



## The Development of Procedural Text Learning Module with an E-Learning-Based Flipped Classroom Model

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### ABSTRACT

This study aims to: 1) analyze the needs of procedural text writing skills of grade XI students at SMAN 7 Banjarmasin using the Flipped Classroom learning model based on e-learning; 2) develop a procedural text writing learning module that suits students' needs; and 3) test the feasibility of the module based on expert assessments, teacher assessments, and student responses. The study took place in the even semester of the 2024/2025 academic year. The research method used a Research and Development (R&D) approach with stages adapted from the Borg & Gall model which included: preliminary study, planning, initial product development, limited trials, product revision, field trials, operational revisions, operational tests, final revisions, and dissemination and implementation. The results of the study showed that (a) the need for a procedural text learning module was identified through observations, interviews, and questionnaires with teachers and students, which showed the need for innovative teaching tools; (b) the developed module received a "good" assessment from material experts, "very good" from media experts, and "very good" from education practitioners; and (c) the results of the feasibility test from teachers and students gave a "very good" response. Thus, this Flipped Classroom-based learning module is suitable for use to improve the procedural text writing skills of class XI students at SMAN 7 Banjarmasin.

*Keywords: development, procedural text, learning modul, flipped classroom model, E-learning*

## Pengembangan Modul Pembelajaran Teks Prosedur dengan Model Flipped Classroom Berbasis E-learning

### ABSTRAK

Penelitian ini bertujuan untuk: 1) menganalisis kebutuhan keterampilan menulis teks prosedur siswa kelas XI di SMAN 7 Banjarmasin dengan model pembelajaran Flipped Classroom berbasis e-learning; 2) mengembangkan modul pembelajaran menulis teks prosedur yang sesuai dengan kebutuhan siswa; dan 3) menguji kelayakan modul tersebut berdasarkan penilaian ahli, guru, dan respon siswa. Penelitian berlangsung pada semester genap tahun akademis 2024/2025. Metode penelitian menggunakan pendekatan Research and Development (R&D) dengan tahapan adaptasi model Borg & Gall yang mencakup: studi pendahuluan, perencanaan, pengembangan produk awal, uji coba terbatas, revisi produk, uji coba lapangan, revisi operasional, uji operasional, revisi akhir, serta diseminasi dan implementasi. Hasil penelitian menunjukkan bahwa (a) kebutuhan modul pembelajaran teks prosedur diidentifikasi melalui observasi, wawancara, dan angket dengan guru serta siswa, yang memperlihatkan perlunya perangkat ajar inovatif; (b) modul yang dikembangkan memperoleh penilaian "baik" dari ahli materi, "sangat baik" dari ahli media, serta "sangat baik" dari praktisi pendidikan; dan (c) hasil uji kelayakan dari guru dan siswa memberikan respon "sangat baik". Dengan demikian, modul pembelajaran berbasis Flipped Classroom ini layak digunakan untuk meningkatkan keterampilan menulis teks prosedur siswa kelas XI di SMAN 7 Banjarmasin.

*Kata kunci: pengembangan, modul pembelajaran, teks prosedur, flipped classroom, e-learning*

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## INTRODUCTION

The Merdeka Curriculum, launched by the Ministry of Education, Culture, Research, and Technology in 2021, marks a paradigm shift in learning practices in schools. This curriculum places learning outcomes as the primary reference, emphasising literacy, numeracy, character, and mastery of 21st-century skills.

At the senior high school (SMA) level, Indonesian language learning is directed not only at mastering theoretical knowledge but also at developing language skills, encompassing listening, reading, writing, and speaking (Kemendikbud, 2020a). This achievement aligns with the profile of Pancasila Students, which prioritises critical, creative, and communicative characters, as well as the ability to collaborate in various contexts.

Within the realm of language skills, writing skills hold a highly strategic position. Writing is not merely a mechanical skill, but also a means of critical and reflective thinking. One type of text that is crucial for students to master is procedural text. This text requires students to construct instructions in a coherent, straightforward manner and in accordance with linguistic rules. The structure of a procedural text, consisting of objectives, materials or tools, and implementation steps, requires systematic, logical, and thorough thinking skills (Kosasih, 2019). Mastery of procedural texts is not only helpful in academic contexts but also in everyday life, the workplace, and digital communication.

