



Development and Evaluation of a Visual Scaffolding-Based Pop-Up Book for Sentence-Writing Instruction among Lower-Grade Elementary School Students

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Abstract. The urgency of this study lies in developing an engaging visual scaffolding-based pop-up book to support sentence-writing skills among lower-grade elementary school students. This study aimed to develop and evaluate a visual scaffolding-based Pop-Up Book to support sentence-writing instruction for second-grade elementary school students. The study employed a Research and Development approach using the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation. Data were collected through observation, interviews, questionnaires, and documentation. The product integrated three-dimensional visual representations into a sequence of activities that guided students to observe objects or activities, identify information, generate ideas, select relevant vocabulary, and organize it into simple sentences. Product evaluation involved a media expert, a language expert, a practitioner, and 20 second-grade students at SD Negeri 2 Telaga as users. Validation results showed feasibility scores of 93.75% from the media expert and 79.16% from the language expert, with an average of 86.46%. The practitioner assessment reached 97.50%, while student responses reached 98.68%, indicating high feasibility and practicality. These findings indicate that the visual scaffolding-based Pop-Up Book is feasible and practical for supporting sentence-writing instruction in the context of this study. However, the study did not measure the effectiveness of the medium in improving writing ability. Future research should use experimental or quasi-experimental designs with writing performance as a direct outcome.

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Introduction

Writing is a fundamental component of literacy development in elementary school students because it enables them to organize ideas, represent knowledge, and communicate information through written language. In the lower grades, writing development involves not only forming letters, spelling, and using punctuation, but also generating ideas and transforming them into meaningful written language. Research on early writing indicates that writing development is a multidimensional process involving transcription skills, language ability, conceptual knowledge about writing, and

generative or composing ability (Tortorelli et al., 2022; Rohloff et al., 2023). Studies of writing instruction in elementary schools also highlight the need to balance basic writing skills with the processes of generating and organizing written content (Malpique et al., 2023; Graham et al., 2024; Guo et al., 2026). Therefore, writing instruction for lower-grade students should be designed not only to develop the mechanical aspects of writing but also to provide support that enables students to generate and develop ideas into written language units.

One fundamental skill at this stage is sentence writing (Mooduto et al., 2026). Although it may appear simple, sentence writing requires students to perform several processes almost simultaneously, from deciding what to write and selecting vocabulary to constructing sentence structures and applying writing conventions such as capitalization and punctuation. Recent research identifies sentence writing as an important skill in early writing development that requires systematic instructional support (Allen, 2026). At the same time, studies on interactive writing, writing conferences, and process approaches show that young students benefit when writing instruction includes modeling, dialogue, feedback, or other forms of support that help them progress from what they can already do toward more complex writing tasks (Gerde et al., 2024; Sherman et al., 2025; Pletcher et al., 2026; Busse et al., 2026). Evidence-based recommendations also identify support during the writing process and instruction in sentence construction as important components of writing instruction (Graham et al., 2024). These findings suggest that beginning writers need more than simply being assigned writing tasks; they require scaffolding that supports idea generation and organization before they can independently produce sentences (Riyani et al., 2023).

One potentially useful form of support for writing instruction in the lower grades is visual representation. Images and other visual forms can provide information about objects, characters, actions, locations, and relationships among elements that students can observe before producing written language. Research on visual literacy shows that images contribute to children's thinking and meaning-making processes and therefore do not function merely as decorative elements in learning materials (Farrar et al., 2024). In early-grade instruction, visual models and multimodal prompts can direct students' attention to particular elements and support meaning making through interactions among visual, verbal, and gestural representations (Ridell & Walldén, 2024). Studies of multimodal writing also indicate that children can use more than one representational mode to construct and express meaning, including relationships between images and alphabetic writing (Mathew et al., 2025; Björk et al., 2025). More recent research further demonstrates the potential of integrating visual design with structured support to develop generative abilities that form a foundation for writing development (FitzPatrick et al., 2026).

