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Journal of General Education and Humanities Vol. 5, No. 1, February 2026, pp. 341 – 355, https://doi.org/10.58421/gehu.v5i1.886 ISSN 2963-7147 341 Journal homepage: https://journal-gehu.com/index.php/gehu Implementing Google Docs Collaboration to Improve Descriptive Writing Skills of Eleventh-Grade Students at SMA Lab School Untad Palu Syafira Naysilla Putri Atmoko1, Sriati Usman2, Budi3, Darmawan4 Tadulako University, Palu, Sulawesi Tengah Article Info ABSTRACT Article history: Received 2025-12-04 Revised 2025-12-29 Accepted 2025-12-29 This research aims to investigate the effectiveness of Google Docs collaboration in improving descriptive text writing skills among eleventh-grade students at SMA Lab School Untad Palu. The research was conducted because many students faced challenges in writing descriptive text, particularly in mechanics (capitalization, punctuation, spelling), organization (logical structure and coherence), and content (idea development and relevance). A quantitative approach with a quasi-experimental pre-test and posttest control group design was employed. The sample consisted of two groups: the experimental group (n = 30), which was taught using Google Docs collaboration, and the control group (n = 29), which received conventional writing instruction. Students' writing skills were assessed using an analytic scoring rubric adapted from Oshima and Hogue (2006), focusing on three components: mechanics (5 points), organization (35 points), and content (20 points), totaling 60 points, converted to a 100-point scale. The descriptive statistics showed that the experimental group achieved notable improvement, with the mean score increasing from 43.67 in the pre-test to 83.43 in the post-test, whereas the control group showed minimal change from 28.48 to 79.31. The Mann-Whitney U test confirmed a significant difference between the groups, indicated by an Asymp. Sig. value of 0.000 < 0.05. These findings demonstrate that Google Docs collaboration helps students 11 provide real-time feedback, revise their work collaboratively, and organize ideas more effectively, resulting in improved writing performance in mechanics, organization, and content. Therefore, Google Docs is considered and effective digital tool for enhancing descriptive writing skills and is recommended for use in English writing classrooms aligned with the Merdeka Curriculum.

Keywords: Collaborative Writing Descriptive Text Google Docs Quasi-Experimental Writing Skills Corresponding Author: Syafira Naysilla Putri Atmoko Faculty of Teacher Training and Education, Department of Language and Art Education, Tadulako University Email: firaatmokofira@gmail.com

https://doi.org/10.58421/gehu.v5i1.886 342 1. INTRODUCTION Writing is an essential language skill that supports students' creativity and critical thinking. It plays a crucial role in helping learners express their ideas clearly and accurately. As stated by Mualim & Aziez [1], writing is a productive skill that contributes significantly to language competence. Mastery of writing allows students to communicate effectively in various contexts and enriches their overall language development [2]. This skill also reinforces other language abilities and serves as a foundation for meaningful communication in academic and daily life. Writing 3 development in a second-language context is not merely an individual cognitive activity but also a social process shaped by interaction and feedback. Hyland [3] emphasizes that effective writing instruction should provide learners with opportunities to revise texts, negotiate meaning, and receive continuous feedback in order to improve writing quality. Therefore, instructional approaches that encourage collaboration are considered essential in addressing students' writing difficulties. However, producing a well-written text requires students to master several fundamental aspects of writing, including mechanics, organization, and content. Mechanics involve the technical components of writing, such as capitalization, spelling, and punctuation (Chauhan) [4]. Organization refers to the arrangement of ideas, coherence, and the use of cohesive devices (Kruse et al.) [5]. Content encompasses the clarity and relevance of ideas that reflect the writer's understanding of the topic [4]. Observations conducted at SMA Lab School Untad Palu revealed that many students still struggle with these elements, especially in applying correct capitalization, constructing coherent paragraphs, and presenting engaging content. These persistent difficulties highlight 12 the need for a more effective instructional approach that systematically addresses these writing challenges. To

