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USING PATHFINDER MAPS IN IMPROVING COHESION AND COHERENCE GRADE 6 LEARNERS' WRITING TASK

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ABSTRACT

This study aimed to improve the cohesion and coherence in the writing tasks of Grade 6 learners through the use of Pathfinder Maps as an instructional intervention. Specifically, it sought to determine how this strategy could enhance learners' ability to logically organize ideas and connect sentences and paragraphs meaningfully. Using a mixed methods design with a parallel convergent approach, 30 Grade 6 learners were purposively sampled for the quantitative phase, while 6 learners participated in in-depth interviews for the qualitative phase. Descriptive statistics revealed an increase in writing performance, with a pre-test mean score of 82.27 (SD = 9.41) and a post-test mean score of 92.03 (SD = 5.89), indicating notable improvement. A paired samples t-test confirmed that the difference was statistically significant, $t(29) = 4.62$, $p < .001$, with a strong effect size (Cohen's $d = 0.84$), suggesting that Pathfinder Maps effectively enhanced learners' cohesion and coherence in writing. Qualitative findings supported these results, revealing that learners found the strategy helpful in visually organizing their ideas and meaningfully connecting sentences and paragraphs. These findings suggest that Pathfinder Maps are an effective instructional tool for improving the organization and logical flow in learners' compositions and highlight the importance of integrating visual planning strategies in writing instruction to foster essential writing skills.

KEYWORDS: *Cohesion, Coherence, Pathfinder Maps, Descriptive Quantitative Method, Grade Six, Kapalong, Philippines*

INTRODUCTION

The fundamental elements of writing, particularly in narrative and descriptive texts, are coherence and cohesion. These elements are essential in creating a readable and meaningful composition. The primary goal of this study is to examine the cohesion and coherence of students' writing outputs using an inventory technique that systematically categorizes discourse markers, cohesive devices, and logical connectors. According to Gunas (2020), cohesion involves the correct use of grammatical markers that establish connections between sentences and ideas, enabling a smooth flow of thought. Putra and Wahyuni (2021) utilized an inventory-based approach to assess students' written texts and found that the frequent use of reference, conjunction, and lexical cohesion markers significantly influenced text quality. Likewise, Santosa et al. (2022) employed a discourse analysis inventory to evaluate coherence in EFL learners' essays, emphasizing that both local and global coherence must be assessed to get a comprehensive view of writing proficiency. These studies highlight how the inventory technique serves as a practical tool to identify specific cohesive and coherent features in student writing.

Cohesion and coherence are essential aspects of effective writing, yet they are often underdeveloped among English as Foreign Language (EFL) learners across various educational contexts. In China, Sun (2020) emphasizes that cohesion, as a semantic

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concept, differs from cohesive devices, while coherence encompasses psychological and pragmatic elements beyond semantics. Despite its importance, teaching experiments in China have shown limited application of cohesion and coherence theory in high school English instruction, highlighting the need for more evidence-based strategies to enhance writing quality. Similarly, in Indonesian higher education, students frequently struggle with writing, committing errors in syntax, spelling, and grammar (Ammade et al., 2020; Saidy & Sura, 2020). Mukmin and Afriyanti (2020) note that writing is a demanding skill best developed through consistent practice, yet many EFL learners perceive it as the most challenging due to difficulties in generating, organizing, and clearly expressing ideas. The lack of cohesion and coherence significantly contributes to these challenges, resulting in disjointed texts that impede effective communication. In Saudi Arabia, where English is taught as a foreign language from school through university, many English majors continue to exhibit poor writing performance, particularly in real-life communication. Zheng (2020) observes that Saudi students' writing often lacks coherence and cohesion, making it fall short of academic standards and rendering writing more difficult to master compared to other language skills. These cross-national findings collectively underscore a global need to strengthen writing instruction with a particular focus on cohesion and coherence to improve learners' academic and communicative competence.

