectory supports the proposed participation mechanism, but it cannot independently establish that greater activity caused higher test scores.

Table 4
Observed Classroom Activity Scores

Occasion	M (%)	SD	Median	IQR	Range
Baseline	44.36	15.15	42.0	33-52	25-75
Cycle I	60.75	19.04	62.5	42-75	33-92
Cycle II	73.71	16.44	75.0	67-92	33-92

Note. The observation instrument contained 12 binary classroom-activity indicators converted to percentages. Friedman chi-square(2) = 28.23, $p < .001$, Kendall $W = .504$. These ratings are treated as supportive process evidence because inter-rater reliability and observer independence were not reported.

5. DISCUSSION

5.1 Interpretation of the Achievement Pattern

The results show a substantial local improvement associated with role playing supported by picture cards. The mean increased by 43.57 points from baseline to Cycle II, and the mastery rate rose by 67.8 percentage points. The large Friedman effect and strong pairwise rank-biserial correlations indicate that the pattern was not driven only by a few high-performing students. Most students improved, and the final distribution became more concentrated around 80 to 90.

The first cycle nevertheless exposed an important qualification. Five students scored lower than at baseline, including two who moved from mastery to non-mastery. These reversals are obscured by the overall mastery increase from 17.9% to 50.0%. They may reflect unfamiliarity with role-play routines, anxiety during public performance, uneven group support, or differences between the baseline and post-test forms. The second cycle produced no decline, suggesting that reflection and procedural refinement improved consistency.



The findings align with previous work reporting that role playing can strengthen Indonesian language achievement by linking language to action, social interaction, and contextual meaning (Jennej et al., 2022; Saputri & Yamin, 2022; Solihin, 2023). Picture cards likely supported this process by making traffic-related concepts visible and by giving groups a shared reference for dialogue. The data do not permit separation of the role-playing effect from the picture-card effect because both components were introduced together.

5.2 Why Cycle II Was Stronger

Classroom action research treats reflection as part of the intervention. The second cycle was informed by concrete first-cycle problems, especially hesitation, limited interaction, and incomplete role enactment. Increased guidance, clearer problem-solving support, more attractive presentation, and reinforcement may have reduced uncertainty. Students were also more familiar with the routine, which could free attention for the academic content rather than the mechanics of performing.

The absence of any Cycle II decline is one of the most meaningful findings. It indicates that the revised implementation supported both students who were still below mastery and students who had already achieved it. Ten students crossed the mastery threshold in the second cycle, while the 14 students who had mastered Cycle I retained mastery. This stability is more educationally important than a mean gain alone.



5.3 Practical Implications

Teachers should design role playing around a narrow language objective. Scenarios need to require the target sentence forms, vocabulary, and comprehension processes. Picture cards should represent essential cues rather than decorative images. Groups should be small, roles should be balanced, and every student should have a speaking or interpretive responsibility.

Rehearsal should include corrective feedback before public performance. Students who are hesitant can begin with paired or small-group practice. Observation tasks for non-performing groups can prevent passive watching. After each performance, the teacher should connect the enacted scene to the language concept and use short individual assessment to verify that group participation has translated into personal understanding. Monitoring should include student-level trajectories. This study shows why class percentages are insufficient. During Cycle I, the class improved overall, but five students declined. A teacher using only the 50% mastery rate would miss those individual regressions. Tracking score changes and mastery transitions supports targeted assistance and more defensible decisions about whether a cycle should be repeated.

5.4 Limitations and Research Priorities

The study used one intact class without a comparison condition. Improvement may partly reflect repeated testing, maturation, increased teacher attention, familiarity with the task, or other classroom events. The teacher-researcher arrangement may introduce expectancy and observer bias. The short duration does not establish retention or transfer to later language units.

Measurement limitations are substantial. The tests contained only ten items, and the source did not report item analysis, reliability, content-validation procedures, or equivalence across occasions. Scores were limited to 10-point increments. The post-test may have been repeated across cycles, which would create practice effects. Picture cards and role playing were introduced as a package, so their separate contributions cannot be estimated. Future studies should use parallel validated tests, independent scoring, fidelity checks, delayed follow-up, and a comparison class. A factorial or sequential design could also distinguish the contribution of visual scaffolding from the contribution of enacted role play.

6. CONCLUSION

Role playing supported by picture cards was associated with a marked improvement in fourth-grade Indonesian language achievement at SDN 02 Tilamuta. Mean scores rose from 35.36 to 67.14 and 78.93, while mastery increased from 17.9% to 50.0% and 85.7%. The repeated-measures effect was large, and the second cycle was especially important because no student declined and ten additional students reached mastery. The instructional value of the approach appears to lie in combining contextual dialogue, visual cues, group rehearsal, embodied performance, and iterative feedback. The results justify the strategy as a classroom-improvement option in this setting. They do not prove that the combined intervention alone caused the gains because no comparison group was used and the measurement quality was not established.



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AUTHOR CONTRIBUTIONS

Sarwin Ungo: Conceptualisation, methodology, classroom implementation, observation, data curation, formal analysis, writing of the original draft, review, and editing. The author approved the final manuscript and accepts responsibility for its integrity.

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DATA AVAILABILITY

The de-identified achievement and classroom-activity records supporting this article may be requested from the corresponding author, subject to school permission and applicable confidentiality requirements.

CONFLICTS OF INTEREST

The author declares no conflicts of interest related to this research, authorship, or publication.

GENERATIVE ARTIFICIAL INTELLIGENCE DISCLOSURE

OpenAI ChatGPT was used to assist English-language editing, manuscript restructuring, and statistical reanalysis of the original de-identified data. It was not used to create participants, raw scores, references, findings, consent records, or ethical approval information. The author reviewed the manuscript and remains responsible for its accuracy and integrity.

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