

FLIPBOOK POETRY GOA TERAWANG BASED ON COOPERATIVE SCRIPT: DEVELOPMENT, VALIDATION, AND EFFECTIVENESS IN IMPROVING READING SKILLS

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Abstract

The ability to read poetry is an essential competency in literary literacy in elementary schools, but students' mastery of intonation, articulation, and interpretation of meaning is often hampered by the limitations of interactive and contextual learning media. Although previous literature has partially explored the use of digital media and cooperative learning models, the integration of poetry based on local wisdom, audio models, and collaborative interactions in a single platform is still very limited. This study aims to develop the Goa Terawang Poetry Flipbook based on the Cooperative Script Model and to test its validity and effectiveness in improving the poetry reading skills of fourth-grade students at SDN Kediren, Blora. This research is a Research and Development (R&D) study adapted from Sugiyono's model through eight stages: (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product testing, (7) product revision, and (8) field testing. The developed media integrates poetry texts containing local songs, visual illustrations, and expressive audio models accessed through QR codes, combined with a cooperative script model that includes paired activities so that children can practice more confidently with their peers. Expert validation results showed a very high level of feasibility, namely 92.8% for the material aspect and 94.6% for the media aspect. Effectiveness tests showed a significant increase in students' poetry reading skills, as evidenced by the results of the Paired Sample t-test ($P < 0.05$) in the product test and the Wilcoxon Signed-Rank test ($P < 0.05$) in the usage test. The improvement in learning outcomes was categorized as moderate, with N-Gain scores of 61.3% and 60.16%, respectively. In conclusion, the Goa Terawang Poetry Flipbook is declared valid and effective as an alternative learning medium to improve elementary school students' poetry reading skills.

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INTRODUCTION

Education is an important endeavor undertaken by individuals to develop their potential (Spychalski, 2023). Without adequate education, individuals will experience limitations in acquiring knowledge (Juhra, 2025). Recognizing the role of education in determining the quality of human resources and the future of the nation, the Indonesian government has established a policy of compulsory education up to the secondary level for all citizens. This policy emphasizes that the formal education process does not only take place in a structured

and systematic manner, but must also equip students with the various basic competencies needed in life (BP et al., 2022).

Elementary school is the initial foundation that determines the development of students' academic abilities in the education process. At this stage, Indonesian language subjects play a very important role because they not only function as a means of communication but also as a means of shaping students' overall language skills, which include listening, speaking, reading, and writing skills (Alvarado-Cedeño & Reyes-Meza, 2022). Among these skills, reading is a basic skill that students must master, as it is the starting point for the development of other language skills and success in understanding various types of knowledge during the learning process. This is in line with research (Ferdianto et al., 2025), which explains that reading skills from the early grades of elementary school serve as the main foundation for students in understanding various fields of learning, so that strong reading skills will greatly determine the success of students' learning in various types of knowledge during the learning process.

Reading skills are not only aimed at recognizing letters and words, but also understanding the meaning and information contained in the reading material (Hidayad et al., 2025). Effective reading requires cognitive and affective involvement from students so that they are able to connect the reading material with their experiences and daily life contexts. Reading skills must be developed through varied and enjoyable methods so that students are not only able to read technically, but also understand the content of the reading thoroughly (Urrutia et al., 2024). Within these reading skills, there is the skill of reading poetry (Safitri & Fatayan, 2025), which has its own characteristics because it requires deep understanding and appreciation.

Poetry reading skills are not merely reciting a series of words in a text (Moldagali et al., 2024). These skills require the ability to capture and internalize the meaning hidden behind the verses written by the poet. In addition, students are also required to be able to convey this meaning through the appropriate voice, intonation, pauses, facial expressions, and gestures (BP et al., 2022). Therefore, poetry reading skills are a challenge for elementary school students in learning Indonesian, especially for fourth-grade students (Muthahar & Fatonah, 2024). This is in line with the researcher's study of fourth-grade students at SDN Kediren Blora, which found problems with the poetry reading skills of fourth-grade students.

