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# Implementation of Hypercontent-Based Web Media in Indonesian Language Learning for Poetry Writing Material in Elementary Schools

Iswahyuni Listyowati<sup>1</sup>, Sabariah<sup>2\*</sup>

<sup>1</sup> Education Technology, Universitas PGRI Adi Buana Surabaya, Indonesia

<sup>2</sup> Education Technology, Universitas PGRI Adi Buana Surabaya, Indonesia

Corresponding author: Sabariah, Email: [sabariah@unipasby.ac.id](mailto:sabariah@unipasby.ac.id)

## Abstract

The integration of digital learning media has become increasingly important in improving students' literacy and creative writing skills in elementary education. However, the use of innovative digital media such as hypercontent-based learning is still limited, while conventional methods continue to dominate classroom practices. This study aims to analyze the effect of hypercontent-based web media compared to conventional methods and the role of gender in influencing the poetry writing ability of sixth-grade students at SDN Bareng 5 Jombang. The research employed a quantitative approach using a 2 × 2 factorial experimental design, with learning media (hypercontent-based web media vs. conventional method) as the first factor and gender (male vs. female) as the second factor. The research subjects consisted of 64 sixth-grade students who were equally divided into experimental and control groups. Data were collected using a validated and reliable poetry writing test supported by observation sheets. Data analysis was conducted using SPSS version 27 through a two-way ANOVA test. The results showed that learning media had a significant effect on students' poetry writing ability ( $F = 79.686$ ;  $p < 0.001$ ), with students using hypercontent media achieving higher scores than those using conventional methods. Gender also had a significant effect ( $F = 24.784$ ;  $p < 0.001$ ), with female students demonstrating better poetry writing ability than male students. Furthermore, a significant interaction between learning media and gender was found ( $F = 24.273$ ;  $p < 0.001$ ), indicating that the effectiveness of hypercontent media differed by gender, with female students showing greater improvement. These findings indicate that hypercontent-based web media is more effective in enhancing students' poetry writing skills and highlight the importance of integrating interactive digital media and gender-responsive strategies in creative writing instruction.

**Keywords:** gender differences, hypercontent media, poetry writing ability, web-based learning.

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## INTRODUCTION

In today's digital era, information and communication technology plays a crucial role in transforming education globally. The use of digital media in literacy learning, particularly in poetry writing, is showing an increasing trend. According to Saputra, Condro Murti, and Hastuti (2025), the application of interactive web-based media to elementary school students significantly improves critical thinking skills and learning outcomes compared to conventional methods. Other studies have also



found that digital media can capture students' attention and facilitate more active learning (Marini, Razanah, & Hikmat, 2023). UNESCO data also shows that students in many countries, including Indonesia, face difficulties in composing literary works such as poetry, particularly in developing creativity and style, despite their high digital literacy levels. This reflects that poetry writing skills are not only about technical aspects but also related to the media and methods used.

Globally, literary writing skills, particularly poetry, are often viewed as receiving less attention than other aspects of literacy such as reading and text comprehension. Much research focuses on improving reading literacy, while quantitative research comparing different teaching methods in the context of poetry writing is relatively limited. For example, a study conducted at a junior high school in Bima Regency found that learning media and learning techniques jointly influenced poetry writing ability, using a two-way ANOVA analysis. The results showed that interactive media had a positive effect compared to traditional media, but the interaction with learning techniques was also important (SMPN 1 Bolo & SMPN 1 Madapangga, 2023). These findings suggest that media use may not be sufficient without considering other student variables such as gender, motivation, or prior creativity.

In theory, writing learning is influenced by constructivism and multimodal communication theory. Constructivism states that students construct knowledge through active interaction with the learning environment, including the media used. Multimodal theory emphasizes that media that present text, visuals, interactive elements, and hypercontent enrich the learning experience with various representational elements, enabling students to understand and produce literary works in a more diverse style. This evolution of theoretical thinking suggests that digital media is not merely a tool but can be a mediator in students' creativity and aesthetic expression.

However, there is debate in the literature regarding the extent of gender's role in literary writing achievement, such as poetry. Several studies report significant differences between males and females in creativity, use of language style, and emotional tendencies in poetry (Hakim & Sari, 2022), while others suggest that these differences are minimal or insignificant if the methods and media used are innovative and responsive to student characteristics (Marini et al., 2023). This debate is important because if gender influences learning outcomes, instructional media interventions may need to be adjusted.

