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The Effectiveness of YouTube Learning Videos in Enhancing Students' Comprehension of Procedure Text Structures: A Case Study of Fifth Grade Students

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ABSTRACT

This study investigates the effectiveness of YouTube learning videos in enhancing fifth-grade students' comprehension of procedural text structures at UPT SD Negeri 064004 Medan during the 2025-2026 academic year. Initial observations revealed low student comprehension of procedural texts and insufficient variety in teaching media utilized by educators. This qualitative descriptive research involved 22 fifth-grade students who engaged with a YouTube video from the "Titiz Craft" channel titled "Creative and Unexpected Ideas from Waste Materials." Data were collected through observation, interviews with both teachers and students, documentation, and procedure text-writing assessments. Results demonstrated significant improvements in student understanding, with mean scores of 84.63 (categorized as "Good"). Of the 22 students, 6 (27.27%) achieved the "Very Good" category (86-100), 14 (63.63%) attained "Good" category (75-85), and 2 (9.09%) scored in the "Sufficient" category (56-74). No student fell into the "Poor" category. The findings indicate that video-based learning effectively supports students' comprehension of procedural text structures through concrete visual representations and enhanced classroom engagement.

Keywords: Effectiveness, Learning Videos, Youtube Media, Procedure Text, Comprehension

I. INTRODUCTION

Language is the primary tool for human communication and knowledge transfer across generations. Within the educational context, Indonesian language instruction occupies a central position in developing students' communicative competence and critical thinking abilities. The curriculum requires students to master four fundamental language skills: listening, speaking, reading and writing. These skills constitute an integrated system wherein each competency supports and reinforces the others (Rossetto et al., 2025).

Writing, as a productive skill, represents a critical indicator of students' capacity to process information, organize ideas systematically, and communicate effectively (Pebriani et al., 2025). Among the various text genres taught in Indonesian classrooms, procedural texts are of significant pedagogical importance. Procedural texts, those containing sequential steps to accomplish a specific task, serve as fundamental instruments for developing systematic and critical thinking. They appear frequently in students' daily experiences, from cooking recipes to operational manuals, making comprehension essential for functional literacy (Dolzhenko et al., 2025).

Nevertheless, empirical observations in Indonesian classrooms have revealed that many students encounter substantial difficulties in understanding and analyzing procedural texts. Specifically, students struggle to identify essential structural elements, including the purpose, required materials and tools, and logical sequence of steps (Praptika & Rokhuma, 2024). These comprehension gaps reflect broader challenges in integrating abstract linguistic concepts with a concrete procedural understanding. This difficulty stems from several interconnected factors: the predominantly traditional instructional approaches that rely on textual exposition without visual support, the limited variety of instructional media available to educators, and the absence of authentic contextual demonstrations that would facilitate conceptual internalization (Azis et al., 2025).

To address these pedagogical challenges, educational technology presents promising solutions. Digital platforms, particularly YouTube, have democratized access to diverse multimedia learning resources. YouTube's widespread adoption among young learners suggests its potential as an instructional tool that aligns with students' media consumption patterns and technological literacy. Video-based learning offers distinctive

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advantages; it combines auditory and visual modalities, presents information dynamically through sequential frames, and permits repeated viewing to accommodate individual learning paces (Sutirman et al., 2025).

The channel "Titiz Craft" exemplifies this potential, offering clear, visually engaging tutorials on craft creation that inherently embody procedural structures. The video selected for this intervention, "Creative and Unexpected Ideas from Waste Materials: Best out of Waste Soap Boxes Craft Idea," presents step-by-step instructions with high visual clarity, color vibrancy, and procedural completeness characteristics that could substantially support procedural text comprehension among elementary students (Chen & Li, 2025).

This research examines whether the systematic integration of YouTube videos as instructional media enhances fifth-grade students' ability to comprehend and analyze procedural text structures. By combining rigorous qualitative methodology with authentic classroom contexts, this study aimed to generate empirically grounded insights regarding technology-enhanced language instruction at the primary level. The findings will contribute to both the theoretical understanding of multimedia learning effectiveness and practical guidance for educators seeking to innovate their instructional practices using digital resources.