However, initial observations and interviews with Indonesian language teachers at SMAN 7 Banjarmasin indicate that students' writing skills, particularly in writing procedural texts, still face various challenges. Students often struggle to structure texts consistently, use appropriate instructional language, and develop ideas into coherent paragraphs. Furthermore, low learning motivation, limited reading literacy, and a lack of interactive teaching media exacerbate these challenges. This phenomenon aligns with Agustin and Indihadi's (2020) findings that many students experience difficulties writing procedural texts due to limited struc-

tural and linguistic knowledge, as well as a lack of writing practice habits.

To address these issues, practical, systematic, and contextual teaching tools are needed. Learning modules are an alternative for teachers because they serve as independent learning guides containing objectives, materials, activities, and learning evaluations (Daryanto, 2013). A sound module not only presents material coherently but also encourages independence, trains critical thinking skills, and provides space for student creativity (Arianti, 2019; Andayani, 2017). However, the reality in schools shows that the modules used by teachers are still limited to printed teaching materials that lack variety, do not integrate technology, and do not fully accommodate the learning outcomes of the Independent Curriculum.

One relevant innovative approach to incorporate into modules is the Flipped Classroom model. This approach reverses traditional learning patterns by placing conceptual understanding outside the classroom through digital media, while using face-to-face class time for discussion, practice, and problem-solving activities (Farida et al., 2019). International research shows that the Flipped Classroom model can increase learning motivation, active student engagement, and learning outcomes across various subjects (Jayakumar et al., 2015). In the context of language, this approach is believed to strengthen writing literacy because it provides more space for practice, collaboration, and direct feedback.

The implementation of the Flipped Classroom is also highly relevant in the post-pandemic context, when digital learning has become an integral part of the education system. Students who are familiar with technology tend to have easier access to e-learning-based learning materials, whether in the form of videos, digital modules, or online learning platforms. Therefore, the development of a Flipped Classroom-based procedural text writing learning module at SMAN 7 Banjarmasin is a strategic effort to improve students' writing skills while fostering independent learning and digital literacy.



Based on this background, this research focuses on developing a Flipped Classroom-based procedural text learning module using e-learning media at SMAN 7 Banjarmasin. Specifically, this research aims to: (1) analyse students' needs in procedural text writing skills; (2) develop a learning module that meets these needs; and (3) test the module's feasibility through expert validation, teacher feedback, and student feedback.

The research findings are expected to contribute to the development of innovative teaching tools aligned with the Independent Curriculum and strengthen Indonesian language learning practices in senior high schools.

Many relevant articles can be found in various online journals. Here are some of these articles:

- 1) Auzura, I., Tasman, F. (2023). Pengembangan E-Modul Model Pembelajaran Blended Learning Tipe Flipped Classroom untuk Kelas VIII SMA/MTs. *Jurnal Edukasi dan Penelitian Matematik*, Vol.12 No. 1 Maret 2023, 33-43
- 2) Pengembangan E-Modul Model Flipped Classroom pada Pembelajaran untuk Meningkatkan Kemampuan Penalaran Matematis Siswa Sekolah Dasar. *Edukasi: Jurnal Penelitian dan Artikel Pendidikan*, 14(2), 85-98.
- 3) Recyalini, V., Darmansyah, D., Zuliarni, Z., & Amilia, W. (2024). Pengembangan E-Modul Berbasis Flipped Classroom pada Mata Pelajaran Informatika Kelas VII SMP. *Jurnal Pendidikan Tambusai*, 8(1), 7472-7479.

## METHOD

The research took place in the even semester of 2024/2025. This timeframe was used for planning, implementation, and reporting activities.

This research used a Research and Development (R&D) approach, adapting the steps from Borg and Gall, simplified by Sugiyono (2019). This model was chosen because it is

suitable for producing learning products in the form of modules that have been tested for validity, practicality, and effectiveness. The research stages include:

- 1) Preliminary study, namely gathering initial information through observation, teacher interviews, and student questionnaires.
- 2) Planning, which includes determining learning outcomes, objectives, and indicators for procedural text writing skills.
- 3) Initial product development, in the form of a Flipped Classroom-based digital module design validated by subject matter experts, media experts, and education practitioners.
- 4) Limited trial testing in a small group (15 students) to obtain input on the clarity of content, presentation, and learning steps.
- 5) Revising the initial product based on feedback.
- 6) Field trial testing in a larger group (45 students) to assess the module's effectiveness.
- 7) Operational revision and further trial testing to ensure the module is ready for regular use.
- 8) Finalisation and dissemination by handing over the module to teachers and providing recommendations for implementation in schools.

