

Effectiveness of E-Module Teaching Material Development in Learning Procedure Text Using Flip Pdf For SMP Students

Nidia Harum Pertiwi*, Mulyanto Widodo, Farida Ariyani, Sumarti, Siti Samhati

University of Lampung, Indonesia

*Corresponding Author e-mail: nidiaharum123@gmail.com

Abstract: This research aims to develop and evaluate the effectiveness of Flip PDF-based e-modules in learning procedure texts at junior high school level grade VII. The use of the ADDIE approach is the basis for the stages of analysis, design, development, implementation, and product evaluation. The assessment results show that this e-module is suitable for use in the teaching and learning process with a score of 80.3%, because it is able to facilitate understanding of the material, increase learning motivation, and is visually appealing and interactive. The evaluation also identified the need for improvement, such as adjusting the content to the local context and adding technical guidelines. The results of this study are expected to contribute to the development of effective and innovative technology-based learning media in improving learners' literacy skills, especially in understanding procedure texts.

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Introduction

Learning is an educational process that provides opportunities for individuals to develop their potential, so that all abilities can be maximized (Imania, 2014). The formal learning process occurs in official institutions such as schools. Learning is a complex system that includes planning, implementation and evaluation. Planning includes determining learning objectives, competencies to be achieved, and strategies to achieve the goals and competencies that have been set. Implementation of learning is the stage where the necessary human resources and facilities are provided to support success in achieving the competencies, characters and ultimate learning objectives. Evaluation is conducted to determine and measure the process and results achieved, whether it is in accordance with the plan and learning objectives that have been determined.

One of the steps in providing learning facilities is the existence of teaching materials which have a very important role. Teaching materials are tools used by teachers and students to facilitate the teaching and learning process (Kosasih, 2021). In general, teaching materials or learning materials consist of knowledge, skills, and attitudes that need to be learned by students to achieve predetermined competency standards (Aisyah, 2020). In teaching materials, there are explanations of theories, learning materials, and experiences that

educators and students have to help understand the main learning materials that have been determined in the curriculum. Educators can also compile teaching materials by considering references that are relevant to the learning material, to support students during the learning process.

Teaching materials consist of various types, including printed and non-printed teaching materials (Tania, 2017). Some forms of teaching materials include printed materials (such as handouts, books, modules, LKS, brochures, and leaflets), audio (radio, cassettes, audio CDs), visual (photos or images), audio visual (such as video/film or VCD), and multimedia (such as interactive CDs, computer-based, and internet) (Mulyasa, 2006). One type of teaching material that is often used is modules. Modules are the main choice in the learning process at school because they are considered to make it easier for teachers and students to deliver and understand learning materials. Teaching modules that are commonly used are usually in the form of printed books that include material and practice questions in them.

With the development and high use of technology in the field of education today, technology should be utilized to support the teaching and learning process. Information technology used as a learning tool aims to improve the quality and quality of students. One of the developments that utilize technology and information in the world of education is to convert teaching materials that were previously in the form of printed modules into modules in electronic format or e-modules.

E-modules are learning tools or media that contain material and questions that function to evaluate students' understanding of the material studied. The development of e-module teaching materials is expected to improve student understanding of certain materials. With the use of e-modules, the learning process becomes more effective because electronic modules can help students who have difficulty learning, make it easier for students to learn lessons in a structured and systematic manner, and present material in a clear sequence (Laraphaty, 2021). The e-module to be developed will cover procedure text material for Indonesian language learning in grade VII in junior high school.

Previous research used as a reference was conducted by Devi (2018) which showed that the development of teaching materials for writing procedure texts in class XI SMA Negeri 1 Samarinda obtained a validity of 86%. The next research by Widiani (2021) shows that the validation results from material experts reached 85%, media experts 92%, and language experts 88%. The development of flipbook maker-based e-modules in office technology subjects received a "very feasible" category with an overall percentage reaching 88.33%, while the results of the student response questionnaire recorded a percentage of 95.45%. Thus, it can be concluded that the development of flipbook maker-based e-modules in office technology subjects is very feasible to be implemented at SMKN 1 Sooko Mojokerto.