From this perspective, the present study operationalizes visual scaffolding as instructional support delivered through deliberately designed visual representations that help students move gradually from observation to sentence production. In this study, visual scaffolding is not positioned merely as the presentation of attractive images; rather, it functions as a pedagogical mechanism that guides students to observe visual representations, identify objects and activities, generate ideas, activate relevant vocabulary, and organize the information into simple sentences. The instructional pathway developed in the study comprises visual observation, object/action identification, idea generation, vocabulary activation, and sentence construction. This

approach is consistent with the view that early writing activities should provide opportunities for generative processes and that children can use verbal and multimodal support to construct meaning before and while expressing it in written form (Rohloff et al., 2023; Mathew et al., 2025; Guo et al., 2026; FitzPatrick et al., 2026).

A medium with characteristics that can potentially implement this mechanism is the Pop-Up Book. Compared with printed learning materials that rely primarily on text or static two-dimensional images, a Pop-Up Book allows objects and situations to be represented in three dimensions and involves physical interaction when pages are opened or media elements are manipulated. These characteristics create opportunities for visual objects to become an integral part of learning activities rather than merely accompanying illustrations. Research on Pop-Up Book development in Indonesian language instruction has shown that this type of medium can receive high validity and practicality ratings in elementary school contexts (Aida et al., 2025). In the context of writing instruction in Indonesia, other studies have used picture stories for second-grade students (Fatmawati et al., 2022), guided writing to support the writing process (Cahyani et al., 2024), QR-based media for writing skills (Fitrianti et al., 2024), and Problem-Based Learning-based Smart Apps Creator media for effective sentence writing (Ratnasari & Ansori, 2024). These studies demonstrate growing innovation in learning media and instructional support, although their focus, media characteristics, and pedagogical mechanisms remain diverse.

The need for this type of support was also identified in sentence-writing instruction for second-grade students at SD Negeri 2 Telaga. Initial observations showed that instruction still relied on printed material sheets and sentence-completion exercises dominated by text, with insufficient visual elements. Under these conditions, some students appeared less enthusiastic, lost focus easily, and continued to experience difficulty expressing ideas as complete and coherent sentences. These initial findings indicate that the instructional problem concerns not only the attractiveness of the media but also the limited support available to help students determine what to write before facing the linguistic demands of deciding how to write it. Therefore, learning media are needed that not only provide visual representations but also integrate those representations into a sequence of activities that encourages students to observe, identify information, generate ideas, and then construct sentences. This orientation is consistent with recent research emphasizing meaningful writing experiences, structured writing practice, and support for composing processes in the early stages of writing development (Gerde et al., 2024; Sherman et al., 2025; Guo et al., 2026; Brosseuk & Downes, 2026).

Based on this synthesis of the literature, three issues underpin the research gap. First, early writing research has demonstrated the importance of integrating basic skills with generative and composing processes; however, sentence-construction instruction for students in the early grades still requires forms of support that are appropriate to their developmental characteristics (Graham et al., 2024; Allen, 2026; Guo et al., 2026). Second, research on visual literacy and multimodality shows that images, visual prompts, and multimodal representations can support children's meaning-making processes (Farrar et al., 2024; Ridell & Walldén, 2024; Mathew et al., 2025; Björk et al., 2025; FitzPatrick et al., 2026), yet these studies do not specifically focus on using three-dimensional physical media to guide simple sentence construction. Third, Pop-Up Books have been developed in various learning contexts, but research that explicitly operationalizes their three-dimensional visual characteristics as an instructional

scaffold linking visual observation, idea generation, vocabulary activation, and simple sentence construction among beginning writers remains limited. Thus, the research opportunity lies not merely in using a new medium, but in how its characteristics are designed and used according to pedagogical mechanisms relevant to early writing processes.

To address this gap, the present study developed and evaluated a visual scaffolding-based Pop-Up Book for sentence-writing instruction among lower-grade elementary school students, specifically second graders. The novelty of the study lies not merely in the use of a Pop-Up Book or in differences in grade level from previous research, but in a pedagogical design logic that positions three-dimensional visual representations as scaffolds linking observation to written language production. The medium was designed to guide students through observing visual representations, identifying objects and activities, generating ideas, selecting relevant vocabulary, and constructing simple sentences. This study aimed to identify instructional needs for sentence writing, develop a visual scaffolding-based Pop-Up Book that supports idea generation and simple sentence construction, and evaluate the feasibility and practicality of the medium based on assessments by experts, practitioners, and users.