The results of the observations and interviews conducted by the researcher showed that many students had difficulties in poetry reading skills. They still read poetry like reading ordinary texts without paying attention to the aspects of intonation, pauses, emphasis, and expressions that should appear in poetry reading. This finding is in line with the results of a study (Mariskhantari et al., 2023) which states that most elementary school students read poetry in a flat manner, similar to reading ordinary texts, due to a lack of understanding of the musicality and appreciation of poetry. This condition is reflected in the students' poetry reading skills scores, most of which are below the Learning Objective Completion Criteria (KKTP) of 70. There are 71% of students who do not yet have good poetry reading skills. They read poetry without appreciation and tend to read it like ordinary story texts. A total of 26% of students began to show fairly good poetry reading skills, while only 3% of students read poetry well. This indicates a serious problem with the poetry reading skills of fourth-grade students at SDN Kediren Blora, which is influenced by several factors that can be broadly categorized into three aspects: students, teachers, and teaching materials.

The student aspect, difficulties in poetry reading skills often arise due to the use of language in poetry that contains sentences that are difficult to understand, making it difficult for students to determine the correct intonation when reading poetry. This is in line with research conducted by (Ismawati et al., 2022), which found that many fourth-grade students experience difficulties in reading poetry, especially in terms of pronunciation, intonation, stress, and pauses in poetry appreciation because poetry sentences are different from ordinary

texts, making them difficult for students to understand. The difficulties experienced by students are also influenced by psychological factors such as a lack of confidence to perform in front of the class. This is in line with research findings showing that psychological factors such as shyness, fear of making mistakes, and lack of motivation can inhibit students from expressing themselves, thereby affecting their ability to read poetry (Ramadan et al., 2023).

The teacher aspect, the teacher aspect shows that many educators still apply a conventional teacher-centered learning model, where teachers only read poems and ask students to imitate them without exploring their deeper meaning. This results in a monotonous learning process, with students being less active and their poetry reading skills not developing optimally. This is in line with the findings of a study conducted by (Pokharel, 2020). which reported that poetry teaching is often dominated by reading and explaining techniques, while approaches that can foster students' imagination and aesthetic appreciation are rarely applied. Furthermore, research by (Kilag et al., 2023) also shows that interactive and student-centered approaches can improve students' reading skills and engagement in poetry learning. Thus, more varied and interactive learning strategies and models are needed so that students can develop their poetry reading skills more optimally.

Teaching materials aspect, teaching materials used are not very interesting for students because they only use poetry texts from textbooks written on the blackboard without additional supporting learning media. The poetry material used is also not very contextual to students' lives, lacks visualization, and is not interactive, so it is not very effective in attracting students' attention and engaging them in learning. Teaching materials are tools or media used to deliver learning material to students. Teaching materials are important because they help students understand, master, and apply learning material well (Ritonga et al., 2022). Therefore, in teaching poetry reading skills, which have a high level of difficulty, teaching materials that are designed to be interesting are needed so that students can more easily learn poetry reading techniques and have an interest in exploring them further. Thus, the teaching materials used need to be arranged in such a way as to stimulate students' attention and interest in learning. This is in line with research conducted by (Saragih & Purwanti, 2025), which states that teaching materials must be designed according to student characteristics so that learning becomes more meaningful, easy to understand, and able to optimally increase student engagement and learning outcomes.

The appropriate learning media for teaching poetry is media that can provide a learning experience involving visual and audio elements, because reading poetry requires an understanding of meaning, appreciation, intonation, expression, and rhythm. One medium that is considered effective for improving poetry reading skills is audio-visual media, as it can provide concrete examples related to pronunciation, intonation, and poetry appreciation . In its development, this audio-visual media is now available in digital format, where the digital model has superior characteristics, namely that it is reusable, customizable, and scalable (Lu et al., 2022). These flexible characteristics form the basis for the development of interactive digital media. The effectiveness of interactive digital media is in line with research conducted by (Fayrianto & Purwati, 2025), which shows that its use can increase the interest and reading skills of elementary school students because the attractive visual presentation and interactive features make it easier for students to understand the material.

