

DEVELOPING A SCAMPER-BASED IDEATION MODEL TO SUPPORT PREWRITING IN SENIOR HIGH SCHOOL STUDENTS' SHORT STORY WRITING

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Article Info	Abstract
Article History Received: March 2026 Revised: May 2026 Accepted: September 2026 Published: October 2026	<i>Senior high school students often experience difficulties at the prewriting stage of short story writing, particularly in developing focused themes, meaningful conflict, and coherent plot organization. These difficulties are important because underdeveloped ideas can limit narrative progression, weaken conflict development, and result in poorly connected events in the final short story. This study aimed to develop a SCAMPER-based ideation model for short story writing and examine its validity, practicality, and effectiveness. A research and development approach using the 4D model (define, design, develop, and disseminate) was implemented in the odd semester of 2025 at SMA Muhammadiyah 11 Padangsidimpuan with 37 students (Grade X = 11, Grade XI = 10, Grade XII = 16). The developed package consisted of SCAMPER cards, a one-page SCAMPER Sprint worksheet, an ideation rubric, a short story rubric, and a peer-feedback sheet. Product validity ranged from high to very high, with combined mean scores of 3.29 for the SCAMPER cards, 3.36 for the worksheet, 3.50 for the ideation rubric, 3.08 for the short story rubric, and 3.30 for the peer-feedback sheet. Practicality mean scores were 3.31 for students and 3.50 for teachers. Students' ideation scores increased from the pretest ($M = 8.19$, $SD = 1.31$) to the posttest ($M = 12.46$, $SD = 1.28$), with a mean gain of 4.27, $t(36) = 14.15$, $p < .001$, and Cohen's $d = 2.33$. The mean final short story score was 17.89 ($SD = 1.68$), with strong inter-rater agreement for the total score ($r = 0.83$). Within the context of this study, the findings indicate that the developed package was valid and practical and was accompanied by significant improvement in students' ideation performance. Its main contribution is a structured prewriting routine that integrates idea generation, idea selection, conflict development, plot planning, peer feedback, and assessment before students draft a complete short story.</i>
Keywords SCAMPER; Writing ideation; Short story writing; Senior high school students; Muhammadiyah school:	

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INTRODUCTION

Short story writing at the senior high school level supports literacy development because students learn to transform ideas into narratives that are coherent, logical, and readable. Evidence from meta-analytic research indicates that writing activities can enhance

learning by requiring learners to organize ideas and reconsider their understanding, including in secondary education contexts (Graham et al., 2020; Wu & Schunn, 2020). Literacy also involves the capacity to comprehend information meaningfully and communicate it through writing. UNESCO reports that 739 million adults worldwide still lack basic literacy skills, which highlights the continuing urgency of literacy development in education systems (UNESCO, 2025). International assessments also position creativity as a measurable competence, reflected in students' ability to generate diverse and original ideas and refine them through evaluation and improvement (OECD, 2024). Short story instruction therefore needs to be designed as a guided process rather than a product-only assignment so that students can develop ideas, conflict, and plot in a systematic way (Ramírez et al., 2024).

Writing research consistently shows that many students experience difficulties at the prewriting stage when initial ideas remain vague and underdeveloped. Studies on prewriting strategies report that learners often struggle to generate and expand initial ideas and therefore benefit from structured support before drafting begins (Alemu, 2020). In short story writing, ideation is particularly important because decisions made at this stage establish the narrative foundation from which themes, conflicts, and plot sequences are developed. When an initial idea is insufficiently explored, the theme may remain too general to provide a clear narrative direction, the conflict may lack obstacles or meaningful escalation, and events may be arranged without strong causal connections. These weaknesses can persist into the drafting stage, resulting in stories with limited narrative tension, abrupt transitions, weak climaxes, and endings that appear disconnected from preceding events. Research on secondary students' writing similarly identifies structure and coherence as recurring difficulties among less proficient writers (Gani et al., 2024; Siekmann et al., 2022). The OECD (2024) further emphasizes that creative written expression involves generating, evaluating, and refining diverse and original ideas, reinforcing the importance of systematic ideation before students begin composing a complete narrative.

Initial classroom observations at SMA Muhammadiyah 11 Padangsidimpuan revealed a similar pattern. Some students had difficulty beginning their short stories because their initial ideas had not yet developed into sufficiently clear narrative plans. The most visible problems involved selecting a focused theme, constructing a conflict that could sustain story development, and arranging events into a coherent plot. Several student texts remained at the level of a simple premise and moved rapidly toward an ending without adequately developing complications, transitions, or a recognizable climax. These characteristics indicate that the difficulty was not limited to finding a topic to write about. Rather, students had difficulty transforming an initial idea into a narrative structure in which the theme provided direction, the conflict generated progression, and the plot connected events logically. Consequently, weaknesses established during ideation were reflected in the final narrative organization of their texts. This observation is consistent with studies showing that students who have difficulty expanding ideas during prewriting may subsequently encounter problems in coherence and structural development (Bulqiyah et al., 2021; Husniati et al., 2025; Pitrianti & Gasanti, 2020; Pulungan & Siregar, 2023; Woo et al., 2023).

Writing instruction in schools may still place students in a "write immediately" situation after a theme or topic is assigned, with limited structured support for developing ideas before drafting. Classroom-based findings reported by Rahayu et al. (2020) indicate that students may be expected to produce a final text without sufficient guidance for expanding content and organizing its structure during the prewriting stage. Such product-oriented practice leaves ideation largely implicit, even though students who begin with vague ideas need explicit support to generate alternatives, evaluate their possibilities, and organize the selected idea into a coherent narrative plan. Evidence-based writing instruction similarly emphasizes explicit strategy teaching through modeling, guided practice, and reflection so that planning, drafting,

and revision occur as connected stages rather than isolated activities (Gallagher, 2011, 2023). However, the studies reviewed in this manuscript have mainly addressed prewriting support, writing strategies, or creative idea generation as separate concerns, while an integrated and assessable routine that connects idea generation, idea selection, conflict development, and plot organization before short story drafting remains insufficiently addressed. This gap indicates the need for a structured ideation tool that makes the prewriting process visible, guided, and assessable before students proceed to full-text composition.

