

Enhancing writing skills and language creativity through the plus-minus-interesting technique: A case study at the primary school level

Isah Cahyani*, Jatmika Nurhadi, and Mentari

Indonesian Language and Literature Education Study Program, Language and Literature Faculty, Jl. Dr. Setiabudhi No. 229, Isola, Sukasari, Bandung City, West Java 40154, Universitas Pendidikan Indonesia, Indonesia

ABSTRACT

Language creativity plays a pivotal role in facilitating effective communication, especially in written expression. Proficient writing skills require a dedicated teaching and learning process that nurtures critical thinking abilities. While the significance of language creativity and writing skills has been acknowledged, empirical research focusing on explicit techniques to enhance these skills among young learners is needed. Addressing this research gap, this study explores the impact of integrating the PMI (Plus-Minus-Interesting) technique, an integral component of the Cognitive Research Trust framework, in teaching narrative text to primary school students. Employing a case study research method, this study involves 67 students, with data collected through observations, interviews, and analysis of selected students' multiple drafts. The findings reveal significant improvements across various aspects of students' written texts, including word count, vocabulary usage, flow, and organizational structure, following the implementation of the PMI technique. Observations demonstrate that students displayed heightened levels of active engagement and expressive writing when utilizing the PMI technique, effectively incorporating 'plus', 'minus', and 'interesting' elements from their personal experiences. This integration enhanced their overall written communication skills. Based on the study's results, the PMI approach provides clear and structured instruction in literacy learning and development. It particularly offers a practical approach for nurturing language creativity and improving writing skills among young learners.

Keywords: Language creativity; narrative text; plus-minus-interesting technique; primary school; writing literacy

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INTRODUCTION

The development of language creativity and critical thinking in teaching writing skills has been relatively neglected, despite its importance in effective literacy instruction. To address this issue, de Bono (2012, 2016), a renowned expert in the field, emphasized the significance of enhancing critical and creative thinking in writing literacy. His

works, including "Teaching Thinking" (1978), "PMI-I Thinking" (1981), and "The Direct Teaching of Thinking in Education and the PMI-Method" (1991), have contributed to this area. Anderson and Sosniak (1994) furthered this progress by developing Bloom's taxonomy (1984), a hierarchical framework that fosters critical thinking skills in students. The taxonomy encompasses stages ranging

* Corresponding Author
Email: isahcahyani@upi.edu

from knowledge and understanding to application, analysis, synthesis, and assessment. Additionally, numerous scholars such as Clark (1990), Swartz and Parks (1994), Gürsoy (2021), and Yuan et al. (2022) propose integrating thinking skills into specific subjects, rather than teaching them separately. The integration of thinking skills into writing literacy instruction becomes imperative, as writing necessitates the creative engagement of the mind in expressing ideas.

The integration of critical thinking and language creativity in writing instruction has been a topic of interest for researchers in the field of writing pedagogy. Research in this area has shown that critical thinking and creativity can be fostered in teaching language skills. For instance, through problem-based learning, Cosgun and Atay (2021) discovered a statistically significant increase in students' level of critical thinking and creativity and an improvement in their language scores. In a similar vein, Liang and Fung (2021) agreed that critical thinking has become increasingly prominent in language education in the 21st century but revealed challenges in integrating critical thinking for language educators, especially in ESL contexts. In most recent work, Liang (2023) unravelled a set of evidence-based design principles to provide pedagogical assistance to English teachers and instructional designers for their use of technology to support critical-thinking cultivation.