respond to these challenges, the integration of technology in education has become increasingly important, aligning with the characteristics of 21st-century learning, which emphasizes digital competence and innovative tools (Usman et al.) [6]. Teachers are increasingly required to design learning activities that utilize technological resources to enhance student performance. Google Docs, developed by Google Inc., offers an interactive writing environment where students can collaborate, receive real-time feedback, and revise their work efficiently (Andrade & Roshay) [7]. As a technology-enhanced medium, Google Docs supports the development of descriptive writing by enabling students to improve accuracy, structure ideas, and expand content through guided revisions. This digital approach is particularly relevant in the current educational landscape, where technology-mediated learning has become essential for fostering collaborative and interactive learning experiences. The use of technology-enhanced tools like Google Docs is also well-aligned with the principles of the Merdeka Curriculum. The Merdeka Curriculum emphasizes studentcentered learning and character development through individualized instruction [16]. In the context of the Merdeka Curriculum, writing instruction should promote student agency, encourage personal expression, and support individualized learning. The curriculum

https://doi.org/10.58421/gehu.v5i1.886 343 prioritizes contextual learning and active learning approaches relevant to students' lives [17]. By providing opportunities for students to explore meaningful topics and receive feedback tailored to their needs, teachers can strengthen students' mastery of content, organization, and mechanics. This approach fosters a more engaging learning environment and builds confidence in writing, complementing the collaborative features of digital platforms such as Google Docs. Given this alignment, it becomes essential to examine empirical evidence regarding the effectiveness of Google Docs in actual classroom settings. From a social constructivist perspective, learning to write effectively occurs through collaboration and interaction with more capable peers. Storch [18] argues that collaborative writing allows students to

scaffold each other's learning by sharing ideas, correcting errors, and negotiating language use. In this context, digital platforms such as Google Docs extend collaborative writing beyond the traditional classroom by enabling real-time interaction, shared editing, and continuous revision. Several relevant studies on Google Docs in language learning have been conducted, providing important insights into its application and impact. Hairuddin [19] investigated the perspectives and difficulties of non-English majors in collaborative writing using Google Docs. The findings showed that students had positive perceptions because the tool supported collaboration, idea sharing, and improvement of writing skills, although technical barriers, such as an unstable internet connection, were noted. The second study by Sa'diyah and Nabhan [20] focused on high school EFL students' experiences with Google Docs for collaborative writing. They found that Google Docs enhanced students' motivation, digital literacy, social skills, and writing competence, but challenges such as device limitations and technology skill gaps remained. Another research conducted by Kamal [21] examined higher students' anxiety levels in writing essays through Google Docs. The study revealed that students experienced moderate levels of writing anxiety, mainly due to insufficient practice, linguistic difficulties, and fear of evaluation, even though the platform itself provided collaborative benefits. While previous studies have provided valuable insights into students' experiences with Google Docs, there remains a gap in the research that explicitly measures its effectiveness on actual writing performance using experimental designs. Quasiexperimental designs provide empirical evidence for measuring the effectiveness of interventions on actual performance using pre-test and post-test assessments [20]. To fill the gap, previous studies mainly focused on students' perceptions, benefits, and challenges of using Google Docs for collaborative writing, as well as the anxiety levels students experienced when writing on this platform. Meanwhile, the current research focuses not only on perceptions but more importantly on measuring the concrete impact of Google Docs collaboration on students' descriptive writing skills across three key components mechanics, organization, and content, using a quasi-experimental design with pre-test and post-test assessments. This approach provides

empirical evidence of whether Google Docs collaboration significantly improves students' writing performance compared to conventional teaching methods, addressing the need for quantifiable outcomes in technology-enhanced writing instruction.

