

Development of Canva-Assisted Project-Based Learning Instructional Materials to Improve Elementary School Students' Narrative Writing Skills and Learning Autonomy

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Abstract

This study developed and evaluated Canva-assisted instructional materials integrated with the Project-Based Learning (PjBL) model to enhance elementary school students' narrative writing skills and learning autonomy. The study employed a Research and Development (R&D) approach using the ADDIE model, comprising analysis, design, development, implementation, and evaluation stages. The study involved fifth-grade students at Bina Cendekia Islamic Elementary School, South Tangerang City, Indonesia. Data were collected through observations, interviews, questionnaires, documentation, and narrative writing tests. Quantitative data were analyzed using IBM SPSS Statistics, including a paired-samples t-test, while qualitative data were analyzed using the Miles and Huberman model. The developed instructional materials were highly valid, with validation scores of 91% from a subject matter expert and 89% from a media expert. The materials were also highly practical, as indicated by an average positive response of 90% from teachers and students. Students' mean narrative writing scores increased from 52.17 on the pretest to 87.00 on the posttest. The paired-samples t-test indicated a statistically significant improvement ($p < .001$). Students' learning autonomy also improved significantly based on the statistical analysis. These findings indicate that Canva-assisted PjBL instructional materials are valid, practical, and effective for enhancing narrative writing skills and learning autonomy among elementary school students.

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INTRODUCTION

The demands of 21st-century education extend beyond students' mastery of academic content to include the development of critical thinking, creativity, communication, collaboration, and digital literacy skills (Voogt & Roblin, 2012). Rapid technological advancements and global changes require educational institutions to continuously innovate their teaching practices to prepare students for an increasingly dynamic and technology-driven world (Baharuddin, 2022).

As the foundation of formal education, elementary schools play a crucial role in developing students' cognitive abilities, literacy competencies, and lifelong learning skills. In particular, fifth-grade students are at a developmental stage in which they are increasingly able to organize ideas, make connections between concepts, and engage in more complex problem-solving tasks, while still requiring concrete experiences, structured guidance, and appropriate scaffolding to support independent learning (Wood et al., 1976; van de Pol et al., 2010). Therefore, learning activities that combine meaningful projects with visual and interactive digital tools can provide an appropriate bridge between students' developing cognitive abilities and the demands of digital learning. Canva-assisted Project Based Learning (PjBL) is developmentally appropriate in this context because project activities provide students with opportunities to explore ideas, collaborate, make decisions, and produce meaningful products, while Canva offers an accessible visual environment that can help students organize, represent, and communicate their ideas. However, fifth-grade students may not yet possess sufficient digital literacy and self-regulation to independently manage complex digital tasks (Ng, 2012). Consequently, teacher scaffolding remains essential through explicit modeling, step-by-step instructions, examples or templates, guided practice, feedback, and gradual transfer of responsibility to students (Pearson & Gallagher, 1983). Such scaffolding enables students to engage with digital tools without allowing technological complexity to overshadow the primary learning objectives. Among the essential literacy competencies that should be fostered at this stage is narrative writing, as it requires students to integrate logical thinking, imagination, organization of ideas, and expressive language. Thus, integrating Canva-assisted project work into narrative writing instruction can create a developmentally responsive learning environment that supports both students' writing development and their emerging cognitive and digital competencies.

Narrative writing is one of the most important productive language skills in elementary Indonesian-language education. Proficiency in narrative writing involves a process rather than only the quality of the final product. Students need to generate and develop ideas, organize events into a coherent structure, establish cohesion across sentences and paragraphs, select appropriate vocabulary, apply grammatical and mechanical conventions, revise meaning and organization, and consider the intended audience (Kellogg, 2008). In classroom practice, therefore, students' writing competence is reflected in their ability to move from planning and drafting to revising, editing, and publishing a coherent narrative. These processes require students to coordinate content, organization, language use, mechanics, and audience awareness rather than simply produce a visually attractive final text (Flower & Hayes, 1981; Graham et al., 2012).

Despite its importance, previous studies have consistently reported that elementary school students continue to face substantial challenges in developing narrative writing skills. Common difficulties include generating and expanding ideas, organizing coherent storylines, maintaining cohesion between paragraphs, selecting contextually appropriate vocabulary, and correctly applying spelling and punctuation conventions (Graham & Perin, 2007). Consequently, students' written work often lacks coherence, clarity, and completeness in conveying ideas. These findings are consistent with those reported by Nugroho and Dwijantoro (2022), Koster et al. (2015), and Graham et al. (2012), who argued that the limited quality of students' writing is largely attributable to instructional approaches that fail to adequately support idea generation, text organization, and the continuous revision process.

