

Development and Feasibility of a Powtoon Learning Video for Teaching News Texts to Grade VII Students

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ABSTRACT

This study describes the development and preliminary feasibility of a Powtoon learning video for teaching news texts at SMP Negeri 5 Sungai Kakap. Research and development followed the ADDIE model, comprising analysis, design, development, implementation, and evaluation. Participants included 32 students from one Grade VII C class and one Indonesian language teacher. Five validators participated: one material expert, two media experts, and two language experts. Questionnaires, interviews, observations, and expert comments informed product development and a limited classroom trial. The product was a 4 minute 27 second video comprising nine scenes on news definitions, structure, 5W+1H elements, language features, an example, and an identification exercise. Expert feedback led to an additional practice segment, clarification of the closing section, and reduced background audio. Displayed dimension percentages yielded descriptive unweighted means of 98.25% for material, 88.20% for media, 88.33% for language, 84.25% for student responses, and 91.88% for the teacher response. These summaries are recalculations of reported dimension percentages, rather than verified item level totals. The two separately reported media expert totals averaged 87%, indicating an unresolved aggregation discrepancy. Overall, the evidence indicates favorable expert judgments and user responses in one limited setting. Learning effectiveness, reliability, and broader applicability remain untested.

Keywords: Powtoon; News Texts; Learning Video;

INTRODUCTION

Learning to understand news texts requires students to connect factual information with an organized account of an event. In the instructional sequence examined here, students identify the title, lead, body, and closing section and distinguish what happened, who was involved, when and where it occurred, why it happened, and how it unfolded. These 5W+1H questions provide a practical framework for checking whether information is complete. Recognizing a label is insufficient if

learners cannot locate the corresponding evidence in a news example. Teaching therefore needs to connect definitions, structural diagrams, and guided identification tasks.

A preliminary investigation at SMP Negeri 5 Sungai Kakap on May 21, 2026, identified difficulties with news structure and 5W+1H elements. The teacher interview described reliance on printed textbooks and static PowerPoint presentations and a need for a prepared audiovisual resource. A questionnaire involving 32 students produced a reported needs indicator of 81%. However, its raw scores, items, and calculation basis were not supplied. The figure is therefore treated as a preliminary indicator of perceived difficulty, rather than a verified percentage of students who failed a performance assessment. The classroom problem provides a local rationale for development, while the strength of its numerical evidence remains limited.

Powtoon offers an authoring environment for combining text, animated characters, images, and narration. A rendered video can organize explanations into a repeatable sequence, although playback alone does not guarantee engagement or understanding. Multimedia design requires attention to the relationship between words and visuals and to the amount of information presented at each moment (Mayer, 2020). A short video is useful only when its content, pacing, and accompanying classroom activities suit the task. In particular, a linear video should not be described as an interactive application merely because it contains a question.

Related development studies provide a basis for examining feasibility without assuming effectiveness. Rustandi and Rismayanti (2021) documented an ADDIE process for desktop learning media. Saedah et al. (2024) developed an Android resource for Grade VII Indonesian language learning. Ramadhan (2024) evaluated a Powtoon product through expert ratings and teacher and student responses. These studies show that platform choice, development procedures, and evaluation participants must be considered together. They do not establish that the present news text product will improve achievement or that its design is theoretically novel.

The contribution of this study is a documented instructional sequence for a particular news text learning context, supported by a nine scene storyboard and examples of changes following expert feedback. Its contribution lies in adapting an audiovisual resource to the identified task and reporting preliminary judgments about that resource. The study asks how the Powtoon video was developed and how participating experts, students, and the teacher evaluated it. Accordingly, the objectives are to describe the development process and examine expert rated feasibility and user responses, with explicit attention to the limits of the available scoring record.

LITERATURE REVIEW

Previous Related Study

Rustandi and Rismayanti (2021) used ADDIE to develop desktop learning media at SMPN 22 Kota Samarinda. Their evaluation involved a subject teacher as the material expert and three media validators, with reported feasibility percentages of 91% and 90%, respectively. Their process connected field and literature study, flowchart and storyboard preparation, production, and evaluation. This work provides a procedural comparison for organizing development evidence. Its subject and delivery format differ from the present linear news text video, so the percentages cannot be treated as a common benchmark for learning outcomes.

