



RESEARCH ARTICLE

THE EFFECTS OF PERCEPTION ON DIGITAL LEARNING MEDIA AND SELF-ESTEEM TOWARDS WRITING SKILLS

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Abstract: This study examines the effects of students' perception of digital learning media and self-esteem on writing skills. A quantitative survey was conducted with 88 eighth-grade students from two public junior high schools in Tangerang Regency, selected using proportional random sampling. Data were collected through questionnaires on perception of digital learning media, self-esteem, and a descriptive writing test, then analyzed using multiple linear regression. Results indicate that perception of digital learning media and self-esteem jointly have a significant effect on writing skills (Sig = 0.001; F = 17.549). Individually, perception of digital learning media (Sig = 0.002; t = 3.208) and self-esteem (Sig = 0.002; t = 3.145) also show significant effects. The findings suggest that both factors play a crucial role in improving students' writing skills.

Keywords: digital learning media; self-esteem; writing skills; students' perception; junior high school.

PENGARUH PERSEPSI PADA MEDIA PEMBELAJARAN DIGITAL DAN HARGA DIRI TERHADAP KETERAMPILAN MENULIS

Abstrak: Penelitian ini mengkaji pengaruh persepsi siswa pada media pembelajaran digital dan harga diri terhadap keterampilan menulis. Metode kuantitatif survei digunakan dengan sampel 88 siswa kelas VIII dari dua SMP negeri di Kabupaten Tangerang yang dipilih melalui proportional random sampling. Data dikumpulkan melalui angket persepsi media pembelajaran digital, angket harga diri, dan tes menulis teks deskriptif, kemudian dianalisis menggunakan regresi linier berganda. Hasil penelitian menunjukkan bahwa persepsi media pembelajaran digital dan harga diri secara bersama-sama berpengaruh signifikan terhadap keterampilan menulis (Sig = 0.001; F = 17.549). Secara parsial, persepsi media pembelajaran digital (Sig = 0.002; t =

3.208) dan harga diri ($Sig = 0.002$; $t = 3.145$) juga berpengaruh signifikan. Temuan ini menegaskan bahwa kedua faktor tersebut berperan penting dalam meningkatkan keterampilan menulis siswa.

Kata kunci: media pembelajaran digital; harga diri; keterampilan menulis; SMP

INTRODUCTION

Writing is widely recognized as one of the most essential yet challenging skills in English language learning. Unlike receptive skills such as listening and reading, or productive skills like speaking, writing requires learners to integrate multiple aspects of language knowledge—grammar, vocabulary, organization, and mechanics—into a coherent and meaningful text (Richard & Renandya in Suyanto, 2019). Many students of English as a foreign language (EFL) struggle with constructing grammatically correct sentences, using appropriate vocabulary, and organizing ideas logically, which makes writing particularly difficult compared to other skills (Asnas & Hidayanti, 2024; Lubis & Afri, 2023). Despite these challenges, writing remains crucial for academic achievement, communication, and personal development, as it fosters higher-order thinking skills such as problem-solving, creativity, and critical reflection (Suteja & Setiawan, 2022).

Given the difficulties students face, educators continue to seek innovative ways to improve writing instruction. One approach that has gained prominence in recent years is the integration of digital learning media. These tools provide interactivity, flexibility, and accessibility that traditional methods often cannot offer. Digital media can make learning more engaging, support diverse learning styles, and enhance comprehension by presenting content in multimodal forms (Puspitarini & Hanif, 2019). Furthermore, technology allows for collaborative learning and self-paced study, enabling students to take greater ownership of their learning. According to Heidari et al. (2021), the use of technology-rich environments contributes not only to cognitive development but also to increased motivation and confidence, suggesting that digital tools may address both linguistic and affective dimensions of learning.

Parallel to technological influences, self-esteem is another factor that plays a pivotal role in language learning outcomes. Self-esteem refers to an individual's overall sense of self-worth or value, which strongly affects behavior, motivation, and performance (Rosalina, 2019). In educational contexts, students with high self-esteem are more confident in their abilities, more resilient when facing challenges, and more willing to engage in difficult tasks such as writing (Yulianawati et al., 2022). On the contrary, students with low self-esteem often avoid participation, doubt their abilities, and demonstrate lower academic performance (Vilani & Sugiarto, 2024). Writing, in particular, requires students to share their ideas publicly and risk criticism, making self-esteem a critical psychological factor in the process.

