

Diceroll Strategy: A Game-Based Reading Comprehension Approach for Grade 4 Pupils

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Abstract- *This study aimed to determine the effectiveness of the DiceRoll Strategy in enhancing the reading comprehension of Grade 4 pupils at a selected public elementary school in Ozamiz City during the school year 2025–2026. A classroom-based action research design using a single-group pretest–posttest approach was employed. The respondents consisted of forty-five (45) Grade 4 pupils selected through purposive sampling. Data were collected using a researcher-made Reading Comprehension Achievement Test to measure pupils' reading comprehension performance before and after the implementation of the DiceRoll Strategy. The instrument consisted of comprehension questions covering literal, inferential, and evaluative skills and was validated by education experts and tested for reliability using Cronbach's alpha. The intervention was implemented through four instructional sessions using game-based and collaborative reading activities guided by the DiceRoll Strategy. Data were analyzed using mean, standard deviation, and paired t-test through JAMOWI software. Based on these findings, teachers are encouraged to integrate the DiceRoll Strategy into regular reading instruction to strengthen pupils' literal, inferential, and evaluative comprehension skills. School administrators may support its implementation by providing suitable reading materials, instructional resources, and professional development activities on game-based and collaborative teaching approaches. The strategy may also be adapted to other subjects and grade levels to promote active participation, critical thinking, and learner engagement. Future researchers are recommended to examine its long-term effects using larger samples, longer intervention periods, comparison groups, and additional measures of motivation and engagement.*

Keywords: *DiceRoll Strategy, game-based learning, learner-centered instruction, reading comprehension, reading intervention*

I. INTRODUCTION

Context and Rationale

When we teach reading, we are not just teaching words, we are guiding students to think critically, make connections, and understand ideas in meaningful ways. Reading comprehension is an essential skill that allows students to understand, think about, and use information they read (Rice & Wijekumar, 2024). It supports learning across all subjects and helps students solve problems and make sound decisions in school and everyday life (Ziglari, 2024). However, many learners struggle with reading comprehension, particularly in understanding main ideas, connecting information, and making inferences (Idulog et al., 2023). Traditional teaching methods often focus on memorizing words or answering questions mechanically rather than building deep understanding (Alreshoud & Abdelhalim, 2022). This approach can reduce students' interest in reading and limit opportunities for comprehension practice (Caupayan et al., 2024).

Recent studies suggest that interactive, collaborative, and game based strategies can help improve reading comprehension skills (Ahmed Abdel Al Ibrahim et al., 2023). One promising example is the DiceRoll Strategy, which turns reading tasks into engaging, group based activities determined by dice rolls. After reading a passage, students perform tasks such as identifying characters, sequencing events, or explaining ideas promoting active thinking, discussion, and connection of ideas to real life experiences (Prados Sánchez et al., 2023). Using culturally relevant texts or materials can further help students relate to stories and better understand them (Rasyid et unspecified, 2023). Game based reading activities and digital or interactive exercises also enhance motivation, encourage critical thinking, and support comprehension by making reading more enjoyable (Loem et unspecified, 2025). When students read actively and complete meaningful tasks,

they develop skills to interpret and analyze texts independently rather than relying on rote memorization (Calloway, Helder, & Perfetti, 2023).

There appears to be a population gap in the prior research. There is a lack of studies that focus on the use of the DiceRoll Strategy as a game-based reading intervention to improve reading comprehension among Grade 4 pupils, particularly in the Philippine elementary school context. Most existing studies on reading comprehension strategies and game-based learning were conducted among older learners or focused mainly on qualitative and descriptive approaches, leaving limited empirical evidence on how elementary pupils respond to this strategy (Miles, 2017).

Moreover, few studies statistically examined the effects of interactive reading strategies on learners' comprehension, motivation, and critical thinking skills (Delima et al., 2024). It is important to address this gap because Grade 4 pupils possess different learning needs, reading behaviors, and engagement levels compared to older learners. At this stage, pupils are transitioning from learning to read toward reading to learn, making effective and engaging comprehension strategies essential in strengthening their understanding, participation, and critical thinking skills during reading activities. There remains a lack of robust research using experimental or correlational designs to measure the impact of specific reading instruction strategies on comprehension, motivation, or reading habits among learners in the Philippines or similar contexts (Nabong & Fernal, 2025). Even when interventions are applied, many do not statistically examine their effects on comprehension or motivation (Delima et al., 2024).