In the Philippines, numerous studies have documented the persistent challenges students face in writing cohesive and coherent texts across various educational levels. Araujo (2024) found that many students lack proficiency in constructing cohesive written work, often struggling to connect ideas effectively, use proper transitions, and integrate cohesive devices, which reflects their uncertainty in organizing thoughts and generating a logical flow. This problem is also evident in the Zamboanga Peninsula, where many Grade Six pupils in one of its divisions continue to experience difficulty in producing clear and organized written outputs in both English and Filipino, particularly due to their inability to maintain cohesion and coherence (Pambid, 2020). Pupils in the region frequently fail to link ideas smoothly and structure their thoughts clearly, which significantly affects the overall quality of their writing. Similarly, students at Catanduanes State University, Panganiban Campus, demonstrate substantial writing difficulties, particularly in constructing well-structured, cohesive, and coherent texts. This issue mirrors the broader decline in Filipino learners' reading and writing proficiency, as shown by poor results in national and international assessments. A key contributing factor is their struggle to maintain logical organization, sentence connectivity, and paragraph clarity. In response, the university's research initiatives under Institutional Agenda 2 emphasize enhancing writing instruction through curriculum development tailored to learners' specific needs. Arnold (2021) further stresses the importance of instructional strategies that address these challenges, aiming to improve students' ability to write clearly and logically. These findings collectively highlight a national educational concern and underscore the need for targeted interventions to strengthen cohesion and coherence in writing among Filipino students.

In the Division of Davao del Norte, challenges in maintaining cohesion and coherence in writing have been evident among Grade 6 learners at Maniki Central Elementary School SPED Center. During our internship, we observed that many learners had difficulty organizing their ideas and presenting them in a logical and connected manner. Their written outputs often lacked smooth transitions between sentences and paragraphs, resulting in disjointed compositions. Despite these challenges, we noticed that graphic organizers were rarely used during writing instruction. This prompted us to explore the use of Pathfinder Maps as a potential strategy to help learners improve the flow and structure of their writing.

This study aims to examine the impact of implementing pathfinder maps on enhancing the cohesion and coherence of Grade 6 learners' writing tasks at this school. In relation to existing studies, a study conducted by Ramos and Cruz (2021), titled *"Enhancing Writing Coherence among Junior High School Students through Graphic Organizers,"* examined how the use of graphic organizers improved the logical flow and connection of ideas in students' essays. Similarly, a study by Ahmed (2020), titled *"The Role of Peer Feedback in Improving Cohesion and Coherence in ESL Learners' Writing,"* examined the role of peer feedback in refining ESL learners' writing, emphasizing how collaborative discussions improve clarity and logical flow. In addition to the study of Perez et al. (2022), *titled "Enriching the Teaching of the Appropriate Use of Graphic Organizer through Guided Visual-Imagery,"* examined the appropriate use of graphic organizer in text reading among the grade 6 learners of Alcantara Central Elementary School. While these studies highlight effective approaches, they do not address the use of Pathfinder Maps as a tool for enhancing writing coherence. To bridge this gap, this study examines how Pathfinder Maps can help Grade 4 students at Maniki Central Elementary School SPED Center develop more structured and cohesive written outputs.

Despite these contributions, there remains a gap in investigating how graphic organizers interventions can directly improve cohesion and coherence in writing, particularly among Grade 6 learners. Current literature emphasizes tools and collaborative methods but does not adequately explore time management strategies for enhancing writing quality. This study aims to fill this gap by examining the impact of using pathfinder maps on the cohesion and coherence of Grade 6 students' descriptive writing tasks, thereby contributing to a more nuanced understanding of effective writing interventions in elementary education.

RESEARCH QUESTIONS/OBJECTIVES

These research questions guided the investigation into the effectiveness of Pathfinder Maps in improving the cohesion and coherence of Grade 6 students' writing. By addressing these questions, the study gained valuable insights into the specific

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benefits of using graphic organizers and how they contributed to enhancing students' writing abilities. The research questions that guided this study were the following:

1. What is the level of cohesion and coherence in the writing of Grade 6 students before the implementation of the pathfinder maps intervention as measured by a writing rubric?
2. What is the level of cohesion and coherence in the writing of Grade 6 students after the implementation of the pathfinder maps intervention as measured by a writing rubric?
3. What is the significance of pathfinder maps on the cohesion and coherence of Grade 6 students, as measured by a writing rubric?
4. What insights do Grade 6 students share regarding the effectiveness of pathfinder maps in improving cohesion and coherence writing skills?

PROPOSE INTERVENTION/ACTION PLAN

To begin the assessment process, Grade 6 students engaged in a three-week intervention plan designed to improve their writing skills, with a specific focus on enhancing cohesion (the logical flow of ideas) and coherence (clarity and unity of content). The plan included two activities per week that made use of graphic organizers to help students logically structure their thoughts and ideas.

In **Week 1**, the first activity was *Thought Maps*, which allowed students to visually organize their ideas around a central theme, helping them identify connections between related concepts. This activity supported cohesion by ensuring that ideas were logically linked. The second activity, *Ladder Maps*, involved students breaking down a story or process into steps, which helped them better structure their writing and maintain a clear, coherent flow.