https://doi.org/10.58421/gehu.v5i1.886 344 Building on this research gap, this study aims to address ongoing challenges students face in writing descriptive texts, such as limited vocabulary, low motivation, and insufficient feedback. Traditional instructional methods often fail to provide the personalized guidance needed to enhance students' writing abilities [22]. By implementing Google Docs, which facilitates collaboration and immediate correction, this research aims to introduce a more interactive and supportive writing environment. The expected outcome is that students will develop stronger descriptive writing skills and experience improved learning outcomes, supported by measurable data that can guide future instructional practices. These findings also provide empirical support for social constructivist learning theory, demonstrating that collaborative digital environments can enhance students' writing development through peer scaffolding and meaningful interaction. 2. METHOD This research used a quasi-experimental design with a pretest-posttest control group approach to examine the effectiveness of Google Docs in enhancing students' descriptive text writing skills. The research involved two groups: an experimental group using Google Docs and a control group using conventional methods. Both groups underwent pre-test and post-test assessments to measure the impact of the intervention on their writing abilities. The research design was represented as follows: Experimental O1 X O2 Control O3 O4 Where: O1 = (Pre-test of the experimental group) O2 = (Post-test of the control group) O3 = (Pre-test of the experimental group) O4 = (Post-test of the control group) X = (Treatment) The population of this research consisted of all eleventh-grade students at SMA Lab School Untad Palu in the 2025/2026 academic year, totaling 115 students across four classes (MIPA 1–MIPA 4). In statistical terms, a population refers to the aggregate of individuals or units from which a sample is drawn, and to which the results of any analysis

are to apply; in other words, the aggregate of persons or objects under investigation (Krieger) [14]. This school was selected because it implements the Merdeka Curriculum, which emphasizes strengthening students' writing abilities through various text genres, including descriptive text. A sample is a group of people, objects, or items drawn from a larger population for measurement (Bhardwaj) [15]. To ensure the research focus remained relevant, purposive sampling was employed. Two classes were selected based on similar instructional exposure, grade level, and curriculum implementation. Class IPA 3,

https://doi.org/10.58421/gehu.v5i1.886 345 consisting of 30 students, was assigned to the experimental group and received instruction through collaborative Google Docs writing, while Class IPS 3, consisting of 29 students, served as the control group and was taught using conventional writing methods. Although the two groups came from different academic streams, their initial writing abilities were considered comparable. This assumption was supported by the administration of a pre-test prior to the treatment, which measured students' baseline descriptive writing skills. The pre-test results indicated 1 no significant difference between the experimental and control groups, suggesting that both groups had relatively equivalent initial proficiency levels. Therefore, any differences observed in the post-test results could be more confidently attributed to the implementation of Google Docs collaboration rather than to pre-existing differences between the groups. The research instrument used in this research was a writing test administered as a pre-test and post-test to measure students' descriptive writing performance. The pre-test was conducted to assess students' initial writing ability, and the post-test was administered after the intervention to evaluate the effectiveness of Google Docs collaboration. The writing assessment focused on three key components mechanics, organization, and content, using an analytic scoring rubric adapted from Oshima and Hogue [8]. This rubric enabled a systematic evaluation of students' technical accuracy, the coherence of their ideas, and the relevance of their content. The scoring criteria used in this research are presented in the following table: Table 1. Scoring Rubrics 1 of Writing The data for this research

were collected through a writing test administered as a pre-test and post-test. The pre-test was conducted at the first meeting to assess students' initial writing ability in descriptive texts. Students were required to produce a short descriptive paragraph, which was assessed based on three components: mechanics, organization, and content. The experimental group participated in six 90-minute instructional sessions over three weeks. Session 1 began with the administration of the pre-test (45 minutes), followed by an introduction to Google Docs (30 minutes), focusing on collaborative document creation, the use of suggested mode, comments, and version history. Students were then