Seeing the significance of audio-visual media and the potential offered by interactive digital formats, researchers took the initiative to develop audio-visual-based digital media. The development of this media was also designed to integrate local content from Goa Terawang as a source of poetry material and visual-audio context. This makes it easier for students to understand the meaning of the poetry texts (Prawiyogi et al., 2023). The integration of local wisdom, such as Goa Terawang, into this learning material also serves to strengthen students' national character. This is in line with research showing that learning

models that adopt local wisdom can strengthen students' understanding of cultural values and national character, as well as be effective in shaping their social attitudes (Nur et al., 2025). Therefore, this learning media not only functions as a tool for training technical skills in reading poetry, but also as a means of strengthening students' identity and awareness of the local wealth in their environment.

The media to be developed by the researcher is audio-visual media titled Goa Terawang poetry flipbook. The media is designed with audio-visual support in the form of examples of correct poetry reading and can be accessed via QR code technology. This media is also equipped with visualizations to help students understand the setting and atmosphere in the poem. With audio-visual presentation, students can learn how to read poetry with appropriate emphasis, pauses, and rhythm, and avoid monotonous reading like reading ordinary texts. This is supported by research conducted by (Dz & Amril, 2025), which shows that presenting poetry through a combination of audio and visuals helps students understand rhythm, intonation, and appreciation more effectively so that they no longer read poetry flatly. This finding is also reinforced by research (Aituganova et al., 2023) which proves that digital technology-based poetry learning can improve students' understanding, positive attitudes, and memory of poetry. Therefore, learning media innovations such as interactive audio-visual flipbooks are very relevant and necessary in poetry reading lessons to help students understand reading techniques more comprehensively and enjoyably.

The learning media that has been designed requires an appropriate model to support its effectiveness. (Purwati, 2024) states that a learning model is a conceptual framework that systematically describes the entire learning process, from planning to evaluation. Therefore, the selection of a model that is in line with the characteristics of poetry, which is rich in symbols and beauty in its recitation, is expected to create a meaningful and enjoyable learning experience for students. The model that is considered suitable for supporting poetry reading learning is the Cooperative Script model. In this model, students work in pairs and take turns as readers and active listeners. The structure of the activity is designed to allow students to practice reading poetry repeatedly, receive feedback from peers, and actively build an understanding of the appropriate intonation to convey the meaning of the poem effectively. The effectiveness of Cooperative Script in learning to read poetry is supported by research by (Kilikily & Johansz, 2023), which shows that the application of the Cooperative Script method can significantly improve elementary school students' poetry reading skills through paired reading and structured discussion activities.

The stages of implementing the Cooperative Script model begin with: (1) forming learning pairs, (2) providing poetry texts and audio media, (3) students taking turns reading and listening, (4) discussing and analyzing poetry, (5) presenting the results of the discussion, to (6) evaluation (Anshori et al., 2024). This model creates active and collaborative learning, in line with the findings (Song et al., 2023) which state that poetry learning should be active, creating space for students to share and learn together. This is in line with the Cooperative Script approach which fosters student engagement and understanding of the meaning of poetry through collaboration.

Based on these issues, further research is needed to address students' difficulties in reading poetry. Therefore, the researcher conducted a study on the Development of a Goa Terawang Poetry Flipbook Based on Cooperative Scripting to Improve the Poetry Reading Skills of Fourth Grade Students at SDN Kediren Blora. In this study, the researcher added a new feature in the form of a QR code containing examples of proper poetry reading to the flipbook that had been created and combined it with a cooperative script learning model that allows students to correct each other more freely. The research questions in this study are: (1) How can the design of the Goa Terawang poetry flipbook based on cooperative script improve the ability of fourth-grade students at SDN Kediren Blora to read poetry with the

correct intonation? (2) How does the validation of the Goa Terawang poetry book based on cooperative script improve the poetry reading skills with the correct intonation of fourth-grade students at SDN Kediren Blora? (3) How does the effectiveness test of the Goa Terawang poetry book based on cooperative script improve the poetry reading skills of fourth-grade students at SDN Kediren Blora?.