In the Indonesian context, a significant shift has also occurred in Indonesian language learning in an attempt to incorporate critical thinking and creativity in Indonesian language teaching, with a focus on establishing a literacy culture (Gipayana, 2002; Suherli, 2002). This shift aims to foster students' connection to the materials taught and learned in their everyday lives, preparing them for real-world applications beyond the school environment. Implementing a literacy-culture-based approach in education offers several advantages, enabling students not only to comprehend conceptual discourse but also to actively apply their social and intellectual understanding (Cooper & Kiger, 2006). Such an approach is hoped to hone students' critical and creative thinking skills. Research on this topic has indicated that certain teaching approaches, such as multicultural-based Indonesian teaching, were evidently effective in improving student critical thinking skills. Challenges have surfaced, however. For instance, Solihati and Hikmat (2018) found that Indonesian language textbooks lack a variety of tasks promoting critical thinking skills.

Past research has explored the application of PMI principles in classroom materials and learning activities (De Bono, 1982; Nikijuluw & Puspitasari, 2018; Setyarini et al., 2021; Sharma & Priyamvada, 2017; Sharma et al., 2020). The implementation of PMI strategies focused on enhancing students'

critical thinking skills as they are learning English, as highlighted by Akatsuka (2019) and Mirawati and Amri (2013). These studies investigated how the application of PMI strategies positively influenced students' critical speaking skills and provided insights into the effective implementation of PMI in the classroom context. What seems apparent from previous research in this line of inquiry is that there is a paucity of research on fostering thinking skills in teaching Indonesian language writing, especially within the primary school context. This is precisely the research void the present work is occupying.

Plus-Minus Interesting

The PMI method, rooted in the work of de Bono (2009, 2012), encompasses essential tools that empower students to adopt diverse perspectives, facilitating effective problem comprehension and resolution. Integrating the PMI method into reading and writing instruction empowers students to develop a comprehensive and persuasive understanding of the subject matter. In this study, we employ PMI as an initial tool within the PMI (Plus, Minus, Interesting) framework to foster idea development. PMI prompts students to engage in comprehensive thinking by considering the advantages/benefits (plus), weaknesses (minus), and intriguing aspects (interesting) of an idea.

The utilization of PMI occurs prior to decision-making and action-taking, allowing students to broaden their perspectives. Through PMI, students harness their cognitive thinking skills during the writing process. This is evident when students generate ideas for essay writing, thoroughly considering the advantages/benefits (plus), disadvantages (minus), and intriguing elements. In this process, students engage in planning, drawing upon long-term memory and translation. Such cognitive processes align with the cognitive theory of the writing process proposed by Flower and Hayes (1981), which begins with the planning phase, where the writer constructs an internal representation of the knowledge to be expressed. This planning phase involves various sub-processes, including retrieving relevant information from long-term memory. The subsequent step is translation, which involves transforming ideas into coherent and comprehensible language. De Bono (1988) asserts that PMI serves as a thinking tool that directs attention to the surroundings, thereby enhancing perception.

Through these learning activities, students are expected to generate ideas for essay development by drawing on personal experiences. By retrieving relevant information from long-term memory, students are anticipated to develop stronger metacognitive abilities compared to those who solely rely on teacher explanations. Experience-based learning is centered on an open learning environment, enabling students to guide and

condition themselves (Groves et al., 2013). When writing about personal experiences, the experience itself functions as a catalyst for capacity development, enabling students to express their viewpoints (Cahyani, 2016).

METHOD

The present study adopts a qualitative research design, aiming to provide a comprehensive description of the progression of critical thinking and creativity among students through an analysis of their narrative essay writing utilizing the PMI technique. The research was conducted at an elementary school situated in a bustling metropolitan area in Indonesia, thereby ensuring a diverse and dynamic context for the study.

The sample for this research comprised a total of 67 students. From this student population, a representative sample of 25 students was selected to gather data. The selection process involved careful assessment and consideration of various factors to ensure a well-rounded representation of the larger group.

To effectively measure the language creativity exhibited by the students, a case study approach was employed. This design allows for an in-depth exploration of individual cases within the larger student population, enabling a rich and detailed analysis of their critical thinking and creative abilities. Furthermore, the research design was supplemented by additional data collection methods, namely observations and interviews, to provide a comprehensive understanding of the learning processes and student responses in relation to the development of critical thinking and creativity (see Creswell, 2012).