https://doi.org/10.58421/gehu.v5i1.886 346 organized into groups of three to four members, with rotating roles: initiator, content developer, editor, and feedback coordinator. Sessions 2 and 3 emphasized collaborative drafting, in which groups selected topics, developed outlines, and simultaneously composed descriptive texts using the suggesting mode. Sessions 4 and 5 focused on structured peer feedback activities, where students highlighted specific text segments and provided at least one positive comment and one suggestion for each writing component (organization, content, and mechanics) through the comment feature. Revisions were required to be completed within 24 hours. Session 6 was devoted to revision refinement and concluded with the administration of the post-test (45 minutes). Throughout sessions 2-5, the teacher monitored students' progress in real time and provided guidance and feedback directly in Google Docs. The collaborative writing procedure in this study was designed to promote peer interaction and joint text construction, which are considered essential features of effective collaborative writing activities (Li & Kim) [24]. During the implementation, the teacher acted as a facilitator to support students in using digital collaborative tools effectively, in line with technology-enhanced collaborative learning practices (Trust & Whalen) [25]. In contrast, the control group received conventional instruction. The teacher explained the structure and language features of descriptive texts through lectures, and students completed writing tasks individually without peer collaboration. Feedback was provided only after the final

submission, with a one-week delay. The pre-test and post-test for the control group were administered following the same schedule as the experimental group to ensure consistency. To evaluate the effectiveness of the instructional procedures described above, all pre-test and post-test scores from both groups were analyzed quantitatively using SPSS version 24. Descriptive statistics were first employed to summarize students' writing performance, followed by inferential statistical analysis. Normality and homogeneity tests were conducted to examine whether the data met the assumptions for parametric testing. When the data were normally distributed and homogeneous, an independent-samples t-test was used to compare post-test scores between the experimental and control groups. However, when these assumptions were not met, the Mann-Whitney U test was used as a nonparametric alternative. This analytical process allowed the researcher to determine whether collaborative writing through Google Docs led to a statistically significant improvement in students' descriptive writing skills. 3. RESULTS AND DISCUSSION The findings revealed that Google Docs collaboration was effective in improving students' descriptive writing skills. Analysis of the pre-test and post-test scores showed that the experimental group, which received instruction via Google Docs, achieved significantly greater improvement than the control group, which continued with conventional writing methods. Overall, integrating Google Docs helped students organize their ideas more coherently, apply writing mechanics more accurately, and develop richer content, resulting in better writing performance.

https://doi.org/10.58421/gehu.v5i1.886 347 3.1. Results The pre-test and post-test were administered to determine whether Google Docs collaboration could effectively improve eleventh-grade students' descriptive writing skills at SMA Lab School Untad Palu. The pre-test measured their initial ability, while the posttest assessed the progress they made after the treatment. The experimental group learned through collaborative writing using Google Docs, which allowed students to write, revise, and provide feedback in real time, a method that has also been reported to improve writing performance by supporting idea

development and organization. Meanwhile, the control group continued with the conventional method that relied on teacher explanation and individual writing. After completing several treatment sessions, both groups took the posttest in the final week of the intervention. When the pre-test and post-test scores were compared, the experimental group showed clearer improvement than the control group, as presented in the descriptive results in the following tables: Table 2. Pre-Test Results of Class XI IPS 3 (Control Group) No Students Organization (35) Content (20) Mechanics (5) Pre-Test 1 AN 10 6 2 30 2 FA 18 10 3 51 3 IR 7 4 1 20 4 KP 7 4 1 20 5 JO 7 4 1 20 6 FD 7 4 1 20 7 RF 7 4 1 20 8 NT 7 4 1 20 9 SA 7 4 1 20 10 TR 7 4 1 20 11 AP 7 4 1 20 12 RY 14 8 2 40 13 N 16 9 2 45 14 M 17 10 3 50 15 SY 14 8 2 40 16 AP 10 6 2 30 17 HI 12 7 2 35 18 JP 7 4 1 20 19 T 7 4 1 20 20 R 7 4 1 20 21 RE 10 6 2 30 22 MI 9 5 1 25 23 ST 12 7 2 35 24 TY 14 8 2 40 25 PO 16 9 2 45 26 LP 10 6 2 30 27 P 7 4 1 20 28 BR 7 4 1 20 29 PA 7 4 1 20 Mean 28.48 Minimum 20 Maximum 51 Std deviation 10.34