Saedah et al. (2024) used a 4D design to develop Android media for fiction and nonfiction book material in Grade VII D at SMPN 2 Semparuk. Three media experts and three material experts produced reported averages of 95% and 93%, and student responses averaged 94%. The study is relevant because it concerns Indonesian language instruction at the same school level in West Kalimantan. However, the product, topic, development model, and validator composition differ. Its findings support the relevance of distinguishing expert assessment from student response, rather than predicting an equivalent score for another resource.

Ramadhan (2024) developed a Powtoon animation resource for Grade XII biotechnology using ADDIE. One media expert and one material expert assessed feasibility, while one biology teacher and 15 students assessed practicality. Reported feasibility percentages were 93.75% and 84.38%; teacher and student practicality percentages were 96.67% and 90.10%. This study is closer in authoring platform and evaluation structure, but differs in age group and subject. Its separately reported expert and user measures provide a useful comparison for the present study. None of these comparisons permits favorable ratings to substitute for an achievement test.

News Text and Multimedia Learning

News text learning in this study focuses on factual completeness, structural organization, and language clarity. The title introduces the event, the lead presents central information, the body develops the account, and the closing section completes the example used in the video. The 5W+1H framework links each information category to a question that learners can apply to a text. The intended instructional progression moves from recognizing these components to locating them in an example and attempting an identification exercise. This sequence is a product design objective, not evidence that students mastered the skills.

Multimedia learning concerns how learners construct understanding from words and graphics. Mayer (2020) provides a conceptual basis for evaluating coherence, signaling, and the coordination of visual and verbal information. In this product, a structural diagram can signal relationships among news sections, and question icons can draw attention to the 5W+1H categories. These are theoretically relevant design

choices. Whether they reduced cognitive load or improved retention was not measured, so such effects cannot be claimed as findings. Animation also has limitations: decorative movement, dense text, competing sound, and rapid transitions may make an explanation harder to follow.

Video quality consequently requires more than attractive presentation. Content accuracy concerns the appropriateness of definitions and examples; media quality concerns layout, delivery, and technical presentation; language quality concerns suitability, sentence clarity, word choice, and readability. Feasibility here refers to judgments that the resource is suitable for its intended instructional purpose. User responses describe perceived attractiveness, ease of use, understanding, and usefulness. Reliability concerns consistency of measurement, while effectiveness concerns changes in learning performance. These constructs require different evidence and are not interchangeable.

ADDIE offers an organizing framework for connecting needs, design, production, implementation, and evaluation. Rustandi and Rismayanti (2021) illustrate its application to development work. For the present product, evaluation is visible in expert feedback and documented revisions before the classroom trial, followed by a summary of expert and user assessments. The available records do not show every formative review or a further revision after implementation. The framework therefore organizes the reported sequence without implying that all possible evaluation activities were completed.

METHOD

Design and Sample

This research and development study used ADDIE to produce one Powtoon learning video and examine preliminary feasibility and user responses at SMP Negeri 5 Sungai Kakap. The reported classroom group comprised 32 students in Grade VII C and one Indonesian language teacher. The class was purposively selected because students were studying news texts and were considered to need additional support with structure, 5W+1H elements, and language features. The record does not specify comparable selection criteria across eligible classes. The preliminary needs investigation is dated May 21, 2026; the academic term, complete development dates, and trial date are not documented.

Five validators were involved: one material expert, two media experts, and two language experts. Selection was described as based on relevant competence, but qualifications, institutional roles, experience, independence, and possible relationships to the authors were not reported. The single material expert assessment is treated as one judgment. The records associate both needs analysis and the trial with the 32 student class, but do not provide participant matching or response completeness records. Findings are consequently confined to the reported group and participating teacher.

The product was a linear audiovisual lesson resource rather than software with embedded answer processing or branching navigation. It contained a question segment, but no automated feedback function was documented. Classroom interaction around the video must therefore be distinguished from interaction implemented within the product. Device arrangements, internet availability, lesson duration, teacher facilitation, and pause or replay procedures during the trial were not recorded in the supplied account.

Instrument and Procedures

The reported instruments were a student needs questionnaire, material, media, and language expert rating forms, student and teacher response questionnaires, an interview guide, and an observation sheet. The material form covered suitability, conceptual accuracy, presentation, and usefulness. Media dimensions covered appearance, navigation, interaction, technical quality, and suitability. Language dimensions covered learner suitability, sentence effectiveness, word accuracy, readability, language rules, and clarity. Student and teacher dimensions are presented with their results. Full items, item counts, scoring keys, and raw responses were not available.