Previous research has explored students' perceptions of digital learning media, self-esteem, and writing ability separately. For instance, Tridesia (2023) found that most students perceived online learning media positively, citing increased accessibility and motivation, though some challenges related to technical limitations persisted. Similarly, Al-farizi and Suherman (2019) reported that digital media enhanced engagement and comprehension in higher education contexts. In terms of psychological variables, Khan et al. (2024) demonstrated a positive correlation between self-esteem and academic performance, while Yulianawati et al. (2022) emphasized the significant role of self-

esteem in improving students' writing skills. However, while these studies confirm the importance of each factor independently, limited research has examined their combined influence on writing skills, particularly within the context of junior high school students in Indonesia.

This study seeks to fill this gap by investigating the simultaneous and individual effects of students' perception of digital learning media and self-esteem on writing skills. By addressing this gap, the research contributes both theoretically and practically. Theoretically, it integrates technological and psychological perspectives, providing a more comprehensive understanding of the factors influencing writing development. Practically, the findings may guide teachers in designing instructional strategies that incorporate digital tools while also fostering students' confidence and self-worth, thereby enhancing the effectiveness of writing instruction.

This research was conducted to reveal (1) whether there are effects of students' perception on digital learning media and self-esteem simultaneously towards writing skills; (2) whether there is an effect of students' perception on digital learning media towards writing skills; (3) whether there is an effect of self-esteem towards writing skills.

RESEARCH METHOD

This study employed a quantitative approach with a survey design to examine the effects of students' perception of digital learning media and self-esteem on writing skills. The survey method was deemed appropriate because it allows researchers to systematically collect information from a large sample and to identify relationships between variables without manipulating the research setting (Creswell, 2012). Through this approach, the study sought to determine both the simultaneous and individual contributions of technological and psychological factors to students' writing performance.

The research was conducted during the 2024/2025 academic year in two public junior high schools, there are SMPN 1 Panongan and SMPN 2 Panongan which located in Tangerang Regency, Indonesia. The implementation of the study followed a predetermined timeline, beginning with the approval of the research proposal in March 2025, data collection in May 2025, and completion of the analysis and reporting phase in June 2025. Conducting the study within this period ensured that the research was aligned with the schools' academic calendar and minimized disruption to students' regular learning activities.

The population of this study included all eighth-grade students in both schools, consisting of 400 students from SMPN 1 Panongan and 322 students from SMPN 2 Panongan. Using proportional random sampling, a total of 88 students were selected as participants. This sampling technique ensured that each school and class was proportionally represented in the sample, thereby reducing bias and increasing the representativeness of the data (Fraenkel & Wallen, 2009).

Prior to data collection, formal permission was obtained from the local education authority, school principals, and classroom teachers. The researcher also explained the objectives of the study to the students and distributed consent forms. Data collection was conducted in classroom settings during regular school hours to ensure a natural learning environment. Each class session lasted approximately 90 minutes, during which students completed two questionnaires and one writing test under the direct supervision of the researcher and teachers. Instructions were explained clearly, and students were encouraged to ask questions if any items were unclear.

In this study, three instrument were used. The first was the Students' Perception of Digital Learning Media Questionnaire, adapted from Tridesia (2023) and Al-farizi & Suherman (2019). This questionnaire assessed students' attitudes toward digital media across dimensions such as engagement, comprehension, flexibility and accessibility, as well as perceived limitations and challenges. The items were structured using a Likert scale format to capture the degree of agreement or disagreement.

The second was the Self-Esteem Questionnaire, adapted from established frameworks on adolescent self-esteem (Rosalina, 2019; Vilani & Sugiarto, 2024). This instrument measured

students' self-confidence, motivation, and overall sense of self-worth in academic contexts. The Likert-scale responses allowed for quantitative analysis of individual differences in self-esteem levels.

The third instrument was a descriptive writing test, designed to evaluate students' writing skills in descriptive text. Students were asked to write a short composition based on a given prompt. The test was assessed using Weigle's (2002) writing assessment rubric, covering five aspects: content, organization, vocabulary, grammar, and mechanics. Two ratters independently evaluated the writing to ensure scoring reliability.

