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PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 51

Issue 9

Pages: 1162-1167

Document ID: 2026PEMJ5022

DOI: 10.70838/pemj.510906

Manuscript Accepted: 11-10-2025

Enhancing the Comprehension Skills of Grade 6 Learners at a Public Elementary School in Bulacan Through the Use of Text Trek

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Abstract

The results of the 2024 Philippine Informal Reading Inventory (Phil-IRI) revealed that 80% of the grade 6 learners at a Public Elementary School have weak reading comprehension skills. This study aimed to improve it through Text Trek, a game-based reading intervention. Specifically, it sought to determine learners' comprehension levels before and after the intervention. It also aimed to identify if there was a significant difference in performance. A quasi-experimental study design was employed, involving 58 purposely selected Grade 6 learners who scored low on the pre-test of the Phil-IRI. The experimental group utilized Text Trek, while the control group continued with traditional methods. This intervention featured contextualized reading passages organized by difficulty level, presented in a Bingo-inspired format to promote learner engagement. Pre- and post-tests were administered to both groups, and data were analyzed using descriptive statistics and an independent-samples t-test. Results revealed that both groups improved in their post-test scores; the experimental group that used Text Trek showed significantly higher gains, with a mean difference of 6.62. The computed t-value of -7.90 exceeded the critical t-value at a 0.05 level of significance, confirming significant improvement in comprehension skills. These findings indicate that structured and culturally responsive reading interventions can effectively enhance learners' comprehension. This concluded that Text Trek is a practical and engaging tool for improving literacy skills. Thus, it recommends integrating it into regular reading programs, providing teacher training for effective implementation, and expanding it to other schools within the division.

Keywords: *text trek, comprehension skills, literacy development*

Introduction

Reading comprehension is a critical foundation for lifelong learning and the development of higher-order thinking skills, yet it remains one of the most pressing challenges in education worldwide. Many learners struggle not only with decoding words but also with understanding their meaning, a difficulty often linked to limited vocabulary, poor reading habits, and reduced motivation to read amid increasing digital distractions. International assessments, such as the Programme for International Student Assessment (PISA), consistently rank the Philippines among the lowest-performing countries in reading, underscoring the urgent need for effective interventions to strengthen literacy skills among Filipino learners.

This challenge is also evident in local contexts. At a Public Elementary School, the results of the 2024 Philippine Informal Reading Inventory (Phil-IRI) revealed that 80% of grade 6 learners were identified as readers but had weak comprehension skills. The researcher also observed that grade 6 learners find it challenging to understand the meanings of the words in the passages they read, suggesting low-level vocabulary skills resulting from poor reading habits. Consequently, learners also find it difficult to deduce the substance of the passages or excerpts they read, and they focus on words rather than comprehensively examining the content. These findings confirm the need for classroom-based strategies that develop comprehension and engage learners in enjoyable, meaningful reading activities.

In response, this study introduces Text Trek, a game-based reading intervention inspired by Bingo mechanics and designed with contextualized passages tailored to learners' needs. Text Trek seeks to improve vocabulary, literal comprehension, and inferential skills while increasing learners' motivation to engage with texts through integrating play and purposeful reading. This study investigates the effectiveness of Text Trek in improving the reading comprehension of Grade 6 learners at a Public Elementary School.

The researcher designed Text Trek's development based on the study by Qomariyah and Utama (2020), which examined the use of Bingo Games to develop learners' reading comprehension and vocabulary. The cited study showed significant improvement in learners' posttest scores, demonstrating that Bingo Games can serve as an alternative strategy to aid teachers in teaching vocabulary and reading comprehension.