To address this gap, this study adopts a quantitative research design to examine the effectiveness of the DiceRoll Strategy among Grade 4 pupils. The study will assess whether the game-based reading intervention improves students' reading comprehension, engagement, motivation, and critical thinking (Prados Sánchez et al., 2023). By providing empirical evidence on the efficacy of the DiceRoll Strategy, the study aims to recommend practical interventions that teachers can implement to address

challenges in reading instruction (Calloway et al., 2023). The findings also highlight the potential of game-based and interactive strategies to make reading more enjoyable, relevant, and meaningful, ultimately supporting the development of independent and lifelong readers.

Strategy

The DiceRoll Strategy is a game-based reading comprehension approach designed to actively engage Grade 4 pupils while developing their reading, critical thinking, and inferential skills. The goal of this strategy is to make reading interactive and meaningful by transforming comprehension tasks into collaborative and playful activities. Students work in small groups to read passages, complete comprehension tasks determined by dice rolls, and discuss their responses. This approach encourages active participation, strengthens conceptual understanding, and enhances the ability to construct meaning from texts.

The DiceRoll Strategy follows a structured procedure in which learners tackle various comprehension activities in an organized manner. Research shows that game-based strategies improve academic performance, engagement, motivation, and higher-order thinking skills (Paige et al., 2024). Studies also indicate that interactive and learner-centered strategies foster collaboration, discussion, and reflection, making learning more enjoyable and effective (McCarthy & Yan, 2024). By turning reading into a dynamic experience, the DiceRoll Strategy promotes confidence, motivation, and comprehension skills, while allowing learners to apply inferential and analytical reasoning to the texts they encounter.

To implement the DiceRoll Strategy, begin by selecting reading passages aligned with the learning objectives. Prepare comprehension tasks for each passage, such as summarizing, predicting, answering questions, making inferences, or identifying the main idea. Assign pupils to small collaborative groups and provide a dice for task selection. Each roll determines the comprehension activity the group will complete, ensuring variety and engagement.

Guide students in reading the passage carefully, discussing key ideas, and completing the assigned task. Encourage critical thinking, collaboration, and discussion to justify answers and share interpretations. Integrate reflection sessions to allow groups to summarize their learning, analyze mistakes, and discuss strategies for improvement. Formative assessments can be used to monitor both individual and group performance, ensuring that all pupils participate actively and understand the text.

Conclude the session with a synthesis activity, where groups present their responses, reflect on their reasoning, and receive feedback. This final step reinforces comprehension skills, strengthens critical thinking, and encourages pupils to apply reading strategies in other contexts. Regular use of the DiceRoll Strategy provides an engaging and systematic way to improve reading comprehension, motivation, and higher-order thinking skills among Grade 4 learners (Prados Sánchez et al., 2023).

Statement of the Problem

This study aimed to determine the effectiveness of the DiceRoll strategy in enhancing reading comprehension among Grade 4 pupils during the School Year 2025–2026 in one of the public elementary schools in Ozamiz City. Specifically, it sought to answer the following questions:

1. What is the level of pupils' reading comprehension before the implementation of the DiceRoll strategy?
2. What is the level of pupils' reading comprehension after the implementation of the DiceRoll strategy?
3. Is there a significant difference in the reading comprehension levels of the pupils before and after the implementation of the DiceRoll strategy?

Null Hypotheses

H01: There is no significant difference in the level of reading comprehension of pupils before and after the implementation of the DiceRoll strategy.

II. RESEARCH METHODOLOGY

Research Design

This study employed a classroom-based action research approach using single pretest-posttest design to examine the effectiveness of the DiceRoll Strategy, a game-based reading comprehension approach, in improving Grade 4 pupils' reading skills. A pretest-posttest design is widely used to evaluate instructional interventions by measuring learners' performance before and after treatment (Hasbi & Fitri, 2023). In this context, the design will allow the researcher to determine how the DiceRoll Strategy affects students' ability to identify main ideas, make inferences, sequence events, and enhance overall reading comprehension (Prados Sánchez et al., 2023). By implementing this design, the study aims to provide empirical evidence on the effectiveness of the DiceRoll Strategy, guiding teachers in using interactive reading activities to improve comprehension, motivation, and higher-order thinking skills (Calloway, Helder, & Perfetti, 2023).