RESEARCH METHOD

Research Design

This study uses a Research and Development (R&D) approach. This approach was chosen to develop a product in the form of a Goa Terawang poetry flipbook based on the Cooperative Script model, which is effective in improving the poetry reading skills of fourth-grade students at SDN Kediren Blora.

This research uses a development research approach that refers to the approach developed by Sugiyono (2025). This approach modifies the research and development steps from Borg and Gall into ten stages. However, due to time and cost constraints, this research was only conducted up to stage eight, namely the implementation test stage with the following steps: (1) potential and problems, (2) data collection, (3) design product, (4) design validation, (5) design revision, (6) testing product, (7) product revision, (8) Field testing.

Participants

The research subjects in this study involved several important groups who contributed to the development and evaluation of the flipbook media. Two subject matter experts and two media experts served as validators to assess the content accuracy, design quality, and overall appropriateness of the media. In addition, fourth-grade teachers at SDN Kediren Blora participated as respondents by providing practical feedback on its use in classroom learning. The students acted as the main users of the media. The trial was carried out in two stages: a small-scale trial with 9 fourth-grade students to examine readability and practicality, and a large-scale trial with 24 students to test the media's effectiveness through pretest and posttest results in poetry reading skills.

Instruments

The research instruments used in this study were divided into two categories, namely non-test and test instruments, in order to obtain comprehensive data. The non-test instruments consisted of observation sheets, interview guidelines, student needs questionnaires, expert validation questionnaires for subject matter and media, as well as teacher and student response questionnaires. These instruments were used to gather information related to learning conditions, media quality, and users' perceptions. Meanwhile, the test instrument was a poetry reading assessment rubric that measured students' performance in terms of expression, vocal aspects such as articulation, intonation, and tempo, and body movements. Each aspect was rated on a scale of 1 to 4 and then converted into scores ranging from 0 to 100. The test was given before and after the implementation of the media to identify improvements in students' poetry reading skills.

Data Analysis

Data analysis was conducted using descriptive qualitative and quantitative methods. Qualitative data was used to analyze suggestions and input from validators and respondents, while quantitative data was used to analyze the effectiveness of the media. Learning outcome data were analyzed using a normality test as a prerequisite, followed by a paired t-test if the data were normally distributed or a Wilcoxon Signed Rank Test if the data were not normally distributed. The improvement in students' poetry reading skills was analyzed using Normalized Gain (N-Gain) to determine the level of effectiveness of the learning media. The level of improvement was analyzed using the following N-Gain formula. The N-Gain value is

then categorized as follows: $g \geq 0.70$ is classified as high; $0.30 \leq g < 0.70$ is classified as moderate; and $g < 0.30$ is classified as low. These categories are used to determine the level of effectiveness of improving students' poetry reading skills after using learning media.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

The design of the Goa Terawang Poetry Flipbook

This The design of the Goa Terawang poetry flipbook based on cooperative script can improve the poetry reading skills of fourth-grade students at SDN Kediren Blora with the right intonation. The design of the Goa Terawang poetry flipbook based on Cooperative Script for teaching fourth-grade students at SDN Kediren Blora to read poetry with the correct intonation was developed through a research and development process, which included identifying potential and problems, collecting data, and designing the product. The results of the flipbook design development are presented below.

Potential and Problems

The potential and problems stage began with observation and interviews to identify the actual conditions of poetry reading learning in the fourth grade of SDN Kediren. The results of the observation showed that the students' poetry reading skills were still low, especially in terms of appreciation, intonation, expression, tempo, and word stress. Students tended to read poetry like reading ordinary texts without the aesthetic elements that characterize poetry reading. Additionally, the learning atmosphere appeared less active due to the lack of media that could stimulate students' understanding of meaning and imagination.

Data Collection Stage

Data collection was conducted to reinforce findings on potential and problems by gathering data on students' poetry reading skills prior to media development. Of the 38 fourth-grade students at SDN Kediren, only four achieved a good rating, indicating low poetry reading skills and the need for more effective learning media. Learning needs data were collected through student and teacher questionnaires. The student questionnaire results showed that 88% experienced difficulties with intonation, expression, and word stress, 98–99% only used printed books from the Ministry of Education and Culture, and 84% felt bored without interactive media. while 97-100% wanted audio, visual, and video-based digital media. All students supported QR Code-based flipbooks, and 99-100% agreed with the Goa Terawang-themed poems. The teacher questionnaire shows that poetry reading lessons are still monotonous, students have difficulty with expression and appreciation, and teachers support the development of interactive QR Code-based digital media that can be accessed independently, using the Cooperative Script model, and integrating local wisdom.