Methods

This study employed a Research and Development (R&D) approach to produce and evaluate a visual scaffolding-based Pop-Up Book for sentence-writing instruction among lower-grade elementary school students. The development process used the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The model provided a systematic development pathway from identifying instructional needs, designing and developing the medium, validating the product, implementing it, and evaluating its feasibility and practicality. The study focused on product development and the evaluation of product feasibility and practicality.

The study was conducted at SD Negeri 2 Telaga, Gorontalo Regency, Indonesia. Participants in the implementation stage were 20 second-grade students who participated in sentence-writing instruction using the developed Pop-Up Book. The product trial was conducted on May 11, 2026. The product evaluation process also involved a media expert, a language expert, and an educational practitioner who assessed the quality of the product before and during implementation.

Development Procedure

1). The analysis stage was conducted through observation and interviews to identify the initial conditions of sentence-writing instruction, the needs of teachers and students, learner characteristics, and product requirements. The analysis showed that instruction was still dominated by printed material sheets and written exercises, while students needed a more concrete and visual medium that could provide structured support when generating ideas before writing. 2). The design stage involved designing the structure and components of the Pop-Up Book based on the needs analysis. The medium was designed with three-dimensional visual representations, colorful illustrations, sentence-writing content, instructions for use, and activities that directed students to observe visual representations before producing sentences. The principle of visual scaffolding was operationalized through a sequence of visual observation, object or action identification, idea generation, vocabulary activation, and sentence construction. The

themes used in the medium included health problems, healthy lifestyles, personal hygiene, and a healthy environment. These themes served as the content context, while the target skill remained focused on learning to write simple sentences based on information obtained from the visuals. 3). The development stage transformed the design into a Pop-Up Book product. The product was then validated by a media expert and a language expert and assessed by a practitioner. Comments and suggestions from the validators were used as the basis for revising the product before it was implemented with students. 4). The implementation stage involved 20 second-grade students. The teacher introduced the medium and explained how to use it. Students then observed the three-dimensional representations, identified objects, characters, and activities, and used their observations as stimuli to generate ideas and write simple sentences. After the learning activity, students responded to the medium through a questionnaire. 5). The evaluation stage was conducted continuously using feedback from the media expert, language expert, practitioner, and students. Evaluation aspects included media appearance, language use, content appropriateness, ease of use, and user acceptance. The overall evaluation results were used to determine the feasibility and practicality of the medium.

Instruments and Data Collection Techniques

Data were collected through observation, interviews, questionnaires, and documentation. Observation and interviews were used during the analysis stage to obtain information about instructional conditions, media use, students' difficulties, and teacher and student needs. Questionnaires were used to obtain assessments from the media expert, language expert, practitioner, and students. Documentation was used to record the product development and implementation processes.

Table 1. Data Collection Techniques and Their Purposes

Instrument	Data Source	Purpose
Observation	Learning activities	Identify initial conditions and instructional needs
Interview	Teacher	Explore needs, constraints, and characteristics of writing instruction
Media Validation Questionnaire	Media expert	Assess the feasibility of media appearance, design, and function
Language Validation Questionnaire	Language expert	Assess language feasibility and readability
Practitioner Questionnaire	Teacher/practitioner	Assess the practicality of media use
Student Response Questionnaire	20 students	Assess media acceptance and practicality from the users' perspective
Documentation	Development process	Support documentation of development and implementation stages

Qualitative data from observations, interviews, comments, and validator suggestions were analyzed descriptively to identify instructional needs and provide a basis for product revision. Quantitative data from the validation and practicality questionnaires were analyzed using percentages by comparing the obtained scores with the maximum possible scores. The results were then interpreted according to the feasibility or practicality categories used in the study. To maintain construct consistency, expert assessments were interpreted as feasibility, whereas practitioner assessments and student responses were interpreted as practicality or acceptance of media use.

Ethical Considerations

This study received permission to be conducted at SD Negeri 2 Telaga, Bulila Village, Telaga District, Gorontalo Regency. The research permit was granted under Research Permit Letter No. 420/Dikbud-Kab.Gtlo/1564 issued by the Department of Education and Culture of Gorontalo Regency. This permit served as the basis for conducting observations, data collection, validation, and trials of the Pop-Up Book with second-grade students. All research activities were carried out in accordance with the rules and regulations applicable within the school. The data obtained were used for academic purposes and the preparation of this scholarly article, while publication of the findings maintained the confidentiality of participants' identities and personal data.