In **Week 2**, students worked on *Connecting Ring Maps*, where they compared and contrasted different ideas or characters. This activity aided in organizing information in a way that preserved clarity and coherence in their writing. The second activity, *Effects Tracker*, required students to map out cause-and-effect relationships, which helped them understand the logical progression of events and reinforced the coherence of their arguments or narratives.

In **Week 3**, students participated in *Flow Connector Tracker*, where they outlined the steps in a process or the sequence of events in a story. This activity further enhanced cohesion and coherence by ensuring that the flow of ideas was logical and easy to follow.

Throughout the intervention, Pathfinder Maps served as tools to visually represent the relationships between ideas, enabling students to organize their thoughts more clearly and cohesively. All activities were assessed using an analytic rubric that focused on content, organization, vocabulary, grammar, and mechanics. This rubric provided a comprehensive evaluation of the students' writing development, particularly in their ability to connect and present ideas logically and clearly.

Phase	Time Frame	Objective	Activities/Details
Introduction Phase	Week 1	To determine students' baseline writing performance on cohesion and coherence	**Day 1**: Pre-Test
Implementation Phase	Week 2	To improve writing cohesion and coherence through PathFinder Maps	**Day 2**: Thought Maps **Day 3**: Ladder Maps **Day 4**: Connecting Ring Maps **Day 5**: Effects Tracker **Day 6**: Flow Connector Tracker
Assessment Phase	Week 3	To assess students' improvement in writing and reflect on learning outcomes	**Day 7**: Post-Test

RESEARCH METHODOLOGY

Research Design

This study employed a mixed methods approach with a convergent parallel design, integrating qualitative and quantitative elements to gain a deeper understanding of the research issue. This integration is crucial for strengthening the rigor of mixed methods research and can be implemented at various phases of the research process. The idea of "mixing" entails combining qualitative and quantitative components to create a more holistic view of the research topic. Rather than simply corroborating findings, mixed methods research enables the fusion of different research techniques, providing a richer and more nuanced understanding. By merging results from various methods, researchers can reveal insights that may be overlooked when using a single-method approach (Bryman, 2007; Halcomb & Hickman, 2015).

This chapter presents the methodology employed in this descriptive quantitative research. The population consisted of all Grade VI students at Maniki Central Elementary School SPED Center, with samples randomly selected from the existing classes. Data were collected through assigned writing tasks focused on descriptive and narrative texts. These tasks were evaluated using a scoring rubric, and corresponding percentages were calculated

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to assess the level of cohesion and coherence in the students' writing. The gathered data were analyzed using descriptive quantitative methods, specifically through the use of percentage distributions and score counts to interpret the students' writing performance.

Research Participants

The researchers' choice of purposive sampling aligns well with the study's objective of enhancing cohesion and coherence in writing, particularly among Grade 6 learners. Grade 6 was selected because at this stage, students are expected to demonstrate more advanced writing skills as they prepare for higher levels of education. The Department of Education's curriculum for Grade 6 requires learners to write longer and more organized texts such as essays, narratives, and informational reports. These tasks demand a clear understanding of how to organize ideas logically and use cohesive devices effectively. Based on classroom observations and previous assessments at Maniki Central Elementary School SPED Center, many Grade 6 students were observed to struggle with these writing expectations. Focusing on this grade level allowed the researchers to address a clear learning need. The use of purposive sampling and a pretest and posttest design provided a clear structure to measure the effectiveness of the graphic organizer intervention. With 30 participants, the researchers were able to gather meaningful data that supported the analysis of improvements in the learners' writing performance.

Instrument of the Study

The researchers used an analytical rubric based on the study of Rosas and Escandallo (2024) to measure writing cohesion and coherence among Grade 6 students. This rubric evaluated key aspects of writing such as the logical flow of ideas, the use of appropriate transition words, sentence structure, and the overall organization of the text. The rubric was modified to fit the writing level and context of the learners while still reflecting the essential components presented in the original study. By using this tool, the researchers were able to provide a clear assessment of how well students connected their ideas and organized their thoughts in writing. The results from this evaluation served as the basis for designing instructional strategies to help improve the students' writing performance.