The low level of students' narrative writing proficiency is influenced by both internal and external factors. Internal factors include limited learning motivation, low interest in writing, and insufficient self-confidence. External factors involve the use of less innovative instructional approaches, teacher-centered classroom practices, and the limited integration of engaging digital learning media into classroom instruction (Husain & Budiman, 2022). Furthermore, the absence of instructional materials that incorporate creative digital projects has become a significant barrier to fostering students' learning autonomy and encouraging their interest in narrative writing.

A preliminary observation conducted at SD Islam Bina Cendekia, South Tangerang City, revealed that most fifth-grade students experienced difficulties across several stages of the narrative writing process. During the planning stage, many students had difficulty generating and selecting ideas, identifying relevant experiences or topics, and organizing them into a coherent sequence of events. These difficulties continued into the drafting stage, as students often struggled to develop their initial ideas into complete narratives with clear orientation, complication, and resolution. During classroom activities, students tended to be passive and relied heavily on teacher guidance to initiate and develop their writing. Difficulties were also observed during the revising and editing stages, as students rarely reviewed their drafts independently to improve the organization of ideas, word choice, sentence structure, and writing mechanics. Instead, they tended to consider the first draft as the final product and depended on teacher feedback to identify and correct errors. These conditions were closely related to students' low level of learning autonomy, particularly their limited ability to plan writing tasks, monitor their progress, evaluate their own work, and make revisions independently. Thus, the identified problem was not limited to students' final writing performance but involved the writing process as a whole, indicating the need for learning activities that provide systematic scaffolding throughout the stages of planning, drafting, revising, and editing while gradually encouraging students to assume greater responsibility for their own writing.

Previous studies have examined the use of Canva and Project-Based Learning (PjBL) in elementary education, but important pedagogical limitations remain unresolved, particularly in supporting students throughout the complete narrative-writing process. Mulyani et al. (2022) developed Canva-based instructional media to improve students' learning outcomes; however, the study did not integrate Canva with a project-based instructional framework that systematically guides students through planning, drafting, revising, and editing. Similarly, Afriani and Sundari (2022) employed Canva to support students' descriptive writing skills, rather than addressing the specific process demands of narrative writing, in which students need to generate ideas, organize sequences of events, develop a coherent story, and revise their drafts. Meanwhile, Sartika and Komalasari (2022) implemented Project-Based Learning to enhance students' learning autonomy but did not utilize a digital platform that could support students in visualizing ideas, developing written products, and communicating their work creatively. Consequently, the unresolved pedagogical limitation is not merely the separate use of Canva and PjBL, but the absence of an integrated learning design that connects project-based activities, digital creative tools, and systematic scaffolding across the stages of the writing process. In elementary narrative-writing instruction, such integration is particularly important because students require structured support to move from generating and organizing ideas to producing, reviewing, and improving their written work, while gradually developing greater responsibility for their learning. Therefore, this

study addresses the gap by developing instructional materials that systematically align the stages of Project-Based Learning with Canva's creative and visual features to scaffold the narrative-writing process from planning to final product, while simultaneously fostering students' learning autonomy.

To address these challenges, an instructional approach that actively engages students in meaningful, creative, and increasingly independent learning experiences is required. The integration of Project-Based Learning and Canva was selected because the two approaches complement each other pedagogically and technologically while remaining relevant to the learning objectives of Grade V Indonesian-language instruction. In the Indonesian elementary-school curriculum, Indonesian-language learning emphasizes students' ability to understand, develop, and communicate ideas through various types of texts, including narrative texts, by organizing information coherently and expressing ideas appropriately in written form. Accordingly, the developed instructional materials are designed to support Grade V students in achieving these learning outcomes through a structured narrative-writing process, beginning with generating and organizing ideas, continuing through drafting and developing narrative texts, and progressing to revising, editing, and presenting the final product. Project-Based Learning provides a structured learning framework through its instructional phases, encouraging students to engage in authentic tasks, collaborate, make decisions, monitor their progress, and gradually develop responsibility for their learning (Bell, 2010; Kokotsaki et al., 2016). At the same time, Canva provides an accessible digital environment through which students can visualize ideas, organize narrative elements, develop written products, and communicate their stories creatively (Ainsworth, 2006). The integration of these components is therefore intended not merely to introduce digital technology into the classroom, but to provide curriculum-aligned scaffolding that connects the narrative-writing process with meaningful project work and students' emerging digital competencies. Therefore, this study aimed to develop Canva-assisted Project-Based Learning instructional materials for Grade V Indonesian-language learning to improve students' narrative writing skills and learning autonomy. The developed instructional materials are expected to provide a valid, practical, and effective learning resource that is relevant to authentic elementary-school practice and contributes to innovative instructional practices aligned with the demands of 21st-century education (Wahyuni et al., 2022; Ramadhani et al., 2022).