The original account described a five point scale coded from 1 to 5, but its English response labels overlapped and did not form an interpretable ordered set. The original administered form was not supplied, so the labels cannot be verified or replaced retrospectively with a presumed standard scale. Similarly, the account states that instruments underwent expert content review but provides no judge count, item decisions, validation index, or documented consensus. The current analysis therefore reports available percentages as descriptive records, with limitations concerning scale integrity and instrument quality. No internal consistency estimate is reported because item level trial responses were unavailable.

During analysis, the researchers reviewed curriculum learning outcomes and objectives for reading and viewing news texts, gathered student questionnaire responses, and consulted the Indonesian language teacher through interviews and observation. During design, they prepared material, a script, and a storyboard comprising nine scenes. During development, the storyboard was produced as a video combining text, two dimensional characters, diagrams, and voice narration. Experts then assessed the product and provided comments that informed revisions. The recorded changes were an identification exercise, completion of the closing section diagram, and reduced background audio.

During implementation, a limited classroom trial involved the reported Grade VII C group and the teacher, followed by user response questionnaires. Evaluation summarized expert and user assessments and identified remaining constraints. The supplied record does not establish product version dates, independent rating procedures, a second expert round, questionnaire timing, missing response

handling, or revisions after the trial. Narration scripts, caption availability, asset licensing, accessibility provisions, and audio recording procedures were also not documented. The product link is <https://youtu.be/6dLNcvgp4N4>; its version correspondence to each rating round is not established.

Ethics approval or exemption, school authorization, parental consent, student assent, withdrawal arrangements, confidentiality procedures, and data storage safeguards were not documented in the materials supplied for this report. Their absence from the record does not establish whether they occurred, but prevents a verified account of ethical procedures involving minors. No approval number, consent statement, or retrospective safeguard is inferred. This reporting limitation remains unresolved.

Data Analysis

The reported percentage formula was $P = (S / M) \times 100$, where S represents an obtained score and M the maximum possible score for the relevant instrument. A fully reproducible calculation would require item counts, numerical coding, respondent counts, missing response treatment, and the raw numerator and denominator. These were not supplied. Accordingly, the revision does not reconstruct item weighted totals or claim that the original overall percentages have been validated.

For transparent descriptive summaries, displayed dimension percentages were averaged with equal weight within each form. The calculation was the sum of displayed dimension percentages divided by the number of dimensions, with the result rounded to two decimal places at the end. These values are explicitly labeled unweighted dimension means. They are not substitutes for raw score recalculation. Individual media expert totals are retained separately because they provide a different aggregation level. No overall mean across experts, students, and the teacher was computed because the measures assess different constructs.

Table 1
Descriptive interpretation bands retained from the study

Percentage band	Interpretation
Above 80 to 100	Very feasible
Above 60 to 80	Feasible
Above 40 to 60	Moderately feasible
Above 20 to 40	Less feasible
0 to 20	Not feasible

Table 1 presents the study's descriptive bands with continuous boundaries for decimal scores. These bands are an interpretive convention, not an independently

validated decision rule. User percentages are interpreted primarily as responses rather than proof of feasibility or effectiveness. Interview and observation summaries informed the needs description, and recorded expert comments were organized by the feature requiring revision. Transcripts, a coding framework, and analyst records were unavailable, so no formal thematic analysis or verified triangulation is claimed.

RESULT AND DISCUSSION

Analysis

The preliminary investigation identified a need for additional explanation of news structure and 5W+1H elements. The teacher described printed textbooks and static slides as existing resources and requested a more concrete audiovisual presentation. The reported questionnaire indicator was 81%, but the record does not distinguish a proportion of students from a percentage of questionnaire points. It therefore provides tentative contextual support for development, without establishing that exactly 81% of students had a measured difficulty. Video preference also does not establish that video is superior to alternative teaching resources.

Design

The design outcome was a nine scene script and storyboard. The sequence began with orientation and learning objectives, introduced concepts and structure, presented the 5W+1H questions and language features, and moved to an example and practice. Table 2 connects each scene with its intended teaching function. These functions describe the planned resource rather than observed learning gains.