Research Setting

This study was conducted in a large public elementary school located in Ozamiz City, Misamis Occidental, Philippines. During School Year 2025–2026, the school had an estimated enrollment of approximately 3,248 learners and was staffed by around 107 teachers.

The Grade 4 level will consist of one class with 46 pupils who will exhibit diverse learning needs and reading abilities. Their reading levels are expected to range from proficient to struggling, with anticipated differences in vocabulary knowledge, inferential skills, and motivation to engage with texts. The implementation of the DiceRoll Strategy will take place during regular instructional periods in subjects that involve reading or storytelling, such as English, EPP, Filipino, and GMRC. These sessions will allow learners to engage in interactive, game-based activities designed to increase participation and enhance their ability to understand, analyze, and interpret texts. By integrating the strategy across multiple subjects, students can develop consistent reading comprehension skills while applying critical thinking and collaborative learning in various contexts.

Respondents of the Study

The respondents of this study are all 46 Grade 4 pupils in the selected public elementary school. Purposive sampling was employed, as the researcher intentionally selected the entire class based on their identified need to improve reading comprehension skills. Based on classroom assessments and reading performance records, the pupils demonstrate varying levels of comprehension. While some learners can identify familiar words and understand basic details in a text, many require assistance in making inferences, identifying key ideas, sequencing events, and constructing meaning from what they read.

Research Instruments

This study employed the following instruments as the primary tools for data gathering to determine the effectiveness of the DiceRoll strategy in enhancing reading comprehension among Grade 4 pupils.

A. Reading Comprehension Test (Appendix A) - A researcher-designed Reading Comprehension Achievement Test was developed to measure pupils' reading comprehension levels before and after the implementation of the DiceRoll strategy. The test will consist of 20 items encompassing literal, inferential, and evaluative comprehension questions, aligned with Grade 4 learning competencies and validated reading instruction frameworks (Abejuela et al., 2023). Reading passages and items will be constructed based on evidence-based comprehension approaches, emphasizing vocabulary acquisition, inference-making, and text-integration skills (Rice & Wijekumar, 2024).

Each correct response will be scored as 1 point, and total raw scores will be interpreted using the following scale:

Scores	Interpretation
27-30	Outstanding
24-26	Very satisfactory
21-23	Satisfactory
18-20	Fair
1-17	Poor

The validity and reliability of the test was ensured through expert validation, pilot testing, and statistical analysis. Reading specialists and language educators will review the content to guarantee clarity, developmental appropriateness, and alignment with Grade 4 competencies (Dixon & Oakhill, 2024). Pilot testing will assess readability, item difficulty, and discrimination, while reliability will be determined using Cronbach's alpha. Prior research confirms that structured comprehension assessments are effective in measuring learners' growth, particularly when game-based reading strategies are applied (Napa-Rodríguez, 2025).

B. Lesson Plan (Appendix B) – A DiceRoll-based lesson plan was implemented to guide the instructional sessions for Grade 4 reading comprehension. The DiceRoll strategy, a game-based approach, will structure pupils' learning by engaging them in dice-driven reading tasks that promote active comprehension, critical thinking, and collaborative learning. The intervention will be carried out over four instructional sessions, each lasting 60 minutes.

The lesson plan integrates practices from research highlighting the effectiveness of strategic reading instruction, including metacognitive guidance, schema activation, and reflective learning (Pahrizal et al., 2025). DiceRoll has been found to improve comprehension by fostering engagement, encouraging deeper processing, and helping students connect new concepts meaningfully to prior knowledge (McCarthy & Yan, 2024).

By comparing pretest and posttest results and analyzing engagement levels before and after the intervention, the study will determine the effectiveness of the DiceRoll strategy in bridging reading comprehension gaps among Grade 4 pupils (Rasyid et al., 2023).

Data Collection

Prior to data collection, the researcher secured formal approval to conduct the study by submitting request letters to the appropriate authorities, including the Dean of the College, the Schools Division Superintendent, and the School Principal of the selected elementary school in Ozamiz City. Upon approval from the Superintendent and the Principal,

subsequent letters were addressed to the ELC Coordinator and the Cooperating Teacher, and their consent was obtained prior to the implementation of any data collection procedures. Each letter will clearly outline the objectives, methodology, and scope of the study to ensure transparency and adherence to institutional and ethical guidelines.