METHOD

This study employed the Research and Development (R&D) method using the ADDIE instructional design model, which consists of five phases: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE model was selected because it provides a systematic, structured, and iterative framework for developing instructional materials while emphasizing continuous evaluation throughout the development process. Consequently, it is widely recognized as an appropriate model for developing instructional materials in elementary education (Branch, 2009; Molenda, 2003). Through these sequential phases, the instructional materials were systematically designed, validated, implemented, and evaluated to ensure their alignment with students' learning needs and instructional objectives.



Figure 1. The Stage of ADDIE Model

The study was conducted at SD Islam Bina Cendekia, South Tangerang City, Indonesia, during the second semester of the 2025/2026 academic year. The school was purposively selected because it represented the instructional context targeted by the developed materials, particularly the implementation of Grade V Indonesian-language learning and the need for instructional materials that integrate project-based learning with digital media. The participants were 30 fifth-grade students who were selected based on their enrollment in the target class and their participation in the narrative-writing learning activities. The students had varying levels of academic achievement and digital familiarity, providing a heterogeneous classroom context for evaluating the applicability of the developed instructional materials. Before the field trial, students' prior exposure to Canva and comparable digital tools was identified through teacher information and an initial student questionnaire. The preliminary information indicated that students had limited experience using digital design applications, and most students had never used Canva for academic learning activities. This information was considered in designing the scaffolding, including teacher demonstrations, step-by-step instructions, templates, and guided practice.

Prior to the field trial, a small-group trial was conducted with six fifth-grade students representing high, medium, and low achievement levels. The achievement categories were determined using students' previous Indonesian-language learning records and narrative-writing performance, with students classified based on the distribution of their prior achievement scores.

Two students were selected from each category to represent the high-, medium-, and low-achievement groups. The small-group trial focused on the readability, usability, clarity of instructions, attractiveness of the visual presentation, and feasibility of the learning activities and Canva-based tasks. The results showed that the instructional materials could be followed by students across the three achievement levels, although students in the low-achievement group required more teacher guidance during the stages of generating ideas, organizing narrative elements, and operating some Canva features. Minor revisions were therefore made to simplify several instructions, provide additional examples and templates, and clarify the sequence of project activities before the field trial. Overall, the small-group trial indicated that the developed materials were sufficiently understandable and feasible for implementation in a larger Grade V classroom setting.

1. Analysis Phase

The analysis phase was conducted to identify instructional needs, students' characteristics, and the challenges encountered in teaching narrative writing at the elementary school level. This phase consisted of two major activities: performance analysis and needs assessment. Data were collected through classroom observations, interviews with the fifth-grade classroom teacher, and the administration of a student needs assessment questionnaire (Laksana & Kurniawan, 2022; Putra & Divayana, 2022).

The classroom observations revealed that narrative writing instruction remained predominantly teacher-centered, relying mainly on lectures and individual assignments. Students tended to be passive during learning activities and experienced difficulties in generating ideas, organizing coherent storylines, and selecting appropriate vocabulary. Furthermore, the integration of digital learning media into writing instruction was still very limited. Interviews with the classroom teacher also indicated that many students lacked confidence in their writing abilities and demonstrated low levels of learning autonomy.

2. Design Phase

During the design phase, the instructional materials and all research instruments were systematically developed. This phase involved designing the instructional model, teaching module, student worksheets (*Lembar Kerja Peserta Didik* [LKPD]), and Canva-based instructional media (Fadillah & Wahyudi, 2022; Sofyan et al., 2022). The instructional materials were designed by aligning the six stages of the Project-Based Learning (PjBL) model with Canva's interactive features. Specifically, (1) the driving question was presented through an interactive Canva cover page; (2) the project plan was organized using a narrative planning template; (3) the project timeline was visualized through an infographic; (4) project monitoring was facilitated using Canva-based progress-tracking sheets; (5) project outcomes were presented through students' digital storybook presentations; and (6) learning evaluation was conducted through structured written reflection activities.

The research instruments developed during this phase included: (1) content-expert and media-expert validation sheets; (2) a teacher response questionnaire to evaluate practicality from the teacher's perspective; (3) a student response questionnaire to assess practicality from the users' perspective; (4) a narrative-writing achievement test administered as pretest and posttest; and (5) a learning autonomy questionnaire. The learning autonomy questionnaire was conceptualized as a self-regulatory learning construct informed by Self-Regulated Learning theory (Zimmerman,

2002). Its indicators addressed learning responsibility, discipline, self-confidence, learning initiative, and independent task completion. The questionnaire used a five-point Likert scale. Because the current manuscript does not contain the original item-level validation and reliability output, the exact number of items, content-validation coefficient, and internal-consistency coefficient should be inserted from the original instrument-analysis records before submission.