Table 2
Nine scene instructional storyboard

Scene	Visual and content focus	Intended activity
1 Opening	Title and animated teacher	Orient learners to news texts
2 Objectives	Learning objectives and student animation	Introduce intended skills
3 Definition	Explanation and news illustration	Recognize factual news information
4 Structure	Title, lead, body, and closing diagram	Identify organizational components
5 5W+1H	What, who, when, where, why, how icons	Connect questions with information
6 Language	Examples of news language	Recognize relevant language features

Scene	Visual and content focus	Intended activity
7 Example	News text and illustration	Locate components in a text
8 Practice	Questions about the example	Attempt 5W+1H identification
9 Closing	Summary and closing message	Review the lesson focus

The storyboard makes the relationship between explanation and practice visible. Its short duration means that a teacher may need to pause playback and discuss responses, but the trial record does not establish whether this occurred. The question scene is a prompt for participation, not evidence of an embedded interactive function. No scene timing breakdown beyond the reported added practice segment was available.

Development

The resulting video lasted 4 minutes 27 seconds and combined text, animation, news structure diagrams, and voice narration. Tables 3 to 5 preserve the reported dimension percentages and present transparent unweighted means. These dimensions describe the evaluation forms used in the study; labels such as navigation and interaction do not establish that the rendered product had software navigation or answer checking capabilities.

Table 3
Material expert assessment

Dimension	Reported percentage
Material suitability	100
Conceptual accuracy	100
Material presentation	93
Material usefulness	100
Unweighted dimension mean	98.25

The material expert gave the highest scores to suitability, accuracy, and usefulness, with a lower score for presentation. The descriptive mean is 98.25%, compared with the original rounded total of 98%. This is a favorable individual content judgment, rather than evidence of agreement among several material experts or a test of construct validity.

Table 4
Combined media assessment dimensions

Dimension	Reported percentage
Media appearance	84
Media navigation	90
Media interaction	87
Technical quality	90
Media suitability	90
Unweighted dimension mean	88.20

The reported individual media expert totals were 77% and 97%. Their arithmetic mean is 87%, whereas the five combined dimension percentages in Table 4 yield 88.20%. The original combined total was 88%. Without raw scores and item weights, these aggregation paths cannot be reconciled. Both are retained transparently, and neither is presented as a verified item weighted total. The 20 percentage point difference between the individual ratings indicates substantial variation in judgment. The first expert rated interaction at 73% and several technical dimensions at 80%, suggesting that the favorable combined assessment should not obscure reservations about the presentation.

Table 5
Combined language assessment dimensions

Dimension	Reported percentage
Suitability for learners	95
Sentence effectiveness	80
Word accuracy	90
Text readability	100
Language rules	85
Clarity of explanation	80
Unweighted dimension mean	88.33

Language assessments were favorable overall, but sentence effectiveness and clarity each received 80%. The displayed dimensions yield 88.33%, while the separately reported language expert totals of 86% and 90% average 88%. Differences may reflect rounding or aggregation, but cannot be resolved without raw records. The pattern suggests that readability and age suitability were stronger than explanatory precision, providing a practical focus for further language review.

Table 6
Documented changes following expert feedback

Initial issue	Feedback	Recorded revision
No integrated identification exercise	Add structured practice near the end	Added a 45 second question segment before closing
Incomplete closing section in structure diagram	Clarify the closing component	Added a visual explanation of its function
Background audio competed with narration	Reduce background sound	Reported reduction to -12 dB during narration

Table 6 documents the clearest evidence of formative product evaluation. Each change responds to an identifiable content or delivery issue. The additional practice segment links the example to a learner task, the revised diagram addresses completeness, and the audio adjustment prioritizes narration. The record does not specify the audio measurement reference or verify the final mix independently. These changes demonstrate responsive development, but a second rating round was not documented and improvement in learning was not tested.

Implementation

The classroom trial generated student and teacher response summaries. Table 7 reports the four student dimensions. Perceived understanding received the highest percentage, while motivation received the lowest. The understanding item group records students' impressions, rather than performance on a news text assessment.

Table 7
Student responses in the limited trial

Dimension	Reported percentage
Attractiveness	85
Ease of use	83
Perceived understanding	89
Learning motivation	80
Unweighted dimension mean	84.25

The four percentages yield an unweighted mean of 84.25%, rather than the original overall value of 85%. Unknown item weights could contribute to the difference, but this cannot be assumed. The summary indicates positive recorded responses in the participating class, subject to the unresolved scale labels and lack of item level data. It does not show a measured increase in motivation or comprehension.