Data collection was conducted over four 60-minute sessions to implement the DiceRoll strategy aimed at improving reading comprehension among Grade 4 pupils. Each session began with a pretest using the Reading Comprehension Achievement Test to assess pupils' initial understanding of the text. This was followed by DiceRoll-based reading activities, where pupils engage in interactive, dice-driven tasks designed to enhance vocabulary, develop inferential skills, and strengthen critical thinking. Each session concluded with a posttest to measure immediate learning outcomes (Hidayat, 2024).

In addition, pre-assessment questionnaires will be administered to gauge baseline engagement and motivation, while post-assessment questionnaires will capture any improvements in reading comprehension, problem-solving, and interest in reading. Data collected from the pretests, posttests, and the Pupil Engagement in Reading Activities Questionnaire will be analyzed using mean scores and standardized rubrics to determine the overall effectiveness of the DiceRoll strategy in enhancing comprehension, cognitive skills, and classroom engagement among Grade 4 pupils (Gesta et al., 2025).

Ethical Consideration

Before conducting the study, ethical considerations were carefully established to prioritize the well-being, rights, and privacy of all participants. Approval will be sought from the Misamis University Research Ethics Committee (MUREC) to ensure compliance with institutional and ethical research standards. Additionally, the researcher will ensure that all ethical standards are upheld to protect the well-being of the participants. Approval to conduct the study will be sought from the School Principal, the Grade Level Head, and the class Adviser, with consent obtained from each authority prior to any data

collection. These approvals will confirm that the study adheres to institutional and research guidelines.

Informed consent procedures were implemented for all participants. Parents or guardians of the Grade 4 pupils will provide formal consent, and the pupils themselves will give assent, indicating their voluntary participation. Participants will be fully informed of the study's objectives, procedures, potential benefits, and possible risks. They will also be made aware that they may withdraw from the study at any time without facing negative consequences.

Confidentiality and anonymity will be strictly maintained. Collected data will exclude personally identifiable information, and pupils will be assigned coded identifiers. Both digital and physical data will be securely stored, with digital files encrypted and physical copies kept in a locked cabinet accessible only to the researcher. These measures comply with Republic Act No. 10173 (Data Privacy Act of 2012), ensuring participants' privacy, dignity, and security.

The study was designed to minimize risks and prevent harm. All activities, including PBL tasks, will be conducted in a safe and supportive learning environment, with close supervision to prevent physical, psychological, or emotional distress. By adhering to these ethical considerations, the researcher will safeguard participant welfare while maintaining the integrity and credibility of the study.

Data Analysis

This study utilized the following statistical methods for data analysis using JAMOV software:

Mean and standard deviation was used to measure the pupils' total scores on the Observation Checklist as an indicator of focus and learning retention.

A paired t-test was conducted to determine significant differences in pupils' focus and learning retention before and after the implementation of the CPA approach.

Dissemination Plan

The findings of this study will be shared with school administrators, cooperating teachers, Grade 4 pupils,

and their parents through detailed reports, discussions, and simplified summaries to ensure understanding of the benefits of the DiceRoll strategy. When presenting results to pupils and parents, proper consent and assent procedures will be highlighted to uphold ethical research practices. Furthermore, the study's outcomes will be disseminated to the university community and other educators through seminars, presentations, and publications, promoting awareness of innovative game-based strategies that enhance reading comprehension.

Utilization Plan

The results of the study will be disseminated and utilized through Poster Presentation and Publication. A research poster summarizing the key findings, conclusions, and recommendations will be prepared and showcased during academic or institutional dissemination events. This will enable educators, school stakeholders, and fellow researchers to clearly understand the outcomes of the study and apply its insights to classroom practices. Additionally, the study will be prepared for publication in an academic journal or the institution's research repository. This ensures that the study's contributions reach a wider scholarly audience and support further investigations on enhancing pupil engagement, improving learning retention, and effectively implementing game-based strategies such as the DiceRoll Strategy in reading comprehension instruction.

COST ESTIMATES

(Grade 4)

The estimated budget in the conduct of this study is broken down below from the personal money of the proponent. The proponent has a personal laptop and printer.