SCAMPER can be used as an ideation strategy to help students generate multiple idea options before they begin drafting a short story. Alhamdi (2021) describes SCAMPER as a creative thinking technique that uses a set of systematic prompts, including Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate, and Reverse or Rearrange. These prompts encourage learners to transform story elements in purposeful ways, such as changing the trigger of a problem, combining two events, or reversing the sequence of events. This process is relevant for strengthening conflict because students are guided to add obstacles and increase narrative stakes, which can build tension more effectively. Plot coherence can also improve because the selected idea can be organized into a logical sequence of events before drafting begins. A more recent perception study also reports that SCAMPER supports idea development and writing organization by enabling students to explore alternatives and refine their thinking prior to composing a full text (Dewangga et al., 2026).

A research and development (R&D) approach was adopted because the study sought to produce instructional tools that could systematically support students' ideation before short story drafting. The 4D model proposed by Thiagarajan et al. (1974), comprising define, design, develop, and disseminate stages, provides a framework for developing instructional materials through needs analysis, product design, validation and revision, implementation, and dissemination. This framework was appropriate because the product developed in the present study was not intended as a single SCAMPER classroom activity. Instead, SCAMPER was operationalized as an integrated ideation package in which several tools perform complementary functions across the prewriting process: SCAMPER cards stimulate alternative ideas, the SCAMPER Sprint worksheet guides idea development and plot organization, the ideation rubric assesses the quality of emerging ideas, the peer-feedback sheet supports refinement before drafting, and the short story rubric evaluates how the developed ideas are realized in the final narrative. The integration of these components enables the ideation process to be guided and documented from initial idea generation to the completed short story. Studies employing the 4D model in instructional development similarly emphasize validity, practicality, and learning outcomes as important evidence for product refinement and feasibility (Tampubolon & Sipahutar, 2024; Yudistia & Chandra, 2025).

The study therefore aimed to develop a SCAMPER-based ideation model for short story writing and to examine its feasibility in terms of validity, practicality, and effectiveness in senior high school instruction. The model specifically addresses the prewriting stage by supporting theme formation, conflict development, and plot organization before students proceed to full-text drafting. The novelty of the study lies not merely in applying SCAMPER as a creative-thinking technique, but in transforming it into an integrated and assessable prewriting package that connects idea generation, idea development, plot planning, peer feedback, and evaluation of both ideation and final short story quality. The developmental process was further documented through students' idea traces, from seed ideas and SCAMPER-generated variations to selected ideas and final short stories, allowing the progression of ideas to be examined across stages. Through this design, the study seeks to provide a structured prewriting routine that teachers can use to make students' ideation processes more explicit, guided, and assessable.

Accordingly, this study addressed the following research questions: (1) How was the SCAMPER-based ideation package developed to support the prewriting stage of short story writing? (2) To what extent did the developed package meet the established validity criteria? (3) How practical was the developed package for students and teachers during classroom implementation? and (4) What changes in students' ideation performance were observed following implementation of the SCAMPER-based package, and what characteristics were reflected in their final short stories?

RESEARCH METHOD

Research Design

The effectiveness component used a one-group pretest-posttest design in which students completed the same ideation task before and after implementation of the developed package. The one-group pretest-posttest design was selected because the effectiveness component was intended to examine within-participant changes in ideation performance before and after classroom implementation of the developed package. Using the same participants at both measurement points allowed the analysis to focus on changes in fluency, flexibility, originality, and elaboration following the intervention, rather than on differences between separate instructional groups. Because the design did not include a comparison group, the resulting changes were interpreted as improvement following implementation within the study context rather than as definitive evidence of a causal effect. The primary outcomes were ideation quality and final short story quality. Ideation was assessed in terms of fluency, flexibility, originality, and elaboration, whereas short story quality was assessed through six aspects: plot and conflict, characterization, setting, diction and style, coherence, and originality and theme. Product validity and user practicality were evaluated as feasibility indicators, while changes in ideation scores and final short story performance were used to examine the instructional outcomes of the developed package.

Research Participants

The target population comprised students enrolled in Grades X, XI, and XII at SMA Muhammadiyah 11 Padangsidempuan during the study period. The study involved 37 students, consisting of 11 students in Grade X, 10 students in Grade XI, and 16 students in Grade XII. Participants were selected through convenience sampling involving intact classes, based on class availability and the instructional needs identified during the initial classroom observation. This approach allowed the developed learning package to be implemented within the existing classroom structure without reorganizing students into new experimental groups.

Students from the three grade levels were included because the initial needs analysis identified recurring difficulties in short story ideation across the participating classes, particularly in developing themes, constructing conflict, and organizing plot. Although the students represented different grade levels and therefore may have differed in prior writing experience and curriculum exposure, the study did not assume that their initial writing abilities were equivalent. The study also did not aim to compare writing performance across Grades X, XI, and XII. Instead, all participants followed the same SCAMPER-based ideation procedure, completed the same ideation tasks, and were assessed using the same ideation and short story rubrics. The combined analysis therefore focused on changes in students' performance following implementation of the developed package rather than on differences among grade levels. Two teachers were also involved in the study. One Indonesian language teacher and one peer teacher served as validators during product development and subsequently acted as independent raters of the students' final short stories. Inter-rater agreement was examined to evaluate the consistency of the scoring.