Design Product

During the design stage, a storyboard was developed to arrange the layout of text and illustrations so that the flipbook would be attractive and easy to understand for fourth-grade students. The visual design uses bright colors, expressive illustrations, and elements of local wisdom from Goa Terawang to increase student motivation and emotional engagement. The flipbook is equipped with QR codes containing audio and video recordings of poetry readings as guides for intonation, expression, and articulation, with usage tailored to the limitations of students' device ownership. Furthermore, a prototype was developed through the digitization of the design using a flipbook application, with the integration of text, illustrations, and QR features tailored to the characteristics and learning needs of students. Flipbook desain is shown in the following figure 1.



Figure 1. Design of the Goa Terawang Poetry Flipbook

The Goa Terawang Poetry Flipbook design, which was developed in the previous stage, was then evaluated to assess the extent to which the quality of the media design met learning standards, both in terms of appearance, material presentation, and the appropriateness of the language used.

Results of the validation of the Goa Terawang poetry flipbook

The Cooperative Script-based Goa Terawang poetry flipbook was validated through design validation and design revision stages by media experts and subject matter experts. The product validation results are presented as follows.

Expert Team Validation

The validation was conducted by two experts, namely a subject matter expert and a media expert. This validation aimed to assess the suitability of the Goa Terawang Poetry Flipbook in terms of content quality, accuracy of material delivery, language, as well as media display and technical quality.

Results of Content Validation Testing

The material validation test results were obtained from a questionnaire using a 1-4 Likert scale with assessment indicators shown in the following table 2.

Table 1
Material Validation Test Results

No	Assessment Indicators	Score
1	Appropriateness of poetry material to learning outcomes	8
2	Appropriateness of poetry material to student abilities	11
3	Appropriateness to poetry reading skills learning	8
4	Authenticity and relevance of material	15
5	Use of Indonesian language in accordance with KBBI (Big Indonesian Dictionary)	10
Total score obtained (R)		52
Maximum score (M)		56
Result (NP)		92,8%

Based on the indicators mentioned in the research method, a score of 92.8% is categorized as a feasible learning medium in terms of material. After conducting the material

validation test, a media validation test will be conducted to assess the quality of the design of the learning medium that has been developed.

Media Validation Test Results

The results of the media validation test were obtained from a questionnaire using a 1-4 Likert scale with assessment indicators shown in the following table.

Table 2
Media Validation Test Results

No	Assessment Indicators	Score
1	Use of fonts and font sizes	8
2	Appropriateness of layout and design	14
3	Appropriateness of illustrations, images, and fonts	20
4	Appropriateness of display design	11
Total score obtained (R)		53
Maximum score (M)		56
Result (NP)		94,6%

Based on the validation results conducted by a team of experts, the Goa Terawang Poetry Flipbook is deemed highly suitable for use as a medium for teaching poetry reading, with some notes for improvement.

Revision Desain

Based on the validation results provided by the expert team, the developers revised the Goa Terawang Poetry Flipbook to ensure that the medium is fully suitable for use in teaching poetry reading. In terms of visual design, revisions were made by enlarging the font size, improving the color composition to make it more comfortable to view, and rearranging the page layout to make it more proportional and less crowded. The illustrations depicting the atmosphere of Goa Terawang were also clarified and rearranged to better support the understanding of the meaning of the poems and increase their visual appeal to students.

In terms of content, several terms and explanations were simplified to better suit the developmental level of fourth-grade students. The explanation of the concept of poetry, which was originally quite long, was condensed into key points that were easier to understand. In the poetry analysis section, the sentences were clarified so that students could grasp the message and mood of the poem more effectively.