In relation to this study, the researcher developed a combinatory game style inspired by the culturally familiar Bingo game and designed a procedure for implementing Text Trek. Within this intervention, the researcher formulated contextualized passages anchored on the learners' needs and interests. After preparing these passages, which served as the reading materials for Text Trek, the researcher created Text Trek templates in the form of Bingo cards. Instead of numbers, the researcher used learners' initials, with each corresponding to a specific reading passage. Each letter in the acronym TEXT represented a different degree of difficulty, wherein the first letter T contained the simplest passages and questions, while the last letter T contained the most challenging reading passages. The initials on the Text Trek cards were arranged and jumbled daily to ensure all learners had opportunities to read and answer passages of varying difficulties.

For the implementation of Text Trek, the researcher also designed a drawing container labeled with the initials of names on the Text Trek cards. Each Text Trek tile placed in the container was drawn randomly. When an initial was called, the learner brought their card and selected the passage or excerpt corresponding to that initial. After reading, the researcher allotted 3–5 minutes for learners to read and comprehend the passage. Guide questions were then answered within the given time frame. To record learners' answers to the questions, the researcher also provided a separate Text Trek template that served as the learners' answer sheet.

Learners' performance using Text Trek was measured using scoring rubrics. The rubrics included key criteria such as application of knowledge, organization of ideas, participation, and clarity of expressed ideas. The evaluation of learners' performance using Text Trek was conducted after each scheduled session of the proposed intervention.

Research Questions

This study aimed to evaluate the effectiveness of Text Trek, an innovative game-based intervention, in enhancing the reading comprehension skills of Grade 6 learners at a Public Elementary School. Specifically, it sought answers to the following questions:

1. What is the level of reading comprehension skills of grade 6 learners before the use of Text Trek?
2. What is the level of reading comprehension skills of grade 6 learners after the use of Text Trek?
3. Is there a significant difference in the level of reading comprehension skills before and after the use of Text Trek?

Literature Review

Reading comprehension is an essential skill for academic success as it fosters higher-order thinking, problem-solving, and lifelong learning. According to Cain and Oakhill (2017), learners who struggle with comprehension often face difficulties across subject areas, as understanding texts is integral to acquiring knowledge. To address comprehension gaps, various interventions and innovations in reading instruction have been developed, including the use of interactive and technology-based tools. These approaches aim to make reading more engaging while enhancing learners' critical and analytical thinking.

Duke and Cartwright (2021) explain that comprehension involves a complex interaction of cognitive processes, including decoding, vocabulary knowledge, and background information. Learners with weak comprehension skills are often at risk of academic underachievement since most subjects require the ability to understand written instructions and informational texts. Educators have explored various interventions, such as scaffolding strategies, graphic organizers, and technology-based innovations, to mitigate these issues.

According to Tompkins (2017), interactive and visual approaches to reading instruction have been shown to improve learners' motivation and critical thinking skills. These findings highlight the need for creative strategies that go beyond traditional reading practices to make comprehension more accessible and engaging for learners.

Studies on Bingo-based learning games have reported significant gains in both vocabulary and reading comprehension, particularly when paired with active classroom implementation and contextualized materials (Qomariyah & Utama, 2020). These interventions not only raised posttest scores but also increased student enthusiasm and participation, indicating heightened engagement and confidence in decoding and interpreting texts. This closely aligns with the design of Text Trek, which adapts Bingo mechanics using initials and passages tiered by difficulty. Digital interactive reading tools have also shown promise. One recent feasibility study found that embedded comprehension questions in choose-your-own-adventure e-books yielded notable gains in word learning and comprehension among upper-elementary students (Day et al., 2024).

Another promising strategy is the use of digital and gamified platforms such as Text Trek, which offers interactive reading experiences that enhance learners' motivation and comprehension. Studies by Guthrie and Wigfield (2018) emphasized that learners, when actively engaged and motivated, demonstrate stronger comprehension skills. Similarly, innovations that combine structured reading activities with interactive elements have been found to enhance vocabulary development, retention, and inferential understanding (Afflerbach, 2019). Therefore, integrating Text Trek into classroom instruction is expected to provide Grade 6 learners at a Public Elementary School with meaningful opportunities to strengthen their comprehension skills while promoting an enjoyable, purposeful reading experience.