Materials	Amount
1 ream A4 US bond paper	Php 180.00
1 set 664 ink	Php 1,179.00
2 sliding folders	Php 15.00 x 2 (Php 30.00)
Tokens (ballpen)	Php 1, 000.00
Snacks	Php 1, 500.00
Total	Php 3, 889.00

III. RESULTS AND DISCUSSIONS

Level of Pupils' Reading Comprehension Before the Implementation of the DiceRoll Strategy

Table 1 presents the level of pupils' reading comprehension before the implementation of the DiceRoll Strategy. The overall performance of the pupils was classified as Satisfactory, with an overall mean score of ($M = 21.56$, $SD = 1.12$). In terms of distribution, the highest percentage of pupils belonged to the Fairly Satisfactory category ($n = 13$, 28.9%) and the Did Not Meet Expectations category ($n = 13$, 28.9%). This was followed by pupils who achieved a Satisfactory level ($n = 10$, 22.2%), while fewer pupils attained Outstanding performance ($n = 5$, 11.1%) and Very Satisfactory performance ($n = 4$, 8.9%). These findings indicate that although the overall reading comprehension level was satisfactory, a considerable proportion of pupils still demonstrated below-average performance prior to the intervention. The findings suggest that many pupils experienced difficulties in reading comprehension before the implementation of the DiceRoll Strategy. The large number of pupils categorized as Fairly Satisfactory and Did Not Meet Expectations implies that learners may have struggled with understanding texts, identifying key ideas, and interpreting information accurately. Moreover, the limited number of pupils who achieved Outstanding and Very Satisfactory levels reflects the need for more engaging and effective instructional approaches in reading. The overall satisfactory mean score further indicates that while some pupils possessed adequate comprehension skills, there remained significant gaps in mastery among learners. This variation in performance may be influenced by factors such as limited vocabulary knowledge, lack of reading motivation, insufficient exposure to reading activities, or the use of traditional teaching methods that may not fully address diverse learning needs.

The findings of the present study are supported by several related studies emphasizing the importance of instructional strategies and learner engagement in improving reading comprehension. Many learners in the Philippine basic education context continue to experience challenges in reading comprehension, particularly in understanding and interpreting texts

effectively. Gaps in curriculum implementation and instructional practices also contribute to learners' low reading performance (Abejuela et al., 2023). Similarly, learners with low reading motivation tend to demonstrate weaker comprehension skills, suggesting that engagement and interest greatly influence reading achievement (Caupayan et al., 2024). These studies support the current findings where a large proportion of pupils were categorized under Fairly Satisfactory and Did Not Meet Expectations, indicating the need for more effective and motivating reading interventions.

In addition, gamified and interactive instructional approaches significantly improve learners' reading comprehension and attitudes toward reading (Prados Sánchez et al., 2023). Learners become more motivated and actively involved when reading activities incorporate game-based elements and collaborative participation. This aligns with the rationale behind the implementation of the DiceRoll Strategy, which utilizes interactive and engaging classroom activities to enhance comprehension skills. Likewise, collaborative learning approaches positively influence learners' reading proficiency by encouraging peer interaction, critical thinking, and active participation during reading tasks (Delima et al., 2024). These findings suggest that interactive and learner-centered strategies may help address the comprehension difficulties observed among pupils in the present study.

Furthermore, explicit instruction in comprehension strategies, particularly inference-making and critical thinking, significantly improves learners' understanding of texts (Rice & Wijekumar, 2024).

Structured and engaging instructional practices contribute to better reading outcomes among elementary learners. In the same manner, deficits in comprehension and critical thinking skills may hinder academic performance if not addressed through timely interventions (Ramos, 2024). These studies reinforce the implication of the present findings that teachers and school personnel should implement innovative and targeted reading activities, such as comprehension games, differentiated instruction, and collaborative exercises, to strengthen pupils' reading comprehension skills and bridge existing learning gaps.

The results of the study imply that teachers, school administrators, and other concerned personnel should strengthen reading intervention programs to improve pupils' comprehension skills. The findings highlight the importance of implementing innovative and interactive strategies, such as the DiceRoll Strategy, to make reading activities more engaging and learner-centered. Teachers may conduct differentiated reading exercises, vocabulary enrichment activities, peer-reading sessions, and comprehension games to support struggling readers. Likewise, school administrators may provide instructional materials, reading resources, and professional development training for teachers to enhance reading instruction. Parents may also be encouraged to participate in home-based reading activities to reinforce pupils' comprehension skills outside the classroom. Through collaborative efforts and continuous intervention programs, the gaps in pupils' reading comprehension may be gradually addressed and improved.