https://doi.org/10.58421/gehu.v5i1.886 348 Table 3. Pre-Test Result of Class XI IPA 3 (Experimental Group) No Students Organization (35) Content (20) Mechanics (5) Pre-Test 1 DF 17 10 3 50 2 VG 19 11 3 45 3 AM 17 10 3 50 4 AS 14 8 2 40 5 FK 16 9 2 45 6 R 14 8 2 40 7 MU 14 8 2 40 8 NN 12 7 2 35 9 AR 17 10 3 50 10 RO 14 8 2 40 11 MH 16 9 2 45 12 NK 14 8 2 40 13 AD 17 10 3 50 14 N 14 8 2 40 15 FN 14 8 2 40 16 NA 12 7 2 35 17 LS 12 7 2 35 18 MR 17 10 3 50 19 QA 16 9 2 45 20 TY 17 10 3 50 21 PT 17 10 3 50 22 SN 16 9 2 45 23 DL 12 7 2 35 24 BD 16 9 2 45 25 RL 16 9 2 45 26 LA 16 9 2 45 27 YK 19 11 3 55 28 S 14 8 2 40 29 AZ 10 6 2 30 30 ZR 16 9 2 45 Mean 43.67 Minimum 30 Maximum 55 Std deviation 6.18 The descriptive results show that the experimental group's mean score was 43.67 on the pre-test, while the control group's mean score was 28.48. These findings indicate that students in both groups still had limited descriptive writing ability prior to the treatment, especially in mechanics, organization, and content. Table 4. Post-Test Result of Class XI IPS 3 (Control Group) No Students Organization (35) Content (20) Mechanics (5) Post-Test 1 AN 23 13 3 65 2 FA 23 13 3 65

3 IR 28 16 4 80 4 KP 31 18 5 90 5 JO 24 14 4 70 6 FD 28 16 4 80 7 RF 30 17 4 85 8 NT 31 18 5 90 9 SA 28 16 4 80 10 TR 30 17 4 85

https://doi.org/10.58421/gehu.v5i1.886 349 No Students Organization (35) Content (20) Mechanics (5) Post-Test 11 AP 26 15 4 90 12 RY 28 16 4 80 13 N 26 15 4 75 14 M 30 17 4 85 15 SY 24 14 4 70 16 AP 23 13 3 65 17 HI 24 14 4 70 18 JP 26 15 4 75 19 T 28 16 4 80 20 R 30 17 4 85 21 RE 26 15 4 75 22 MI 30 17 4 85 23 ST 31 18 5 90 24 TY 30 17 4 85 25 PO 28 16 4 80 26 LP 30 17 4 85 27 P 28 16 4 80 28 BR 31 18 5 90 29 PA 28 16 4 80 Mean 79.31 Minimum 65 Maximum 90 Std deviation 7.64 Table 5. Post-Test 2 Result of Class XI IPA 3 (Experimental Group) No Students Organization (35) Content (20) Mechanics (5) Post-Test 1 DF 28 16 4 80 2 VG 28 16 4 80 3 AM 30 17 4 85 4 AS 26 15 4 75 5 FK 31 18 5 90 6 R 31 18 5 90 7 MU 31 18 5 90 8 NN 30 17 4 85 9 AR 28 16 4 80 10 RO 28 16 4 80 11 MH 30 17 4 85 12 NK 26 15 4 75 13 AD 28 16 4 80 14 N 31 18 5 90 15 FN 30 17 4 86 16 NA 27 16 4 78 17 LS 28 16 4 80 18 MR 28 16 4 81 19 QA 28 16 4 79 20 TY 31 18 5 90 21 PT 29 16 4 82 22 SN 28 16 4 80 23 DL 28 16 4 79 24 BD 30 17 4 85