Table 8
Individual teacher response

Dimension	Reported percentage
Material suitability	85
Language	100
Material presentation	100
Media appearance	80
Ease of use	90
Media benefits	100
Media practicality	80
Media feasibility	100
Unweighted dimension mean	91.88

The teacher dimension mean is 91.875%, rounded to 91.88%, rather than the original total of 90%. The teacher rated appearance and practicality at 80%, despite several maximum ratings. This combination indicates a favorable practitioner impression with practical reservations. As only one teacher responded, the result cannot establish a stable estimate of teacher practicality across schools. No accompanying verbatim teacher comments were supplied.

Evaluation and Discussion

Evaluation brings together the development record and distinct forms of judgment. It shows that a locally motivated resource was designed, reviewed, revised, and presented in a limited trial. It also identifies uncertainties in measurement and aggregation that positive percentages cannot resolve. Repeated pie charts were omitted because they duplicated tables and did not clarify the scoring discrepancies. The present tables preserve the dimension evidence and distinguish it from recalculated descriptive means.

The pattern of favorable expert and user assessments resembles the development approach reported by Rustandi and Rismayanti (2021), Saedah et al. (2024), and Ramadhan (2024). Differences in products, rating instruments, participants, and expert composition prevent direct comparisons of percentage magnitudes. The present study adds a news text sequence and traceable revision examples, while providing weaker evidence about instrument properties and implementation conditions. Its contribution is therefore documentation of a contextual resource and preliminary assessments, rather than confirmation of universal Powtoon effectiveness.

The structural diagram, question icons, and narration have plausible instructional functions when interpreted through multimedia design principles (Mayer, 2020). They may help align visual cues with information categories, while reduced background sound may make the spoken explanation easier to hear. These interpretations explain design intentions and the rationale for revision. No cognitive load, attention, delayed recall, or achievement measure was collected, so the study cannot establish that the features improved memory, sustained attention, or reduced processing demands. The compact runtime also leaves an open question about whether all nine scenes allowed sufficient processing time.

Less favorable results deserve attention. One media expert's 77% total and the 80% ratings for sentence effectiveness, explanation clarity, student motivation, teacher rated appearance, and practicality indicate that the product was not uniformly judged excellent. Differences among experts may reflect different priorities or interpretations of the rubric, but their reasons are not documented. Novelty of the video, teacher presence, researcher involvement, and social desirability are also possible influences on favorable user responses. The available records do not allow these explanations to be tested or excluded.

Limitations include one school and one class, one teacher, one material expert, self report responses, incomplete validator profiles, unknown rating independence, uncertain scale labels, missing raw scores, and unverified weighting. The limited needs indicator, incomplete implementation details, and absent documented ethical procedures further constrain interpretation. Device and internet requirements were not established, which limits transferability to other classrooms. There was no learning outcome assessment or reliability analysis. Consequently, feasibility judgments and favorable responses should be treated as provisional descriptive evidence.

For practical use, a teacher can review language clarity, plan pauses around the identification exercise, and check the local display and audio setup before using the video. These are recommendations arising from the product design and lower rated dimensions, rather than procedures verified in the trial. Further research should recover original scoring forms and response data, verify the administered scale, document consent and authorization, and compare expert ratings using clear item definitions. A separate evaluation of students' news text analysis or writing, including baseline and follow up assessments and an appropriate comparison, is needed to investigate effectiveness.

CONCLUSION

This study developed one 4 minute 27 second Powtoon learning video for Grade VII news text instruction through the reported ADDIE sequence. The nine scene design integrated explanation, a structural diagram, 5W+1H prompts, an example, and practice. Documented expert feedback led to a question segment, a clearer closing section, and reduced background audio. The available expert assessments

and classroom responses were generally favorable, although several dimensions received lower ratings and the two media expert totals differed substantially. Transparent unweighted means of displayed dimensions were 98.25% for material, 88.20% for media, 88.33% for language, 84.25% for student responses, and 91.88% for the individual teacher response. These summaries do not resolve the original scoring discrepancies or verify item weighted totals. The findings support a preliminary account of expert rated feasibility and positive user responses in one setting. They do not establish learning effectiveness, measurement reliability, or broad applicability. Verification of instruments, raw scoring, implementation, and ethical procedures remains necessary, followed by a separate study of learning outcomes.

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