The research was conducted at SMAN 7 Banjarmasin, involving 60 eleventh-grade students in the Mathematics and Natural Sciences (MIPA) and Social Sciences (IPS) programs. In addition to the students, Indonesian language teachers were also involved as respondents in the needs assessment and initial validation of the module. This location was chosen because, based on initial observations, students' procedural text writing skills still needed improvement, and the teaching materials used by teachers were not fully aligned with the Independent Curriculum.

This research phase began with a needs analysis conducted through classroom observations, teacher interviews, and student questionnaires. The purpose of this stage was to

identify students' difficulties in writing procedural texts and to determine teachers' needs for more innovative teaching materials.

After the needs were mapped, the next step was planning, which involved developing learning objectives, mapping out learning outcomes aligned with the Independent Curriculum, and determining the procedural text writing competencies that students should achieve.

Next, the initial product was developed in the form of a Flipped Classroom-based learning module, compiled in digital format, covering the identity, objectives, materials, learning steps, exercises, and evaluation. This initial product was first validated by subject matter experts, media experts, and education practitioners to ensure the quality of the content and presentation.

The next stage was a limited trial conducted with a small group of 15 students to obtain initial feedback on material clarity, media design, and learning implementation.

Based on feedback from this stage, revisions were made to the main product to suit the needs better. After the revisions, the module was retested through a field trial involving a larger group of 45 students to assess its effectiveness in improving procedural text writing skills.

This stage was followed by operational revisions and further testing to ensure the final version of the module was truly suitable for use in regular learning. In the final stage, dissemination and implementation were carried out by handing the module to Indonesian language teachers at SMAN 7 Banjarmasin for use in the teaching and learning process and providing recommendations for use in other schools.

The research instruments serve to collect the necessary data at each stage of module development. The instruments used in this study include:

- 1) Observation Sheet. This instrument was used to record the initial conditions of learning to write procedural texts at SMAN 7 Banjarmasin. Observations focused on teacher and student activities, student

engagement in learning, and obstacles encountered when writing procedural texts.

- 2) Interview Guide. This non-test instrument was used to obtain in-depth information from Indonesian language teachers regarding the need for teaching materials, implemented learning strategies, and obstacles encountered in improving students' writing skills.
- 3) Student Needs Questionnaire. This non-test instrument was used to explore students' difficulties in writing procedural texts, their learning motivation, and their expectations regarding the desired format of the learning module. The questionnaire used a Likert scale with four answer options to facilitate quantitative analysis.
- 4) Validation Sheet. This instrument was given to subject matter experts, media experts, and education practitioners to assess the feasibility of the developed module. Validated aspects included content, presentation, language, media display, and the module's applicability to learning.
- 5) Teacher and Student Response Scale. This non-test instrument was used during the limited trial and field trials to determine teacher and student responses to the module. This scale assessed aspects of material clarity, presentation, ease of use, and the module's usefulness in learning.

Data were analysed using quantitative and qualitative descriptive techniques. Data on student and teacher needs were analysed as percentages to determine categories (excellent, good, sufficient, and poor). The results of expert validation and teacher-student responses were averaged and then converted into categories of suitability. Qualitative data, in the form of comments or suggestions, were analysed to improve the product.

## RESULT

### 1. Student and Teacher Needs Analysis

A needs analysis is the initial stage to determine the actual conditions of procedural text



writing learning at SMAN 7 Banjarmasin. Based on observations, teacher interviews, and student questionnaires, it was found that most students still experience difficulties in writing procedural texts that adhere to the structure and language rules. The main challenges lie in organising ideas coherently, selecting instructional language, and paragraph development.

The Indonesian language teacher also emphasised that available teaching materials are still limited to textbooks and simple modules. Digital-based learning media are rarely used, resulting in a lack of varied learning experiences for students. This results in low learning motivation, especially in writing.