3. Development Phase

The development phase focused on producing the instructional materials based on the design developed in the previous phase. During this stage, the researcher developed Canva-assisted instructional materials, including digital storybook templates, sample narrative texts, instructional interface designs, and Canva user guides for both teachers and students. The completed instructional materials were then subjected to expert appraisal by two validators with complementary areas of expertise. One validator served as a content expert with expertise in Indonesian-language and elementary education, particularly in literacy and narrative-writing instruction, while the other served as a media expert with expertise in educational technology and the development of digital learning media. The selection of the validators was based on their relevant academic and professional expertise in the respective areas assessed. The content expert evaluated the accuracy, relevance, organization, language, and suitability of the instructional content for Grade V Indonesian-language learning, whereas the media expert assessed the visual design, usability, navigation, technical quality, and appropriateness of the Canva-assisted materials. The content validation resulted in a score of 91%, while the media validation obtained a score of 89%, indicating that the materials met the predetermined validity criteria. Although the expert appraisal involved one content expert and one media expert, the two validators provided complementary evaluations of the product's substantive and media qualities. Therefore, these validation results were treated as preliminary evidence of product validity rather than as the sole basis for establishing validity. The expert appraisal was subsequently complemented by a small-group trial and a field trial to examine the materials' readability, practicality, feasibility, and effectiveness in the target Grade V classroom context.

The validation process employed a five-point Likert-scale instrument, with scores ranging from 1 to 5 (Herlinda et al., 2022). Product validity was determined using descriptive percentage analysis based on the following formula:

$$P = \frac{\sum \text{obtained score}}{\sum \text{maximum score}} \times 100\%$$

The validity criteria were classified as follows: 81–100% = Highly Valid, 61–80% = Valid, 41–60% = Fairly Valid, and below 40% = Less Valid. Feedback and recommendations provided by the validators served as the basis for revising the instructional materials. The revisions primarily involved simplifying the user instructions, adjusting font sizes, adding more examples of narrative texts, and improving the visual design of the instructional media to enhance readability and user engagement.

4. Implementation Phase

The implementation phase involved applying the developed instructional materials in the target classroom context. The product was implemented using a One-Group Pretest–Posttest pre-experimental design involving 30 fifth-grade students at SD Islam Bina Cendekia, South

Tangerang City, during four instructional sessions in Indonesian-language lessons focusing on narrative writing (Gusniar & Hasibuan, 2023; Yanti et al., 2022). Because the study did not include a comparison group, changes observed between the pretest and posttest were interpreted as evidence of changes associated with the implementation of the developed materials rather than as conclusive evidence of their causal effectiveness. Other factors, such as students' prior learning experiences, maturation, teacher effects, and repeated testing, may also have contributed to the observed changes (Knapp, 2016).

The four instructional sessions were organized according to the stages of Project-Based Learning and the narrative-writing process. Each session lasted approximately [duration] minutes. At the beginning of the implementation, students completed a pretest to assess their initial narrative-writing performance and a learning-independence questionnaire. In the first session, the teacher introduced the learning problem and driving question, activated students' prior knowledge, presented examples of narrative texts, and guided students in identifying narrative elements and generating story ideas. In the second session, students planned and developed their narrative projects by organizing characters, settings, problems, sequences of events, and possible resolutions. Students worked in individual, with each student maintaining responsibility for developing and contributing to the content of the narrative. The teacher provided scaffolding through modeling, guiding questions, examples, and step-by-step instructions, particularly for students who experienced difficulties generating or organizing ideas. In the third session, students drafted and developed their narratives using Canva-assisted materials. They were guided to combine written narrative content with appropriate visual elements while maintaining coherence between the text and the intended message. Students then reviewed their drafts and received teacher and/or peer feedback on the organization of ideas, language use, and writing mechanics (Hattie & Timperley, 2007). In the fourth session, students revised and edited their narratives based on the feedback received and completed their final digital narrative products. The products were subsequently shared or presented, followed by reflection on the learning process, the completed project, and students' individual contributions. Throughout the four sessions, responsibility was gradually transferred from the teacher to the students so that scaffolding was reduced as students became more familiar with the writing process and Canva features.

Digital access was also considered during implementation because the feasibility of Canva-assisted learning depends on students' access to appropriate technological resources. The learning activities were conducted using students' own devices. Internet access was provided through other, and the connection was stable. The teacher provided technical assistance when students experienced difficulties accessing Canva, navigating templates, inserting text or visual elements, or saving and sharing their work. When technical difficulties occurred, students were encouraged to work collaboratively and use the available templates and printed or teacher-provided alternatives so that technological constraints did not prevent them from achieving the intended learning objectives.

At the end of the implementation, students completed a posttest to assess their narrative-writing performance and a learning-independence questionnaire. Teachers and students also completed response questionnaires to provide information about the practicality, usability, and perceived usefulness of the developed instructional materials. The pretest-post test results were subsequently compared descriptively and statistically to identify changes in students' narrative-

writing performance, while the questionnaire data were used to examine students' learning independence and perceptions of the practicality of the materials. Given the absence of a control group, the findings were interpreted as evidence of the observed changes following implementation and as support for the feasibility and potential effectiveness of the developed materials, rather than as definitive evidence that the materials alone caused the observed improvement.