Procedure text is one of the text types taught in Indonesian language subjects at school. This text explains the steps in detail, clearly, and comprehensively about how to carry out certain activities and daily habits (Kosasih, 2016). In the learning process of procedure text, there are several objectives that need to be achieved by students. One of the goals is that students can compose procedure texts by paying attention to correct linguistic rules. The

linguistic rules in the procedure text include the use of imperative sentences or command sentences, as well as the application of effective sentences so that readers can easily understand the procedure text.

The use of command sentences is often a problem for students. The limited vocabulary or sentence references that students have cause them to experience difficulties in composing procedural texts. Based on observations at SMP N 1 Seputih Banyak, it was found that the challenge faced by students in learning procedural texts is their lack of understanding of imperative sentences or command sentences that can be used to compose procedural texts. This is due to the lack of teaching materials available during the learning process, so the references that students have are limited. As a result of these limitations, the final learning product is less than optimal. The tasks produced by students tend to use monotonous sentences and only copy the sentences that have been exemplified in the package book by changing the object they want to make.

This phenomenon underlies the development of E-modules as teaching materials in procedure text learning materials. The focus of this material development is to provide explanations and examples of sentences that are included in the imperative sentence category or sentences that can be used in the preparation of procedural texts. With the references provided, it is expected that students can further develop their creative ideas in composing procedure texts.

The material development is then organized in an electronic module that makes it easier for students to learn the learning content. The process of making this electronic module uses Flip PDF. Flip PDF is software that can be used for interactive PDF-based digital publications that can be opened or flipped like a physical book. Electronic modules created using Flip PDF can be accessed and read through computers, tablets and smartphones. Flip PDF contributes to creating a more interesting and interactive reading experience, as well as providing convenience in presenting content in digital format.

To achieve learning objectives, quality, easy-to-understand and attractive teaching materials are needed. The attractiveness of teaching materials is very important in the learning process because it can increase students' appreciation during the process. Therefore, one of the steps to increase the effectiveness of learning is by utilizing E-modules developed from procedure text learning materials, in order to increase students' knowledge of the linguistic elements in procedure text in the form of electronic modules that can increase students' interest in learning. Thus, it is expected that students are able to compose good and correct procedure texts in accordance with the applicable linguistic rules. Therefore, this study was conducted to determine the effectiveness of E-Module teaching materials in learning procedure texts using Flip PDF for Grade VII Junior High School Learners."

Research Method

Penelitian ini merupakan sebuah penelitian dan pengembangan yang bertujuan untuk explore the effectiveness of the implementation of learning product development, particularly in the context of education at SMP Negeri 1 Seputih Banyak. In an effort to achieve these objectives, this research uses the ADDIE approach, which is a development model consisting of five stages: Analysis, Design, Development, Implementation, and Evaluation. This

approach not only provides a clear structure, but also allows the researcher to systematically evaluate every aspect of the learning product development process under study.

Involving 66 learners from grade VII, this study used a variety of data collection techniques, including observation and test sheets. Observations were made to record learners' interactions during the learning process, while test sheets were used to measure their understanding and learning outcomes related to the procedure texts taught. In this context, it is important to note that procedure text is a type of text that provides instructions or steps to be followed to achieve a certain goal, such as a recipe or instructions for using a tool. Therefore, a good understanding of procedure texts is very important for learners, especially in improving their literacy skills.

Data analysis was conducted using the N-Gain formula, which is one of the methods to measure the effectiveness of educational interventions. N-Gain provides a clear picture of how much the learners' learning outcomes have improved after following the developed learning program. By using this formula, researchers can identify not only the overall improvement of learning outcomes, but also specific aspects of learning that may need further attention. For example, if the data shows that learners have significantly improved in understanding the steps in a procedure text, but still struggle in applying the information in a different context, then this becomes an area for improvement in the development of future learning products.

Through this systematic and structured approach, this research focuses not only on the end result, but also on the process involved in developing the learning product. This is important as it provides a deeper insight into how learners interact with learning materials and how they can be supported to achieve better results. As such, this research is expected to make a significant contribution to the development of more effective teaching methods, especially in the context of procedure text learning at the secondary school level.