Revisions were also made to the interactive aspects, especially those related to the QR Code feature. The position of the QR Code was improved to make it easier for students to scan using their digital devices. In addition, the instructions for use were updated by replacing the term "mengscan" with "memindai" to conform to the proper and correct use of Indonesian. The audio quality of the poetry reading in the QR Code was improved by re-recording the parts that were unclear. The revisions made based on expert input ensured that the final product was ready for use in classroom learning, resulting in the revised Goa Terawang poetry flipbook design shown in the following figure 2.

The revised flipbook media in Figure 3 was then registered with Intellectual Property Rights (IPR) as legal proof of intellectual ownership. After the registration process, the product was tested by requesting feedback and direct responses from teachers as the main users to assess the effectiveness, ease of use, and direct application of this media in the classroom environment.

Results of the Effectiveness Test of the Cooperative Script-Based Flipbook

The effectiveness of the Goa Terawang poetry flipbook based on Cooperative Script was tested through product trial, product revision, and Field Trial. The results of product effectiveness testing on the poetry reading skills of fourth-grade students at SDN Kediren Blora are presented as follows

Product Trial

A product trial was conducted to determine the initial effectiveness of the Goa Terawang poetry flipbook media based on the Cooperative Script Model on the poetry reading skills of fourth-grade students at SDN Kediren Blora. This trial involved nine students as research subjects. The data analyzed included the results of the students' poetry reading skills assessment before and after using the flipbook media, as well as the students' responses to the developed learning media.

The data from the poetry reading skills assessment was first analyzed using a prerequisite test in the form of a data normality test. The normality test was conducted to determine the distribution of data on students' poetry reading skills before and after using the flipbook media. The normality test used the Shapiro–Wilk test, considering that the number of research subjects was less than 50. The results of the normality test of the students' poetry reading skills before and after using the flipbook media are presented in Table 3.

Table 3
Normality Test Results Product Trial

Assessment Stage	Statistics	df	Sig.	Description
Before media use	0.911	9	0.326	Normally distributed
After media use	0.850	9	0.074	Normally distributed

Based on the normality test results, the data on students' poetry reading skills before and after using the flipbook media was declared to be normally distributed. Therefore, the analysis of differences in students' poetry reading skills was conducted using the Paired Samples t-Test. The results of the Paired Samples t-Test are presented in Table 4.

Table 4
Paired Samples t-Test Results Product Trial

Data Pair	Mean Difference	Std. Deviation	Std. Error	t	df	Sig. (2-tailed)
Before-After media use	-18.778	0.667	0.222	-84,500	8	0.000

The results of the Paired Samples t-Test analysis show a significance value of $0.000 < 0.05$. This value indicates a significant difference between students' poetry reading skills before and after using the Goa Terawang poetry flipbook media based on the Cooperative Script Model. This significant difference indicates that the use of flipbook media has an effect on students' poetry reading skills. To determine the level of improvement in poetry reading skills quantitatively, an N-Gain analysis was conducted. The N-Gain analysis was used to measure the extent of improvement in students' poetry reading skills after using flipbook media. The results of the N-Gain analysis in the product trial are presented in Table 5.

Table 5
Results of N-Gain Analysis of Product Trials

Variable	N	Minimum	Maximum	Average	Std. Deviation	Category
N-Gain Score	9	0.55	0.73	0.6013	0.0587	Medium
N-Gain (%)	9	54.55	73.08	60.13	5.87	Effective Enough

Based on the results of the N-Gain analysis, the average N-Gain value was in the moderate category, indicating that the Goa Terawang poetry flipbook media based on the Cooperative Script Model was quite effective in improving students' poetry reading skills during the product trial phase. These results are reinforced by user responses to the developed

media. Student responses reached 92% in the very feasible category, indicating that the flipbook media is considered interesting, easy to understand, and helpful for students in reading poetry with the appropriate intonation, expression, and soul. In addition, the responses of fourth-grade teachers showed an acceptability percentage of 93.7% in the very acceptable category, indicating that the flipbook media was considered suitable for the characteristics of students, easy to use in learning, and supported the achievement of poetry reading learning objectives in elementary schools. However, as part of the research and development stage, the results of the product trial became the basis for product revisions to improve the media before it was used in the usage trial stage.