5. Evaluation Phase

The evaluation phase aimed to examine the practicality and potential effectiveness of the Canva-assisted instructional materials developed based on the PjBL model. Evaluation involved narrative-writing tests administered before and after the intervention, classroom observations, interviews with the teacher and students, and the learning autonomy questionnaire. Narrative writing was assessed with an analytical rubric covering five dimensions: content and ideas, text structure, vocabulary and word choice, language use, and writing mechanics, with a maximum of 20 points for each dimension. Each dimension was scored on a four-level scale: 4 = clear, complete, coherent, and appropriate performance; 3 = generally appropriate performance with minor weaknesses; 2 = partially developed performance with several weaknesses; and 1 = limited performance requiring substantial improvement. The same rubric was applied to all pretest and posttest products. The pretest and posttest tasks were designed to have comparable narrative-writing demands rather than to repeat the same prompt; however, the original task forms should be retained as supplementary evidence of task equivalence. One trained rater, the classroom teacher/researcher, scored all products. Because only one rater was used, inter-rater reliability could not be estimated, and scorer expectancy remains a possible source of bias (Jonsson & Svingby, 2007).

Quantitative analysis used descriptive statistics, paired-samples t-tests, and Normalized Gain (N-Gain). The paired-samples t-test examined whether pretest and posttest scores differed statistically. The assumption of normality of the paired difference scores should be verified using the Shapiro-Wilk test (Ghasemi & Zahediasl, 2012); the exact p-value from the original IBM SPSS output should be inserted before submission. For narrative-writing scores, the mean difference was -34.83 (pretest minus posttest), $t(29) = -32.145$, $p < .001$. The corresponding paired-samples effect size, calculated as Cohen's $d_z = |t|/\sqrt{n}$, was approximately 5.87 (Lakens, 2013). N-Gain was calculated from the mean pretest and posttest scores and interpreted using Hake's (1998) criteria: high ($g > 0.70$), moderate ($0.30 \leq g \leq 0.70$), and low ($g < 0.30$). The narrative-writing N-Gain was 0.73, categorized as high. For learning autonomy, the paired-samples result was $t(29) = -11.273$, $p < .001$, with a corresponding Cohen's d_z of approximately 2.06. Because the study used a One-Group Pretest-Posttest design without a comparison group, inferential and N-Gain results were interpreted as evidence of observed change following implementation, not as definitive causal evidence that the developed materials alone produced the change. Practicality was determined from teacher and student response percentages, while observation and interview data were analyzed descriptively.

RESULTS AND DISCUSSION

Results

The findings indicate that the Canva-assisted Project-Based Learning (PjBL) teaching materials were successfully developed through the five stages of the ADDIE model: analysis, design, development, implementation, and evaluation. The developed product consisted of a teaching module, learning instruments, student worksheets (LKPD), Canva-based instructional media, an analytical rubric for assessing narrative writing skills, and a learning independence questionnaire.

Analysis Phase Results

The needs analysis revealed several key findings. First, teachers predominantly relied on conventional instructional methods, particularly lectures and assignment-based activities. Second, fifth-grade students experienced difficulties in organizing coherent narrative plots, selecting appropriate vocabulary, and expressing their ideas effectively in written form. Third, students demonstrated a relatively low level of learning independence, as indicated by their high dependence on teacher guidance during learning activities. Fourth, the use of digital learning media in classroom instruction was still very limited. Finally, students expressed the need for more engaging, interactive, and technology-based teaching materials to support the learning process.

Design Stage Results

During the design stage, a blueprint of the teaching materials was developed by systematically integrating the six phases of the Project-Based Learning (PjBL) model into Canva templates. The competency map of the teaching materials covered three main domains: (1) cognitive competence, focusing on students' understanding of the structure of narrative texts; (2) psychomotor competence, emphasizing students' ability to produce narrative texts using Canva; and (3) affective competence, aimed at fostering students' learning independence through project-based activities. In addition, all research instruments were designed during this stage, including expert validation sheets, teacher and student practicality response questionnaires, a narrative writing skills test, and a learning independence questionnaire.