By employing a qualitative research design, accompanied by a case study methodology and the incorporation of observations and interviews, this study ensures a holistic investigation into the growth of student critical thinking and creativity as reflected in students' essays and learning processes. These combined methods will enable a nuanced exploration of the complex interplay between narrative essay writing, the PMI technique, and the multifaceted dimensions of critical thinking and creativity.

Data collection technique

Data collection for this study encompassed documentation, observation, and interviews. The primary documents analyzed were the students' essays, providing valuable insights for analysis. Moreover, researchers employed observation techniques to closely monitor students' scientific attitudes during the process of learning to write with the PMI technique. Pertinent observations were recorded to capture significant occurrences throughout the PMI-based learning sessions.

Complementary information was obtained through interviews, conducted to gather crucial insights to supplement the observational findings. These question-and-answer sessions took place following the completion of the narrative writing activities using the PMI technique.

In the context of narrative writing instruction, the application of PMI proved instrumental in aiding students' development of essay-writing ideas rooted in personal experiences. The integration of PMI also held immense significance in fostering students' foundational literacy skills. PMI factors were identified based on the ideas generated by students drawing from their personal experiences. Researchers played an instrumental role in guiding the implementation of PMI during the learning process. Students initially formulated their narrative essay titles based on their thoughts, with guidance from the teacher. Subsequently, under the teacher's supervision, students articulated several aspects related to the advantages, disadvantages, and intriguing elements of their chosen ideas. These points, structured around the aforementioned aspects, served as the foundations to be further developed into comprehensive essays.

Data analysis technique

Employing a qualitative approach, the analysis focused on examining the stories to conceptually validate the theoretical framework (Hsieh & Shanon, 2005), specifically employing the PMI technique as the underlying theory of writing. To ensure representativeness, a subset of 25 student essays was selected for in-depth analysis. These essays were meticulously examined utilizing the plus-minus-interesting (PMI) framework, following the same analytical procedure applied to the remaining essays. The classroom observations, comprising audio and video recordings, were transcribed verbatim to facilitate textual analysis. The resulting transcriptions underwent meticulous scrutiny to identify instances of critical thinking skills, subsequently categorized based on the levels of critical thinking within the PMI framework. Moreover, interview data were transcribed and meticulously organized into tables, shedding light on the principal themes derived from the research data.

FINDINGS

This section presents the findings of this study that shed light on the intricate interplay between student critical thinking, creativity, and narrative essay writing using the PMI technique. The findings encapsulate the richness and depth of the students' expressions, providing valuable insights into their evolving critical thinking skills and creative abilities. Additionally, this section delves into the observed learning processes and responses, offering

a holistic understanding of the factors that contribute to the cultivation of these cognitive competencies.

Students' essays: First draft

The evaluation of students' initial drafts aimed to assess the extent to which their scripts exhibited a well-organized narrative structure and elements. It was expected that the content would demonstrate a progression stemming from personal experiences, while effectively incorporating pertinent information and data characteristic of narrative texts. Additionally, students were anticipated to

showcase their creative writing style and expressions, adhering to the prescribed language conventions inherent to narrative compositions. Provided below is an illustrative sample of a student's narrative essay in its untreated state. Upon initial examination, the first draft reveals evident limitations in terms of ideas, vocabulary usage, and capitalization errors. Notably, the brevity of the essay, consisting of a single paragraph, is evident from the word count and the progression of events observed.