Results and Discussion

Research Results

Initial Condition of Learning Media

The analysis results showed that sentence-writing instruction for second-grade students at SD Negeri 2 Telaga still faced several problems. The learning media used consisted of printed materials and sentence-completion exercises that were predominantly text-based. Attractive visual media had not been widely used, causing the learning process to tend to be monotonous. This condition resulted in some students showing less enthusiasm during the learning process and experiencing difficulties in expressing their ideas in complete sentences.

These problems were also related to students' ability to use capital letters and punctuation marks appropriately. The limited use of learning media, which mainly relied on textbooks and lecture methods, became one of the conditions underlying the development of the *Pop-Up Book* media. Based on these conditions, learning media that could provide students with a more concrete and visual learning experience was needed. The *Pop-Up Book* was selected because it presents attractive three-dimensional images that can serve as a stimulus for students to develop ideas and write simple sentences.

Development of the *Pop-Up Book* Media

This research produced a learning media product in the form of a *Pop-Up Book* for teaching sentence writing to second-grade students at SD Negeri 2 Telaga. The product development was carried out through the five stages of the ADDIE model.

Analysis

The analysis results showed that the learning media used for sentence-writing materials were still in the form of printed materials and sentence-completion worksheets. These materials were predominantly text-based and had not been equipped with attractive visual elements. As a result, the learning process tended to be monotonous, and some students showed less enthusiasm. Students also experienced difficulties in expressing their ideas into complete and coherent sentences (Purwanti, 2026). The needs analysis indicated the necessity of more attractive and interactive learning media. Second-grade students were more interested in colorful and illustrated media and found it easier to understand materials through concrete and visual media. Therefore, the *Pop-Up Book* was selected as an alternative learning medium.

Design

The media was designed using the Canva application to create the images and page layouts. The product was made using 250 gsm *Ivory* paper, *art cartoon* paper, *hard cover* material, scissors, glue, and other supporting materials. The media used a combination of bright colors and images appropriate for children. The product consisted of several sections, including a cover, preface, instructions for use, table of contents, *Pop-Up* materials on health disorders, healthy lifestyle, personal hygiene, health and the environment, the author's biography, and the back cover.



Figure 1. Pop-Up Book Media Product Design

Development Stage

The development stage is the process of transforming the *Pop-Up Book* media design into a product that is ready to be used in sentence-writing instruction for second-grade students at SD Negeri 2 Telaga. At this stage, the media was developed based on the prepared design, research instruments were prepared, and validation was conducted by a media expert, a language expert, and a practitioner to assess the feasibility of the media in terms of appearance, language, content, and use. Research and development products need to undergo a validation process to ensure their suitability and quality before being used in learning activities (Rahayu, 2025). The validation results and suggestions from the validators were then used as a basis for revising the media so that the resulting *Pop-Up Book* would be feasible and appropriate for the characteristics of second-grade students.

Table 2. Summary of Validation Results and Practitioner Assessment

Evaluation Type	Evaluator	Percent (%)	Category
Feasibility	Media expert	93.75%	Highly feasible
Feasibility	Language expert	79.16%	Feasible
Average feasibility	Experts	86.46%	Highly feasible
Practicality	Practitioner/teacher	97.50%	Highly practical

Table 2 presents the results of the feasibility validation and practitioner assessment of the developed learning media. The media expert obtained a score of 93.75%, categorized as highly feasible, indicating that the media components, visual presentation, layout, and overall design met the expected feasibility criteria. Meanwhile, the language expert provided a score of 79.16%, which was categorized as feasible, suggesting that the language used in the media was generally appropriate but may still require minor improvements in terms of clarity, sentence structure, and suitability for the target users. The average feasibility score from both experts was 86.46%, placing the developed media in the highly feasible category and indicating that it was suitable for implementation. Furthermore, the practitioner/teacher assessment reached 97.50%, categorized as highly practical, demonstrating that the media was considered easy to

use, appropriate for learning activities, and practical for classroom implementation. Overall, these findings indicate that the developed media met both feasibility and practicality criteria and could be implemented in learning activities with appropriate consideration of the language-related suggestions from the validation process.

