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Digital Literacy and Its Impact on Critical Thinking and Writing Skills: A Qualitative Study in A High School Context

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Abstract
Digital literacy has become a crucial competency in the 21st century, particularly in enhancing students' writing skills. Writing requires not only mastery of grammar, vocabulary, and coherence but also creativity and critical thinking, all of which can be supported by digital tools. This study examined the impact of digital literacy on students' writing skills at SMA Kusuma Bangsa Palembang, South Sumatra, using a qualitative case study design. The research was guided by the Technological Content Knowledge (TPACK) framework, which emphasizes the meaningful integration of technology, pedagogy, and content in the leaening. Data were collected through document analysis, classroom observations, and semi-structured interviews with 16 students and two teachers. The findings revealed that digital platforms such as Google Scholar, ChatGPT, Grammarly, and Google Translate helped students generate and organize ideas, enrich vocabulary, and improve grammatical accuracy. Students reported that these tools made the writing process easier and more effective, parti cularly in developing arguments, ensuring coherence, and enhancing word choice. Classroom observations confirmed that digital tools were actively used during the prewriting, drafting, and revising stages, resulting in clearer and more structured texts. Moreover, digital resources encouraged creativity and confidence, allowing students to express ideas through diverse formats such as blogs, short articles, and online publications. However, a gap remained between digitally assisted writing and unaided exam performance, indicating the need for balanced reliance. Practically, the findings suggest that English teachers should integrate digital tools systematically while fostering students' independent writing competence. Schools are encouraged to establish clear guidelines for responsible digital use and align technological integration with pedagogical objectives to maximize the effectiveness of writing instruction.

Keywords:
Digital Literacy, Critical Thinking, Writing Skills, English Language Learning, Technology Integration

1. Introduction

In the 21st century, digital literacy has become one of the essential competencies that students must acquire in order to succeed academically and professionally. According to Erwin and Mohammed (2022) digital literacy refers to the ability to use technology critically and creatively in various situations. Similarly, Hussain and Phulpoto (2024) emphasize that digital literacy is not limited to basic computer skills, but also involves navigating the digital world, critically evaluating digital content, and interacting effectively with digital communities. Bahri et al., (2022) further explain that digital literacy encompasses the knowledge and proficiency to use digital media, communication tools, or networks to search, evaluate, and create information in a wise, careful, precise, and law-abiding manner. Collectively, these perspectives show that digital literacy is a multifaceted skill set needed to operate effectively in today's interconnected world.

The importance of digital literacy is increasingly evident in education, where the integration of technology has transformed the teaching and learning process. Sogalrey et al. (2024) highlight that digitalization underscores the importance of effective and inclusive digital education. In line with this, Sillat et al. (2021) argue that 21st-century digital skills require not only technical competence but also creativity, critical thinking, collaboration, and communication. Behforouz et al. (2021) also note that students who are digitally literate are able to apply their skills to improve productivity, self-development, and the creation of valuable work. These studies indicate that digital literacy equips students not only with technical know-how but also with the broader competencies necessary for learning in a digital environments.

In the Indonesian context, the development of digital literacy has become a national priority, particularly following the rapid expansion of digital learning during and after the COVID-19 pandemic. In urban areas such as Palembang, schools have increasingly integrated digital tools into classroom instruction; however, variations remain in how effectively these tools are used to support higher-level learning skills, especially writing. Schools therefore play a central role in fostering digital literacy. Chaerani et al. (2024) state that technology integration in learning increases digital literacy rates by engaging students with various digital tools, learning software, online simulations, and collaboration platforms. Similarly, Carlos (2024) argues that technology use in education is not limited to classroom tools but also promotes independent learning, which increases student motivation and engagement with digital resources. Rahman et al. (2023) emphasize that digital resources include a wide spectrum of information and media such as text, images, audio, and video files accessible through computers and the internet.