Instruments

Data were collected using instruments corresponding to the needs-analysis, product-development, implementation, and outcome-assessment stages. During the define stage, student and teacher needs questionnaires, supported by initial classroom observation, were used to identify learning needs related to theme development, conflict construction, and plot organization in short story writing. These three areas served as the principal indicators for determining the instructional focus of the developed package.

The instructional package consisted of five complementary components. First, the SCAMPER cards provided seven categories of idea-generation prompts: Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate, and Reverse or Rearrange. The prompts directed students to explore alternative characters, problems, obstacles, consequences, and event sequences before drafting. Second, the one-page SCAMPER Sprint worksheet guided students through a sequence from a seed idea, SCAMPER-generated alternatives, idea selection, and development of the selected idea into a three-act plot outline. Third, the ideation rubric used a 1-4 scale to assess four dimensions fluency, flexibility, originality, and elaboration with a total possible score ranging from 4 to 16. Fourth, the short story rubric used a 1-4 scale to assess six dimensions: plot and conflict, characterization, setting, diction and style, coherence, and originality and theme, yielding a total possible score of 6-24. Fifth, the structured peer-feedback sheet was used once before drafting and included an idea-summary field, a focused feedback checklist, and space for suggestions to help students refine their intended story ideas.

Product validity was evaluated by two validators using product-specific validation sheets on a four-point scale accompanied by written recommendations. The validation covered the five developed components and focused on the appropriateness and clarity of their content, instructions, and scoring descriptors. Practicality was measured after classroom implementation using student and teacher questionnaires consisting of ten indicators rated on a 1-4 scale. The indicators addressed clarity of card instructions, ease of worksheet completion, speed of idea generation, conflict development, plot organization, usefulness of peer feedback, adequacy of instructional time, writing confidence, learning engagement, and willingness to use the method again. Open-ended responses were also collected to provide explanatory information about participants' experiences.

Data Collection

Data collection was conducted sequentially from needs analysis to classroom implementation and outcome assessment. Initial classroom observation and student and teacher needs questionnaires were first used to identify students' difficulties in short story writing. The resulting needs analysis informed the design of the SCAMPER-based ideation package, which was subsequently validated by two validators and revised before implementation. The revised package was then implemented over eight meetings, with each meeting lasting two class periods. Students completed all writing activities by hand, short stories were limited to a maximum of 700 words, and the use of AI tools was prohibited during the student writing activities.

During the implementation, the SCAMPER Sprint worksheet was used in Meetings 1-4, the SCAMPER cards in Meetings 2-3, and the peer-feedback sheet in Meeting 3. The ideation rubric was used in Meetings 1 and 8 to assess students' pretest and posttest ideation performance, while the short story rubric was used in Meetings 7-8 to assess the final writing products. After implementation, student and teacher practicality questionnaires were administered. The completed short stories were independently scored by two raters, and inter-rater agreement was examined.

Data Analysis

Validity and practicality data were analyzed descriptively by calculating mean scores for each product and questionnaire item using a four-point scale. The mean scores were interpreted using four equal intervals: 1.00–1.75 = Low, 1.76–2.50 = Moderate, 2.51–3.25 = High, and 3.26–4.00 = Very High. Descriptive statistics, including means, standard deviations, minimum scores, and maximum scores, were also calculated for ideation and final short story performance.

Effectiveness was examined by comparing students' pretest and posttest ideation scores, both for the total score and for the four dimensions of fluency, flexibility, originality, and elaboration. Statistical analyses were conducted using SPSS. Before inferential analysis, the normality of the pretest-posttest difference scores was examined using the Shapiro–Wilk test. Because the pretest and posttest scores were obtained from the same participants and the difference scores met the normality assumption, a paired-samples t-test was used to determine whether the change in ideation scores was statistically significant. Statistical significance was evaluated at the .05 level.

The magnitude of the pretest-posttest change was estimated using Cohen's *d*, calculated by standardizing the mean difference by the standard deviation of the paired difference scores. Effect sizes of approximately 0.20, 0.50, and 0.80 were interpreted as small, moderate, and large, respectively, while values substantially exceeding 0.80 were interpreted as indicating a very large magnitude of change. Final short story scores from the two raters were summarized using aspect-level and total means. Inter-rater consistency was examined using Pearson correlation coefficients together with mean score differences between the two raters.

Qualitative evidence was analyzed descriptively to support interpretation of the quantitative findings. Students' idea traces were examined sequentially by comparing the seed idea, SCAMPER-generated variations, the selected idea, and the final short story. The analysis focused on observable changes in theme development, conflict construction, and plot organization across these stages. Open-ended responses from the practicality questionnaires were also reviewed to identify recurring comments concerning the clarity and usefulness of the SCAMPER tools, idea generation, peer feedback, time sufficiency, and writing confidence. These qualitative data were used to explain patterns found in the quantitative results rather than being treated as a separate qualitative outcome.

RESEARCH FINDINGS AND DISCUSSION

Findings

The findings are organized around the development and feasibility of the SCAMPER-based ideation package. The development process resulted in five integrated products designed to guide students from initial idea generation to final short story writing. Validation results placed the developed products in the high to very high categories, while student and teacher responses indicated that the package was practical for classroom use. Following implementation, students obtained higher posttest ideation scores than pretest scores across all four assessed dimensions. The final short stories also showed generally moderate-to-good performance across the assessed aspects, with strong agreement between the two raters. These findings are presented as evidence addressing the study's development, validity, practicality, and effectiveness questions within the context of the participating students and school.

Product Development Results

The development process resulted in a SCAMPER-based ideation package designed to support the prewriting stage of short story writing, particularly theme development, conflict construction, and plot organization. The package comprised five complementary components: SCAMPER cards, a one-page SCAMPER Sprint worksheet, an ideation rubric, a short story rubric, and a structured peer-feedback sheet. Each component served a specific function

within the ideation process, from generating alternative ideas and selecting a promising idea to organizing the plot, obtaining peer feedback, and assessing the resulting writing. The products were designed for handwritten, face-to-face classroom implementation across eight meetings.