Excerpt 1

Student 13's First Narrative Draft

*"Pengalaman Hidup Sekolah"
Saat ku masih kecil aku langsung TK B tidak TK A dan PAUD dulu. Saat TK aku sudah Bisa menulis dan Membaca saat Jalan-jalan bersama teman ke Dufan Saya senang Saat itu Dan masuk ke rumah kaca Di situ Saya pusing mencari jalan keluar Dan sudah 10 menit aku Dan kaka bisa menemukan jalan keluar Dan masuk ke rumah hantu."*

*"School Life Experience
When I was a kid, I went directly to Kindergarten Level B, not to Kindergarten A and Playgroup. When I was in Kindergarten, I was able to write and read when I went on a trip with friends to Dufan I was happy At that time And entered the mirror house There I was dizzy looking for a way out And it took 10 minutes for me And my sister to find a way out And enter the haunted house."*

The narrative text above was analyzed based on PMI, yielding the following.

Table 1

PMI Analysis of Student 13's First Narrative Draft

Plus (P)	Minus (M)	Interesting (I)
<ul style="list-style-type: none"> Saat aku kecil sudah Bisa membaca (When I was little I could read) 	<ul style="list-style-type: none"> Saya pusing mencari jalan keluar (I am dizzy looking for a way out) 	<ul style="list-style-type: none"> Masuk ke rumah kaca (Entered the glass house) Masuk ke rumah hantu (Entered the haunted house) Menemukan jalan keluar (Found out the way out)
<ul style="list-style-type: none"> Aku pergi ke Dufan (I went to Dufan) 		

The paragraph presented in Excerpt 1 serves as an illustrative example of a narrative pretest essay in its initial draft. Upon initial examination, the paragraph exhibits inadequate cohesiveness and fails to encompass essential narrative elements such as plot development and moral values. Although the essay draws from personal experience, it lacks an intriguing narrative. The content lacks coherence and fails to proportionally develop the story in relation to the title. Detailed information characteristic of narrative essays is not effectively conveyed. The main events within the essay lack accompanying detailed stories that would support the events. The presentation of the story lacks impact, with no apparent weaknesses, strengths, or interesting impressions of the experiences described. Moreover, when analyzing the written language creativity aspect, the narrative essay lacks sentence variety, innovative expressions, and detailed expressions of feelings. Common mistakes primarily arise from mechanical aspects of writing narratives, such as punctuation, spelling, and writing conventions. The essay contains unrelated sentences

and lacks proper punctuation, such as periods and commas. Additionally, there are misspelled words, such as "kaka" instead of "kakak," and the student pays inadequate attention to the use of capital letters, using them incorrectly within sentences or even within words.

The observed writing errors align with the findings of Akello et al., (2015) study conducted in Ugandan primary schools. Their research indicates a similar phenomenon, highlighting deficiencies in spelling knowledge influenced by inaccuracies during the writing process. The role of the mother tongue is also evident in the occurrence of these errors. Both studies reveal that students tend to deviate from correct spelling and commonly make the same writing errors. Therefore, the attention given to spelling becomes a crucial aspect of writing skills development. Neglecting spelling in writing activities can adversely affect students' writing abilities in subsequent stages.

Another finding in this initial stage is the limited ideation capacity among students when it comes to writing. Students often struggle with

initiating their writing and selecting appropriate topics, resulting in incomplete information delivery (Flower & Hayes, 1981). Supporting data related to the events described in the essay are frequently absent. From a creativity perspective, student essays tend to be monotonous, with repetitive usage of certain words. Sentence diversity remains minimal, and the use of simple vocabulary restricts the emergence of unique expressions. Moreover, students fail to effectively express their feelings in their writing, resulting in essays with poor emotional expression. A repetition of the last word

in a clause followed by its use as the first word in the subsequent clause is a common pattern observed, such as in the case of the word "mengaji" (recitation).

Students' essays: Second draft

Following a series of five meetings where consistent learning materials and narrative assessment instruments were provided, notable improvements in narrative writing skills were observed. The comparison of the second draft showcased evident enhancements in the student's text.