Table 1. Competency Map of Canva-Assisted Project-Based Learning (PjBL) Teaching Materials

PjBL Syntax Stage	Learning Competencies	Teaching Material Activities	Canva Features	Expected Output
1. Start with an Essential Question	Identify the elements, structure, and purpose of narrative texts; formulate the problem to be addressed.	Students read and analyze sample narrative texts, discuss guiding questions, and determine the theme of the story.	Cover page, Video	Problem statement and project theme
2. Design the Project Plan	Develop a story outline by determining the characters, setting, plot, and task distribution.	Students collaboratively prepare a storyboard and a narrative outline.	Document Templates, Whiteboard, Sticky Notes, Graphic Organizer	Story outline (storyboard)

PjBL Syntax Stage	Learning Competencies	Teaching Material Activities	Canva Features	Expected Output
3. Develop the Project Schedule	Develop planning and time-management skills.	Students establish a timeline and completion targets for each stage of the project.	Timeline, Calendar, Infographic, Checklist	Project implementati on schedule
4. Monitor Project Progress	Develop learning independence, responsibility, and the ability to revise written work.	The teacher monitors students' progress, while students revise their drafts based on feedback.	Worksheets, Comments	Revised draft of the narrative text
5. Assess the Project Outcome	Produce coherent, communicative, and visually engaging narrative texts.	Students create a digital storybook using Canva and present their final products.	Narrative Text Template, Presentation	Canva-based digital narrative text
6. Evaluate the Learning Experience	Reflect on the learning process and enhance metacognitive skills and learning independence.	Students write reflective journals and conduct self-assessment as well as peer assessment.	Reflection Sheet	Learning reflection and self-assessment

Development Stage Results



Ayo Kita Membuat Teks Narasi

Kumpulan Ide Cerita
Coba kamu ingat lagi, apa saja pengalaman yang sangat berkesan bagi kamu?

Pilih satu pengalaman di atas untuk kamu jadikan sebuah cerita narasi!

Menyusun Jadwal Proyek Teks Narasi

Pengalaman yang Berkesan
Nama: _____
Materi: _____
Tanggal: _____

No	Kegiatan Proyek	Waktu Pelaksanaan
1	Mengumpulkan pengalaman yang sangat berkesan	
2	Membuat kerangka cerita	
3	Membuat draft teks narasi	
4	Memperbaiki draft yang diberikan teman	
5	Mengembangkan hasil cerita	

Memonitor Kemajuan Proyek

Nama: _____
Materi: _____
Tanggal: _____

No	Kegiatan Proyek	Kualitas dan Ketepatan	Kemajuan yang Diharapkan	Kesulitan
1	Mengumpulkan pengalaman yang sangat berkesan			
2	Membuat kerangka cerita			
3	Membuat draft teks narasi			
4	Memperbaiki draft yang diberikan teman			
5	Mengembangkan hasil cerita			

Memonitor Kemajuan Proyek

Pemeriksaan Struktur Teks Narasi
Materi: Teks Narasi
Aspek yang Ditinjau: _____

Observasi: Pengumpulan fakta, waktu, dan tempat.
Kerangka: (membuat dalam cerita)
Detail: (perincian masalah)
Koda / pesan cerita

Kriteria Ketuntasan
Apakah proses yang kamu lakukan dengan sudah baik?
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?

Presentasi Hasil Proyek Teks Narasi

Nama: _____
Materi: _____
Tanggal: _____

Refleksi Pembelajaran Proyek Teks Narasi

Nama: _____
Materi: _____
Tanggal: _____

Refleksi
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?
Apakah kamu sudah melakukan hal yang sama untuk membuat cerita?

Figure 2. Development Product Sample

The developed product consisted of a teaching module, learning instruments, student worksheets, Canva-based learning media, and an analytical rubric for assessing narrative writing skills. The teaching materials were subsequently validated by a subject matter expert and a media expert. The validation results are presented in table 2.

Table 2. Expert Validation Results of the Developed Teaching Materials

Validator	Percentage	Category
Subject Matter Expert	91%	Highly Valid
Media Expert	89%	Highly Valid

The expert validation results indicated that the developed teaching materials featured a well-structured learning syntax, visually appealing media design, and learning activities that were appropriate for the characteristics of elementary school students (Fadillah & Wahyudi, 2022; Sofyan et al., 2022). Based on the experts' recommendations, several revisions were made: (1) simplifying the project activity instructions to improve comprehensibility for fifth-grade students; (2) enhancing the color contrast between the text and background in the Canva templates; (3) incorporating more contextual examples of narrative texts; and (4) adjusting the font size in the teacher's guide. These revisions resulted in a final version of the teaching materials that was ready for classroom implementation.

Implementation and Evaluation Phase Results

a. Product Practicality

The practicality of the developed teaching materials was evaluated through teacher and student response questionnaires administered after the completion of the learning activities. The results of the practicality assessment are presented in Table 3.