In Indonesia, particularly at the elementary school level, research on literacy learning media, including web-based media, has shown positive effects on motivation, student engagement, and learning outcomes. Recent studies, such as "Developing a website integrated with project-based learning: Evidence of stimulating creativity among elementary school students in Indonesia" (2025), show that web media integrated with project-based learning can stimulate creativity in elementary school students. (ScienceDirect, 2025). Meanwhile, research on the Development of Google Sites-Based Websites as Indonesian Language Learning Media (2024) shows that the use of websites increases student engagement and comprehension in learning Indonesian. (Sundari, Sudiyan, & Subiyantoro,



2024) However, so far this research has not tested much with two-way analysis that takes into account the interaction of media and student factors such as gender in the context of writing poetry.

The local context at SDN Bareng 5 Jombang has its own unique characteristics: as an elementary school in a mid-sized city in East Java, internet access and digital devices may be better than in remote areas, but the implementation of structured digital learning systems remains limited. The gap between the use of conventional media, namely direct teacher instruction and manual poetry writing exercises, and the potential of hypercontent media, which provides interactivity, cross-linking, images, audio, and non-linear navigation, remains largely untapped. This makes the context of Bareng 5 highly relevant as a study location to determine the extent to which hypercontent media can improve poetry writing skills.

A review of previous research reveals several gaps. First, most studies compare traditional media with one type of digital media or innovative learning, but have not specifically focused on hypercontent media (which combines multimedia and hyperlinks) in poetry. Second, few studies have used a two-way ANOVA design to test the effect of media and moderating variables such as student gender on poetry writing ability, particularly in sixth grade. Third, there is a lack of local statistical data from Jombang or similar schools that demonstrate baseline poetry writing ability and gender differences in the context of modern learning media. Therefore, this research is very important. The novelty of this research lies in the use of hypercontent media as a medium for learning poetry, combined with the variable of student gender, with analysis using two-way ANOVA, in a specific location, namely SDN Bareng 5 Jombang. This research will answer the questions: Does the use of hypercontent media significantly affect the poetry writing ability of sixth grade students compared to conventional methods? Is there a difference in poetry writing ability between male and female students? and Is there an interaction between the type of learning media and student gender on poetry writing ability?

## **METHODS**

This study employed a quantitative approach with a quasi-experimental design analyzed using a two-way ANOVA. This design was chosen because it allows for testing the effect of two independent variables simultaneously on the dependent variable and examining the interaction between them. The first independent variable was the learning media, with two levels: hypercontent-based web media and conventional media currently used in schools. The second independent variable was student gender (male or female), which served as an additional differentiating factor. The dependent variable in this study was the poetry writing ability of sixth-grade students at SDN Bareng 5 Jombang after being given the treatment. This design allowed the researcher to compare the effectiveness of using hypercontent media with conventional methods and to determine whether there was an interaction between media type and student gender on poetry writing ability.

The subjects were sixth-grade students at SDN Bareng 5 Jombang during the semester of the study, with approximately 60–70 students divided into two classes. The sampling technique used cluster random sampling, with one class serving as the experimental group and the other as the control group. The experimental group received poetry writing instruction using hypercontent-based web



media, while the control group continued using conventional learning media. Prior to treatment, both groups were given a poetry writing pretest to determine initial abilities. The treatment was then administered for four to six sessions, followed by a posttest to measure improvement in students' poetry writing skills.

The research instrument used was a descriptive poetry writing test. This instrument was tested for content validity through assessments by language experts and educational evaluation experts, and for reliability through limited trials using the Cronbach's alpha coefficient. Furthermore, student background data, such as gender, was collected for analysis. Therefore, the research data sources consisted of primary data in the form of poetry writing pretest and posttest scores, as well as additional data in the form of student background information.

Data analysis was conducted in several stages. First, assumption tests were conducted, including a normality test using the Kolmogorov–Smirnov (K-S) test and a homogeneity of variance test using Levene's test to ensure the data met the requirements for ANOVA. Next, a two-way ANOVA was conducted to determine the main effect of the learning media, the main effect of gender, and the interaction between the two on poetry writing ability.

## RESULTS

The results of this study indicate that the number of subjects involved consisted of 64 sixth-grade students of SDN Bareng 5 Jombang, who were divided into two groups based on the learning media treatment and gender. In the first factor, namely learning media, there were 32 students who learned using hypercontent-based web media and another 32 students who learned through conventional methods. This indicates a balanced group division, allowing for a more objective comparison in testing the effectiveness of the two learning methods.

		Value Label	N
media pembelajaran	1.00	media web berbasis hypercontent	32
	2.00	media konvensional	32
jenis kelamin siswa	1.00	laki-laki	26
	2.00	perempuan	38

**Figure 1.** Distribution of Subjects by Learning Media and Gender

Meanwhile, for the second factor, gender, there were 26 male students and 38 female students. This composition indicates that there were more female subjects than male subjects, so the distribution

was not completely balanced. Nevertheless, the sample size in each group was still sufficient for analysis using a two-way ANOVA test, as each cell still had sufficient representation.