Product Revision

Product revisions were made based on product testing results, which included an analysis of improvements in students' poetry reading skills, student responses, and fourth-grade teacher responses. The Goa Terawang poetry flipbook media based on the Cooperative Script Model has shown a sufficient level of effectiveness and an excellent category of feasibility. Improvement efforts are still being made to optimize the quality of the media before it is used in a trial phase with a broader subject coverage.

Product refinement focused on visual aspects by adjusting color combinations, font sizes, and page layouts to make them more comfortable for elementary school students to read. The poetry reading material was also strengthened, especially in the explanation of intonation, expression, and soulfulness, through the presentation of simpler and more contextual examples of poetry reading.

The learning media was also optimized in the QR learning video component by clarifying the articulation, adjusting the video duration, and aligning the video content with the material presented in the flipbook. The emphasis on Cooperative Script-based learning was clarified by strengthening the instructions for students' roles as speakers and listeners in turn, so that paired learning activities could take place in a more structured and effective manner. The revision of this product aims to ensure that the Goa Terawang poetry flipbook media based on the Cooperative Script Model has optimal quality and is ready for use in a trial phase with a wider range of subjects.

Field Trial

A field trial was conducted to determine the effectiveness of (Dz & Amril, 2025) the Goa Terawang poetry flipbook media based on the Cooperative Script Model when used on a wider research subject. The field trial involved 24 fourth-grade students at SDN Kediren Blora as research subjects. The data analyzed included the results of the students' poetry reading skills assessment before and after using the flipbook media.

The data from the poetry reading skills assessment was analyzed through a prerequisite test in the form of a data normality test to determine the distribution of the research data. The normality test in the usability test used the Shapiro–Wilk test. The results of the normality test of the students' poetry reading skills before and after using the flipbook media are presented in Table 6.

Table 6

Normality Test Results Field Trial				
Assessment Stage	Statistics	df	Sig.	Description
Before media use	0.889	24	0.012	Non-normally distributed
After media use	0.808	24	0.000	Non-normally distributed

The normality test results show that the data on students' poetry reading skills before and after using the flipbook media are not normally distributed. This condition requires the use of nonparametric statistical analysis techniques. The analysis of differences in students'

poetry reading skills was conducted using the Wilcoxon Signed Ranks Test, with the test results presented in Table 7.

Table 7
Wilcoxon Test Results for Field Trials

Category	N	Mean Rank	Sum of Ranks
Decreasing value	0	0.00	0.00
Increasing value	24	12.50	300.00
Constant value	0	-	-

The results of the Wilcoxon Signed Ranks Test analysis showed a significance value of $0.000 < 0.05$. This value indicates a significant difference between students' poetry reading skills before and after using the Goa Terawang poetry flipbook media based on the Cooperative Script Model in the pilot test. This significant difference shows that the flipbook media has an effect on the poetry reading skills of students in a wider group. The level of improvement in students' poetry reading skills was further analyzed using N-Gain. N-Gain analysis was used to determine the extent of improvement in students' poetry reading skills after using the flipbook media. The results of the N-Gain analysis in the pilot test are presented in Table 8.

Table 8
Results of N-Gain Analysis of Field Trials

Variable	N	Minimum	Maximum	Average	Std. Deviation	Category
N-Gain Score	24	0.52	0.71	0.6016	0.0485	Medium
N-Gain (%)	24	51.61	71.43	60.16	4.85	Effective Enough

The average N-Gain score obtained was in the moderate category. These results indicate an improvement in students' poetry reading skills after using the Goa Terawang poetry flipbook media based on the Cooperative Script Model in a wider group of students.

Discussion

The development of the Goa Terawang Poetry Flipbook based on the Cooperative Script Model aims to meet the needs of contextual, interactive poetry reading that is tailored to the characteristics of fourth-grade elementary school students. Based on a needs analysis, students still experience difficulties in the aspects of intonation, expression, and poetry interpretation due to the limitations of conventional teaching materials, which do not provide appropriate and easily accessible examples of poetry reading. Therefore, the flipbook was developed by combining poetry texts based on the local context of Goa Terawang, visual illustrations, and interactive audio through QR codes as a model for expressive poetry reading. The integration of audio-visual media is in line with the findings of (Dz & Amril, 2025), which state that audio-visual media is effective in improving elementary school students' understanding of intonation, pauses, and expression in poetry reading.