Parallel to the development of digital literacy, writing remains a fundamental skill in education. Sa'adah (2020) describes writing as a multifaceted process that combines linguistic, cognitive, and organizational skills. In a similar vein, Pratama and Hastuti (2024) explain that writing skills involve mastery of grammar, vocabulary, word choice, and punctuation. Dhananjaya et al. (2024) emphasize that writing is a process of expressing ideas in a form that can be clearly understood by readers.Writing also plays a key role in shaping students into competent and critical thinkers. Hadi et al., (2024) emphasizes that writing is a learning journey requiring thorough understanding of the writing process. Suprapto et al.,(2022) identify four essential stages in this process: pre-writing, drafting, revising, and editing, while Purnamasari et al. (2021) argue that writing allows students to demonstrate their knowledge, analyze information, and present logical conclusions, especially in academic genres such as argumentative essays and analytical exposition texts. These findings show that writing is both a technical and intellectual activity that develops higher-order thinking.

Another important dimension of writing is its focus on accuracy and clarity. Purnamasari et al., (2021) note that students face challenges in grammar, spelling, and coherence, which makes writing a complex task that requires integrating linguistic and mechanical skills. Sakkir et al., (2022) stress the importance of grammar, spelling, punctuation, capitalization, and vocabulary for producing quality written work. Fitria, (2024) adds that writing allows students to articulate ideas and emotions effectively using appropriate structure, vocabulary, and coherence. Together, these perspectives suggest that mastery of technical elements is crucial for clarity and readability in writing.

With the rapid advancement of technology, writing practices are also undergoing significant change. Mali and Salsbury (2021) point out that digital tools enable students to use technology at every stage of writing, from brainstorming to editing and publishing. Pitukwong and Saraiwang, (2024) observe that digital platforms offer opportunities for collaboration, feedback, and multimedia integration, exposing students to diverse writing genres and perspectives. These tools include applications such as Grammarly, Google Docs, and blogging platforms, which enhance accuracy, collaboration, and creativity in the writing process. Thus, the intersection between digital literacy and writing reflects the ways in which students can leverage technology to improve both technical and critical aspects of their writing.

Pevious studies also highlighted the pedagogical impact of integrating digital tools into writing instruction. (Lukman, 2024)found that Padlet significantly enhanced students' writing skills, particularly in the areas of content development, creativity, and language accuracy, while also promoting higher motivation and encouraging collaborative learning. Similarly, Mukhlis, (2024) reported that ChatGPT-based Project-Based Learning enhanced students' ability to write news texts by providing authentic

learning experiences. These findings reinforce the close connection between digital literacy, technology use, and writing development.

This gap indicates the need for research that examines digital literacy not merely as tool usage but as an integrated skill influencing students' critical thinking and writing performance. Accordingly, this study addresses the following research questions: (1) How is digital literacy implemented in English writing instruction at SMA Kusuma Bangsa Palembang? (2) How does digital literacy influence students' writing skills, particularly in terms of coherence, accuracy, and critical thinking? (3) What challenges emerge in balancing digitally assisted writing and independent writing performance?

Based on these questions, the purpose of this study is to analyze the impact of digital literacy on students' writing skills at SMA Kusuma Bangsa Palembang. This research is expected to contribute theoretically by enriching the discussion on digital literacy and writing development in the Indonesian context and practically by providing insights for teachers and schools on how to integrate digital tools effectively while fostering students' independent writing competence.

2. Method

This study use a qualitative case study to describe how digital literacy impacts the students' critical thinking and writing skills of Kusuma Bangsa High School Palembang.

2.1 Research Design

This study employed a qualitative approach with a case study method to explore how digital literacy influences students' critical thinking and writing skills at SMA Kusuma Bangsa Palembang. A qualitative design was chosen because it focuses on meaning, interpretation, and participants' experiences rather than numerical data. Muzari et al.,(2022) explains that the qualitative research focuses on the search of meanings, interpretations, code, and the processes and relationships of social life. In line with this, Lim (2025) notes that qualitative design enables researchers to study intricate human beahaviors and thoughts more deeply, which cannot be fully represented through quantitative approaches.

The case study method, as suggested by Yin,(2003), was considered appropriate since it enables the in-depth exploration of contemporary issues within real-life contexts. This design allowed the researcher to investigate not only whether digital literacy improved students' critical thinking and writing skills but also how these processes occurred during classroom practices.