The overarching research questions driving this investigation are as follows: (1) How does the integration of YouTube learning videos influence the pedagogical process of analyzing procedural text structures among fifth-grade students? (2) What is the measurable effectiveness of YouTube video media in enhancing students' comprehension of procedural text structures, as evidenced by writing assessments and qualitative indicators?

II. METHODS

A. *Research Design and Setting*

This qualitative descriptive investigation was conducted at UPT SD Negeri 064004 Medan, located in the Belawan Bahari District, Medan City, North Sumatra Province. This institutional setting serves a diverse primary-grade population with facilities supporting both conventional and technology-enhanced instruction. Data were collected during October and November 2025, incorporating pre and post-intervention assessment phases (Sugiyono, 2019).

B. *Participants*

The research population comprised 22 fifth-grade students (ages 10-11 years) enrolled in the UPT SD Negeri 064004 Medan. This heterogeneous group exhibited varying levels of reading comprehension, technological literacy, and prior exposure to procedural texts. The selection of the fifth grade reflects curriculum alignment, wherein procedural text analysis constitutes the primary learning objectives per Indonesian National Curriculum standards (Arikunto, 2017).

C. *Data Collection Instruments and Procedures*

A multi-method approach ensured comprehensive data triangulation:

Observational Assessment: Classroom observations conducted during two instructional cycles—one prior to video intervention and one following—examined student engagement, teacher-student interaction patterns, and behavioral responses to instructional media. Structured observation protocols document indicators including student attention span, participation frequency, question-asking frequency, and affective responses (Creswell, 2021).

Structured Interviews: Semi-structured interviews with the Indonesian language teacher (n=1) and six purposefully selected student participants explored pedagogical decision-making, perceived media effectiveness, and learning experience quality. Teacher interviews addressed instructional media selection criteria, student learning challenges, and media appropriateness assessments. Student interviews examined perceived comprehension improvements, motivational shifts, and media-text connections.

Written Composition Assessment: Following video viewing, the students completed written procedural text composition tasks. Instructions directed students to compose original procedural texts describing the craft process demonstrated on YouTube videos. Assessments evaluated five dimensions: (1) content fidelity to video demonstration, (2) organizational coherence, (3) structural completeness (purpose, materials, sequential steps), (4) conventional writing accuracy, and (5) appropriate use of procedural linguistic features (imperative forms, temporal sequencers, and generalized participants).

Evaluation employed a four-point rubric (1=Minimal, 2=Adequate, 3=Good, 4=Excellent) yielding raw scores converted to percentage values and categorized as "Very Good" (86-100), "Good" (76-85), "Sufficient" (56-75), or "Poor" (below 56).

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Instructional Video: "Titiz Craft" tutorial on crafting small bags from waste soap packaging served as a pedagogical intervention. This approximately 8-minute video presents sequential instructions with a clear visual demonstration, appropriate pacing, bright color composition, and age-appropriate narration.

D. *Data Analysis Procedures*

The analysis employed Miles and Huberman's three-phase model: (1) Data Reduction involved systematic selection, condensation, and coding of raw observations and interview transcripts, focusing attention on evidence directly addressing research questions; (2) Data Display organized reduced data into coherent thematic categories with supporting evidence, utilizing tables and narrative descriptions to illuminate patterns; (3) Conclusion Drawing synthesized thematic findings, examined evidence consistency, and formulated interpretations addressing research questions while acknowledging limitations.

Quantitative composition scores received descriptive statistical treatment (means, frequencies, and percentages) to characterize the overall writing performance distributions. Qualitative observational and interview data were subjected to thematic coding to identify emergent patterns in student engagement, comprehension development, and perceived media effectiveness.