To ensure the quality of the instruments, content validity was first established through expert judgment by specialists in English education, who reviewed the items for clarity, relevance, and appropriateness. Construct validity was further tested empirically using item-total correlation (Pearson Product Moment). Reliability was measured using Cronbach's Alpha, with coefficients exceeding the minimum threshold of 0.70, confirming satisfactory internal consistency (Sugiyono, 2018). Inter-rater reliability was also calculated for the writing test, ensuring consistency across different evaluators.

Data were analyzed using both descriptive and inferential statistics. Descriptive statistics (mean, standard deviation, and frequency distribution) were used to summarize students' responses to the questionnaires and their performance in the writing test. For inferential analysis, multiple linear regression was employed to test the simultaneous effect of perception of digital learning media and self-esteem on writing skills, as well as the individual contributions of each predictor. Prior to regression analysis, statistical assumptions were tested, including normality, linearity, multicollinearity, and homoscedasticity, to ensure the robustness of the findings (Field, 2013).

Ethical standards were strictly observed throughout the research process. The study received approval from the school authorities before data collection commenced. Informed consent was obtained from both students, with assurances that participation was voluntary and that students could withdraw at any time without penalty. Confidentiality of data was maintained by assigning codes to participants rather than using personal identifiers, and all data were securely stored. The researcher declared no conflict of interest in the study.

RESULTS AND DISCUSSION

As previously mentioned, this study aimed to answer three research questions regarding the effects of students' perception of digital learning media and self-esteem on writing skills. Data analysis was conducted using multiple linear regression. The descriptive statistics revealed that students generally demonstrated moderate to high perceptions of digital learning media and self-esteem, along with varied levels of writing performance. This provided an initial indication that both technological and psychological factors might play an important role in supporting writing achievement. The results of hypothesis testing are presented in Tables 1, 2, and 3 and discussed in detail below.

Table 1
Result Recapitulation of calculation on variable X1 and X2 with Y

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4360.849	2	2180.424	17.549	<.001 ^b
	Residual	10561.049	85	124.248		
	Total	14921.898	87			

Table 1 presents the results of the regression analysis for the first research question, which asked whether students' perception of digital learning media and self-esteem simultaneously influence writing skills. The results indicate that the combined effect of the two independent variables on writing skills was statistically significant, with $F\text{-count} = 17.549$, $\text{Sig} = 0.001$, $p < 0.05$. The model explained 29.2% of the variance in writing performance (see Table 2). This finding suggests that both technological and psychological dimensions jointly contribute to students' ability to produce descriptive texts effectively.

Table 2
Result Recapitulation of Correlation Calculation on variable X1 and X2 toward Y

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.541 ^a	.292	.276	11.147

The effective contribution of nearly one-third of the variance highlights the substantial role of perception and self-esteem in academic writing. This result is consistent with the view that writing is a complex skill that requires not only linguistic knowledge but also cognitive and affective support (Demneri, 2024; Suteja & Setiawan, 2022). In other words, while grammar, vocabulary, and organization are essential components, students' motivation, confidence, and attitudes toward learning tools also play decisive roles in shaping their success in writing.

Table 3
Result Recapitulation of calculation on variable X1 and X2 toward Y

Model	Coefficients ^a				
	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	30.532	6.853		4.455	<.001
Students' Perception of Digital Learning Media	.235	.073	.323	3.208	.002
Self-Esteem	.346	.110	.317	3.145	.002

The second research question examined whether students' perception of digital learning media individually affects writing skills. As shown in Table 3, the regression coefficient for perception of digital learning media was significant ($t\text{-count} = 3.208$, $\text{Sig} = 0.002$, $p < 0.05$). This finding indicates that students with more positive perceptions of digital learning media achieved higher writing performance compared to their peers with less favorable perceptions.

This result aligns with prior studies that emphasize the pedagogical benefits of digital media. Puspitarini and Hanif (2019) reported that digital learning tools can enhance comprehension and engagement by making abstract content more concrete and interactive. Similarly, Heidari et al. (2021) noted that technology-rich environments support students' motivation and confidence, both of which are crucial for language learning. The present study supports these findings, showing that positive perceptions of digital learning media encourage students to make better use of available tools to organize ideas, improve vocabulary, and enhance grammatical accuracy (Asnas & Hidayanti, 2024; Lubis & Afri, 2023). Therefore, perception of digital learning media can be considered a strong predictor of writing achievement.