2.2 Ethical Considerations

Prior to data collection, ethical approval was obtained from the school authority. All participants were informed about the purpose of the study, data collection procedures, and their rights as participants. Informed consent was obtained from all participants, and for student participants, permission was also granted by the school. Participants were assured of confidentiality, anonymity, and the voluntary nature of their participation, with the right to withdraw at any time without consequences.

2.3 Research Duration

The study was conducted over a three-month period, from 1 to 31st of May 2025. This duration allowed sufficient time for document collection, repeated classroom observations, and in-depth interviews, ensuring rich and credible qualitative data.

2.4 Source of Information and selection of informants

Informants were selected using purposive sampling. Puposive sampling is a technique in which participants are deliberately chosen based on specific criteria relevant to the research objectives (Wibawa et al., 2020). The individuals had specific qualities (specified knowledge and experience with digital literacy practices) that align with study goals (Giri, 2024). The study included sixteen grade eleven students, (two from eight classes), and two Advanced English teachers. Students selected from advanced - English classes were intentional since these were the classes who focused on critical analysis and digital assessment. To reduce researcher bias and ensure fairness, the final student participants were selected using a random generator application from the list of eligible students. The teacher participants were selected purposively due to their direct involvement in designing and implementing digital literacy-based instruction

The sixteen student participants were all Grade XI students, consisting of 9 female and 7 male students, aged between 16–17 years. The two teacher participants were Advanced English teachers with more than five years of teaching experience and regular involvement in digital-based instruction.

Table 1
List of Interview Informants and Their Class Affiliation

Informant Codes	Informants	Class
S-1 to S-16	Students 1-16	XI.1 to XI.8
T-1, T-2	Teachers 1-2	-

Codes were used to maintain the confidentiality of participants. This diverse group helped generate a comprehensive understanding of digital literacy implementation and student development.

2.5 Research Instrument

Three data collection methods were used: document analysis, semi-structured interviews, and classroom observations. These methods provided triangulated data to enhance the validity and credibility of the findings (Lim, 2025). Three instruments were employed to collect data: document analysis, classroom observations, and semi-structured interviews. Document analysis was used to examine lesson plans, assessment rubrics, and samples of student writing submitted through online platforms. The analysis focused on identifying the integration of digital literacy elements, instructional objectives, assessment criteria, and students' writing development in terms of coherence, accuracy, and critical thinking. According to Chanda (2022), document analysis allows researhers to review and evaluate documents reflecting pedagogical goals and student needs.

Classroom observations were conducted in three sessions, each lasting 2 × 40 minutes. The observations focused on the use of digital tools, student engagement, interaction patterns, and the teacher's role in facilitating digital-based writing activities. An observation protocol was used to guide data collection, including indicators such as stages of writing activities, types of digital tools used, and student participation. Semi-structured interviews were conducted with sixteen students and two teachers. The interviews were carried out in Indonesian to allow participants to express their experiences comfortably and in depth, while still allowing new questions to be brought forward during the interview as a consequence of what the interviewees have said (Ruslin et al., 2022). Interview questions explored participants' experiences with digital literacy, perceived benefits and challenges, and its influence on writing and critical thinking. All interviews were audio-recorded, transcribed verbatim, and anonymized.

2.6 Procedure Collecting Data

The data collection procedure in this study was systematically designed through three main stages: document analysis, classroom observation, and semi-structured interviews. This triangulation method was used to gain in-depth understanding of digital literacy practices in English learning at Kusuma Bangsa High School. In the initial stage, relevant documents such as Lesson Plans (RPP), assessment rubrics, and student work samples were collected. The analysis of these documents aimed to determine the level of integration of digital literacy into the school curriculum and how these competencies were assessed. The documents were systematically analyzed to identify themes, teaching strategies, and ethical policies related to the use of technology in the learning process.