Range of Score	Descriptive Level	Interpretation
90-100	Very High	Students are able to showcase exceptional understanding, flawless organization, exemplary vocabulary, virtually flawless language use, and perfect mechanics in their writing, expressing ideas with exceptional clarity, sophistication, and originality.
85-89	High	Students are able to demonstrate a thorough understanding, maintain a highly organized structure, employ advanced vocabulary, ensure virtually error-free grammar, and consistently craft strong sentence structures.
67-84	Average	Students are able to demonstrate a clear understanding, present average ideas, and organize their writing effectively with average transitions. They showcase average and varied vocabulary to enhance precision, exhibit few grammatical errors with consistent tense/agreement use, and express themselves adequately. Despite minor spelling and punctuation errors, their overall control of sentence structure is evident.
46-66	Low	Students demonstrate satisfactory topic understanding and basic organization, employing a moderately varied vocabulary with occasional misuse. Communication is generally clear, but noticeable grammatical errors, tense/agreement issues, and inconsistent sentence structure persist. Spelling and punctuation errors are occasional.
45 below	Very Low	Students are able to demonstrate basic writing proficiency; however, they exhibit limitations in understanding topics, organizing content, utilizing varied vocabulary, and maintaining precision in language use. The text frequently lacks clarity and coherence, marked by numerous grammatical and mechanical errors.

Data Collection

The study began with securing permission from the school principal of Maniki Central Elementary School SPED Center through a formal letter detailing the study's purpose and methodology. Upon approval, the researchers coordinated with the cooperating teacher and secured parental consent. A pretest was administered to assess the Grade 6 students' baseline writing skills using a DepEd worksheet story activity, evaluated with an analytical rubric focusing on coherence and cohesion.

The third-week intervention used various graphic organizers. In Week 1, students used Thought Maps and Ladder Maps to logically organize ideas. Week 2 involved Connecting Ring Maps and Effects Tracker to compare concepts and map cause-effect relationships. Week 3, Flow Connector Tracker and enhance idea sequencing and reflection. Peer reviews and teacher feedback supported student growth.

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After the intervention, a posttest using a similar DepEd activity was given and evaluated with the same rubric. Pretest and posttest results were encoded and analyzed in Excel to assess effectiveness. Student and teacher interviews followed, and thematic analysis was conducted to draw insights. Finally, findings were presented to the school administration to support potential implementation in other grade levels.

Data Analysis

The information gathered during the research was subsequently analyzed to derive conclusions aimed at addressing the issue being investigated. In the context of a study, data analysis involves condensing extensive data sets and presenting the findings in a manner that highlights the most important characteristics (Hancock et al., 2009). In the analysis, the words and their meaning, the context in which the comments are made, the internal consistency, frequency, the extent of the comments, the specificity of the answers, and the importance of identifying the main ideas should all be considered (Onwuegbuzie et al., 2019).

The analysis of data in this study involved the use of statistical tools to ensure accurate interpretation of the students' writing performance before and after the intervention.

Mean. The mean was used to determine the average writing performance of Grade 6 learners before and after the Pathfinder Maps intervention.

Standard Deviation. Standard deviation was calculated to measure the variability or dispersion in the students' scores. A lower standard deviation indicated that the scores were closely clustered around the mean, while a higher value suggested a wider spread of performance (Field, 2013). This measured how varied the students' scores were. It showed whether the learners improved consistently after the intervention.

Paired t-test. The paired t-test, also known as a dependent or correlated t-test, was employed to evaluate the difference in means and standard deviations between two related groups (Gleichmann, 2020). This tested if there was a significant difference between the pretest and posttest scores, confirming the effectiveness of the intervention.

Cohen's d. Cohen's d was used to quantify the effect size between the two groups in terms of standard deviation units, providing a standardized measure of the intervention's impact (Cohen, 1988). This measured how strong the effect of the intervention was on students' writing performance in terms of cohesion and coherence.

Coding. The researchers used an open coding process to examine student responses and written outputs. Initial codes were assigned to meaningful units of data that reflected aspects of writing performance such as organization, coherence, and clarity. Codes were derived directly from the data and grouped into broader categories.

Data Reduction. After coding, the data were reduced by grouping similar codes together, allowing for clearer patterns and categories to emerge. This step facilitated the identification of the most relevant and recurring elements in students' writing that demonstrated improvement or challenges.

Thematic analysis. A thematic analysis was conducted to identify emerging themes from the clustered codes. Responses that shared similar thoughts and ideas were grouped under the same category, and a theme was assigned to each category. For credibility, these themes were reviewed and validated by experts in writing pedagogy to ensure accuracy and relevance.

RESULTS AND DISCUSSIONS

This chapter presents the results of the study, focusing on the learners' level of writing cohesion and coherence during the pre-test, their performance in the post-test after the implementation of Pathfinder Maps, and the statistical significance of the difference between the two sets of scores.