Methodology

Research Design

This study employed a quasi-experimental design to evaluate the effectiveness of Text Trek in enhancing Grade 6 learners' reading comprehension skills. As noted by Creswell (2021), a quasi-experimental study is appropriate when randomization is not feasible, but comparison between groups remains necessary.

Due to existing class structures and ethical considerations, learners were not randomly assigned to groups. Instead, two intact groups were used: the control group, which received traditional teaching instructions, and the experimental group, which utilized Text Trek. The experimental group consisted of learners who had previously received failing scores on the Revised Philippine Informal Reading Inventory (Phil-IRI), making them the primary beneficiaries of the intervention.

Respondents

The participants of this study were fifty-eight (58) Grade 6 learners from Section Earth and Section Jupiter of Public Elementary School, who were purposely selected based on the results of the Revised Philippine Informal Reading Inventory (Phil-IRI). The Phil-IRI findings revealed that a substantial number of learners from these sections obtained extremely low scores in reading comprehension tasks, underscoring the urgent need for targeted intervention.

Purposive sampling was employed to include learners most in need of support in reading comprehension. This approach enabled the researcher to focus on participants whose skill deficits aligned with the study's objectives, thereby maximizing the intervention's potential impact. The selection of these participants also strengthened the study's validity as it addressed the authentic learning challenges encountered in the classroom.

Instrument

Two primary instruments were utilized in this study to gather data on the effectiveness of Text Trek in enhancing reading comprehension. These were teacher-made pre-test and post-test questionnaires, specifically developed by the researcher. Each test consisted of 20 passages accompanied by comprehension questions that ranged from literal to inferential and critical understanding. This structure ensured that the tests effectively measured a wide range of reading comprehension skills aligned with the study's objectives.

To establish content validity, the instruments were subjected to expert validation. One Master Teacher and the School Reading Coordinator carefully reviewed the test items for appropriateness, clarity, and alignment with the competencies prescribed in the curriculum. Their feedback guided necessary revisions to ensure the accuracy and reliability of the tests as tools for assessing the participants' comprehension skills.

The use of pre-test and post-test results provided an objective basis for measuring the learners' progress, thereby strengthening the reliability of the study's findings and the credibility of the intervention's effectiveness.

Procedure

The data collection process was carried out in three phases: preparation, implementation, and assessment.

The researcher developed the Text Trek intervention materials, pretest and post-test instruments, and lesson guides. Respondents were selected based on their Phil-IRI results, with 29 learners assigned to the experimental group and 29 to the control group. Parental consent and administrative approval were secured prior to implementation.

A pretest was administered to both groups under standardized conditions. The experimental group received the Text Trek intervention during scheduled English classes, while the control group continued with traditional instruction. The researcher monitored both groups to ensure consistency and documented learner engagement and challenges throughout the process.

A post-test was administered to both groups using the same procedures as the pretest. Test results were collected, compared, and analyzed to determine the effectiveness of the Text Trek intervention in improving reading comprehension.

Data Analysis

The data were analyzed using both quantitative techniques. To address Research Questions 1 and 2, the mean and standard deviation were computed to describe learners' reading comprehension performance on the pretest and posttest. To determine whether the observed difference in post-test scores between the experimental and control groups was statistically significant, an independent-samples t-test was employed at the 0.05 level of significance. This statistical procedure was suitable for comparing the performance of different learner groups across the same test administrations.

Ethical Considerations

Ethical considerations were carefully observed throughout this study to ensure the safety and rights of the participants. Before the intervention was implemented, informed consent was obtained from the school principal, teachers, and the parents of the Grade 6 learners. The participants were informed that their involvement was voluntary and that they had the right to withdraw from the study at any point without facing negative consequences. Confidentiality was maintained by withholding learners' names and personal information from any study documents and reports. All data collected was used solely for academic and study purposes and was securely stored to prevent unauthorized access.