Next, classroom observations were conducted to observe the usage of digital literacy in the teaching-learning process. Researchers did three observation sessions of 2 x 40 minutes and all were focused on the use of digital tools, students' engagement, and the teacher's role in facilitating activities. Detailed field notes were given about the observed interactions and practice that would later become significant qualitative data.

Semi-structured interviews were conducted in Indonesian with 16 students and two teachers to get deeper and more open responses. The questions aimed to dig out the respondents' experiences, the positive aspects and the difficulties they faced with digital literacy. The interviews were recorded and transcribed and were done in the school's library to make it a quiet place for the data to be collected richly and deeply.

2.7 Data Analysis

Thematic analysis was employed to extract rich information from the qualitative data in this study. Braun and Clarke (2006) defined this technique as a systematic process that the researchers follow to figure out the key points or themes that appear in the whole data set repeatedly. This method is very suitable for exploring the common experiences and points of view of participants, such as teachers and

students, about digital literacy. This approach is highly effective for understanding the collective experiences and perspectives of participants, including teachers and students, regarding digital literacy. Its flexibility and accessibility have made this method widely adopted in various qualitative studies, including in education (Kiger & Varpio, 2020).

A systematic review by Tinmaz et al., (2022) also highlighted the prevalence of digital literacy research and the importance of thematic analysis in uncovering key themes and categories within this domain. Thematic analysis not only examines the surface of the data but also digs deeper to uncover common themes that shape collective narratives (Naeem et al., 2023)

Following Creswell (2009)'s framework, the process included preparing and organizing the data, coding significant statements, developing descriptions, identifying relationships, and interpreting findings. Codes were generated from documents, interview transcripts, and observation notes, highlighting themes such as benefits, challenges, strategies, and student engagement. These themes were then synthesized to provide a comprehensive understanding of how digital literacy contributes to critical thinking and writing development.

3. Results and Discussion

3.1 Results

The aim of this study was to describe the impact of English digital literacy on the writing skills of Kusuma Bangsa High School students. In general, the results indicate that the use of digital tools helps students organize ideas more effectively, develop richer vocabulary, and improve grammatical accuracy while also fostering critical thinking and creativity in their writing process. The following subsections present the study's findings based on the research question.

3.1.1. Writing Skills and Expression of Ideas.

Writing is a language skill used to communicate ideas, feelings, and experiences in written forms (Asiah et al., 2020). It allows students to express themselves clearly and meaningfully in various context. This section identifies (a) text development and types of digital assignments (b) quality of writing, and (c) idea expression.

a. Text Development and Types of Digital Assignments

Interview data revealed that 14 out of 16 students regularly used various digital tools to support idea generation and text development. They emphasized that digital literacy supported both idea generation and the improvement of sentence structure, vocabulary, and grammar. As one student explained:

> "When working on essay assignments, I use Safari and Google Scholar to find reliable sources. From there, I arrange the important points and develop them into paragraphs." (S-4)

Another student highlighted the role of digitial tools in improving accuracy and coherence in writing:

> "I usually write on my own first, then I ask ChatGPT to check coherence and grammar. For essays and discussions, I use Google Scholar because the information is based on facts and expert opinions." (S-13)

Classroom observations supported these findings, showing that students integrated platforms such as Google Scholar, Safari, ChatGPT, and Padlet throughout the stages of prewriting, drafting, and revising. In addition, Document analysis of lesson plan and assignments showed that teachers intentionally designed digital-based writing tasks, including argumentative essays, reflective journals, and collaborative Padlet discussions.

b. Quality of Writing

The findings showed all students widely used digital tools such as Grammarly, ChatGPT, Google Translate, and autocorrect to support their writing. These tools were particularly helpful during drafting and revision stages, especially in improving grammatical accuracy and sentence structure. As one student explained:

> "… When I compose a sentence but I am not sure whether the sentence structure is correct, I ask for help from Grammarly and AI." (S-3)

Another student emphasized that these tools enriched vocabulary and coherence. As S-15 stated:

> "Before the assignment is submitted, I usually check the coherence in ChatGPT. In short, digital tools and digital platforms are very helpful and easy." (S-15)