Result and Discussion

The results of the research were conducted by referring to the ADDIE approach, as follows:

1. Analysis

The analysis was carried out to identify the learning needs of procedural texts, the characteristics of students in grade VII SMP, and determine the suitability of Flip PDF e-module media in the learning process. based on the findings of the researchers, procedural text material is part of the independent curriculum which emphasizes understanding the structure and linguistic rules of the text systematically while conventional learning is still textual and does not involve interactive media. The characteristics of students tend to be interested in visual, interactive and technology-based learning. The characteristics of students are also reinforced by the results of a questionnaire distribution in the form of 10 question items related to difficulties in understanding procedural text material, which are as follows:

Table 1 analysis of learner characteristics

Item Soal	1	2	3	4	5	6	7	8	9	10
Total	12	6	13	9	10	10	9	11	14	9
Average	80	40	87	60	67	67	60	73	93	60

Source data 2025

Based on the results of the needs analysis data given by researchers to 15 students, it is known that question item number 9 "Do you need digital-based media in understanding Procedure Text material" obtained a result of 93% which categorized students' desire to use digital-based teaching materials, while the question item, "Do you feel the need for further guidance or assistance in understanding how to write good and correct procedure text" showed a low score with 40% categorizing that students were not confident in understanding procedure text material. Behaviorism and constructivism theories state that media selection must be tailored to the learning needs and characteristics of students so that the learning process is more optimal.

2. Design

At the design stage, researchers formulated learning objectives that were in line with the basic competencies of the seventh grade Indonesian language curriculum, namely: "understanding and composing procedure text according to the structure and linguistic rules". The material is designed systematically and gradually so that students can understand the concept of procedure text thoroughly. Furthermore, the researcher designed an e-module framework consisting of, 1) cover page; 2) preface; 3) table of contents; 4) concept map; 5) learning objectives; 6) learning materials; 7) interactive exercises; 8) self-assessment; 9; learner reflection; 10) glossary and bibliography; John Dewey (1938) states that learning design must adjust students' learning experiences to make learning meaningful. By formulating learning objectives according to the curriculum and designing a material framework that is gradual and systematic, so that students can understand the procedure text completely.

3. Development

According to Dick and Carey (1996), the development process must be based on a mature design and integrate teaching materials with appropriate media. This development stage aims to develop procedure text e-module products based on the design that has been made. At this stage, researchers compile material, design visual displays, compile learning evaluations, and integrate everything into Flip PDF format so that it can be used in the learning process. the following is the appearance of the development product

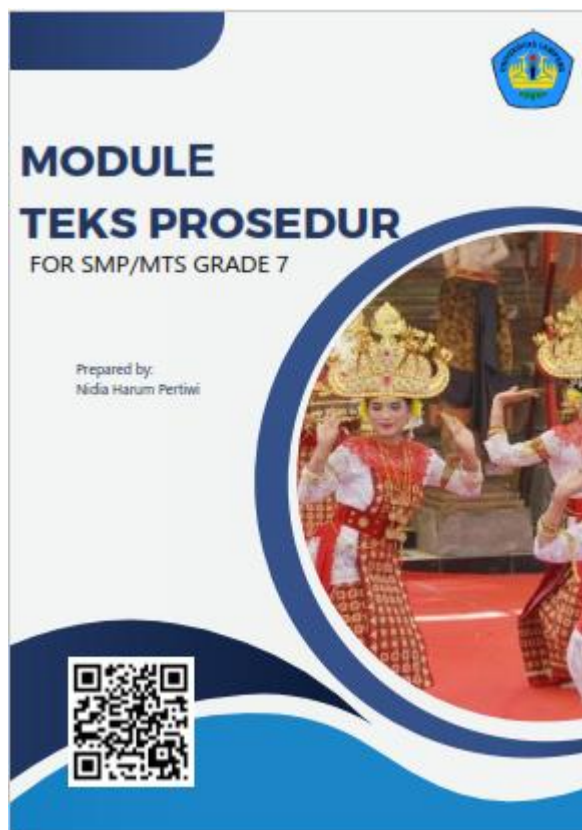


Figure 1 Product E-Modules Flip PDF

Furthermore, after the development draft is complete, the researcher conducts a limited product test by involving competent experts. limited product testing involves material experts, and media experts with each already having the ability to provide an assessment of the product, validation experts have a qualification level of strata 2 and S3. who already have the ability to provide an assessment. The results of expert testing were obtained as follows:

Table 2. Recapitulation of expert assessment

No	Expert	Average
1	Material Expert	89
2	Linguist	103
Average		96

Source: data processed 2025

Based on the recapitulation of the assessment of material experts and media experts obtained a percentage of 96%, as a basis for decision making it can be concluded that the interpretation of the PDF flip e-module assessment is categorized as very feasible (The module results are in accordance with the statements on the instrument sheet with an accuracy value of 76-100%).