Table 1  
Summary of the Results of the Analysis of the Needs of Students and Teachers of SMAN 7  
Banjarmasin

No.	Value Components	Sum of Indicator	Mean	Interpretation
1	Module Content	5	21,00	very good
2	E-Learning	5	20,75	very good
	Total	10	41,75	very good

Table 1 shows that the module development needs were rated "very good" by both students and teachers. This means that the development of the Flipped Classroom-based module is highly relevant to the learning conditions in schools.

## 2. Expert Validation

The developed learning module product was then validated by subject matter experts, media experts, and education practitioners. Validation was conducted to measure the suitability of the product's content, presentation, presentation method, and applicability to learning.

Table 2  
Summary of Learning Module Validation Results

No.	Validators	Rated Aspect	Mean	Interpretation
1	Subject Expert	Content and Method	48,00	good
2	Media Expert	Display & Programming	99,00	very good
3	Practitioner	Feseability of Content and Presentation	37,00	very good

Table 2 shows that the module received a "good" rating from subject matter experts, while it received an "excellent" rating from media and education practitioners. This indicates that the ma-

terial content is sufficiently aligned with learning outcomes, while the quality of the media and the product's applicability in the classroom are highly supportive.

### 3. Teacher and Student Responses

During the limited trial and field testing phases, teachers and students provided feedback on the module. Responses were obtained through a questionnaire on a scale of 1–5, covering aspects of content, appearance, ease of use, and usefulness of the module.

Table 3  
Summary of Teacher and Student Responses to the Module

No.	Respondents	Rated Aspect	Mean	Interpretation
1	Teachers	Content and Method	61,00	very good
2	Students	Materials & Media	60,25	very good

The results in Table 3 show that teachers rated the module "very good" because it helped make the learning process more focused, practical, and aligned with the demands of the Independent Curriculum. Students also provided positive feedback, categorised as "very good," primarily because the Flipped Classroom-based module was considered more engaging, easier to understand, and facilitated their independent practice of writing procedural texts.

### DISCUSSION

The results of this study demonstrate that the development of a Flipped Classroom-based learning module is efficacious in improving the procedural text writing skills of eleventh-grade students at SMAN 7 Banjarmasin. This finding aligns with research by Farida et al. (2019), which states that the Flipped Classroom can increase student engagement in learning. Furthermore, the validation results from media and education practitioners, which obtained an "excellent" rating, reinforce the findings of Jayakumar et al. (2015) that e-learning integration can improve the quality of the learning experience.

From the student perspective, positive responses indicate increased learning motivation. This supports the findings of Agustin and Indihadi (2020), who emphasised that procedural text writing skills can develop if students receive targeted practice and are supported by appropriate learn-

ing media. The Flipped Classroom-based module also provides students with the flexibility to study the material before face-to-face learning, allowing class time to be focused on discussion, practice, and feedback.

Thus, this module not only addresses the writing learning needs at SMAN 7 Banjarmasin but also contributes to the development of technology-based teaching tools that support the implementation of the Independent Curriculum.

For Indonesian language teachers, this module can be used as an alternative teaching tool to support the Independent Curriculum, particularly in teaching procedural text writing. Teachers are also advised to integrate the module with other learning strategies to enhance students' learning experiences.

For students, this module can be used as an independent learning material outside of class. This way, students have more opportunities to practice writing and prepare for face-to-face learning. "For schools, the results of this study can serve as a reference for enriching digital-based learning resources and encouraging the implementation of the Flipped Classroom in other subjects.

For future researchers, this module can be further developed by expanding the scope of other texts (e.g., expository or argumentative texts) and testing its effectiveness through experiments with a more robust design.



## CONCLUSION

This research resulted in a Flipped Classroom-based procedural text learning module using e-learning media, developed for 11th-grade students at SMAN 7 Banjarmasin. Based on a needs analysis, students and teachers assessed the need for module development, particularly to improve writing skills and utilise digital technology.

Validation results indicated that the module was rated "good" by subject matter experts and "very good" by media experts and education practitioners. Furthermore, teacher and student responses during the trial phase also indicated "very good." Therefore, it can be concluded that this Flipped Classroom-based learning module is suitable for use as a teaching tool to improve procedural text writing skills at SMAN 7 Banjarmasin.

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