Beyond grammatical support, digital tools also played a significant role in enriching students' vocabulary and improving textual coherence. Continuous exposure to digital reading materials and writing platforms enabled students to access more varied and appropriate word choices. As S-12 stated:

> *"Because every writing process uses digital tools, it makes it very easy to find new and appropriate vocabulary. The more I read, speak, watch, and write using digital platforms, the more my vocabulary and grammar develop, which gives me more insight when writing."* (S-12)

Teachers also confirmed these improvements in students' writing quality. One teacher emphasized that regular integration of digital literacy contributed to noticeable progress in grammar, vocabulary, and text organization:. One teacher noted:

> "So, the more we use digital literacy, the more their grammar and vocabulary have improved. Every time students write, I emphasize content, coherence, vocabulary, grammar, and the quality of their writing."

However, document analysis of exam results without digital support showed significant differences in students' performance (T-2). Overall, digital tools enhanced vocabulary, grammar, and text organization while also promoting independent proofreading.

c. Idea Expression

Most students (15 out of 16) agreed that digital literacy broadened their horizons and inspired richer ideas by providing access to diverse sources and references. Seven students reported that digital platforms such as online articles, videos, and digital books helped them generate and develop ideas more comprehensively. As S-2 explained:

> *"In the process of writing my ideas, I can find sources and help from these digital tools. When I express myself in writing, I can use digital tools to express my ideas and thoughts as a whole. When I do not know how to express Indonesian idioms in English, I can ask for help from Google or Google Translate so that I can express my ideas more thoroughly."* (S-2)

Similarly, students used digital tools not only to search for information but also to avoid repetitive or monotonous writing. As S-12 stated:

> *"Yes, because I can search for other words or synonyms, even read references to other people's writings to be used as writing ideas so that my writing is not monotonous and not boring to read. In addition, watching movies can also be used as an idea for fictional writing."* (S-12)

Other students also emphasized the role of digital tools in supporting idea development through information gathering. For example, S-8 noted that digital platforms enabled access to various forms of references, including news texts, articles, and videos, which strengthened the content of her writing. In addition, S-15 shared her experience of publishing her work online and using reader feedback to refine her ideas:

> *"I like writing short articles. Then, I publish them on Medium. The comments and constructive suggestions made by readers help me further develop my skills in writing."* (S-15)

Classroom observations supported these insights, showing that students were able to adjust their writing style to different text types, such as using academic and argumentative expressions in discussion texts. During the writing process, students consistently relied on platforms such as Google Translate,

Google Scholar, and Grammarly to refine vocabulary, structure, and coherence, indicating clearer and more structured idea expression.

3.1.2. Evidence from Student Writing Samples

Document analysis of student writing samples revealed noticeable improvement in clarity and coherence.

Example (Anonymized):

Before digital support:

> "Global warming is dangerous. Many pollution from factory and vehicle. Government must action."

After digital-assisted revision:

> "Global warming poses serious environmental threats caused by industrial emissions and vehicle pollution. Therefore, governments must take immediate and effective action."

This comparison illustrates improvements in sentence structure, vocabulary precision, and coherence.

3.1.3. Challenges and Limitations in Using Digital Tools

Despite the benefits, **9 out of 16 students** reported challenges in using digital tools effectively. Common issues included over-reliance on AI, confusion when receiving contradictory feedback, and difficulty applying corrections independently. As one student admitted: "Sometimes I depend too much on AI, so when writing exams without tools, I feel confused." (S-11). Teachers also raised concerns: "Students need guidance so they don't rely fully on digital tools." (T-2)

3.2 Discussion

The findings demonstrate that digital literacy significantly enhances students' writing development by supporting idea generation, improving grammatical accuracy, and fostering creativity. The extensive use of platforms such as Google Scholar, ChatGPT, and Grammarly enabled students to move from fragmented ideas to structured and coherent texts. This aligns with Septianasari et al., (2025)), who emphasized that ChatGPT helps students map their thoughts due to its vast information resources.