Table 1
Level of Pupils' Reading Comprehension Before the Implementation of the DiceRoll Strategy

Performance	Frequency	Percentage	M	SD
Outstanding	5	11.1	27.8	0.447
Very Satisfactory	4	8.9	25.3	0.957
Satisfactory	10	22.2	22.3	0.949
Fairly Satisfactory	13	28.9	19.2	0.801
Did Not Meet Expectations	13	28.9	13.2	2.455
Overall Performance	45	100.00	21.56	1.12

Note: 27–30 (Outstanding); 24–26 Very Satisfactory; 21–23 (Satisfactory); 18–20 (Fairly Satisfactory); 1–17 (Did Not Meet Expectations)

Level of Pupils' Reading Comprehension After the Implementation of the Diceroll Strategy

Table 2 presents the level of pupils' reading comprehension after the implementation of the DiceRoll Strategy. The overall performance of the pupils was classified as Very Satisfactory, with an overall mean score of ($M = 23.95$, $SD = 0.83$). The highest percentage of pupils achieved an Outstanding level of performance ($n = 21$, 46.7%), followed by those who attained a Very Satisfactory level ($n = 17$, 37.8%). Meanwhile, a smaller number of pupils were categorized as Satisfactory ($n = 5$, 11.1%) and Fairly Satisfactory ($n = 2$, 4.4%). Notably, no pupil fell under the Did Not Meet Expectations category after the implementation of the intervention. These findings indicate a marked improvement in pupils' reading comprehension performance following the use of the DiceRoll Strategy.

The findings suggest that the DiceRoll Strategy positively influenced pupils' reading comprehension skills by increasing learner engagement and participation during reading activities. The high percentage of pupils who achieved Outstanding and Very Satisfactory performance indicates that the intervention effectively enhanced pupils' ability to understand, analyze, and interpret texts. Moreover, the absence of pupils under the Did Not Meet Expectations category demonstrates that the strategy may have helped struggling readers improve their comprehension skills. The improvement in the overall mean score further implies that interactive and game-based instructional approaches can create a more motivating and supportive learning environment for pupils. These results also highlight the importance of active learning strategies in promoting better comprehension outcomes among elementary learners.

The findings of the present study are supported by several related studies highlighting the effectiveness of interactive and learner-centered instructional strategies in improving reading comprehension. Gamified and interactive instructional approaches significantly improve learners' reading

comprehension and attitudes toward reading (Prados Sánchez et al., 2023). Learners become more motivated and actively engaged when classroom activities incorporate game-based elements and collaborative participation. This supports the present findings where a high percentage of pupils achieved Outstanding and Very Satisfactory levels after the implementation of the DiceRoll Strategy. Similarly, collaborative learning approaches positively influence learners' reading proficiency by promoting active participation, peer interaction, and critical thinking during reading tasks (Delima et al., 2024).

Moreover, differentiated and strategy-based instruction has been shown to enhance pupils' comprehension performance and overall engagement in reading activities. Reading comprehension among elementary learners improves when teachers utilize varied and learner-centered instructional techniques that address pupils' diverse learning needs (Langcuyan et al., 2024). In the same manner, the use of reading strategies significantly contributes to learners' achievement in reading comprehension by helping them better analyze and interpret texts (Loem et al., 2025). These findings align with the current study, wherein pupils demonstrated improved comprehension performance after exposure to the DiceRoll Strategy. The increase in pupils' overall performance suggests that interactive strategies can effectively support comprehension development among elementary learners.

Furthermore, reading comprehension skills are strengthened when learners are exposed to motivating and supportive learning environments that encourage critical thinking and active engagement. Explicit instruction in comprehension and inference-making strategies significantly improves learners' understanding of texts and promotes higher-order thinking skills (Rice & Wijekumar, 2024). Likewise, deficits in reading comprehension and critical thinking skills may be reduced through timely and innovative interventions that actively involve learners in the learning process (Ramos, 2024). These studies reinforce the implication of the present findings that teachers and school administrators should continue implementing engaging and interactive reading

activities, such as comprehension games, collaborative exercises, and differentiated instruction, to sustain pupils' improved reading comprehension performance.