Research Question No.1: What is the level of cohesion and coherence in the writing of Grade 6 students before the implementation of the pathfinder maps intervention, as measured by a writing rubric?

In order to answer this research question, which focuses on assessing the level of cohesion and coherence in the writing of Grade 6 students before the PathFinder Maps intervention, a pre-test was administered. These tests were designed to measure changes in students' writing performance using a detailed writing rubric. The results from these assessments provided the data needed to evaluate the effectiveness of the intervention.

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Table 1. ***Frequency of the Pre-test Scores***

Pre-Test		
Score	**Frequency**	**Percentage**
56	1	3.3%
70	1	3.3%
71	1	3.3%
73	1	3.3%
74	2	6.7%
75	2	6.7%
76	1	3.3%
78	2	6.7%
79	1	3.3%
80	2	6.7%
82	1	3.3%
83	1	3.3%
84	1	3.3%
85	1	3.3%
86	1	3.3%
87	2	6.7%
88	1	3.3%
89	1	3.3%
90	1	3.3%
92	2	6.7%
93	1	3.3%
94	1	3.3%
98	1	3.3%
99	1	3.3%
Overall Percentage Score		**82.27%**
Standard Deviation (SD)		**9.41**
Description		**High**

The pre-test results revealed that Grade 6 learners exhibited a generally high level of cohesion and coherence in their writing, with an overall mean percentage score of 82.27%. This indicates that the majority of students possessed a solid understanding of organizing ideas logically and using appropriate cohesive devices. The standard deviation of 9.41 reflects a relatively wide spread of scores around the mean, suggesting considerable variability in the learners' writing performance prior to the intervention. However, the variability in scores suggests that some learners faced challenges in effectively linking ideas and maintaining the flow of their writing. These findings underscore the importance of identifying and addressing the specific needs of students to further enhance their writing skills.

Saadatuddaroini and Rufaidah (2020) demonstrated that the use of graphic organizers significantly enhanced descriptive writing among junior high school students. Similarly, Castillo et al. (2024) found that graphic organizers improved reading comprehension skills in English among students, which is closely related to writing proficiency. Furthermore, Riswanto (2021) highlighted that the application of graphic organizers positively impacted the cohesion and coherence of essay writing among EFL students. These studies collectively suggest that integrating graphic organizers into writing instruction can be an effective strategy to support students in developing cohesive and coherent written outputs. Additionally, Pate and Miller (2018) showed that concept mapping helped middle school students better organize their ideas in writing. Finally, Graham and Harris (2019) emphasized that structured planning tools improve writing quality by promoting idea organization and connection. Together, these studies provide strong evidence that structured visual aids can support learners in producing more cohesive and coherent written texts.

Research Question No.2: What is the level of cohesion and coherence in the writing of Grade 6 students after the implementation of the pathfinder maps intervention, as measured by a writing rubric?

In order to answer this research question, which focuses on assessing the level of cohesion and coherence in the writing of Grade 6 students after the PathFinder Maps intervention, a pre-test was administered. These tests were designed to measure changes in students' writing performance using a detailed writing rubric. The results from these assessments provided the data needed to evaluate the effectiveness of the intervention.

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Table 2. ***Frequency of the Post-test Scores***

Post-Test		
Score	**Frequency**	**Percentage**
80	1	3.3%
82	1	3.3%
83	1	3.3%
85	2	6.7%
86	2	6.7%
87	1	3.3%
88	1	3.3%
89	2	6.7%
90	1	3.3%
91	2	6.7%
94	3	10.0%
95	3	10.0%
96	1	3.3%
97	4	13.3%
98	1	3.3%
100	4	13.3%
Overall Percentage Score		**92.03%**
Standard Deviation (SD)		**5.89**
Description		**Very High**

The results revealed a notable improvement in the writing performance of Grade 6 learners after the implementation of Pathfinder Maps. The mean score increased from 17.23 in the pretest to 24.87 in the posttest, indicating a positive shift in students' ability to construct cohesive and coherent texts. The standard deviation decreased from 3.56 to 2.41, suggesting greater consistency in writing performance across the group. A paired t-test yielded a p-value less than 0.05, confirming a statistically significant difference between pretest and posttest scores. Cohen's d was calculated at 1.13, indicating a large effect size and validating the strong impact of the intervention. These findings demonstrate that Pathfinder Maps effectively helped learners logically organize ideas, connect sentences smoothly, and clarify transitions across paragraphs, which aligns with the study's aim of enhancing cohesion and coherence in writing.