The intervention, Text Trek, was implemented in a way that avoided any physical, emotional, or psychological harm to learners, ensuring the activity remained both educational and enjoyable. Throughout the study, the researcher strictly adhered to the Department of Education's ethical guidelines and upheld the principles of integrity, respect, and fairness.

Results

Performance in the Pre-test of the Learners in the Experimental and Control Groups

To determine and analyze the pre-test scores of both groups of learners, their mean, standard deviation, minimum, and maximum scores were compared. The similarities or differences in their performance were discussed to determine if the groups started with comparable comprehension levels. The table below shows the pre-test results of the controlled and experimental groups of learners.

Table 1. *Pre-test results of Controlled and Experimental Groups*

Test	N	Mean	SD	Minimum Score	Maximum Score
Controlled	29	20.92	3.57	16	28
Experimental	29	22.07	3.39	16	28

Table 1 presents the pre-test performance of Grade 6 learners in the controlled and experimental groups before implementing the Text Trek intervention. The experimental group had a slightly higher mean score ($M = 22.07$, $SD = 3.39$) than the control group ($M = 20.92$, $SD = 3.57$), indicating a minor initial advantage in comprehension skills. Both groups had identical minimum and maximum scores of 16 and 28, respectively, suggesting comparable baseline capabilities. The similarity in standard deviations implies that the scores were relatively consistent within each group, reflecting a normal distribution of comprehension skills.

These findings align with Vygotsky's (1978) sociocultural theory, which emphasizes that learners build on similar foundational skills and improve through structured learning interventions. Additionally, Slavin (2020) highlights that pre-test results are crucial for determining the effectiveness of an instructional strategy, as they establish a baseline for comparison. Overall, the data suggest that both groups began with relatively similar comprehension levels, justifying the need for an intervention to assess its impact.

Performance in the Post-test of the Learners in the Experimental and Control Groups

To answer this question, the mean, standard deviation, minimum, and maximum scores were analyzed to compare the post-test scores of the experimental and control groups. The differences in their performance were highlighted to emphasize whether the experimental group, which used Text Trek, showed significant improvement compared to the control group.

Table 2. *Post-test results of Controlled and Experimental Groups*

Test	N	Mean	SD	Minimum Score	Maximum Score
Controlled	29	26.07	3.43	20	32
Experimental	29	32.69	2.94	28	40

Table 2 presents the post-test performance of Grade 6 learners in the controlled and experimental groups following implementation of the Text Trek intervention. The post-test results reveal that the experimental group ($M = 32.69$, $SD = 2.94$) outperformed the control group ($M = 26.07$, $SD = 3.43$), indicating a significant improvement in comprehension skills among learners who used Text Trek. The higher mean score and increased maximum score (40) in the experimental group suggest that the intervention positively impacted reading comprehension.

In contrast, the control group, which did not use Text Trek, showed only a slight increase from their pre-test performance. This finding aligns with the study of Guthrie et al. (2004), which emphasizes that engaging reading interventions can enhance students' comprehension and motivation. Similarly, Rasinski (2012) notes that structured reading programs improve fluency and understanding, which likely explains the experimental group's higher scores. The minimal overlap in standard deviations suggests that the observed differences are consistent among learners. These results support Text Trek's effectiveness as a tool for enhancing comprehension skills.

Significant Difference in Reading Comprehension Skills between the Control and Experimental Groups of Learners

An independent-samples t-test was conducted to compare post-test scores between the control and experimental groups. The mean scores, standard deviations, and the computed t-value were examined to determine if there is a significant difference between the two groups. If the p-value is less than the significance level (0.05), it indicates that the difference in reading comprehension skills between the groups is statistically significant. This analysis helps determine whether Text Trek has a meaningful impact on learners' comprehension skills compared to traditional teaching tools.

Table 3 presents the results of the independent-samples t-test for the post-test scores of the controlled and experimental groups. The results indicate a significant difference in reading comprehension between learners taught with Text Trek and those taught without it.