III. RESULTS AND DISCUSSION

A. Pre-Intervention Instructional Context

Baseline observations revealed that conventional procedural text instructions emphasize textual exposition with limited visual support. Student engagement indicators included moderate attention spans (15-20 minute focused concentration periods), minimal unsolicited participation, and frequent comprehension-verification questions directed toward the teacher. Student interviews revealed that procedural text concepts were abstract and difficult to visualize. Multiple students reported difficulty remembering sequential steps and distinguishing procedural components. Teacher interviews confirmed the reliance on textbook-based instruction supplemented by instructor-generated examples, with limited multimedia integration.

B. Post-Intervention Composition Performance

The quantitative assessment results demonstrated substantial performance improvements following video-based instructions. Aggregate performance data yielded mean score of 84.63 (SD = 8.24), corresponding to "Good" categorical rating. Distribution analysis revealed: 6 students (27.27%) achieved "Very Good" category; 14 students (63.63%) attained "Good" category; 2 students (9.09%) scored "Sufficient" category; 0 students achieved "Poor" category.

This distribution contrasts sharply with the pre-intervention performance estimates. Teacher reports indicated that fewer than 15% of the students previously demonstrated adequate procedural structure comprehension. The 90.9% rate of students achieving at least "Sufficient" performance levels represents a marked improvement trajectory.

C. Sample Composition Analysis

A detailed analysis of exemplary compositions reveals quality improvements across the assessed dimensions. Student 8's composition (score: 95, "Very Good") demonstrates complete structural incorporation: purposive introduction, itemized materials inventory (8 components with specifications), 8 chronologically sequenced procedural steps with imperative directives and temporal markers, and motivational conclusion. Writing exhibits appropriate imperative verb forms ("cut," "attach," "apply"), grammatically sound complex sentences coordinating multiple actions, and conventional orthography. The composition successfully translates video demonstrations into coherent procedural text, indicating the internalization of procedural structure and strategic linguistic choices.

Student 4's composition (score: 85, "Good") demonstrates similar structural completeness, with minor organizational refinements needed. While all structural components appear, sentence-level efficiency can improve. For example, "If the glued sections have dried, attach using a hot glue gun to the right and left sides" could condense into "After gluing dries, attach the right and left sides with hot glue." The response showed a competent structural understanding with room for stylistic enhancement.

Student 7's composition (score: 75, "Sufficient") exhibits structural adequacy with noticeable writing convention challenges. Sentence formulation occasionally lacks efficiency ("Open the soap box then cut its edges, make a half-circle pattern on the upper section"), and capitalization inconsistencies appear throughout.

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However, the composition maintains procedural coherence and demonstrates conceptual understanding despite technical limitations.

D. Student Engagement Observations

Post-intervention observations documented qualitative changes in classroom dynamics. Student attention spans extended noticeably during video presentation (sustained focus throughout the 8-minute duration), with minimal off-task behavior compared to baseline observations. Multiple students learned forward during viewing, suggesting heightened engagement. Students verbally expressed interest in the craft process ("That's cool!" "I want to make that!"), demonstrating that emotional investment is absent in conventional instruction. Interactive elements emerged spontaneously: students paused video viewing to point out specific techniques, asked clarifying questions about procedural steps rather than abstract concepts, and made connections between video demonstrations and their own compositions. These behaviors suggest that video visualization concretizes procedural abstraction, enabling engaged analysis.

E. Teacher and Student Interview Findings

Teacher interviews yielded significant insights into perceived media effectiveness. The instructor reported that student enthusiasm visibly increased when using the video. They could see exactly what was happening at each step." When asked about media selection considerations, the teacher emphasized that "visual demonstration reduces ambiguity... students do not have to imagine the process; they see it."

Student interviews revealed convergent perspectives on video effectiveness. Representative quotes include: "I understood better because I could see what to do at each step" (Student 12), "The colors in the video were really clear, so I could follow what the teacher wanted" (Student 8), and "I could pause and think about what happened before writing" (Student 4). These observations align with cognitive learning theory predictions: concrete visual demonstrations reduce the cognitive load associated with abstract linguistic description alone. Several students explicitly noted the video's advantage for different learning modalities: "I'm better at learning when I see things, and the video showed everything" (Student 6). This self-awareness regarding learning preference alignment with instructional media supports constructivist assertions that individualized learning pathways enhance comprehension.