### Descriptive Statistics

Dependent Variable: kemampuan menulis puisi siswa

media pembelajaran	jenis kelamin siswa	Mean	Std. Deviation	N
media web berbasis hypercontent	laki-laki	66.4211	4.32455	19
	perempuan	76.3077	5.12160	13
	Total	70.4375	6.73430	32
media konvensional	laki-laki	62.4286	1.98806	7
	perempuan	62.4800	1.93907	25
	Total	62.4688	1.91740	32
Total	laki-laki	65.3462	4.20421	26
	perempuan	67.2105	7.42588	38
	Total	66.4531	6.34443	64

**Figure 2.** Descriptive Statistics of Students' Poetry Writing Ability by Learning Media and Gender

The descriptive analysis results showed differences in students' average poetry writing ability based on the learning media used and gender. In the group of students learning using hypercontent-based web media, male students achieved an average score of 66.42 with a standard deviation of 4.32, while female students achieved a higher average score of 76.30 with a standard deviation of 5.12. Overall, this group had an average score of 70.43, which was higher than the conventional method group.

In the group using conventional media, male students' average score was 62.42 with a standard deviation of 1.98, while female students' average score was 62.48 with a standard deviation of 1.93. These results indicate that the average poetry writing ability in the conventional group was relatively low, with virtually no difference between male and female students. Overall, the conventional group only achieved an average of 62.46.

When viewed based on gender, female students generally had a higher average score (67.21) than male students (65.34). However, the most striking difference was seen in the group using hypercontent media, where female students demonstrated a greater advantage compared to male students. This indicates a potential interaction between learning media and gender on poetry writing ability.

Overall, these descriptive findings suggest that the use of hypercontent-based web media is more effective than conventional methods in improving students' poetry writing ability. Furthermore, female students tended to achieve higher scores, especially when learning with the aid of hypercontent media. Therefore, it can be assumed that learning media and gender are both influential, and there may be an interaction between the two that exacerbates differences in student learning outcomes.



### Tests of Between-Subjects Effects

Dependent Variable: kemampuan menulis puisi siswa

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1770.504 <sup>a</sup>	3	590.168	46.266	<,001
Intercept	229279.859	1	229279.859	17974.391	<,001
media_pembelajaran	1016.474	1	1016.474	79.686	<,001
jenis_kelamin_siswa	316.138	1	316.138	24.784	<,001
media_pembelajaran * jenis_kelamin_siswa	309.628	1	309.628	24.273	<,001
Error	765.355	60	12.756		
Total	285161.000	64			
Corrected Total	2535.859	63			

a. R Squared = .698 (Adjusted R Squared = .683)

**Figure 3.** Summary of Two-Way ANOVA Results

The results of the two-way ANOVA test showed that the research model used was statistically significant with an F value  $(3.60) = 46.266$ ;  $p < 0.001$ . This means that the combination of learning media and gender factors can explain significant variation in students' poetry writing ability, with an  $R^2$  value of 0.698. This means that approximately 69.8% of the variability in poetry writing ability can be explained by the model consisting of learning media, gender, and their interaction, while the remainder is influenced by other factors outside the model.

For the learning media factor, an F value of 79.686 was obtained with a  $p < 0.001$ . These results indicate a highly significant difference between students who learned using hypercontent-based web media and students who learned using conventional methods. Thus, it can be concluded that the use of hypercontent media is more effective in improving students' poetry writing ability than conventional methods.

The student gender factor also showed a significant influence with an F value of 24.784 and  $p < 0.001$ . This indicates a gender difference in poetry writing ability, with female students tending to have better poetry writing skills than male students.

Furthermore, the analysis revealed an interaction between learning media and gender, with an F value of 24.273 and  $p < 0.001$ . This interaction indicates that the influence of learning media on poetry writing ability is not the same for male and female students. Previous descriptive findings also support this finding, where female students achieved greater learning outcomes when using hypercontent media compared to male students.

Overall, these results reinforce the finding that hypercontent media is not only more effective than conventional methods but also has a more positive impact on female students. Therefore,



hypercontent-based learning strategies can be considered as an innovative alternative for improving creative writing skills, particularly poetry, in elementary schools.

## DISCUSSION

The results of the hypothesis testing indicate that learning media has a very significant effect on the poetry writing ability of sixth grade students at SDN Bareng 5 Jombang ( $F = 79.686$ ;  $p < 0.001$ ). This indicates that the difference in the average poetry writing ability between students who use hypercontent-based web media and conventional methods does not occur by chance, but is influenced by the differences in the learning media used, thus supporting the hypothesis that hypercontent media is more effective. Theoretically, this finding is in line with multimodal theory which emphasizes that the integration of text, images, audio, and hyperlinks can enrich the learning experience and help students build deeper meaning (Jewitt, 2008). In addition, constructivism theory states that knowledge is built through students' active involvement in the learning process (Piaget, 1972; Vygotsky, 1978), which in this context is facilitated by hypercontent media through broader exploration and interactivity than conventional methods.