https://doi.org/10.58421/gehu.v5i1.886 350 No Students Organization (35) Content (20) Mechanics (5) Post-Test 25 RL 31 18 5 90 26 LA 30 17 4 85 27 YK 28 16 4 79 28 S 31 18 5 89 29 AZ 31 18 5 90 30 ZR 30 17 4 85 Mean 83.43 Minimum 75 Maximum 90 Std deviation 4.74 10 The post-test results show that the experimental group experienced a notable increase in performance after learning through Google Docs collaboration. Their mean score rose to 83.43, with several students achieving scores close to the maximum. In 8 comparison, the control group reached a mean score of 79.31, showing improvement but not as substantial. Overall, these 2 results suggest that Google Docs collaboration had a positive impact on students' descriptive writing skills, particularly by improving organization, mechanics, and content clarity. To ensure statistical analysis accuracy, 1 the data were first tested for normality using the Shapiro–Wilk test at the 0.05 significance level. Data are considered normal if Sig. > 0.05. The results are

shown below: Table 6. Test of Normality Group P-value (Sig.) Description Experimental Pre-Test 0.118 Normal Experimental Post-Test 0.016 Abnormal Control Pre-Test 0.245 Normal Control Post-Test 0.089 Normal The results show that the experimental group's pre-test data were normally distributed (Sig. = 0.118), while the post-test data were not (Sig. = 0.016). In contrast, both the pre-test and post-test data from the control group were normally distributed. Because one dataset did not meet the normality assumption, a nonparametric analysis was required, and the Mann–Whitney U test was selected. After the normality test, a homogeneity test was conducted using the Levene statistic. Data are considered homogeneous if Sig. > 0.05. Table 7. Test of Homogeneity No Group Sig. Status 1 Post-Test of Experimental Group and Control Group 0.069 Homogeneous The significance value of 0.069 indicates that the variances of the experimental and control groups are homogeneous. This means both groups showed similar variability and could be compared reliably. Because the normality assumption was not fulfilled for all data, the Mann–Whitney U test was used to determine whether there was a significant

https://doi.org/10.58421/gehu.v5i1.886 difference between the experimental and control groups. According to the decision rule, the alternative hypothesis (Ha) is accepted if the significance value is less than 0.05. Table 8. Test Statistics No Class Indicator Asymp. 2 Sig (2 Tailed) 1 Pre-Test and Post-Test of Experimental and Control Class Sig. < 0.05 0.00 The Mann–Whitney test yielded a p-value of 0.00, which is lower than 0.05. This indicates that the alternative hypothesis is accepted and the null hypothesis is rejected. Thus, the use of Google Docs for collaboration significantly improved the descriptive writing skills of eleventh-grade students at SMA Lab School Untad Palu. This result is consistent with other quasi-experimental studies that found collaborative digital platforms to be more effective than traditional methods in promoting writing improvement. 3.2. Discussion The results of this research show that using Google Docs as a collaborative digital tool had a clear and significant impact on improving

eleventh-grade students' descriptive writing skills at SMA Lab School Untad Palu. Thus, the following discussion explains how organization, content, and mechanics developed throughout the research. The first aspect discussed in this research is organization, which refers to how students structure their descriptive texts through clear identification and detailed description, supported by proper coherence devices (Anderson & Anderson) [8]. During the pre-test, several students demonstrated difficulty in organizing their ideas logically. The student examples presented in this section are illustrative excerpts selected to represent common patterns observed in the pre-test and post-test results across participants. For instance, student F in the control group wrote sentences in separate fragments, using no connecting words, creating a disjointed paragraph. In the post-test, however, the same student successfully used connectors such as “or” and “and” to organize descriptions more clearly. Likewise, a student NT from the control group, who initially wrote only one mixed paragraph without distinction between identification and description, produced a wellstructured text after the treatment, dividing the content into a clear introductory part and detailed characteristics in the body paragraph. This improvement aligns with Kruse et al. [4], who stated that collaborative digital platforms strengthen students’ understanding of coherence and text structure through model exposure and peer-assisted revision. Therefore, the findings indicate that Google Docs collaboration effectively supported students in improving paragraph organization and logical flow. The second aspect is content, which focuses on how well students develop relevant, vivid, and complete ideas in their descriptive texts. Chauhan [3] notes that content quality improves when students receive immediate feedback and opportunities for revision. During the pre-test, many students provided minimal or repetitive details. The following examples are provided as representative cases chosen from students who demonstrated noticeable improvement based on rubric-based score changes. For example, student KP from the control group. Described an object using only general terms such as "bad