Excerpt 2

Student 13's second narrative draft

Pengalaman Hidup Sekolah

Saat masih kecil, aku langsung masuk TK B. Saat TK aku diajari bernyanyi dan menari. Aku sangat senang bernyanyi. Aku akhirnya suka menari. Aku juga belajar membaca dan menulis. Aku dan teman-teman pergi jalan-jalan ke Dufan. Aku masuk rumah kaca. Semua dinding hanya ada kaca. Kiri kanan kaca lalu depan belakang ada kaca. Semuanya penuh kaca. Awalnya senang melihat Aku ada pada kaca. Lama-lama bingung tidak tahu jalan. Di situ aku merasa pusing mencari jalan keluar rumah kaca. Akhirnya, setelah 10 menit aku dan kakakku menemukan jalan keluar. Aku senang bisa keluar dari rumah kaca. Aku dan kakakku ingin mencoba lagi. Aku dan kakakku masuk ke rumah hantu. Aku ketakutan. Aku menjerit. Aku berteriak. Aku minta tolong. Kakakku memegang aku. Aku disuruh menutup mata. Aku minta keluar rumah hantu. Akhirnya aku dan kakakku bebas. Aku melihat kakakku tersenyum. Aku merasa kikuk.

School Life Experience

When I was young, I immediately entered Kindergarten B. In kindergarten, I was taught to sing and dance. I really enjoyed singing. Eventually, I began to enjoy dancing as well. I also learned how to read and write. My friends and I went on a trip to Dufan. I entered the House of Mirrors. All the walls were made of glass. There was glass on the left, right, front, and back. Everything was filled with glass. At first, I was happy to see myself in the mirrors. But as time went on, I became confused and didn't know which way to go. I felt dizzy trying to find the way out of the House of Mirrors. Finally, after 10 minutes, my older brother and I found the way out. I was glad to be out of the House of Mirrors. My brother and I wanted to try it again. We entered the Haunted House. I was scared. I screamed. I shouted for help. My brother held onto me. He told me to close my eyes. I asked to leave the Haunted House. Finally, my brother and I were free. I saw my brother smiling. I felt awkward.

Upon reviewing the appearance of the essay, it can be observed that the students' responses are lengthy and fill the answer sheets. In terms of organization, Essay 13 fulfills the elements of a narrative essay, including plot, characters, setting, point of view, and moral message. Furthermore, Essay 13 demonstrates a good integration of these aspects.

Regarding the content of the narrative essay, Essay 13 draws from personal experiences, and the story develops in line with the given title. The essay is coherent and comprehensive, providing detailed information and supporting data for the events described. The use of regional language was not found in Essay 13, and the sentences are effectively constructed and interconnected. The vocabulary employed is also varied. However, there are still some punctuation errors. The student in Essay 13 has employed certain punctuation marks such as periods, commas, and hyphens to separate repetitive words. Capital letters have been used appropriately throughout the essay. Nevertheless, some sentences are excessively long due to the overuse of commas (,) and the repeated use of the conjunction "and" in place of a period. Breaking down these sentences into several shorter ones would enhance the effectiveness of the writing.

The selection of ideas in Essay 13 is deemed sufficiently creative, with unique and unconventional choices. The ideas within the essay develop with a variety of words and sentence structures, preventing monotony. The expression of emotions is detailed, allowing readers to experience what the essay writer conveys. In this case, the student has effectively utilized cognitive thinking skills in writing the essay. This aligns with the cognitive process theory of writing proposed by Flower and Hayes (1981), which states that in the writing process, the main units of analysis are fundamental mental processes, such as generating or producing ideas. This process involves a structure similar to idea generation, which is included as a sub-process of planning. During the planning stage, the writer forms an internal representation of the knowledge to be used in writing. Planning or the act of constructing this internal representation involves several sub-processes, including generating ideas and recalling relevant information from long-term memory. An interesting aspect of the cognitive process in writing is observing how writers transform and combine various constraints from their knowledge, plans, and text into the production of each new sentence.