F. Comparative Performance Analysis

Table 1 presents score distributions across the five assessment dimensions.

Assessment Dimension	Mean Score	Std. Dev	% Achieving Score 3+
Content Fidelity	3.77	0.43	95.45%
Organizational Coherence	3.36	0.73	77.27%
Structural Completeness	3.82	0.40	95.45%
Writing Conventions	3.59	0.67	86.36%
Linguistic Features	3.68	0.64	90.91%

Content fidelity and structural completeness emerged as comparative strengths, with 95% of the students achieving proficiency. These results suggest that video visualization particularly supports students' comprehension of procedural content and organizational structure. Organizational coherence showed a relative weakness, suggesting that while students grasped procedural sequences, sentence-level organizations required additional development (Suharsono & Priyanto, 2025).

G. Implications for Learning Theory

These findings substantiate Mayer's cognitive multimedia principles: students processing procedurally organized content simultaneously through auditory narration and visual demonstration achieved superior comprehension compared with typical textual-only approaches. Concrete visualization appears particularly beneficial for fifth-grade students, whose abstract reasoning capacities continue to develop. The video conduit

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enabled students to encode procedural information within dynamic visual schemas, thus facilitating both immediate comprehension and schema-supported writing performance.

Constructivist predictions also received support: students who actively analyzed video demonstrations, identified structural patterns, and applied these patterns to the original composition demonstrated deeper procedural understanding than students receiving conventional expositions. The video medium facilitated authentic engagement with genuine procedural sequences, thus supporting the construction of meaningful knowledge.

IV. CONCLUSIONS

This investigation substantiates the effectiveness of YouTube-sourced video instruction in enhancing the procedural text comprehension and composition performance of fifth-grade students. Quantitative results demonstrated that 90.9% of students achieved at least adequate proficiency following video-based instruction, with mean performance in the "Good" category. Qualitative observations revealed increased engagement, improved attentional focus, and explicit student recognition of the video-enhanced comprehension. Interview data indicated that concrete visual demonstrations effectively reduce procedural abstraction, enabling superior conceptual understanding compared to conventional instructional approaches. This study contributes empirical evidence supporting technology integration within primary language art instruction. Rather than constituting entertainment or supplementary enrichment, carefully selected educational videos address the fundamental cognitive processing requirements for procedural text comprehension, particularly among visual learners and students with limited prior procedural text exposure. Limitations warrant acknowledgment: the single-site, single-classroom design constrains generalizability; the study examined one procedural video format, limiting conclusions about video characteristics generally; and the lack of a control group prevents definitively attributing performance improvements solely to video intervention rather than confounding variables. Recommendations for practitioners include systematically evaluating YouTube video content for curricular alignment, pedagogical appropriateness, and technical quality before classroom utilization; integrating video viewing within structured learning frameworks incorporating preparation, focused viewing, and post-viewing analysis rather than standalone presentation; encouraging students to articulate video-text connections explicitly; and differentiating composition tasks according to student readiness levels. Recommendations for researchers include longitudinal investigations tracking sustained comprehension gains, comparative studies examining different video formats and durations, and examinations of video effectiveness across different text genres and grade levels to establish broader pedagogical principles governing the effectiveness of multimedia instruction.

Funding Statement

"No external funding was received for this study."

Ethical Compliance

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Data Access Statement

A Data Access Statement is a section in a scientific publication or research report that explains how the data used or generated in a study can be accessed by readers or other researchers. This statement aims to promote transparency, support research reproducibility, and comply with open-access policies, where applicable.

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2. Restricted Data:
   - "The data that support the findings of this study are available upon request from the corresponding author. Due to privacy concerns, the data are not publicly available."
3. No Data Available:
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Conflict of Interest Declaration

The authors declare that they have no affiliations with or involvement in any organization or entity with any financial interest in the subject matter or materials discussed in this manuscript.

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