resulting in low content development. After participating in collaborative writing through Google Docs, the same student added more specific sensory details, such as “the piece of chicken is a deep, enticing golden brown, covered in a craggy, rugged crust, a clear promise of glorious crunchiness.” Demonstrating richer and more relevant content. Another student, DF from the experimental group, whose pre-test writing lacked a clear main idea and included off-topic sentences, maintained topic relevance and incorporated supporting details in the post-test. This aligned with Vygotsky’s Zone of Proximal Development, which states that learners can enhance their idea development when scaffolded by peers and teachers through structured collaboration. The results confirm that Google Docs enhanced students’ ability to generate clearer, more vivid content. The third component evaluated is mechanics, encompassing spelling, capitalization, and punctuation accuracy. Writing mechanics play a crucial role in ensuring clarity and readability, and their improvement is strongly supported through feedback and revision activities. This aligns with the findings of Annisa and Gusnawaty [9], who emphasize that feedback and revision are beneficial and necessary for improving writing skills. During the pre-test, many students struggled with basic mechanics. Student KP from the control group, for instance, frequently misused capital letters, writing names such as “palupi street” in lowercase. Punctuation errors were also common, including missing commas and periods. After using Google Docs, this student showed notable improvement, correctly applying capitalization and using more accurate punctuation, benefiting from Google Docs’ automatic correction suggestions and peer comments. Similarly, student NM from the experimental group, who initially wrote long run-on sentences, was able to revise them into clearer, correctly punctuated sentences in the post-test. These examples were selected because they reflect recurring mechanical issues identified during the pre-test and their subsequent improvement after collaborative revision activities. The mechanical improvements illustrated here were not limited to individual students but were consistently observed across multiple scripts, as indicated by the overall increase in mechanics scores in the experimental group. This finding

corresponds with Warschauer & Healey [10], who emphasize that digital writing tools support mechanical accuracy by offering real-time error detection and opportunities for iterative editing. These improvements demonstrate that mechanics benefited substantially from the collaborative, revision-oriented nature of Google Docs. Overall, the combined progress in organization, content, and mechanics indicates that Google Docs played a significant role in improving students' descriptive writing performance. The platform enabled students to collaborate, revise, and receive immediate support from peers and teachers, which strengthened their writing processes across all components. This aligns with previous studies (Zhou et al. & Thompson) [11] [12] that highlight the effectiveness of digital collaborative tools in enhancing writing quality. Therefore, this research finds that Google Docs not only promotes higher accuracy and coherence but also supports students in developing richer ideas through meaningful collaboration, confirming its effectiveness as a digital learning medium for writing instruction.

https://doi.org/10.58421/gehu.v5i1.886 353 4. CONCLUSION This research demonstrates that Google Docs collaboration significantly improves eleventh-grade students' descriptive writing skills at SMA Lab School Untad Palu. Implementing Google Docs allows students to revise their work collaboratively, receive real-time feedback, and learn from both their own errors and peers' writing. This collaborative process fosters a more interactive learning environment and supports students in developing clearer organization, richer content, and more accurate mechanics in their descriptive texts. The Mann-Whitney U test confirmed a statistically significant difference between groups ($p = 0.000 < 0.05$), indicating that Google Docs collaboration improved writing performance. These findings have important implications for educational practice. Teachers should integrate Google Docs into writing instruction to create more engaging learning environments. Schools need to invest in digital infrastructure and provide professional development programs. These findings align with the Merdeka Curriculum's emphasis on student-centered, technology-integrated approaches, supporting the integration of