Observation results

The observation results indicate that the teaching conducted by the teacher is highly meaningful, as she guides her students to gradually guide each other and reminds them to use the proper and correct Indonesian language. The teacher motivates the students with rewards (praise, applause) and boosts their enthusiasm and confidence by checking each student's work individually. The teacher observes every student in the classroom during the learning process and circulates to check students' work when assignments are given.

The students are highly active in the learning process, although some are passive and others occasionally become lively. Students' behavior outside the classroom is similar to other children, with some being active and others appearing more reserved. The students are enthusiastic when adding sentences to fulfill the plus, minus, and interesting (PMI) elements. They even engage in discussions to help their classmates who are struggling to continue their essays. It seems that the PMI formula stimulates student engagement in discussions, confirming Nikijuluw and Puspitasari's (2018) study. On the other hand, the readiness for learning is clearly reflected in the process, such as time management, transitional time, and effective time, which are organized in a structured and flexible manner.

The PMI discussion activity has an impact on the quality of the essays. Students do not seem to have difficulty expressing their ideas. PMI helps expand their perspectives when thinking and requires them to take action or make efforts based on the intended goals and objectives. Through PMI, students write narrative essays based on personal experiences. Students and teachers interact more frequently, leading to increased enthusiasm for learning. Students not only interact with the teacher but also exchange ideas with their classmates. The teacher's role is that of a facilitator, helping students discover knowledge. Students discuss grammar aspects of essay writing with the teacher. Moreover, the interaction among students under the guidance of the teacher provides additional insights for the development of students' writing ideas.

Interview results

Among the six students interviewed, only one student showed no interest in learning to write stories, while the other five students were interested in learning to write stories for various reasons. Two students mentioned their interest in writing about personal experiences, one student was motivated by their enjoyment of writing, and another student found it fun despite the need for thinking. All six interviewed students considered the writing lessons to be difficult, and they had all experienced moments of boredom during the learning process,

even though the teacher engaged them in question-and-answer sessions after delivering the lesson. They acknowledged that the information provided by the teacher helped them understand the lesson and believed it aided them in their writing. Furthermore, all the students expressed a desire to ask questions and actively participate in sharing their experiences. After being assigned tasks by the teacher, only one of the six students felt confident enough to answer independently, while the other five students had to consult and discuss with their classmates. Regarding the teaching methods employed by the teacher, all the students expressed satisfaction with the approaches used as seen in the excerpt below.

"I enjoy writing stories, especially when it gets lively. I can ask my friends and the teacher. The teacher is very kind and friendly. I enjoy reading stories in front of the class. Today, I am very happy to learn in this classroom."

In summary, the interview results revealed that the majority of students expressed genuine enthusiasm for learning to write stories, citing various motivations. They acknowledged the difficulty of the lessons but appreciated the teacher's interactive approach and found it beneficial to their learning. The students desired active participation, question-asking, and sharing of experiences. Overall, these findings emphasize the importance of engaging students, creating a supportive environment, and employing effective teaching strategies in narrative writing instruction (Graham, 2019).

DISCUSSION

The findings of this study highlight the significant impact of integrating the Plus-Minus-Interesting (PMI) technique in teaching narrative text to primary school students, specifically in enhancing their writing skills and language creativity. Specifically, the study focused on the students' ability to identify and express positive aspects, negative aspects, and interesting elements related to their written themes. The observations and interviews were conducted in line with ongoing learning, addressing factors such as curiosity, open-mindedness, creativity, cooperation, and responsibility. These findings align with the cognitive theory of writing processes proposed by Flower and Hayes (1981) and Graham (2019), which emphasizes the central role of generating and expressing ideas in the writing process.