The results of the study imply that teachers and school administrators should continue integrating innovative and learner-centered strategies, such as the DiceRoll Strategy, into reading instruction to sustain and further improve pupils' comprehension skills. Teachers may strengthen the intervention through regular comprehension drills, collaborative reading activities, vocabulary enrichment exercises, and

differentiated instruction tailored to pupils' individual learning needs. School administrators may also provide continuous training and workshops for teachers on the use of engaging reading strategies and interactive instructional materials. In addition, parents may be encouraged to support reading activities at home through guided reading sessions and consistent monitoring of pupils' reading habits. Through collaborative efforts among teachers, school personnel, and parents, pupils' reading comprehension skills may be continuously enhanced and maintained.

Table 2
Level of Pupils' Reading Comprehension After the Implementation of the Diceroll Strategy

Performance	Frequency	Percentage	M	SD
Outstanding	21	46.7	28.8	1.17
Very Satisfactory	17	37.8	24.9	0.9
Satisfactory	5	11.1	22.6	0.55
Fairly Satisfactory	2	4.4	19.5	0.71
Overall Performance	45	100.00	23.95	0.83

Note: 27–30 (Outstanding); 24–26 Very Satisfactory); 21–23 (Satisfactory); 18–20 (Fairly Satisfactory); 1–17 (Did Not Meet Expectations)

Significant Difference in the Learners' Reading Comprehension Levels Before and After the Implementation of DiceRoll Strategy

Table 3 presents the significant difference in the level of pupils' reading comprehension before and after the implementation of the DiceRoll Strategy. The findings revealed a very highly significant difference between the pupils' reading comprehension performance before and after the intervention, with a computed t-value of ($t = 13.4$) and a p-value of ($p = 0.001$), which is lower than the 0.05 level of significance. The mean score of the pupils increased from ($M = 19.6$, $SD = 5.13$) before the implementation of the DiceRoll Strategy to ($M = 26.2$, $SD = 2.89$) after the implementation. Since the p-value was less than 0.05, the null hypothesis stating that there is no significant difference in the level of reading comprehension of pupils before and after the implementation of the DiceRoll Strategy was rejected.

The significant improvement in pupils' reading comprehension performance suggests that the DiceRoll Strategy was effective in enhancing learners' comprehension skills. The substantial increase in the mean score after the intervention indicates that pupils were better able to understand, analyze, and interpret reading texts following exposure to the strategy. Moreover, the lower standard deviation after the implementation implies that pupils' performances became more consistent, suggesting that the intervention benefitted not only high-performing pupils but also those who previously struggled in reading comprehension. The interactive and engaging nature of the DiceRoll Strategy may have contributed to increased learner participation, motivation, and focus during reading activities, resulting in improved academic performance. These findings further emphasize the value of learner-centered and game-based instructional approaches in developing pupils' reading comprehension skills.

No non-significant findings were observed in the study since the obtained p-value ($p = 0.001$) was

below the 0.05 level of significance. This indicates that the observed improvement in pupils' reading comprehension performance was not due to chance alone but was likely influenced by the implementation of the DiceRoll Strategy. The absence of non-significant results further strengthens the effectiveness of the intervention in improving pupils' comprehension skills.

The significant findings of the present study are supported by several related studies emphasizing the effectiveness of innovative and learner-centered approaches in improving reading comprehension. Reading comprehension skills are strengthened when learners are actively engaged in collaborative and scaffolded instructional activities that promote participation and confidence in reading tasks (Ahmed Abdel-Al Ibrahim et al., 2023). Likewise, intensive reading approaches significantly improve learners' ability to understand and interpret texts by providing structured and focused reading activities (Gundran, 2024). These findings support the present study, wherein pupils demonstrated a significant improvement in reading comprehension performance after the implementation of the DiceRoll Strategy. The interactive and engaging nature of the intervention may have encouraged pupils to participate more actively during reading sessions, leading to higher comprehension achievement.