Feedback from the two validators led to targeted revisions in wording, instructional clarity, worksheet guidance, and scoring descriptors. These revisions were incorporated into the final versions before classroom implementation. Table 1 summarizes the instructional function, timing of use, and principal revision of each developed component. The table is intended to provide a concise overview of how the five components were positioned within the instructional sequence rather than to establish claims beyond the development context.

Table 1
Developed Products, Purposes, Use, and Key Revisions

Product	Purpose	Used in	Key revision in final version
SCAMPER cards	Stimulate idea variations	Meetings 2-3	Prompts were shortened and made consistent with a conflict and plot focus
SCAMPER Sprint worksheet	Guide seed-sprint-selection-three-act plot	Meetings 1-4	A seed example was added and three-act plot instructions were clarified
Ideation rubric	Assess prewriting idea quality	Meetings 1 and 8	Descriptors distinguishing scores 2 and 3 for originality and elaboration were clarified
Short story rubric	Assess the final short story (max 700 words)	Meetings 7-8	Emphasis on climax, resolution, and coherence including transitions and point of view was strengthened
Peer-feedback sheet	Improve ideas prior to drafting	Meeting 3	An idea-summary field was added to keep feedback aligned with the intended idea

As summarized in Table 1, the revisions were concentrated on making the package easier to follow and the assessment criteria more explicit. The SCAMPER cards and Sprint worksheet were refined primarily to provide clearer guidance for generating and organizing story ideas, while revisions to the two rubrics focused on reducing ambiguity between scoring levels. The peer-feedback sheet was also adjusted to maintain alignment between the feedback provided and the idea the student intended to develop. These revisions show that product development focused not only on generating ideas but also on supporting the transition from idea generation to plot planning, feedback, and assessment.

SCAMPER Cards		
Letter	Strategy	Prompt Question
S	Substitute	Change a character, setting, or problem.
C	Combine	Combine two conflicts or events.
A	Adapt	Adjust to a new situation.
M	Modify	Add a new element or obstacle.
P	Put to Another Use	Use something unexpected
E	Eliminate	Remove confusing parts
R	Reverse	Reverse the storyline

Figure 1. SCAMPER Cards as Idea Prompts for Short Story Writing

SCAMPER Sprint: Creative Short Story Worksheet

Name: _____ / Kelas: _____

Seed Idea

Describe the basic idea of your short story:

Three-Act Plot Development

Act 1: Introduction	Act 2: Conflict	Act 3: Resolution
Who? What happens?	What is the main problem?	How does the story end?

Idea Reflection

What new ideas did you discover after answering the SCAMPER questions?

Figure 2. SCAMPER Sprint Worksheet for Short Story Writing Ideation

Figures 1 and 2 illustrate the two principal tools used to structure students' idea-generation activities. The SCAMPER cards provided concise prompts for exploring alternative story possibilities, while the SCAMPER Sprint worksheet organized those possibilities into a more systematic sequence from the seed idea to idea selection and plot planning. These visual examples are presented to clarify the form and instructional role of the developed products.

Validity Test Results

Product validity was evaluated by two validators, an Indonesian language teacher and a peer teacher, across five developed products. Ratings were assigned using a 1-4 scale. The results indicate that the combined mean validity scores fall within the very high category, which suggests that the products are suitable for use in short story writing instruction. The highest combined means were obtained by the ideation rubric and the SCAMPER Sprint worksheet. The short story rubric reached the high category, indicating that it remained feasible for classroom use while benefiting from strengthened descriptors, as reflected in the revision feedback. Table 2 presents the validity results for each product based on Validator 1, Validator 2, the combined mean, and the feasibility category.

Table 2
Product Validity Results

Product	Mean V1	Mean V2	Combined mean	Category
SCAMPER cards	3.14	3.43	3.29	Very High
SCAMPER Sprint worksheet	3.43	3.29	3.36	Very High
Ideation rubric	3.67	3.33	3.50	Very High
Short story rubric	2.83	3.33	3.08	High
Peer-feedback sheet	3.40	3.20	3.30	Very High

Product Revision Results

Product revisions were carried out after the validity evaluation by considering the key suggestions provided by the two validators. Revisions focused on readability, clarity of instructions, and the specificity of scoring indicators so that the tools could be implemented more efficiently within two class periods and could support consistent scoring. The validators primarily recommended shortening and standardizing the wording of the SCAMPER prompts, adding a brief seed example to the worksheet, and sharpening rubric descriptors so that differences between score levels would not lead to ambiguous interpretation. These revisions produced a more operational final version, particularly for strengthening conflict and

organizing plot through a three-act outline, as well as for improving consistency in ideation and short story assessment. Table 3 summarizes the main feedback and the corresponding revisions incorporated into the final products.