In terms of language accuracy, the results align with Pratama and Hastuti (2024), showing that digital tools encourage independent revision and proofreading. However, consistent with Mudra (2020) the observed gap between digitally assisted writing and exam performance highlights the importance of balancing technology use with independent skill development. The integration of these tools allowed students to move from initial ideas to more structured and coherent drafts, confirming that digital media effectively supported the writing process.

Furthermore, digital literacy also fostered creativity and confidence by providing authentic audiences and diverse learning resources, supporting Siregar (2024) and Asri et al. (2024). Nevertheless, the challenges identified in this study emphasize that digital tools should function as scaffolding rather than substitutes for students' writing competence.

4. Limitation of the Study

This study has several limitations that should be considered when interpreting the findings. First, the research was conducted in a single private high school with well-established digital infrastructure and clear school regulations regarding technology use. Therefore, the findings may not be fully transferable to schools with limited technological resources or different institutional cultures. Second, the number of participants was relatively small and focused on eleventh-grade students in Advanced-level English classes, which may limit the generalizability of the results to students of other grade levels or subject areas. Third, this study relied primarily on qualitative data collected through interviews, observations, and document analysis. While data triangulation strengthened credibility, the absence of quantitative measurements means that improvements in critical thinking and writing skills were not statistically measured. Finally, although efforts were made to minimize researcher bias through reflexive

journaling and structured instruments, the researcher's role as the primary data collector may still have influenced data interpretation.

5. Conclusion

This study concludes that digital literacy significantly enhances students' writing skills by supporting grammatical accuracy, vocabulary enrichment, sentence coherence, and idea expression. Through tools such as Grammarly, ChatGPT, Google Translate, Google Scholar, and autocorrect, students were able to brainstorm ideas, refine drafts, and improve text quality. The integration of digital platforms not only facilitated technical improvement but also encouraged creativity and confidence in writing. However, the findings also revealed that students' exam performance without digital assistance reflected a lower level of ability, indicating the need for balanced reliance between digital tools and independent competence.

The contribution of this study lies in its exploration of how digital literacy intersects with writing practices in Indonesian high school contexts, specifically at SMA Kusuma Bangsa Palembang. The findings provide empirical evidence that meaningful integration of digital tools strengthens not only writing quality but also critical thinking and idea development. Moreover, this study highlights the dual function of digital literacy as both a technical support system for language accuracy and a creative medium that enables richer self-expression in English language learning.

Based on the findings, several recommendations can be made. Teachers should integrate digital tools strategically, using them not only for drafting and proofreading but also for fostering independent skills through guided practice. School administrators and foundations should ensure sustained investment in digital infrastructure by improving internet stability, expanding licensed access to academic tools such as Grammarly or Turnitin, and providing continuous professional development in digital pedagogy. At the policy level, the integration of digital literacy, critical thinking, and ethical technology use into curriculum frameworks is recommended, along with clear guidelines for AI-assisted learning. For future research, further studies are suggested across different educational levels, subjects, and contexts, including longitudinal investigations into the long-term effects of digital literacy on students' academic achievement, independence, and cognitive development, as well as explorations of teachers' and students' beliefs toward digital tools and their influence on learning outcomes.

6. References

Asiah, N., Ardian, E., & Amri, S. (2020). A study on the students' factor difficulty in writing narrative text at VIII grade of MTs Sabilal Muhtadin Tembilahan. *J-Shelves of Indragiri (Jsi)*, *1*(2), 84–97. https://doi.org/10.32520/jsi.v1i2.1057

Asri, B. I., Wahyono, E., Hasby, M., Sjachrun, R. A. M., Wahyuni, R. A., Palopo, U. C., & Makassar, U. B. (2024). Applying digital literacy in improving Students ' writing skill at senior high school. *Indonesian Journal of Learning Studies*, *4*(3), 76–92. https://doi.org/https://doi.org/10.53769/ijls.v4i3.1386

Bahri, A., Bin Jamaluddin, A., Novia Arifin, A., & X, S. (2022). Students' and teachers' digital literacy skill: A comparative study between schools, classes, and genders in urban and rural areas. *International Journal of Science and Research (IJSR)*, *11*(2), 184–191. https://doi.org/10.21275/sr22130101519