4. Implementation

The implementation of development effectiveness activities was carried out involving 66 students with a design of 2 learning activities, namely as follows: In the implementation of learning activities 1 researchers conducted learning by carrying out conventional concepts without using development products followed by giving an assessment

questionnaire (pretest), while at the 2nd meeting the researcher carried out learning activities by providing and displaying the physical e-module Flip PDF to students, followed by at the end of the lesson the researcher gave a final assessment questionnaire (posttest) after using the e-module Flip PDF product. Initial (pretest) and final (posttest) assessment activities. The results of the assessment conducted by researchers at SMP Negeri 1 Seputih Banyak and SMP Negeri 1 Punggur are as follows:

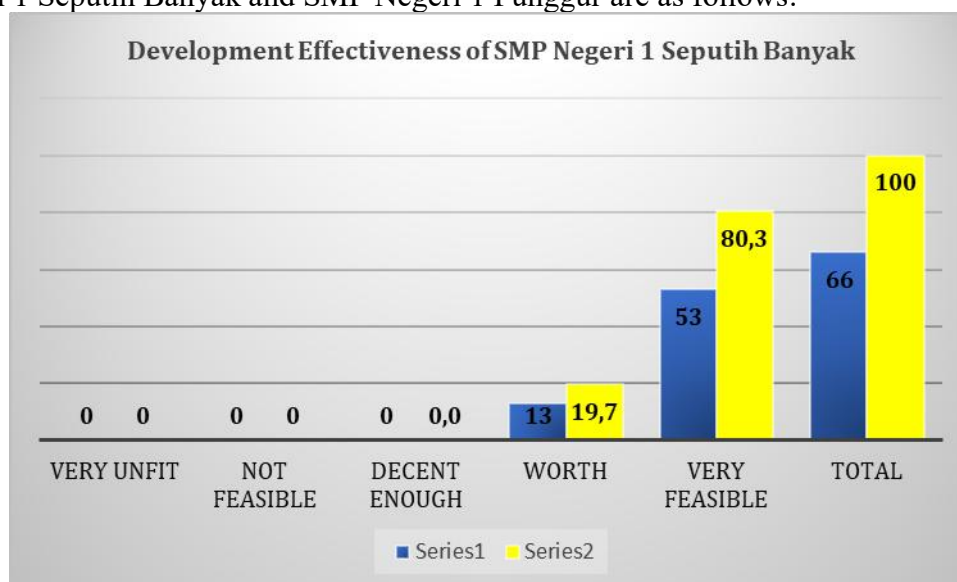


Figure 2 Development Effectiveness Results

Based on the results of the pretest and posttest assessments at SMP Negeri 1 Seputih Banyak, it is known that the feasibility of the Flip PDF e-module from 66 respondents, said 13 (19.7%) respondents crystallized kayak, and 53 (80.3%) respondents categorized it as very feasible, so it can be concluded based on the results of the feasibility of the Flip PDF e-module at SMP Negeri 1 Seputih categorized as a very feasible Flip PDF e-module with a result of 80.3%.

5. Evaluation

According to Scriven (1991), evaluation aims to determine the effectiveness and relevance of learning products. Evaluation is carried out to determine the shortcomings of product development based on suggestions and input from product testing and implementation of activities, based on the evaluation results, the Flip PDF-based procedure text e-module is suitable for use in learning junior high school students in Grade VII, because 1) The material is easy to understand; 2) the display is attractive and interactive; 3) increases the motivation and learning outcomes of students; however, some improvements need to be made including 1) adjusting the content to the local context of students; 2) adding technical guides for teachers and students; 3) anticipating internet access constraints for online features;.