Table 3
Product Revision Log

Product	Main feedback	Key changes in the final version
SCAMPER cards	Prompts needed to be shortened and consistently focused on conflict and plot	Prompts were condensed, terms were clarified, and a consistent conflict-plot focus was applied
SCAMPER Sprint worksheet	A seed example and clearer three-act plot instructions were needed	A seed example was added, three-act plot guidance was clarified, and answer space was expanded
Ideation rubric	Distinctions between scores 2 and 3 for originality and elaboration needed to be clearer	Descriptors were refined and differentiating indicators across levels were added
Short story rubric	Plot-conflict descriptors needed stronger emphasis on climax and resolution, and coherence needed clarification	Climax-resolution descriptors were strengthened and transitions and point-of-view consistency were emphasized
Peer-feedback sheet	Reviewers needed guidance to keep feedback aligned with the intended idea	A 1-2 sentence idea summary field was added before the checklist and suggestions

Practicality Test Results

Practicality was assessed using a 1-4 scale questionnaire completed by 37 students and a teacher practicality questionnaire completed by two teachers. The mean student practicality score was 3.31, while the mean teacher practicality score was 3.50. These findings indicate that the developed learning tools were perceived as practical for short story writing instruction. Student responses showed the highest ratings on items related to the SCAMPER cards supporting conflict development and enabling students to generate idea variations more quickly. The lowest rating appeared on the item about time sufficiency within two class periods, which indicates that time management requires attention during implementation. Open-ended student responses supported this pattern. Students noted that the three-act plot component helped prevent plot jumps and that the cards helped them generate ideas quickly even though time sometimes felt limited. Comments also pointed to benefits in writing confidence and idea improvement, including statements indicating that clear steps increased confidence and that peer feedback helped clarify conflict and endings. Teacher responses showed high ratings for clarity and usefulness of the tools in guiding students' ideation, with the note that two class periods still require tight pacing to complete all stages. Table 4 presents mean scores for each practicality item from students and teachers.

Table 4
Mean Practicality Scores by Item

Item	Brief indicator	Mean (students)	Mean (teachers)
I1	Card instructions are easy to understand	3.43	4.00
I2	The worksheet is easy to complete and clear	3.38	3.00
I3	The cards help generate idea variations quickly	3.49	4.00
I4	The cards help strengthen conflict	3.51	3.50
I5	The three-act plot helps organize the plot	3.30	3.50
I6	Peer feedback helps improve the idea	3.16	3.50
I7	Two class periods are sufficient	2.97	3.50
I8	Writing confidence increases	3.24	3.50

I9	The lesson is more engaging	3.41	3.00
I10	The method should be used again	3.22	3.50

Effectiveness Test Results

Effectiveness was examined by comparing students' ideation performance before and after implementation of the developed package. Ideation was assessed across four dimensions fluency, flexibility, originality, and elaboration with a total possible score ranging from 4 to 16. Descriptive statistics for the pretest, posttest, and gain scores are presented in Table 5, followed by inferential analysis of the overall change in Table 6 and aspect-level comparisons in Table 7. Final short story performance is summarized separately in Table 8.

Table 5
Descriptive Statistics for Pretest and Posttest Ideation Scores

Variable	Mean	SD	Min	Max
Pretest ideation total (4-16)	8.19	1.31	6	12
Posttest ideation total (4-16)	12.46	1.28	10	16
Ideation gain (Post-Pre)	4.27	1.84	0	8

Table 6 shows a clear descriptive increase in students' overall ideation performance following the implementation of the SCAMPER-based package. The mean ideation score increased from 8.19 in the pretest to 12.46 in the posttest, producing an average gain of 4.27 points. The posttest scores were also concentrated within a higher range, from 10 to 16, compared with the pretest range of 6 to 12. Although the gain scores varied across students, ranging from 0 to 8 points, the overall descriptive pattern indicates that most students demonstrated stronger ideation performance after participating in the instructional activities.

Table 6
Paired-Samples T-test for Total Ideation Scores

Pair	Mean difference	SD	SE	95% CI Lower	95% CI Upper	t	df	Sig. (2-tailed)
Total ideation	4.27	1.84	0.30	3.66	4.88	14.15	36	<.001

The inferential analysis in Table 6 confirms that the increase observed descriptively was statistically significant. The mean pretest-posttest difference was 4.27 points, with a 95% confidence interval ranging from 3.66 to 4.88. Because this interval does not include zero and the paired-samples t-test yielded $t(36) = 14.15$, $p < .001$, the posttest ideation scores were significantly higher than the pretest scores among the participating students. These results provide statistical evidence of improvement following implementation of the SCAMPER-based ideation package within the study group, while the interpretation remains limited to the present one-group design.

Table 7
Changes in Ideation Scores by Aspect

Ideation aspect	Pre Mean (SD)	Post Mean (SD)	Mean difference	t	Sig. (2-tailed)	Effect size (dz)
Fluency	2.14 (0.48)	3.11 (0.66)	0.97	7.75	<.001	1.27
Flexibility	2.22 (0.53)	3.24 (0.49)	1.03	9.10	<.001	1.50
Originality	1.95 (0.62)	3.00 (0.53)	1.05	8.63	<.001	1.42
Elaboration	1.89 (0.70)	3.11 (0.66)	1.22	6.99	<.001	1.15

Table 7 indicates that improvement occurred across all four dimensions of ideation rather than being concentrated in only one aspect. Elaboration showed the largest mean-score increase, rising by 1.22 points, followed by originality (1.05), flexibility (1.03), and fluency (0.97). All four differences were statistically significant at $p < .001$. The effect sizes were also large across the dimensions, ranging from $dz = 1.15$ to 1.50. Flexibility produced the largest

effect size ($dz = 1.50$), followed by originality ($dz = 1.42$), fluency ($dz = 1.27$), and elaboration ($dz = 1.15$). This pattern suggests that the post-implementation improvement involved not only producing more ideas, but also varying, developing, and elaborating those ideas more effectively.

Table 8
Descriptive Statistics for Final Short Story Scores

Short story aspect	Mean	SD	Min	Max
Plot and conflict	2.80	0.75	1.50	4.00
Characterization	2.99	0.68	1.50	4.00
Setting	2.92	0.65	1.50	4.00
Diction and style	2.78	0.66	1.50	4.00
Coherence	2.84	0.64	1.50	4.00
Originality and theme	2.95	0.67	1.50	4.00
Total short story score (6-24)	17.89	1.68	15.00	21.50

Table 8 provides a descriptive profile of the students' final short story performance across the six assessed dimensions. Characterization obtained the highest mean score ($M = 2.99$), followed closely by originality and theme ($M = 2.95$) and setting ($M = 2.92$). In contrast, diction and style ($M = 2.78$) and plot and conflict ($M = 2.80$) received the lowest mean scores, indicating areas that remained comparatively less developed in the final texts. The mean total short story score was 17.89 out of a possible 24, with scores ranging from 15.00 to 21.50. These results indicate that the final stories demonstrated relatively stronger performance in characterization, thematic originality, and setting, while language choices and sustained plot-conflict development remained areas for further instructional attention.