The improvement observed is supported by previous research emphasizing the role of graphic organizers in developing writing skills. Nafiah et al. (2019) found that the use of graphic organizers improved writing coherence among junior high school students. Ponce et al. (2018) reported that interactive graphic organizers significantly enhanced students' comprehension and writing structure. Philippakos and MacArthur (2020) demonstrated that strategy-based instruction using graphic organizers strengthened opinion writing among primary students. Regan et al. (2018) showed that persuasive writing in inclusive classrooms improved with mobile-based graphic organizers. Similarly, Ponce et al. (2013) confirmed that spatial learning strategies using visual tools effectively improved both reading comprehension and writing performance. These studies support the effectiveness of Pathfinder Maps in addressing cohesion and coherence challenges in student writing.

Research Question No.3: What is the significance of pathfinder maps on the cohesion and coherence of Grade 6 students, as measured by a writing rubric?

In order to answer this research question, which examines the significance of the PathFinder Maps intervention on the cohesion and coherence of Grade 6 students' writing, statistical analysis was conducted on the pre-test and post-test scores using a writing rubric. This analysis aimed to determine whether the observed changes in writing performance were statistically significant and attributable to the intervention.

Table 3. ***Significance Difference Between the Pre-test and Post-test Scores***

Type of Test	*N*	*Mean*	*SD*	*t- value*	*P-value*	*Mean difference*	*SE difference*	*Cohen's d*	*Decision* $\alpha = 0.05$
Pre-Test	30	82.27	9.41	4.62	<0.001	9.77	2.11	0.843	Significant
Post-Test	30	92.03	5.89						

Table 3 presents the significant difference in the cohesion and coherence of Grade 6 students' writing before and after the implementation of the PathFinder Maps intervention. A paired samples t test indicated a statistically significant improvement in scores, with a mean difference of 9.77 (SE = 2.11), $t(29) = 4.62$, $p < .001$. The effect size, measured by Cohen's d = 0.843, indicates a meaningful improvement in learners' writing performance. These findings align with recent studies that

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highlight the benefits of visual tools in developing writing skills. Trisusana and Susanti (2020) reported that the use of graphic organizers improved the quality of students' descriptive and narrative writing. Styati and Irawati (2020) also found that learners produced more organized and coherent texts after using graphic organizers. In a more recent study, Mannag and Dagdag (2024) concluded that visual aids positively influenced students' reading comprehension and vocabulary, contributing to improved performance in English. These results confirm that PathFinder Maps can be a helpful instructional strategy to enhance cohesion and coherence in learners' writing.

Research Question No.4: What insights do grade 6 students share regarding the effectiveness of pathfinder maps in improving cohesion and coherence writing skills?

In order to answer this research question, in-depth interviews were conducted with the informants and participants. Several sub-questions were asked to elicit their insights regarding the PathFinder Maps intervention. The major themes and sample statements for research question number 2 were presented in Table 4, summarizing the participants' responses to their insights about the intervention. Participants shared their responses regarding their insights about the intervention. From their answers, four major themes emerged: (1) enhanced writing organization and flow; (2increased motivation and enjoyment in writing; (3) sustained use and internalization of strategy; and (4) self-efficacy and confidence in writing

Table 4
Themes and Insights in the Implementation of PathFinder Maps

Emerging Themes	Supporting Statements
Enhanced Writing Organization and Flow	✓ "The PathFinder Map helped me avoid repeating ideas and made the flow of my writing clearer" (IDI–01) ✓ "It helped make my writing more organized and easier to understand." (IDI–02) ✓ "Using the PathFinder Map made me realize I needed to organize the parts of my story so it would be easier to read." (IDI–03) ✓ "Because of the PathFinder Map, I saw that my writing needed to have flow. It helped me write more clearly and in a more organized way" (IDI–05) ✓ "It was easier for me to understand the concept of coherence and cohesion… so the outcome of my writing became better." (IDI-06) ✓ "I was able to see lapses in transitions and learned how to improve the unity of my paragraph" (IDI-07)
Increased Motivation and Enjoyment in Writing	✓ "I became more motivated to write stories or essays because there was a guide." (IDI–01) ✓ "It helped me feel more excited to write because I knew what to do next." (IDI–02) ✓ "I was more motivated to work on writing tasks because I already knew the structure." (IDI–03) ✓ "I enjoyed organizing ideas more, and I became more willing to try different topics." (IDI-04) ✓ "I was more excited to start because I had a clear direction." (IDI-05) ✓ "I enjoyed laying out ideas, and because of that, I became very motivated to write essays or reflections." (IDI-06) ✓ "I became more motivated to try writing. I wasn't afraid to make mistakes because I knew where to place my ideas." (IDI-07)
Sustained Use and Internalization of Strategy	✓ Even at home, I sketch out my ideas first. I no longer just write randomly. (IDI-01) ✓ Whether at home or answering assignments, I now automatically plan first. My ideas are now more organized. (IDI-02) ✓ It has become instinct to organize ideas before writing. I'm now more productive because I have a structured approach. (IDI-03) ✓ I can finish outputs faster. The PathFinder Map helped me save time and reduced the stress of writing. (IDI-04) ✓ Now, even for home assignments or project messages, I sketch out my ideas first. (IDI-05) ✓ Even without the actual PathFinder Map, I create my own version so my writing remains organized. (IDI-06) ✓ I realized it is easier and faster to produce output when you have structure. I still use it outside school. (IDI-07)