The results of this study are also consistent with previous findings showing that the use of hypermedia and web-based learning can improve students' learning outcomes, motivation, and writing creativity (Aloraini, 2012; Şad & Gökteş, 2014). However, several studies have stated that media does not always determine learning outcomes if learning strategies remain the same (Clark, 1983), and the effectiveness of web-based learning can vary depending on the type of material, media design, and student learning conditions (Bernard et al., 2004). In this study, the effectiveness of hypercontent media is likely influenced by media design that is more engaging and relevant to the characteristics of poetry learning, allowing students to explore poetry examples, inspirational multimedia, and interactive links that encourage reflection and creativity. These findings also strengthen the view that digital media can act as a creative facilitator in language and literature learning (Kress, 2010), and emphasize the importance of infrastructure support and teacher readiness in implementing digital learning media in elementary schools (Amin & Sundari, 2020).

The results of the hypothesis testing showed that gender significantly influenced students' poetry writing ability ( $F = 24.784$ ;  $p < 0.001$ ), with female students tending to have better poetry writing skills than male students. This finding suggests that gender is not only a demographic variable but also relates to how students express ideas, emotions, and creativity in writing. Theoretically, this difference can be explained through language development theory, which states that girls generally have an advantage in verbal skills from an early age, as well as socio-cultural theory, which emphasizes the role of social interaction and the cultural environment in the development of language skills (Limpo et al., 2022). Furthermore, from an intrinsic motivation perspective, girls tend to be more interested in creative writing activities as a means of self-expression (Pajares & Valiante, 2021). These results align with previous research showing a gender gap in writing skills, with female students often producing more



complex and cohesive writing than male students (Graham et al., 2020; Datchuk & Kubina, 2023). In the context of poetry writing, female students also tend to use more poetic language, symbolism, and emotional expression (Murphy & Smith, 2024). Although some studies suggest that gender gaps can be reduced with appropriate learning strategies (Pajares & Valiante, 2021), these findings underscore the importance of a gender-responsive learning approach to optimally develop the creative writing potential of both male and female students.

The analysis revealed a significant interaction between learning media and student gender ( $F = 24.273$ ;  $p < 0.001$ ), indicating that the effectiveness of hypercontent media on poetry writing skills differs for male and female students. Descriptively, female students demonstrated greater improvement than male students when using hypercontent media, suggesting that gender plays a moderating role in determining the effectiveness of learning media.

Theoretically, this difference can be explained through cognitive and affective studies, which suggest that females tend to have advantages in verbal skills, language skills, and emotional expression, which are essential for poetry writing (Halpern, 2012). Interactive and multimodal hypercontent media provides more space for girls to express language sensitivity and imagination, while boys tend to be more interested in logic-based or problem-solving activities. The social learning theory perspective also emphasizes that language development is influenced by social interactions and verbal activities, which are more frequently engaged in by girls (Vygotsky). This finding is supported by research showing that girls are more responsive to narrative-based digital media and creative literacy (Sardone & Devlin-Scherer, 2016; Kumpulainen et al., 2020), although several other studies have found that technology can have a relatively equitable effect on literacy if the learning design is appropriate (Suárez-Perdomo et al., 2021). Thus, these findings emphasize that the effectiveness of digital learning media is not universal but is influenced by learner characteristics. Therefore, teachers need to implement gender-responsive learning strategies, for example by integrating exploratory and aesthetic elements for girls and adding logical elements, challenges, or gamification to increase boys' engagement in creative writing learning.

## CONCLUSIONS

Based on the research results, it can be concluded that learning media plays a significant role in improving the poetry writing skills of sixth-grade students at SDN Barend 5 Jombang, where hypercontent-based web media proved to be more effective than conventional methods. In addition, gender factors also had a significant influence, with female students showing better poetry writing skills than male students. Further findings revealed an interaction between learning media and gender, indicating that the effectiveness of hypercontent media differed between male and female students, with female students achieving higher learning outcomes. The implications of these findings are theoretical, practical, and methodological; theoretically, they confirm the relevance of multimodal and constructivist theories in literature learning, practically provide guidance for teachers to use hypercontent media and consider gender differentiation strategies, and methodologically emphasize



the importance of taking into account variable interactions in educational research. Suggestions that can be given are that teachers should integrate hypercontent-based web media in poetry writing learning, adapt the approach to student characteristics, especially gender differences, and further research can examine other factors that moderate media effectiveness, such as student learning motivation and digital skills, to gain a more comprehensive understanding.

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I. L: Data Curation; Writing – Original Draft Preparation

S: Writing – Review & Editing; Resources

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