The third research question focused on the effect of self-esteem on writing performance. Regression analysis revealed that self-esteem was also a significant predictor of writing skills (t -

count = 3.145, Sig = 0.002, $p < 0.05$). This indicates that students with higher levels of self-esteem demonstrated better writing performance compared to those with lower self-esteem.

This finding is consistent with psychological theories that highlight self-esteem as a central factor in learning motivation and resilience (Rosalina, 2019). Students who value themselves and feel confident in their abilities are more likely to take risks, persist in overcoming challenges, and respond positively to feedback, all of which contribute to improved writing outcomes (Yulianawati et al., 2022). Conversely, students with low self-esteem may experience anxiety, self-doubt, and avoidance behavior, which hinder their progress in writing tasks. The present study thus reinforces the idea that fostering students' self-esteem is as critical as teaching technical aspects of writing.

The findings of this study reinforce the notion that both external factors (such as digital learning media) and internal factors (such as self-esteem) must be considered together in understanding writing development. Previous research has often examined these variables separately, but the present study demonstrates their combined and complementary roles. While digital tools provide the necessary cognitive and motivational scaffolding for students, self-esteem ensures that learners engage with these tools confidently and productively. This interplay between technology and psychology mirrors the holistic approach to language learning advocated by Ryan and Deci's (2000) Self-Determination Theory, which emphasizes the integration of intrinsic motivation and supportive learning environments.

The significant effect of self-esteem on writing echoes earlier studies suggesting that higher self-esteem leads to greater persistence and confidence in tackling writing tasks (Rosalina, 2019; Yulianawati et al., 2022). Students with strong self-esteem are more willing to express ideas and accept feedback, which facilitates improvement in their writing. Conversely, those with lower self-esteem may doubt their abilities and show reduced engagement, resulting in weaker performance. Overall, the results demonstrate that writing skills are not solely shaped by linguistic knowledge but are also strongly influenced by learners' attitudes toward technology and their psychological self-perceptions. This underscores the need for teachers to adopt digital tools strategically while simultaneously fostering students' self-esteem to create supportive and motivating classroom environments.

In summary, the findings demonstrate that both perception of digital learning media and self-esteem significantly affect students' writing skills, both simultaneously and individually. These results contribute to the understanding of writing as a multifaceted skill shaped not only by linguistic knowledge but also by students' attitudes toward technology and their psychological well-being. The study highlights the importance of integrating digital tools strategically in the classroom while also fostering students' confidence and resilience. Together, these factors form a strong foundation for improving writing instruction and outcomes in junior high school contexts.

CONCLUSIONS

This study examined the simultaneous and individual effects of students' perception of digital learning media and self-esteem on writing skills. The results demonstrated that both factors significantly influenced students' writing performance, confirming that technological perceptions and psychological confidence are crucial determinants of writing achievement. Specifically, positive perceptions of digital media enhanced students' engagement and comprehension, while higher self-esteem supported persistence and confidence in writing tasks.

The findings contribute to the field of language education by highlighting the combined importance of digital learning tools and self-esteem in developing writing skills, offering a more integrated perspective than previous studies that examined these variables separately. This study also

provides practical implications for teachers to integrate interactive digital resources and foster students' self-confidence as complementary strategies to improve writing instruction.

Nevertheless, the research is limited by its relatively small sample size, focus on a single region, and concentration on descriptive writing. Future studies should expand the population, explore various writing genres, and employ mixed-method approaches to capture deeper insights into learners' experiences. Despite these limitations, this study underscores the significance of combining technological and psychological factors to enhance students' writing outcomes and paves the way for further innovations in language learning.

This study provides several important practical implications for language education. For teachers, the integration of digital learning media in writing instruction can increase students' engagement, comprehension, and motivation. At the same time, teachers need to foster students' self-esteem by providing constructive feedback, positive reinforcement, and supportive classroom environments, which together can build students' confidence in writing. For students, the results highlight the importance of developing self-esteem as a foundation for resilience and persistence in learning. Students should be encouraged to see mistakes as opportunities for growth and to use digital tools as resources for independent practice and improvement.

At the institutional level or schools should invest in adequate digital infrastructure and provide training for teachers to maximize the potential of technology in classrooms, while also designing programs that promote students' psychological well-being alongside academic achievement. Finally, for researchers, the findings suggest the need to extend investigations into different populations, writing genres, and methodological approaches, such as longitudinal or mixed-method studies, to capture a more comprehensive understanding of how technological and psychological factors interact in shaping writing development.

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