Inter-Rater Agreement Results

Inter-rater agreement was examined to ensure consistency in short story scoring by two raters, namely Rater 1 (the Indonesian language teacher) and Rater 2 (the peer teacher). Agreement was assessed using Pearson correlation between Rater 1 and Rater 2 scores and by examining mean score differences. The results indicate a strong correlation for the total short story score, suggesting that the two raters scored student work consistently. The mean difference in total scores between Rater 1 and Rater 2 was small, which indicates that neither rater systematically assigned substantially higher or lower scores than the other.

At the aspect level, correlations generally ranged from moderate to strong. This pattern suggests that the short story rubric supported scoring consistency, particularly for plot-conflict, characterization, and coherence. Mean differences for each aspect were also small, which implies that variations in scoring were more likely due to minor differences across individual texts rather than differences in rater standards. Table 9 presents inter-rater correlations, mean scores for each rater, and mean score differences.

Table 9
Inter-Rater Agreement for Short Story Scoring

Aspect	r (Pearson)	Mean R1	Mean R2	Mean difference (R1-R2)
Plot and conflict	0.74	2.84	2.76	0.08
Characterization	0.71	3.03	2.95	0.08
Setting	0.68	2.96	2.88	0.08
Diction and style	0.66	2.82	2.74	0.08
Coherence	0.72	2.88	2.80	0.08
Originality and theme	0.69	2.99	2.91	0.08
Total short story score	0.83	18.05	17.73	0.32

Table 9 indicates a generally consistent scoring pattern between the two raters. The correlation for the total short story score was strong ($r = 0.83$), while the aspect-level

correlations ranged from 0.66 to 0.74, indicating moderate to strong consistency across the six assessment dimensions. Plot and conflict showed the highest aspect-level correlation ($r = 0.74$), whereas diction and style showed the lowest ($r = 0.66$). The mean differences between the two raters were small, amounting to 0.08 for each individual aspect and 0.32 for the total score. Rater 1 assigned slightly higher mean scores than Rater 2 across all dimensions, but the magnitude of these differences was limited. Taken together, the correlation coefficients and small mean differences indicate that the two raters applied the short story rubric with a reasonably consistent scoring pattern across the participating students' final texts.

Discussion

The validity findings indicate that the developed package had an appropriate level of content, instructional clarity, and assessment structure for classroom implementation. Four of the five components reached the very high validity category, while the short story rubric was rated in the high category and subsequently received more specific revisions to its descriptors. This pattern is important because the usefulness of an ideation package depends not only on the attractiveness of its prompts but also on whether students can understand the sequence of activities and whether teachers can interpret the assessment criteria consistently. The revisions to the SCAMPER cards, Sprint worksheet, and assessment rubrics therefore addressed different but connected aspects of implementation: concise prompts reduced unnecessary processing demands, the seed-idea example clarified how students should begin, and more differentiated descriptors reduced ambiguity between score levels. This finding is consistent with Kalkbrenner's (2021) emphasis on clear indicators and score interpretation in instrument development and with the 4D principle that validation and revision are necessary before wider implementation (Thiagarajan et al., 1974). It also supports evidence-based writing instruction that favors explicit and visible procedures rather than asking students to complete complex writing processes without sufficient guidance (Graham et al., 2025).

The practicality findings show that the package was generally usable for both students and teachers, although the results also reveal an important implementation constraint. Students rated the usefulness of the SCAMPER cards for generating idea variations and strengthening conflict relatively highly, whereas time sufficiency received the lowest student rating. This contrast suggests that practicality should not be interpreted simply as ease of use; the tools were perceived as useful, but completing idea generation, selection, peer feedback, and plot planning within limited classroom time required careful pacing. The concrete nature of SCAMPER prompts may help reduce the difficulty of beginning a story because students are not required to generate all narrative possibilities without guidance. This interpretation is consistent with Boonpracha (2023), who reported the usefulness of SCAMPER for creative idea generation, and with Alhamdi (2021), who connected structured SCAMPER activities with creative writing development. The present findings add a practical consideration to those studies: structured ideation may support students, but the number and sequence of activities need to be adjusted to the available instructional time.

The increase in ideation scores across fluency, flexibility, originality, and elaboration can be interpreted through the cognitive demands built into the SCAMPER procedure. Students were not asked merely to produce one idea and immediately turn it into a story. Instead, the prompts required them to alter, combine, adapt, eliminate, or rearrange elements of an initial idea before selecting one possibility for further development. Such operations encourage students to move away from the first available response and consider alternative relationships among characters, problems, consequences, and event sequences. The largest mean gain occurred in elaboration, suggesting that students became better able to develop an initial idea into a more detailed plan, while flexibility produced the largest effect size, indicating a strong change in their ability to shift among alternative possibilities. These patterns are consistent with studies showing that SCAMPER can facilitate creative idea

generation and refinement (Hassan, 2023; Yüzüak & Recepkethüda, 2025) and with findings that students perceive SCAMPER as useful for idea development and writing organization (Dewangga et al., 2026). The present study extends these findings by operationalizing ideation into four measurable dimensions and by documenting the progression from seed ideas to SCAMPER-generated alternatives and selected story plans.