Behforouz, B., Gaithi, A. Al, & Fekri, N. (2021). Omani efl learner perceptions and motivation toward online learning. *Journal of University Teaching and Learning Practice*, *18*(4). https://doi.org/10.53761/1.18.4.13

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology; In qualittaive research in psychology. *University of the West of England Bristol*, *3*(2), 77–101. https://psychology.ukzn.ac.za/?mdocs-file=1176

Carlos, J. (2024). Impact of digital learning tools on student engagement in high school classrooms in Peru. *American Journal of Education and Practice*, *8*(2), 25–35. https://doi.org/https://doi.org/10.47672/ajep.2246

Chaerani, D., Harianto, J. E., Baehaqi, L., Frantius, D., & Mulvia, R. (2024). Digital Literacy in the 21st Century Classroom: Bridging the Gap Between Technology Integration and Student Engagement.

Global International Journal of Innovative Research, *2*(9), 2104–2116. https://doi.org/10.59613/global.v2i9.303

Chanda, A. (2022). Key methods used in qualitative document analysis. *SSRN Electronic Journal*, *1990*, 1–9. https://doi.org/10.2139/ssrn.3996213

Creswell, J. W. (2009). Research design: qualitative, quantitative and mixed methods approaches. In *SAGE Publications, Inc* (third edit). https://doi.org/10.7748/nr.12.1.82.s2

Dhananjaya, P. A., Karima, F. H., & Egar, N. (2024). Improving students' writing skill in writing descriptive text using brainstorming plus webbing techniques. *Journal of Nusantara Education*, *3*(2), 69–78. https://doi.org/10.57176/jn.v3i2.100

Erwin, K., & Mohammed, S. (2022). Digital literacy skills instruction and increased skills proficiency to cite this article : digital literacy skills instruction and increased skills proficiency. *International Journal of Technology in Education and Science*, *6*(2), 323–332. https://doi.org/https://doi.org/10.46328/ijtes.364

Fitria, T. N. (2024). Creative writing skills in English: developing student's potential and creativity. *EBONY: Journal of English Language Teaching, Linguistics, and Literature*, *4*(1), 1–17. https://doi.org/10.37304/ebony.v4i1.10908

Giri, O. P. (2024). Choosing sampling techniques and calculating sample size. *Indonesian Journal of Teaching in Science*, *4*(2), 166–176. http://dx.doi.org/10.17509/xxxx.xxxx

Hadi, N. F. A., Shaharudin, N. A. D., & Faris, N. E. M. F. (2024). Understanding writing difficulty and writing process among pre-university students. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *9*(9), e002935. https://doi.org/10.47405/mjssh.v9i9.2935

Hussain, N., & Phulpoto, S. (2024). Digital literacy: Empowering individuals in the digital age. *Assyfa Learning Journal*, *2*(2), 70–83. https://doi.org/10.61650/alj.v2i2.231

Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher*, *42*(8), 846–854. https://doi.org/10.1080/0142159X.2020.1755030

Lim, W. M. (2025). What is qualitative research? An overview and guidelines. *Australasian Marketing Journal*, *33*(2), 199–229. https://doi.org/10.1177/14413582241264619

Lukman, H. (2024). *The influence of using padlet as teaching media on the students' Writing skills of the eleventh grade of SMA Sunan Ampel Punggur*. IAIN Metro.

Mali, Y. C. G., & Salsbury, T. L. (2021). Technology integration in an indonesian efl writing classroom. *Teflin Journal*, *32*(2), 243–266. https://doi.org/10.15639/http:teflinjournal.v32i2/243-266

Mudra, H. (2020). Digital literacy among young learners: How do EFL teachers and learners view its benefits and barriers? *Teaching English with Technology*, *20*(3), 3–24.

Mukhlis, M. (2024). The effect of ChatGPT-based project-based learning model and digital literacy on news text writing skills. *Journal of Languages and Language Teaching*, *12*(3), 1353. https://doi.org/10.33394/jollt.v12i3.11433

Muzari, T., Shava, G. N., & Shonhiwa, S. (2022). Qualitative research paradigm, a key research design for educational researchers, processes and procedures: A theoretical overview. *Indiana Journal of Humanities and Social Sciences*, *3*(01), 14–20.