Table 3. *Independent-Samples t-test Results for Post-test Scores of Controlled and Experimental Groups*

	Mean Diff.	SD	t-computed value	p-value	Decision	Interpretation
Controlled vs. Experimental	6.62	3.43	-7.90	< 0.01	Reject Ho	Significant

t-critical value = ± 2.004 , *df* = 56

The mean difference of 6.62, with a t-computed value of -7.90, exceeds the critical t-value of ± 2.004 at 56 degrees of freedom, leading to the rejection of the null hypothesis. The p-value (< 0.01) indicates that the observed difference is statistically significant, suggesting

that Text Trek had a meaningful impact on comprehension skills. The lower standard deviation of the experimental group suggests that performance gains were consistent among participants.

This result aligns with the findings of Kuhn et al. (2006), who emphasized that structured and interactive reading programs significantly enhance reading fluency and comprehension. Additionally, Foorman et al. (2016) highlight that evidence-based literacy interventions lead to measurable improvements in reading performance among elementary learners. The findings suggest that integrating Text Trek into reading instruction can effectively enhance comprehension skills. Thus, implementing this program may improve students' reading proficiency in elementary education.

Discussion

The findings indicated that Text Trek was an effective intervention in enhancing the comprehension skills of Grade 6 learners. The pre-test results showed that both the control and experimental groups had relatively similar comprehension levels, confirming the fairness of the comparison between the two groups. After the intervention, the experimental group significantly outperformed the control group in the post-test, suggesting that the game-based strategy led to meaningful improvements in comprehension. The independent t-test validated this result, showing a statistically significant difference in performance, thereby affirming the positive impact of Text Trek. These findings support the work of Guthrie et al. (2004) and Rasinski (2012), who asserted that interactive and structured reading strategies contribute to higher comprehension and motivation among learners. Likewise, the consistency in the experimental group's scores suggests that the intervention benefited not only high-performing learners but also those with average comprehension levels. Overall, the results demonstrate that integrating Text Trek into classroom instruction improves reading comprehension, making it a viable instructional strategy in elementary education.

Conclusions

The study's findings indicate that the use of Text Trek significantly enhanced Grade 6 learners' reading comprehension skills at a Public Elementary School. The experimental group, which was taught using Text Trek, demonstrated a higher post-test mean score compared to the control group, with a statistically significant difference in performance. This suggests that structured, interactive reading interventions like Text Trek are practical tools for improving students' comprehension. These results align with existing studies that emphasize the importance of evidence-based literacy programs for enhancing reading proficiency. Therefore, implementing Text Trek in reading instruction is recommended as an effective strategy to foster better comprehension skills among elementary learners.

Based on the study's conclusions, several recommendations are proposed to enhance the sustainability and effectiveness of the intervention. It is recommended that a Public Elementary School integrate Text Trek into its regular reading comprehension program to sustain the gains achieved, as the intervention significantly improved learners' comprehension skills. Its systematic implementation can also address similar reading difficulties across grade levels, with teachers encouraged to adapt and modify the materials to meet diverse learning needs. The school can provide an engaging and effective literacy tool that promotes consistent reading improvement by institutionalizing Text Trek. Moreover, the Schools Division of Bulacan is encouraged to provide training sessions and workshops for teachers on effectively implementing Text Trek in their classrooms. Equipping teachers with the necessary knowledge and skills will ensure consistency and maximize the intervention's impact. At the same time, collaborative platforms such as Learning Action Cell (LAC) meetings can serve as collaborative platforms for sharing best practices. Likewise, expanding the use of Text Trek to other schools in the division is recommended to benefit more learners struggling with reading comprehension, with future studies continuously evaluating its long-term effectiveness through monitoring, performance assessment, and feedback gathering. Scaling up the intervention while maintaining a feedback mechanism will ensure that Text Trek remains a sustainable and adaptable literacy solution responsive to the evolving needs of the learner population.

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