Implementation Stage

The development stage is the process of transforming the *Pop-Up Book* media design into a product that is ready to be used in sentence-writing instruction for second-grade students at SD Negeri 2 Telaga. At this stage, the media was developed based on the prepared design, research instruments were prepared, and validation was conducted by a media expert, a language expert, and a practitioner to assess the feasibility of the media in terms of appearance, language, content, and use. Research and development products need to undergo a validation process to ensure their suitability and quality before being used in learning activities. The validation results and suggestions from the validators were then used as a basis for revising the media so that the resulting *Pop-Up Book* would be feasible and appropriate for the characteristics of second-grade students.

Evaluation Stage

The final evaluation considered the expert validation results, practitioner assessment, and student responses. Overall, the medium received high feasibility ratings from the experts and very high practicality ratings from both the practitioner and students.

Feasibility and Practicality of the *Pop-Up Book* Media

After the *Pop-Up Book* media had been developed, validation was conducted to determine the feasibility of the product before it was used in learning activities. Validation was conducted by a media expert and a language expert using the prepared assessment instruments. The feasibility criteria used in this research are presented in Table 1. Based on the validation results, the media expert gave a percentage of 93.75%, categorized as very feasible, while the language expert gave a percentage of 79.16%, categorized as feasible. The average percentage of the media expert and language expert validation results was 86.46%, categorized as very feasible. These validation results indicate that the *Pop-Up Book* media met the feasibility criteria in terms of media appearance and language use for sentence-writing instruction.

Table 3. *Summary of Validation Results and Practitioner Assessment*

Evaluation Type	Evaluator	Percent (%)	Category
Feasibility	Media expert	93.75%	Highly feasible
Feasibility	Language expert	79.16%	Feasible
Average feasibility	Experts	86.46%	Highly feasible
Practicality	Practitioner/teacher	97.50%	Highly practical

The feasibility assessment was also conducted by a practitioner, namely the second-grade teacher at SD Negeri 2 Telaga. The practitioner assessment was used to determine the suitability of the media when used in classroom learning activities. The practitioner assessment obtained a percentage of 97.5%, categorized as very feasible. This result indicates that the *Pop-Up Book* media can be used in sentence-writing instruction and is appropriate to the needs of second-grade students. After being declared feasible, the *Pop-Up Book* media was implemented with 20 second-grade students at SD Negeri 2 Telaga to determine its practicality. During the learning activities, students used the media by observing the three-dimensional images, identifying the objects or activities presented, and then writing sentences based on the

images. The practicality of the media was determined through a student response questionnaire administered after the learning activities.

Table 4. *Student Responses to the Pop-Up Book Media*

Number of Students	Obtained Score	Maximum Score	Percent (%)	Category
20	750	760	98.68%	Highly practical

The student response questionnaire obtained a score of 750 out of a maximum score of 760, resulting in a percentage of 98.68%, categorized as very practical. This result indicates that the *Pop-Up Book* media was easy to use and well received by the students. During the learning process, students appeared more enthusiastic in participating in the activities, actively answered the teacher's questions, and showed greater confidence in writing sentences based on the presented images.

Based on the validation and trial results, the *Pop-Up Book* learning media obtained good results in terms of both feasibility and practicality. The media expert validation result was 93.75%, the language expert validation result was 79.16%, the average of the two expert validation results was 86.46%, and the practitioner assessment was 97.5%, indicating that the media was categorized as feasible to very feasible. Meanwhile, the student response of 98.68% indicated that the media was categorized as very practical. Therefore, the *Pop-Up Book* media can be used as supporting learning media for sentence-writing instruction among second-grade students at SD Negeri 2 Telaga.