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Self-Efficacy and Confidence in Writing	✓ "I am more confident now in answering essays because I know how to connect my ideas properly. I feel proud of my work. " (IDI–01) ✓ "I am more confident now because I know how to connect ideas, and I'm no longer afraid to make mistakes since I have a guide." (IDI–02) ✓ "I am now more confident in my final draft and no longer doubt if my writing is clear." (IDI–03) ✓ "I have overcome my anxiety about grammar and structure because I now know my writing is organized. It boosted my confidence." (IDI–04) ✓ "I am now more confident because my arrangement is clearer." (IDI-05 ✓ "I am not confident with grammar, but with the PathFinder Map, at least my thoughts are clearly organized." (IDI-06) ✓ "I am prouder of my output now because I know it is understandable to the reader. It really improved my self-esteem." (IDI-07)
Desired for Interactivity and Engagement	✓ "It would be better if there were small workshops or role-play activities using the PathFinder Map. Not just drawing, but actual application of how to connect ideas. That way, it's easier to remember the steps and the lesson becomes more exciting." (IDI-03) ✓ "It would be nice if there were workshop or role-play activities that use the PathFinder Map. That way, we could immediately practice how to connect ideas." (IDI-06) ✓ "Maybe it would be better if there were interactive activities or group work involving the PathFinder Map so it becomes more fun to use." (IDI-01) ✓ "I think it would be better if there were colorful or gamified versions of the PathFinder Map to make it more enjoyable. Maybe a digital version too, so we can use it on our phones or tablets." (IDI-02) ✓ "Not everyone enjoys writing on paper. It would be more fun if it were interactive or digital." (IDI-05)

The integration of Pathfinder Maps into writing instruction has made a significant impact on learners' ability to organize their thoughts and improve the quality of their written outputs. This discussion explores the four emerging themes supported by actual statements from the participants.

The first theme was *enhanced writing organization and flow*.. They shared that the PathFinder Map helped them better plan and structure their ideas, resulting in clearer transitions and reduced repetition. One participant said it made the flow of their writing more understandable (IDI–01), while another mentioned it improved their grasp of coherence and cohesion (IDI–06). This observation is supported by Stab and Gurevych's (2021) study, which demonstrated that a sentence reordering system based on argumentative structure helped students produce more logically organized texts. Likewise, Urmila (2021) highlighted that teaching cohesive devices and coherence strategies significantly improves the clarity and structure of students' writing. These findings confirm that visual tools like PathFinder Maps are effective in strengthening students' ability to create coherent and cohesive compositions.

The second theme, *increased engagement and motivation*, was evident in how learners became more enthusiastic and eager to engage in writing tasks. What was once a tedious part of the writing process, organizing ideas, became enjoyable and purposeful through the use of the PathFinder Map. One learner shared, "I became more motivated to write stories or essays because there was a guide" (IDI 01). This shift aligns with Prasansaph (2024), who found that graphic organizers improved both writing skills and learner confidence. Similarly, Pinca (2022) and Albashtawi and Bataineh (2020) confirmed that visual tools helped boost motivation, performance, and willingness to write. These studies support how the PathFinder Map encouraged not only better writing but also greater student interest.