The final short story results provide a more nuanced picture of how stronger prewriting may be reflected in students' completed narratives. Characterization, originality and theme, and setting received relatively higher mean scores, whereas diction and style and plot and conflict remained comparatively lower. This pattern suggests that generating and refining ideas before drafting may be particularly useful for clarifying what a story is about, who is involved, and what narrative possibilities can be developed. However, ideation support alone does not automatically ensure sustained conflict or effective language realization throughout an entire short story. Developing narrative tension requires students to maintain and escalate conflict across scenes, while diction and style depend on sentence-level choices that extend beyond the primary focus of SCAMPER. The qualitative idea traces provide additional support for this interpretation because some simple initial premises developed into more specific conflicts after modify or reverse prompts and became more systematically organized after students constructed a three-act outline. This relationship is consistent with writing research that associates planning and idea organization with stronger coherence and text structure (Fitria et al., 2021).

The contribution of the present study also differs from simply applying SCAMPER as a stand-alone brainstorming technique. Previous studies cited in this manuscript have primarily demonstrated the usefulness of SCAMPER for creative thinking, idea generation, or creative writing activities (Alhamdi, 2021; Boonpracha, 2023; Dewangga et al., 2026; Hassan, 2023; Yüzüak & Recepkethüda, 2025). The present study extends this line of research by embedding SCAMPER within an integrated prewriting sequence that connects idea stimulation, idea selection, plot organization, peer feedback, ideation assessment, and final short story assessment. The SCAMPER cards function as idea triggers, the Sprint worksheet records and organizes idea development, the peer-feedback sheet introduces evaluation before drafting, and the two rubrics make both the ideation process and the final product observable. This integration is particularly relevant for process-oriented writing instruction because it makes a stage that is often invisible the development of an idea before drafting more explicit and assessable for both students and teachers.

The instructional implication is that SCAMPER may be more useful when implemented as a structured prewriting routine rather than as a one-time brainstorming activity. Teachers can model how one initial premise changes through several SCAMPER prompts, require students to compare alternative ideas before selecting one, and connect the selected idea to a plot outline before full drafting begins. The present findings also identify several areas for further development of the package. Time allocation should be made more flexible because students reported lower practicality for completing the activities within two class periods. Additional scaffolding is also needed for plot and conflict development and for diction and style, which remained comparatively weaker in the final short stories. Future versions could provide more focused prompts for escalating conflict, clearer checkpoints between complication and climax, and separate revision guidance for language choices after the ideation stage.

CONCLUSION

The study developed a SCAMPER-based ideation package for short story writing consisting of SCAMPER cards, a SCAMPER Sprint worksheet, an ideation rubric, a short story rubric, and a peer-feedback sheet. The findings indicate that the package met the study criteria for validity and practicality and was accompanied by significant improvement in

students' ideation scores following implementation. The main contribution of the study is the development of a structured prewriting routine that guides students to generate and refine ideas, strengthen conflict, and organize plot before drafting a complete short story. Rather than functioning only as a brainstorming technique, the package integrates idea generation, idea selection, plot planning, peer feedback, and assessment into a documented instructional sequence. Within the context of this study, these findings support the use of SCAMPER as a process-oriented approach to short story writing instruction in senior high school.

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INFORMED CONSENT STATEMENT

Participation in this study was voluntary. Prior permission was obtained from the school. Students were informed about the study objectives and procedures, the learning activities involved, and the use of their work and questionnaire responses for research purposes. Confidentiality was ensured by using anonymized identifiers, and no personal names were reported. Participants could decline to answer any question and could withdraw from the study at any time without academic penalty. Consent to participate was obtained from students and, where required by school policy, from parents or legal guardians.

DATA AVAILABILITY STATEMENT

The data generated and analyzed in this study are not publicly available because they include student-related information and handwritten writing products that may compromise participant privacy. De-identified data may be made available by the corresponding author upon reasonable request and with permission from the school, in accordance with applicable ethical considerations.

DECLARATION OF GENERATIVE AI USE

Generative AI tools were used during the revision of this manuscript to support language refinement, translation, and the restructuring of selected passages in response to reviewer comments. All AI-assisted outputs were critically reviewed, verified, and edited by the authors, who take full responsibility for the accuracy, interpretation, citations, and final content of the manuscript.

REFERENCES

- Alemu, M. (2020). The Role of Pre-writing Strategies to Enhance the Students' Idea Generating Abilities : The Case of First-Year Computer Science Students of Haramaya University. *International Journal of Education & Literacy Studies*, 8(1), 40–47. <https://doi.org/http://dx.doi.org/10.7575/aiac.ijels.v.8n.1p.40>
- Alhamdi, S. A. (2021). The Effect of Social Constructivist SCAMPER Model on Creative Writing Skill. *International Journal of Linguistics*, 13(1), 10–25. <https://doi.org/10.5296/ijl.v13i1.17881>
- Boonpracha, J. (2023). SCAMPER for creativity of students' creative idea creation in product design. *Thinking Skills and Creativity*, 48, 101282. <https://doi.org/https://doi.org/10.1016/j.tsc.2023.101282>
- Bulqiyah, S., Arif, M., & Ayu, D. (2021). Investigating writing difficulties in essay writing :