The next stage is media and material validation to ensure the flipbook's suitability before use in learning. The validation results show that the media is considered very feasible in terms of appearance, presentation, language, material suitability, and its integration with the steps of the Cooperative Script Model. This validation process ensures that the integration of poetry content, local context, QR audio, and collaborative learning scenarios is presented in a harmonious and easily understandable manner for students. This finding reinforces (Yusra, 2022) view that expert validation plays an important role in ensuring the quality and acceptance of multimedia-based learning media.

In the product trial stage (small groups), the use of flipbooks showed an increase in students' poetry reading skills after learning. These findings indicate that the presence of QR

audio as a poetry reading model, combined with paired activities in the Cooperative Script Model, helps students understand and practice poetry intonation and expression in a more focused manner. This improvement shows that the developed media is able to bridge the gap between understanding the concept of poetry reading and its application in expressive reading practice.

The product trial results also showed that the improvement in poetry reading skills was in the fairly effective category. Student responses that showed high interest, ease of use of the media, and increased confidence when reading poetry indicated that the combination of interactive digital media and collaborative learning provided a more meaningful learning experience than conventional teaching materials. Based on the results of the product trial, further revisions were made to improve the quality and readiness of the media before it was implemented in the next stage. The revisions included improving the visual appearance, simplifying the material to make it easier to understand, and optimizing the learning QR audio so that the pronunciation and duration were more suitable for elementary school students. This revision process shows that the development of learning media is iterative and oriented towards improving product quality. Next, a usage trial (large group) was conducted to determine the effectiveness of the media in a broader classroom context. The results showed that students' poetry reading skills continued to improve significantly after using the flipbook.

The results of the validation, product testing, and usage testing show that the Goa Terawang Poetry Flipbook based on the Cooperative Script Model has been successfully developed as a valid, contextual, and effective learning media. The novelty of this research lies in the integration of poetry based on the local wisdom of Goa Terawang, QR audio technology as a model for expressive poetry reading, and collaborative learning through the Cooperative Script Model in a single learning design, which is still rarely applied simultaneously in poetry reading learning in elementary schools. These findings are in line with the views of (Kilikily & Johansz, 2023) that collaborative learning can improve poetry reading skills in a more meaningful way.

CONCLUSION

This study concludes that the development of the Goa Terawang Poetry Flipbook based on the Cooperative Script Model has produced an innovative learning media product for elementary school students. From a design perspective, this media successfully integrates local wisdom content, visualizations, and audio models through QR codes into interactive collaborative learning steps. Validation results by experts show that this media meets very high feasibility criteria, making it highly relevant to the developmental characteristics of fourth-grade students. Effectiveness tests provide empirical evidence that the use of this flipbook significantly improves poetry reading skills, especially in mastering intonation, articulation, and interpretation of meaning. The implications of this research confirm that the integration of contextual and locally-based digital technology is an effective strategy for overcoming the limitations of conventional teaching materials while improving the quality of literary literacy. The use of simple technologies such as digital flipbooks and QR codes shows that the transformation of literacy learning can be carried out in a practical, meaningful, and sustainable manner, and has the potential to become a reference for educators and policy makers in the development of digital teaching materials in elementary schools.

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INFORMED CONSENT STATEMENT

Participation in this study was voluntary. All participants were informed about the purpose, procedures, possible risks, and benefits of the research before taking part. They were also assured that their identities would remain confidential and that they could withdraw from the study at any time without any consequences. Informed consent was obtained from all participants involved in the study.

DATA AVAILABILITY STATEMENT

The data used in this study are not publicly available in order to protect participant privacy and maintain ethical standards. However, the data may be available from the corresponding author upon reasonable request and with prior approval from the appropriate institutional ethics review board.

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