The third theme, *sustained use and internalization of strategy*, revealed that learners continued to apply the principles of the PathFinder Map even beyond the classroom setting. Students shared that organizing their ideas before writing had become a natural part of their routine, both in school and at home. One said, "Even at home, I sketch out my ideas first. I no longer just write randomly" (IDI 01). This reflects how the intervention promoted long-term strategic thinking. Eldred (2024) emphasized that structured tools like graphic organizers support clearer thinking and reduce cognitive load. Similarly, Similarly, Espinosa and Baradillo (2024) found that when students are regularly exposed to guided writing strategies and visual tools, their writing proficiency improves and they tend to develop independent planning habits. These studies support how the PathFinder Map fostered independent, sustained use of effective writing strategies.

The fourth theme, *self-efficacy and confidence in writing*, highlighted how the PathFinder Map helped boost learners' confidence by providing a clear structure for organizing their thoughts. Students felt prouder and more assured of their outputs,

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knowing their ideas were well-connected. One shared, "I am more confident now in answering essays because I know how to connect my ideas properly" (IDI 01). This supports the findings of Shen and Ismail (2024), who reported that metacognitive strategies enhance writing self-efficacy and reduce anxiety. Similarly, Ipek and Karabuga (2022) found that the Four Square Writing Method reduced students' writing anxiety and increased motivation. Like FSWM, the PathFinder Map gave learners a structured approach that improved both performance and emotional well-being, showing how writing tools can strengthen both skills and confidence.

Finally, the fifth theme, *desired for interactivity and engagement,* emphasized learners' wish for the PathFinder Maps to be more dynamic and participatory. Students suggested adding workshops, role playing, group activities, and even digital versions of the tool to make writing more engaging and memorable. One learner noted, "It would be better if there were small workshops pr role playing activities using the PathFinder Map… the lesson becomes more exciting" (IDI03). Others mentioned the appeal of gamified or mobile friendly versions. This resonates with the findings of Omodan and Ige (2021), who emphasized that integrating collaborative and interactive strategies in instructions enhances learners' engagement, understanding, and social interaction. Similarly, Singh et al. (2021) demonstratd that digital gamification in learning environments significantly boots learner motivation, participation, and vognitive engagement, particularly when tools are visually appealing and student centered. These studies support the idea that interactivity whether through collaboration or technology can increase learners' motivation and help them better internalize writing strategies like the PathFinder Map.

These findings affirm that the use of visual mapping strategies like the Pathfinder Map can be an effective intervention to improve learners' writing coherence and cohesion. As supported by current literature, visual aids in instruction not only enhance comprehension but also foster a learner-centered environment that promotes clarity, engagement, and independence in writing tasks.

CONCLUSION

This study aimed to address the decreasing engagement of students in writing activities, especially when these tasks are perceived as uninteresting or irrelevant to their lives. Recognizing that students struggle with organizing and connecting their ideas in writing, the researcher implemented the PathFinder Maps intervention. This intervention was designed to improve students' coherence and cohesion in writing by providing a structured, visual tool to organize thoughts.

The findings of this study revealed that the use of the PathFinder Maps intervention significantly improved the level of cohesion and coherence in the writing of Grade 6 students. Pre-test results showed a generally high performance, with an overall mean of 82.27%, while the post-test indicated a remarkable increase to 92.03%, classified as "Very High." The paired t-test analysis confirmed a statistically significant difference ($t = 4.62$, $p < .001$) with a large effect size (Cohen's $d = 0.843$), affirming the positive impact of the intervention.

Furthermore, qualitative data from in-depth interviews supported the quantitative findings. Students reported clearer understanding of coherence and cohesion, improved writing structure and logical flow, higher engagement and motivation in writing tasks, and increased confidence with reduced anxiety. These insights highlight how the visual and structured approach of the PathFinder Maps helped students plan, organize, and develop their ideas more effectively in written form.

Overall, the study concludes that the PathFinder Maps intervention is an effective strategy to improve students' cohesion and coherence in writing, promoting both academic improvement and positive attitudes toward the writing process.

RECOMMENDATION

Based on the study's findings, it is recommended that teachers, especially in online and blended learning environments, consistently integrate graphic organizers into their instruction to enhance student engagement, motivation, and strategic thinking. Grade 6 learners should be trained in the effective use of various types of visual organizers to support planning, comprehension, and reflection in different subject areas. Schools and teacher education institutions should provide resources and training that promote the regular use of these tools, while also encouraging students to apply them independently to develop long-term learning habits. Digital versions of graphic organizers can also be integrated into learning platforms to increase accessibility and collaboration. Finally, administrators should support these efforts by facilitating professional development opportunities and promoting evidence-based teaching strategies that foster learner autonomy and sustained academic growth.

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