Table 5. *Summary of the Pop-Up Book Evaluation Results*

Evaluation Source	Aspect	Percent (%)	Category
Media expert	Media feasibility	93.75%	Highly feasible
Language expert	Language feasibility	79.16%	Feasible
Expert average	Product feasibility	86.46%	Highly feasible
Practitioner/teacher	Practicality	97.50%	Highly practical
Students	Response/practicality	98.68%	Highly practical

The results indicate that the developed Pop-Up Book is feasible and practical for use as a visual scaffolding medium in sentence-writing instruction for second-grade students. Its three-dimensional features provide observable visual objects, while the sequence of learning activities guides students to identify objects and activities before expressing them in simple sentences. These findings are not intended to establish the effectiveness of the medium in improving writing skills because changes in writing ability were not measured directly.

Discussion

The initial condition of sentence-writing instruction in Grade II at SD Negeri 2 Telaga showed that the learning media used were still in the form of printed materials and sentence-completion exercises. These materials were predominantly text-based and had not been supported by attractive visual media. This condition caused sentence-writing instruction to tend to be monotonous, and some students still experienced difficulties in expressing their ideas in the form of complete sentences. The use of capital letters and punctuation marks also remained an aspect that needed attention in writing activities. This situation indicated that the previously used media had not fully provided students with sufficient stimulus to generate ideas before writing. Therefore, learning media that could provide a more concrete learning experience through images that students could observe was needed.

This initial condition became the basis for developing the *Pop-Up Book* media. The use of media containing three-dimensional images provided a different learning experience compared with the media previously used. Students not only received materials through written text but could also observe the images directly as a source of ideas for writing. This was in accordance with the characteristics of elementary school students, who still require concrete and engaging learning experiences. Through visual media, students received assistance in identifying objects, activities, and information that could be developed into sentences.

Based on the research results, the use of *Pop-Up Book* media had a positive impact on sentence-writing instruction among Grade II students at SD Negeri 2 Telaga. Students found it easier to generate ideas and construct sentences based on the images presented. The three-dimensional images, colors, and overall appearance of the media increased students' interest in participating in learning activities. This condition could be observed when students examined the images, identified objects and activities, and then wrote simple sentences based on the images. These results are in line with the previous studied, who developed picture-series media based on *Pop-Up Book* to improve Indonesian narrative writing skills (Hidayat et al., 2021). The use of images helps students obtain an illustration of the objects or events they are going to write about. In sentence-writing instruction, the images in the *Pop-Up Book* can serve as a source of ideas, allowing students not to depend solely on the teacher's explanation when determining the content of their sentences. Presenting images in three-dimensional form also makes the media more attractive for use in learning activities.

The use of visual media in writing instruction is also supported by the previous studied, who showed that image-based media can help improve students' ability to write effective sentences. Images provide a clearer representation of the objects to be written about, making it easier for students to determine words and construct sentences (Ratnasari & Ansori, 2024). In this study, this function was evident through students' activities of observing the three-dimensional images before writing. Students had objects that could be directly observed, making the writing activity more focused. The *Guided Writing* method can help students develop writing skills through guidance during the writing process (Cahyani et al., 2024). The results of this study showed a similar condition, in which students received assistance through images before constructing sentences. Students first observed the objects and activities presented in the media and then used their observations to write simple sentences. This approach helped students who still experienced difficulties in expressing their ideas in written form.

The developed *Pop-Up Book* media was further assessed in terms of its feasibility and practicality for sentence-writing instruction among Grade II students at SD Negeri 2 Telaga. The feasibility of the media was determined through assessments by a media expert, a language expert, and a practitioner. The media expert validation obtained a percentage of 93.75%, categorized as highly feasible, while the language expert validation obtained 79.16%, categorized as feasible. The average validation result from the media and language experts was 86.46%, categorized as highly feasible. The practitioner assessment obtained a percentage of 97.5%, also categorized as highly feasible. These results indicate that the *Pop-Up Book* media met the required aspects of appearance, language, content, and use and could therefore be used in sentence-writing instruction for Grade II students.

These assessment results indicate that the developed media not only had an attractive appearance but was also adapted to the needs of the learning process. The media expert assessment of 93.75% indicates that the presentation and appearance of the media met the required criteria, while the language expert assessment indicates that the language used in the media was sufficiently appropriate for Grade II students. The practitioner assessment, which reached 97.5%, also indicates that the media could be used in classroom learning from the teacher's perspective as the user. Thus, the validation results demonstrate that the *Pop-Up Book* can be used as supporting media in sentence-writing activities.