- Tertiary students ' perspectives. *English Language Teaching Educational Journal*, 4(1), 61–73. <https://doi.org/10.12928/eltej.v4i1.2371>
- Dewangga, V., Pramudita, R. F., Rukiati, E., & Tornado, G. (2026). Students ' Perception of the SCAMPER Technique on Creative Writing Skill : A Case Study of an ESP Class. *JEAPCO*, 12(1), 1–13. <https://doi.org/https://doi.org/10.25047/jeapco.v12i1.6035>
- Fitria, N., Zahra, C. M., Usman, M., & Usman, B. (2021). Exploring Strategies To Foster Cohesion And Coherence In Efl Writing: A Focus On Simple View Of Writing. *Jurnal Sosiohumaniora Kodepena*, 5(1), 62–73. <http://jsk.kodepena.org/index.php/jsk>
- Gallagher, K. (2011). *Write Like This: Teaching Real-World Writing Through Modeling and Mentor Texts* (1st editio). Routledge. <https://doi.org/https://doi.org/10.4324/9781032683263>
- Gallagher, K. (2023). *Teaching adolescent writers*. Routledge.
- Gani, R., Supratmi, N., Ernawati, T., & Wijaya, H. (2024). Mengembangkan Bakat Menulis Siswa, Meningkatkan Keterampilan Menulis Cerpen, Serta Menumbuhkan Minat Baca Dan Tulis. *Lamahu*, 3(2), 106–119. <https://doi.org/10.37905/ljpm.v3i2.24904>
- Graham, S., Cao, Y., Kim, Y.-S. G., Lee, J., Tate, T., Collins, P., Cho, M., Moon, Y., Chung, H. Q., & Olson, C. B. (2025). Effective writing instruction for students ingrades 6 to 12: a best evidence meta-analysis. *Reading and Writing*, 38(4), 1–46. <https://doi.org/10.1007/s11145-024-10539-2>
- Graham, S., Kiuahara, S. A., & Mackay, M. (2020). The Effects of Writing on Learning in Science , Social Studies , and Mathematics : A Meta-Analysis. *Sage Journals*, 90(2), 1–48. <https://doi.org/10.3102/0034654320914744>
- Hassan, S. M. (2023). SCAMPER as a Creative Idea Generation Method : Case Study on Graphic Design Students. *Information Sciences Letters*, 12(4), 1417–1426. <https://doi.org/http://dx.doi.org/10.18576/isl/120453>
- Husniati, W. O., Dinar, S. S., Tike, L., & Rifa'ie, M. (2025). Faktor Kesulitan Belajar Siswa Pada Pembelajaran Munlis Cerpen Kelas IX. *Jurnal Bastra*, 10(4), 1778–1788. <https://bastra.uho.ac.id/index.php/journal%0AFAKTOR>
- Kalkbrenner, M. T. (2021). A Practical Guide to Instrument Development and Score Validation in the Social Sciences: The MEASURE Approach. *Practical Assessment, Research, and Evaluation*, 26(1). <https://doi.org/https://doi.org/10.7275/svg4-e671>
- OECD. (2024). *PISA 2022 Results (Volume III): Creative Minds, Creative Schools*. Organisation for Economic Co-operation and Development. <https://doi.org/https://doi.org/10.1787/53f23881-en>
- Pitrianti, S., & Gasanti, R. (2020). Analisis Kesulitan Menulis Karya Ilmiah Siswa SMA Terbuka. *Literasi*, 4(2), 92–99. <https://doi.org/http://dx.doi.org/10.25157/literasi.v4i2.4283>
- Pulungan, A. A., & Siregar, M. A. F. (2023). Fenomena deiksis dan kesantunan dalam bahasa Batak Angkola-Mandailing. *Hasta Wiyata*, 6(2), 106–122. <https://doi.org/10.21776/ub.hastawiyata.2023.006.02.01>
- Rahayu, K. D., Novitasari, D. A., & Mirantika, R. (2020). S tudents ' Collaborative Writing Method in Pre-Writing Phase. *IDEAS*, 8(2), 471–482. <https://doi.org/10.24256/ideas.v8i2.1615>
- Ramírez, B. N., Cansino, M. L. R., Campos, C. A., Borrego, D. D., & Garza, L. H. (2024). Creative Writing : Story-Based Learning in Public and Private High School for Exploration of Written Text. *Education Sciences*, 14(12), 1–9. <https://doi.org/https://doi.org/10.3390/educsci14121392>
- Siekmann, L., Parr, J. M., & Busse, V. (2022). Structure and coherence as challenges in composition : A study of assessing less proficient EFL writers ' text quality. *Assessing Writing*, 54(January), 100672. <https://doi.org/10.1016/j.asw.2022.100672>

- Tampubolon, M. L. V., & Sipahutar, H. (2024). Development of project-based modules to improve learning outcomes , critical thinking and problem-solving skills. *JPBI*, 10(2), 531–541. <https://doi.org/10.22219/jpbi.v10i2.32958> ©
- Thiagarajan, S., Semmel, D. S., & Semmel, M. I. (1974). *nstructional development for training teachers of exceptional children: A sourcebook*. University of Minnesota. <https://eric.ed.gov/?id=ED090725>
- UNESCO. (2025). *Literacy*. United Nations Educational, Scientific and Cultural Organization. <https://www.unesco.org/en/literacy/>
- Woo, D. J., Wang, Y., Susanto, H., & Guo, K. (2023). Understanding English as a Foreign Language Students' Idea Generation Strategies for Creative Writing With Natural Language Generation Tools. *Journal of Educational Computing Research*, 61(7), 1464–1482. <https://doi.org/10.1177/07356331231175999>
- Wu, Y., & Schunn, C. D. (2020). The Effects of Providing and Receiving Peer Feedback on Writing Performance and Learning of Secondary School Students. *Sage Journals*, 58(3), 1–35. <https://doi.org/10.3102/0002831220945266>
- Yudistia, A. Y., & Chandra, O. (2025). Effectiveness of augmented reality learning media in enhancing embedded system programming competence : A 4D development study. *Indonesian Research Journal in Education*, 9(2), 1384–1397. <https://doi.org/https://doi.org/10.22437/irje.v9i02.46911>
- Yüzüak, A. V., & Recepkethüda, R. (2025). The effect of SCAMPER activities on 7th grade students' creative thinking, science achievement and perceptions. *Research in Science & Technological Education*, 1–20. <https://doi.org/10.1080/02635143.2025.2575910>