Table 3. Practicality Assessment Results of the Developed Teaching Materials

Respondent	Percentage	Category
Teacher Response	92%	Highly Practical
Student Response	88%	Highly Practical

The questionnaire results indicated that the Canva-assisted Project-Based Learning (PjBL) teaching materials were perceived as highly practical by both teachers (92%) and students (88%). Teachers reported that the user guidelines were clear and easy to follow, and that the PjBL learning phases could be implemented systematically. Students stated that the teaching materials were engaging, easy to use, and helpful in supporting them to write narrative texts creatively using Canva (Rahmatullah et al., 2022).

b. Product Effectiveness

Table 4. Descriptive Statistics of the Pretest and Posttest Scores for Narrative Writing Skills

Statistic	Pretest	Posttest
Number of Students	30	30
Minimum Score	45	80
Maximum Score	60	95
Mean	52.17	87.00
Standard Deviation	5.03	4.84

As shown in Table 4, students' narrative-writing scores increased from a mean of 52.17 on the pretest to 87.00 on the posttest, an observed increase of 34.83 points. The minimum score increased from 45 to 80, and the maximum score increased from 60 to 95. The standard deviation decreased slightly from 5.03 to 4.84. The N-Gain score was 0.73, which falls in the high category according to Hake's (1998) classification. This large change should be interpreted cautiously because the intervention lasted only four sessions, the study had no comparison group, and the writing products were scored by one rater. The paired-samples t-test was used to examine whether the pretest-posttest difference was statistically significant.

Table 5. Paired-Samples t-Test Results for Narrative Writing Skills

Variable	Mean Difference	t	Sig. (2-tailed)
Pretest–Posttest	-34.83	-32.145	0.000

The paired-samples t-test yielded a significance value of 0.000 ($p < 0.05$), indicating a statistically significant improvement in students' narrative writing skills following the implementation of the Canva-assisted Project-Based Learning (PjBL) teaching materials (Wahyuni et al., 2022; Juliani & Lisnawati, 2022).

Table 6. Students' Learning Autonomy Questionnaire Results

Learning Independence Aspect	Percentage	Category
Learning Responsibility	88%	Excellent
Self-Confidence	85%	Excellent
Learning Initiative	84%	Excellent
Learning Discipline	86%	Excellent
Independent Task Completion	89%	Excellent
Average	86.4%	Excellent

The questionnaire results showed that students' learning independence was categorized as excellent, with an overall average score of 86.4%. Students demonstrated greater self-confidence, responsibility, initiative, and active engagement in completing project-based learning activities (Maulana & Sujarwo, 2022; Herlinda et al., 2022).

Table 7. Paired-Samples *t*-Test Results for Learning Autonomy

Variable	Mean Difference	t	df	Sig. (2-tailed)
Learning Independence (Pretest–Posttest)	-18.45	-11.273	29	0.000

As presented in Table 7, the paired-samples *t*-test produced a *t* value of -11.273 with a significance value of 0.000 ($p < 0.05$). These results indicate a statistically significant difference in students' learning independence before and after the implementation of the Canva-assisted Project-Based Learning (PjBL) teaching materials. Therefore, the developed teaching materials had a significant positive effect on improving students' learning autonomy.

Discussion

Validity and Practicality of the Canva-Assisted Project-Based Learning (PjBL) Teaching Materials

The validation results from the subject matter expert (91%) and the media expert (89%) indicate that the Canva-assisted Project-Based Learning (PjBL) teaching materials achieved a high level of validity. This high validity can be attributed to the alignment between the structure of the teaching materials and established instructional design principles. The well-organized PjBL syntax provides students with a clear learning framework, while Canva's visual features serve as creative scaffolding that supports the cognitive development characteristics of fifth-grade elementary school students, who are in Piaget's concrete operational stage (Herlinda et al., 2022). Furthermore, the practicality assessment results, with teacher and student response rates of 92% and 88%, respectively, demonstrate that the teaching materials are easy to implement in classroom instruction and are well accepted by their users (Rahmatullah et al., 2022).

The Impact of the Teaching Materials on Students' Narrative Writing Skills and Learning Autonomy

The findings demonstrate that the Canva-assisted Project-Based Learning (PjBL) teaching materials effectively improved elementary school students' narrative writing skills and learning independence. The improvement in narrative writing skills occurred progressively throughout the implementation of the PjBL phases. During the project planning stage, students identified the structural elements of narrative texts (orientation, complication, and resolution) and developed story outlines. This process encouraged students to think systematically about the sequence of events, thereby strengthening their ability to construct coherent narratives. During the project outcome assessment stage, when students presented their digital storybooks, they were motivated to refine their vocabulary choices and grammatical accuracy to communicate their stories more effectively to the audience. The synergy between these two learning phases contributed substantially to the improvement of students' narrative writing skills.

The use of Canva enabled students to express their ideas more creatively by integrating text, images, colors, and attractive visual designs (Permata & Mareza, 2022; Mulyani et al., 2022). From a pedagogical perspective, Canva's visual features functioned as cognitive mediators that

helped students transform abstract ideas into meaningful visual narratives. When students selected illustrations that matched the content of their stories, they simultaneously engaged in semantic reasoning by connecting textual meaning with visual representations. This process strengthened both their conceptual understanding and their ability to express ideas effectively through narrative writing.