The analysis of writing skills using the PMI technique revealed a significant improvement in students' ability to express their responses to various aspects of their work. This was further supported by changes observed in the learning activities. The PMI

technique facilitated practical experiences for students, enabling direct and personal involvement in their writing. This is consistent with Dewey's perspective on learning, which emphasizes the importance of active engagement, discovery, and experiential learning (Buwer, 2014; Chmielewska, 2022). The findings of this study also align with prior research conducted by Zaiyadi et al. (2009), demonstrating improvements in organizational thinking, idea generation, and critical analysis. Another study by Alshurman (2017) corroborated these findings, indicating that the PMI technique enhances students' perceptual understanding and their ability to analyze and explore situations encountered during learning activities.

The results of the research are also supported by previous studies, including the qualitative research conducted by Sammut at the University of Malta (Dingli, 2001). Sammut's research investigated the teachability of thinking skills to elementary school children, and the application of PMI enabled students to write based on their experiences while activating cognitive thinking skills. The breadth of perception played a crucial role in facilitating students' thinking processes, as it allowed for the free flow of ideas and information. Students were not limited to what they initially observed but were encouraged to consider environmental conditions, ultimately promoting the development of creativity and higher-order thinking skills (Sarudin et al., 2017).

Low interest in reading has been identified as a contributing factor to students' poor writing skills. Students who lack enthusiasm for reading often have limited vocabulary, which hampers their ability to write essays based on their experiences. Additionally, their sentence structures tend to be imprecise, resulting in poor cohesiveness between sentences in the essay. Conversely, students who cultivate a reading habit benefit from an expanded vocabulary and a better understanding of writing organization. Consequently, they find it easier to generate ideas and produce coherent, engaging, and unique storylines in their writing (William & Larkin, 2013). This finding is consistent with research by Ahmed et al. (2014) and Tanrikulu (2022) that emphasizes the positive relationship between reading and writing skills. Their studies demonstrate that students who engage in daily reading exhibit superior writing skills, as reading stimulates their ability to create well-structured, interesting narratives. Conversely, students with limited interest in reading tend to produce essays lacking coherence and comprised of simple sentences.

The study's results also indicate that the PMI approach offers a clear and structured instructional method for promoting literacy learning and development. Specifically, it provides a practical approach that fosters language creativity and

enhances English skills in young learners (Setyarini et al., 2021). The utilization of the PMI technique enables students to engage in practical experiences, actively participate in the learning process, and effectively express their thoughts and ideas. By incorporating the PMI approach into the curriculum, educators can provide students with a solid foundation in writing and empower them to become creative thinkers (Sharma & Priyamvada, 2017). The findings of this study highlight the potential of the PMI approach as an effective instructional tool in nurturing language creativity and improving the writing skills of young learners.

CONCLUSION

The implementation of the PMI thinking method in elementary school has proven to be effective in improving student essays. Significant enhancements were observed in students' writing skills, particularly in terms of language creativity. Their written works showcased enhanced creativity, with well-developed ideas and meticulous expression of feelings. The essays exhibited varied sentence structures, vocabulary choices, and effective sentence coherence. Moreover, students demonstrated a heightened awareness of grammar, resulting in a notable decrease in sentence errors compared to their pre-PMI treatment writings. The findings highlight the effectiveness of the PMI thinking method in improving student essays within the elementary school context.

The findings of the present study provide valuable insights for future research endeavors in the field of writing instruction. Building upon these findings, researchers can delve deeper into the specific mechanisms through which the PMI method enhances language creativity and proficiency of all language skills. Exploring the long-term effects of PMI implementation on students' writing skills and their transferability to other subject areas would also be fruitful. Additionally, investigating the role of teacher training and professional development programs in effectively implementing the PMI method can contribute to optimizing its benefits in the classroom. Furthermore, examining the potential impact of the PMI method on different student populations and/or distinct educational levels, such as those with diverse linguistic backgrounds or varying writing abilities, can provide a more comprehensive understanding of its applicability. By addressing these avenues for further research, educators and researchers can continue to refine and enhance the implementation of the PMI thinking method to promote effective and engaging writing instruction in elementary schools.

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