Discussion

Learning media is a physical support tool in delivering subject matter. Learning media is a means of communication of message carriers from message sources to message recipients to support the learning process (Hapsari, 2020). In line with the opinion of Asmara (2015) that learning media is used to increase learning efficiency and overcome learning obstacles. Hartono quoted by Hapsari (2020) explained that learning media makes teaching more

interesting for students. The subject matter will be clearer in meaning, so it will be easier for students to understand. Learning media also makes educational methods more varied, not merely verbal communication through the utterance of words by the teacher so that students are not bored and the teacher does not run out of energy. So it can be concluded that learning media is a tool for teachers in delivering subject matter (Fitriani, 2023).

Media utilization plays an important role in the dissemination of information in the context of education. As Indonesian speakers, of course, we already know that there are several skills in Indonesian. The four main aspects of language skills need to always be improved in understanding and mastery by each language speaker. The four skills are speaking skills, listening skills, reading skills, and writing skills (Aliyah, 2017).

Procedure text as one of the texts in Indonesian language learning is a text that must be studied in grade VII SMP and MTs. According to the Ministry of Education and Culture (2016), procedure text describes activities that must be carried out so that readers/viewers can precisely and accurately follow a process of making something, doing a job, or using a tool. Procedure text was chosen by the researcher because this text is one of the materials whose learning outcomes do not meet the standards of completeness. In addition, procedure text requires accuracy in determining the steps, which makes it impossible to misplace, because if it is misplaced, the results obtained are also not in accordance with the original objectives.

Text-based learning is not only limited to language knowledge, but texts have uses as the origin of the actualization of the user in the social and cultural realms of education (Anggraini, Rusminto, Nurlaksana, Agustina, 2015). There are several texts taught in grade VII, one of which is procedure text. Procedure text is a text that is very important for fulfilling the needs of society. It is said so because procedure text is a text in which there are steps or ways of doing something. With the existence of procedure text, someone will be greatly helped and the work done will be easier. Text that explains the steps or stages clearly, completely and in detail regarding how to do something (Lestari, Herdiantina, Sudrajat, 2018). Therefore, procedure text is very appropriate for students to learn because students often experience it in their daily lives. The procedure text compiled has a text structure that is somewhat different from other texts. Procedure text is also organized with text structure, objectives and steps (Kristanti, Sriasih, Astika, 2015).

The development of digital-based teaching materials, such as e-modules, is important because it can improve the effectiveness and quality of student learning. According to Sanjaya (2014), learning media should be able to attract students' attention and facilitate a thorough understanding of concepts. With the development of technology and digital-based learning styles, e-modules can provide an interactive, engaging, and easily accessible learning experience anytime anywhere. According to Mayer's (2001) multimedia learning theory, e-modules have several advantages over printed modules, such as interactivity, flexibility of access, attractive visualization, ease of updating materials, and the ability to be easily accessed.

The development carried out using the ADDIE approach according to (Moelanda, 2003) supports the systemization process in designing learning products to be interactive and efficient. The results showed that as many as 80.3% of students considered the e-module very feasible to use, and the results of the pretest to posttest showed significant improvement. This is in line with the theory of learning success according to Hattie (2009), which emphasizes that interactive and interesting teaching materials can improve learning outcomes. Previous research studies by Putri and Rahmawati (2022) showed that students who used Flip PDF-based e-modules had better learning outcomes compared to students who studied using

conventional textbooks. The average test scores of students using e-modules increased by 15%. The study by Sari and Lestari (2023) found that the use of e-modules increased student learning motivation. As many as 85% of students felt more interested and motivated to learn procedure texts when using e-modules. Research by Wijaya and Hidayati (2023) showed that students who used e-modules experienced an increase in reading skills of procedure text. The reading test results showed significant improvement after the use of e-modules.

Conclusion

The development of Flip PDF-based e-modules is an important innovation in the world of education that answers the challenges of conventional learning. The results showed that as many as 80.3% of students considered the e-module very feasible to use, and the pretest to posttest results showed a significant increase. Systematically and supported by multimedia learning theory and instructional design, e-modules are able to increase the effectiveness and attractiveness of the learning process of junior high school students, especially in understanding procedure text. The evaluation shows success in improving learning outcomes, while opening up opportunities for further development to face the challenges of technology and internet access in the field.

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