The improvement in students' learning independence indicates that project-based activities fostered responsibility, creativity, and students' ability to regulate their own learning processes (Dignath et al., 2008). These findings are consistent with constructivist theory, which emphasizes the importance of students' active engagement in constructing knowledge through meaningful learning experiences (Maulana & Sujarwo, 2022; Astuti & Nurhayati, 2023). Furthermore, from the perspective of Self-Regulated Learning theory (Zimmerman, 2002), students' learning independence developed because the PjBL model systematically promotes the three core dimensions of self-regulation (Panadero, 2017). First, the cognitive dimension was strengthened as students planned and organized their narrative frameworks. Second, the motivational dimension emerged through the intrinsic satisfaction students experienced after successfully completing their digital storybooks. Third, the behavioral dimension was reflected in students' discipline in adhering to the project timeline and fulfilling the agreed learning responsibilities.

The findings of this study support previous research demonstrating that Project-Based Learning enhances essential twenty-first-century skills, including creativity, communication, collaboration, and critical thinking (Hidayat & Khotimah, 2022; Nurrohma & Adistana, 2022; Ramadhani et al., 2022; Chen & Yang, 2019). In addition, the integration of Canva into the learning process contributed to the development of elementary school students' digital literacy skills (Husain & Budiman, 2022; Yanti et al., 2022). The main contribution of this study lies in the systematic integration of the Project-Based Learning (PjBL) model with Canva's creative features into a single package of teaching materials. Unlike previous studies, this research simultaneously evaluated the three essential quality criteria of educational product development—validity, practicality, and effectiveness—while examining their impact on both students' narrative writing skills and learning independence.

CONCLUSION

This study successfully developed Canva-assisted teaching materials based on the Project-Based Learning (PjBL) model that met the criteria of validity, practicality, and effectiveness for teaching narrative writing to fifth-grade elementary school students. The expert validation results indicated that the teaching materials achieved validity scores of 91% from the subject matter expert and 89% from the media expert, placing them in the highly valid category. The practicality assessment also demonstrated that the product was highly practical, as reflected by positive responses from teachers (92%) and students (88%). In terms of effectiveness, students' mean narrative writing score increased from 52.17 on the pretest to 87.00 on the posttest. Furthermore, the paired-samples *t*-test yielded a significance value of 0.000 ($p < 0.05$), indicating a statistically significant improvement in students' narrative writing skills. Students' learning independence also reached an average score of 86.4%, which was categorized as excellent, and the paired-samples *t*-test likewise revealed a statistically significant improvement ($p = 0.000$). These findings

demonstrate that the developed teaching materials effectively enhanced students' narrative writing skills while simultaneously fostering greater learning independence.

Despite the promising findings, this study has several limitations that should be considered when interpreting the results. First, the study was conducted at only one elementary school, SD Islam Bina Cendekia, which limits the generalizability of the findings to schools with different instructional, technological, and student characteristics. Second, the study involved only 30 fifth-grade students, resulting in a relatively small sample size. Third, the intervention was implemented over a relatively short period of four instructional sessions, which may not be sufficient to capture longer-term changes in students' narrative writing skills and learning autonomy. Fourth, the use of a One-Group Pretest–Posttest design without a control group limits the ability to attribute the observed improvements exclusively to the developed instructional materials, as other factors such as maturation, prior learning experiences, teacher effects, and testing effects may have contributed to the changes. Therefore, the findings should be interpreted as evidence of observed changes within the study context rather than broadly generalizable causal effects.

Based on these limitations and findings, teachers are encouraged to provide students with an orientation to the teaching materials and Canva features before classroom implementation, particularly for students with limited experience using digital learning platforms. Teachers should also prepare alternative instructional strategies, such as downloading the teaching materials for offline use or arranging shared access to digital devices, to address potential limitations in device availability or internet connectivity during instruction. Future research should employ a quasi-experimental or experimental design involving a comparison group, recruit larger and more diverse samples from schools with different characteristics, and extend the intervention period to examine the sustainability of changes in students' narrative writing skills and learning autonomy. Further studies may also integrate Artificial Intelligence (AI)-based feedback features into the teaching materials to provide more individualized support for planning, drafting, revising, and editing narrative texts.

CREDIT AUTHOR CONTRIBUTION STATEMENT

Hadi Ismanto: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Validation, Visualization, Writing – Original Draft, Writing – Review & Editing.

Euis Eti Rohaeti: Conceptualization, Supervision, Validation, Writing – Review & Editing.

Eva Dwi Minarti: Formal Analysis, Investigation, Resources, Software.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author.

ETHICS STATEMENT

This study did not require formal ethical approval. All participants provided voluntary informed consent and no sensitive personal data were collected.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN MANUSCRIPT PREPARATION

During the preparation of this manuscript, the author(s) used ChatGPT to assist with language translation, improve language clarity, and support paraphrasing. After using this tool, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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