These results support the view of previous studies regarding the importance of learning media in assisting the delivery of learning materials to students (Fadilah & Kanya, 2023). Media with an attractive appearance that is appropriate to students' needs can help create learning activities that are easier to understand. In this study, the *Pop-Up Book* provided a different form of presentation from the printed learning materials previously used. Students could observe images in three-dimensional form and use them as a basis for constructing sentences. The development of visual-based media is also related to the study by the previous study, which developed picture-story-based teaching materials for Grade II elementary school students (Fatmawati et al., 2022). The use of images in learning can help students understand materials through a more concrete presentation. In the *Pop-Up Book*, the images did not merely function as illustrations but became an essential part of the writing activity. Students observed the images first and then developed their observations into simple sentences. This provided assistance for students in determining ideas before engaging in writing activities.

The practicality of the media was determined through students' responses after the *Pop-Up Book* was implemented in the learning process. The trial involved 20 Grade II students at SD Negeri 2 Telaga. The student response questionnaire obtained a score of 750 out of a maximum score of 760, resulting in a percentage of 98.68%, categorized as highly practical. This result indicates that the media could be used easily and was well received by the students. During the learning activities, students were able to use the media appropriately, beginning with observing the three-dimensional images, identifying objects or activities, and then writing sentences based on the presented images.

The high level of student response indicates that the use of the *Pop-Up Book* provided a different learning experience compared with the previous learning process, which relied more heavily on printed materials and written exercises. The three-dimensional images in the media provided objects that students could observe directly, giving them material from which to generate ideas and construct sentences. This condition was evident during the learning activities, when students appeared more enthusiastic, actively answered the teacher's questions, and showed greater confidence in writing sentences based on the images.

These results are consistent with the previous study, who developed *Pop-Up Book* media for elementary school learning (Ulfa & Nasryah, 2020). The three-dimensional appearance of a *Pop-Up Book* can attract students' attention and interest in participating in learning activities. In this study, this interest was reflected in the high level of student responses during the use of the media. Students did not merely view the media as a source of information but also used it as a source for determining ideas and writing sentences.

The findings of previous studied regarding the simple sentence-writing skills of Grade II students also demonstrate the importance of learning activities that help students construct sentences in a structured manner (Prasetya & Indihadi, 2020). This finding is consistent with the use of the *Pop-Up Book*, which provides a stimulus before students begin writing. Students have observable objects, making it easier for them to determine what they want to write. The providing guidance during the writing process can help students develop their writing skills (Cahyani et al., 2024). In this study, such assistance was provided through images that served as stimuli before students constructed sentences.

Based on the feasibility and practicality assessment results, the *Pop-Up Book* media demonstrated good results after undergoing the development and trial processes. The media expert validation obtained 93.75%, the language expert validation obtained 79.16%, and the practitioner assessment obtained 97.5%, while the student response reached 98.68%. These results indicate that the media met the criteria of feasibility and practicality for use in sentence-writing instruction. The *Pop-Up Book* provides images that can be observed directly, making it easier for students to generate ideas and develop them into simple sentences. The use of the media also makes learning activities more engaging and provides students with opportunities to participate directly in the writing process.

Conclusion

This study successfully developed a visual scaffolding-based Pop-Up Book to support sentence-writing instruction for second-grade elementary school students through the ADDIE stages. The medium was designed to use three-dimensional visual representations as pedagogical support that guides students through observing objects or activities, identifying information, generating ideas, selecting relevant vocabulary, and organizing it into simple sentences. The evaluation results showed feasibility ratings of 93.75% from the media expert and 79.16% from the language expert, with an average of 86.46%. The practitioner assessment reached 97.50%, while student responses reached 98.68%, indicating high feasibility and practicality in the instructional context examined. The main contribution of the study lies in extending the function of the Pop-Up Book from merely a visual medium to a visual scaffold that links visual observation with sentence construction. However, the study was limited to one school with a relatively small number of participants and did not measure changes in writing ability using a pretest-posttest design or a comparison group. Future research should involve larger and more diverse samples and use experimental or quasi-experimental designs with writing performance as a direct outcome to evaluate the effectiveness of the medium more rigorously.

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