digital collaborative tools into EFL writing instruction. Despite the positive impact, several challenges and limitations emerged. Some students initially struggled with collaborative editing features, requiring additional time for adaptation. This research has limitations, including a small sample size (59 students from one school), a limited intervention duration (six weeks), a focus exclusively on descriptive text, and a specific context with adequate digital infrastructure. These limitations suggest caution when generalizing results beyond this study's context. Future research should investigate Google Docs' effectiveness across different text genres, conduct longitudinal studies to examine long-term impacts, and explore diverse educational contexts, including rural schools. Mixed-methods approaches combining quantitative and qualitative data could provide deeper insights into collaborative processes. Future studies should also use randomized sampling, larger sample sizes, and report effect sizes to strengthen generalizability. This research contributes to theory by supporting social constructivist learning theories with empirical evidence of peer scaffolding in digital environments. Methodologically, it addresses previous research gaps by providing quantitative evidence through a quasi-experimental design rather than relying on perception-based data. In practice, it provides evidence for instructional decisions aligned with the Merdeka Curriculum and demonstrates that accessible digital tools like Google Docs can effectively enhance writing instruction. For teachers, it provides a replicable model with practical implementation strategies, while for students, it shows how digital collaboration transforms writing into an interactive learning experience that builds both writing competence and digital literacy.

ACKNOWLEDGEMENTS I would like to express my sincere gratitude to Prof. Dr. Hj. Sriati Usman, M.Hum., for her guidance, constructive feedback, and continuous support throughout the research process. My appreciation also goes to Budi, S.Pd., M.Pd., for his valuable

https://doi.org/10.58421/gehu.v5i1.886 354 assistance, input, and encouragement as Co-supervisor. I would also like to thank Dr. Darmawan, S.Pd.,

M.Phil., for his insightful comments and helpful suggestions as the reviewer. My heartfelt thanks are extended to the principal of SMA Lab School Untad Palu and to the English teacher for their cooperation and support during data collection. I am also grateful to all the students who participated in this research. Lastly, I wish to thank my family and friends for their constant prayers, encouragement, and unwavering support throughout the completion of this research. REFERENCES [1] M. Mualim and F. Aziez, "Learning essential writing skills by young learners: The bridge to write a good text," Journal of Teaching and Learning English in Multicultural Contexts, vol. 4, no. 1, pp. 1-11, 2020. [2] J. C. Richards and W. A. Renandya, Methodology in Language Teaching: An Anthology of Current Practice, 2nd ed. Cambridge University Press, 2019. [3] Hyland, K. (2019). Second Language Writing. Cambridge University Press. [4] V. Chauhan, "Technical aspects of writing: Mechanics and organization," Journal of Writing Research, 2022. [5] O. Kruse, M. Chitez, and B. Rodriguez, "Coherence in collaborative writing: Theoretical models and empirical evidence," Writing & Pedagogy, vol. 15, no. 2, 2023. [6] S. Usman et al., "Technology integration in 21st century learning," Educational Technology Journal, 2024. [7] M. S. Andrade and E. Roshay, "Google Docs as a collaborative writing tool in the classroom," Technology in Education Quarterly, 2023. [8] A. Oshima and A. Hogue, Writing Academic English, 4th ed. Pearson Education, 2006. [9] M. Anderson and K. Anderson, Text Types in English, vol. 3. South Yarra: Macmillan Education Australia, 2021. [10] Annisa and Gusnawaty, "The role of feedback in writing development," Journal of Language Teaching, 2024. [11] M. Warschauer and D. Healey, "Computers and language learning: An overview," Language Teaching, vol. 51, no. 4, pp. 49--65, 2018. [12] W. Zhou, E. Simpson, and D. P. Domizi, "Google Docs in an academic writing classroom: Writing together, learning together," Journal of Technology and Teacher Education, vol. 30, no. 1, pp. 121-134, 2022. [13] M. Zhou, M. Simpson, and K. Dominguez, "Enhancing collaborative writing using Google Docs in EFL classrooms," International Journal of Emerging Technologies in Learning, vol. 17, no. 3, pp. 23--36, 2022. [14] N. Krieger, "Who and what is a 'population'? Historical debates, current controversies, and implications

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