Furthermore, learners' comprehension skills improve when instructional activities are designed to be motivating, interactive, and responsive to pupils' learning needs. Pictures-based and visual instructional activities positively enhance young learners' reading comprehension skills by making texts easier to understand and more engaging for pupils (Al-Barakat & Alali, 2024). In the same manner, reading strategy use significantly contributes to learners' online and classroom reading comprehension performance because it helps learners process information more effectively (Habók et al., 2024). These studies align with the present findings, wherein pupils achieved higher posttest scores after exposure to the DiceRoll Strategy, suggesting that interactive and strategic reading interventions can effectively improve comprehension outcomes.

Moreover, reading comprehension and critical thinking skills develop more effectively when learners are exposed to engaging and meaningful learning experiences. Critical thinking plays an important role in comprehension because learners need to analyze, infer, and evaluate information while reading texts (Paige et al., 2024). Similarly, metacognitive reading strategies significantly improve learners' comprehension performance by helping them monitor and regulate their understanding during reading activities (Pahrizal et al., 2025). These findings reinforce the present study's results that the DiceRoll Strategy served as an effective intervention in enhancing pupils' reading comprehension skills. The results further imply that teachers and school administrators should continue implementing innovative reading activities, collaborative learning tasks, and game-based instructional strategies to sustain pupils' engagement and continuously improve their reading comprehension performance.

The findings of the study imply that teachers, school administrators, and curriculum planners should consider integrating interactive and game-based instructional strategies, such as the DiceRoll Strategy, into regular reading instruction to improve pupils' comprehension performance. Teachers may conduct structured comprehension games, collaborative reading tasks, vocabulary-building activities, and differentiated reading exercises to sustain learners' engagement and achievement in reading. School administrators may also provide training programs, workshops, and instructional materials that support the use of innovative teaching strategies in the classroom. Furthermore, parents may be encouraged to reinforce reading habits at home through guided reading sessions and interactive literacy activities. Through collaborative efforts among teachers, school personnel, and parents, pupils' reading comprehension skills may continue to improve and contribute to better academic performance.

Table 3
Significant Difference in the Learners' Reading Comprehension Levels Before and After the Implementation of DiceRoll Strategy

Performance	M	SD	T-value	P-value	Decision
Before the Implementation of DiceRoll Strategy	19.6	5.13	13.4***	0.001	Reject H_{01}
After the Implementation of DiceRoll Strategy	26.2	2.89			

Note: *** $p < 0.01$ (Very Highly Significant); ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant)
 H_{01} : There is no significant difference in the level of reading comprehension of pupils before and after the implementation of the DiceRoll strategy.

before and after the implementation of the DiceRoll Strategy.

Conclusion

Based on the findings of the study, the following are the conclusions:

IV. SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study determined the effectiveness of the DiceRoll Strategy in enhancing the reading comprehension of Grade 4 pupils during the School Year 2025–2026 in one of the public elementary schools in Ozamiz City. Specifically, it aimed to determine the level of pupils' reading comprehension before and after the implementation of the DiceRoll Strategy and to identify whether there was a significant difference in the pupils' reading comprehension levels before and after the intervention. The study utilized a pretest-posttest design to measure the pupils' reading comprehension performance. The findings served as the basis for determining the effectiveness of the DiceRoll Strategy as an interactive and learner-centered approach in improving pupils' comprehension skills.

Findings

This study yielded the following findings:

1. The level of pupils' reading comprehension before the implementation of the DiceRoll Strategy was satisfactory.
2. The level of pupils' reading comprehension after the implementation of the DiceRoll Strategy was very satisfactory.
3. A very highly significant difference existed in the pupils' reading comprehension levels

1. The level of pupils' reading comprehension before the implementation of the DiceRoll Strategy is satisfactory.
2. The level of pupils' reading comprehension after the implementation of the DiceRoll Strategy is very satisfactory.
3. A significant difference exists in the pupils' reading comprehension levels before and after the implementation of the DiceRoll Strategy, indicating that the DiceRoll Strategy effectively improves pupils' reading comprehension skills.

Recommendation

Based on the findings and conclusions of the study, it is recommended that:

1. Teachers may conduct interactive and learner-centered reading activities, such as the DiceRoll Strategy, to improve pupils' reading comprehension performance.
2. School administrators may provide instructional support, reading materials, and teacher training programs that promote the use of engaging reading strategies in the classroom.
3. Future researchers may conduct similar studies using other instructional interventions, grade levels, or larger groups of respondents to further validate the effectiveness of the DiceRoll Strategy in improving reading comprehension skills.

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