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *International Journal of Qualitative Methods*, *22*(October), 1–18. https://doi.org/10.1177/16094069231205789

Pitukwong, K., & Saraiwang, S. (2024). Exploring the effectiveness of digital writing tools on Thai EFL students' writing. *Contemporary Educational Technology*, *16*(3). https://doi.org/10.30935/cedtech/14808

Pratama, R. M. D., & Hastuti, D. P. (2024). *The use of artificial intelligence to improve EFL students' writing skill. 5*(1), 13–25. https://doi.org/https://doi.org/10.22219/englie.v5i1.30212

Purnamasari, D., Hidayat, D. N., & Kurniawati, L. (2021). An analysis of students' writing skill on English descriptive text. *English Education: Jurnal Tadris Bahasa Inggris*, *14*(1), 101–114. https://doi.org/https://doi.org/10.24042/ee-jtbi.v14i1.7943alysis of Student

Rahman, A., Al-Qasri, S., & Ofara, W. (2023). Exploring digital literacy practices in English language learning for secondary level students. *Journal of Languages and Language Teaching*, *11*(4), 722. https://doi.org/10.33394/jollt.v11i4.8939

Ruslin, Mashuri, S., Muhammad Sarib Abdul Rasak, & Alhabsyi, F. (2022). Semi-structured interview:

A methodological reflection on the development of a qualitative research instrument in educational studies. *Journal of Research & Method in Education*, *12*(1), 22–29. www.iosrjournals.org

Sa'adah, A. R. (2020). Writing skill in teaching English: An overview. *EDUCASIA: Jurnal Pendidikan, Pengajaran, Dan Pembelajaran*, *5*(1), 21–35. https://doi.org/10.21462/educasia.v5i1.41

Sakkir, G., Suardi, N. F., Dollah, S., & Ahmad, J. (2022). Writing apprehension and writing skills on English department students: A correlational design. *International Journal of Humanities and Innovation (IJHI)*, *5*(4), 141–145. https://doi.org/10.33750/ijhi.v5i4.164

Septianasari, L., Srinawati, W., Fajartriani, T., & Takdir, M. (2025). Accelerating students ' critical thinking through AI and supportive digital platforms. *Proceeding International Conference OnReligion, Science and Education*, *4*, 1279–1285.

Shinta, Q. (2021). An assessment on coherence and grammatical structure of students' writing skills. *Journal of Educational and Language Research*, *1*(1), 53–60.

Sillat, L. H., Tammets, K., & Laanpere, M. (2021). Digital competence assessment methods in higher education: A systematic literature review. *Education Sciences*, *11*(8). https://doi.org/10.3390/educsci11080402

Siregar, K. E. (2024). Increasing digital literacy in education : Analysis of challenges and opportunities through literature study. *International Journal of Multilingual Education and Applied Linguistics*, *1*(2), 10–25. https://international.aspirasi.or.id/index.php/IJMEAL/article/view/18

Sogalrey, F. A. M., Safitri, F., Tijow, M. A., Sembiring, D. A. K., & Risamasu, P. E. G. (2024). Digital literacy research in education : Trends and insights. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, *10*(3), 1169. https://doi.org/10.33394/jk.v10i3.12490

Suprapto, M. A., Anditasari, A. W., Sitompul, S. K., & Setyowati, L. (2022). Undergraduate students' perceptions towards the process of writing. *Journal of English Language Teaching and Linguistics*, *7*(1), 185. https://doi.org/10.21462/jeltl.v7i1.765

Tinmaz, H., Lee, Y. T., Fanea-Ivanovici, M., & Baber, H. (2022). A systematic review on digital literacy. *Smart Learning Environments*, *9*(21), 1–18. https://doi.org/10.1186/s40561-022-00204-y

Yin, R. (2003). *Case study research design and methods* (third). SAGE Publication, Inc.