

# Development of Interactive E-Modules Based on Flip as Teaching Materials for Indonesian Lessons on Personal Letter and Office Letter Material

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**Abstract.** The aim of this research is to produce a FLIP-based E-Module in Indonesian Language Lessons for 7th grade students' letter writing material that is valid, feasible and effective to use in improving student learning outcomes with the help of the flipbook maker application. This research was conducted at YPIS Maju Binjai Private Junior High School. The subjects in this study were three expert validators (design experts, media experts, and materials experts), then teachers and seventh graders at YPIS Maju Binjai Private Junior High School. Based on the data from the research and discussion that have been described, it can be concluded that the Flip-based E-Module is declared valid by the validator so that it is declared feasible as a learning medium. Furthermore, based on the assessment of the children's tests obtained, the E-Modul was declared to have the effectiveness of learning media at YPIS Maju Binjai Private Junior High School.

**Keywords :** Flipbook-Based E-Module, Module Development, Indonesian Language Learning

## I. Introduction

Quality learning will be able to develop the potential of students as a whole that they have. So that it is hoped that the educational units in the learning process activities that are held can be more interactive with each other, inspire inspiration, be able to create a sense of fun, challenge the soul, and increase the encouragement of students to participate actively, and provide sufficient space to express ideas/ideas. creativity, and independence in accordance with the talents, interests, and physical and psychological development of children. Ki Hajar Dewantara<sup>(3)</sup> states that education is guiding all the natural forces that exist in children so that they as humans or as members of society can achieve the highest safety and happiness.

Based on the facts, it is recognized that at present, education is faced with a number of challenges as a consequence of global changes, crises in various fields of life, and challenges that require changes in the education management system. This means that the demands of globalization in the field of education need to be considered so that the results of national education can compete with the results of education in developed countries.

Besides that, language is also a medium for conveying various information and disseminating knowledge. The important role of language requires efforts to further optimize language learning in schools, especially in elementary schools. It is undeniable that language has a very

important role in human life. Through language we can communicate with other people so that we can express our ideas. That is, language is a medium between the communicator and the communicant.

However, the implementation of the Indonesian language learning process has some obstacles. One of the biggest obstacles in conventional learning given by teachers so far is that students become human figures who are less active in conveying ideas, ideas and opinions, because children tend to only listen to what the teachers explain, so that it can result in learning being boring for students. . the. A student who experiences boredom in learning can have a negative impact on getting progress in learning outcomes. Therefore, it is necessary to encourage students to be motivated to learn so that they can have learning achievements.

Based on the results of observations made during limited face-to-face learning at YPIS Maju Binjai Private Junior High School, the teacher's way of giving material online is still very manual, namely by taking photos of the material to class groups through the *Whatsapp application* so that students learn independently which are then given questions from the package book. owned by the teacher. Although sometimes there are some teachers who give voice messages or short videos and provide learning through the *Google Classroom application* , and *meet google* . However, the results obtained at the end of the Odd semester 2020/2021 assessment data on learning outcomes and children's motivation are very low compared to learning outcomes before the limited face-to-face implementation.

Based on the facts and the results of observations that have been made as well as discussions with the school principal, the results show that in learning there is a great need for innovation in learning, especially for making digital-based teaching materials that can be accessed by students via children's cellphones. This can have an impact on students so that they can and are able to access these teaching materials easily regardless of time and place, so the developed teaching materials must use software that is compatible with the Android platform. Researchers assume that many students have Android-based devices. This teaching material is in the form of an e-module based on making Flipbook, which is an electronic book application equipped with pictures, sound and video. The purpose of using this feature is expected to be able to increase students' desire and enthusiasm for learning, besides that this will make it very easy for children to read and study material anywhere via their cellphones.

According to Dahar<sup>(1)</sup> E-modules can be created using the *Flip Book Makers application* . *Flip Makers* is a useful software for making e-book applications. While electronic books are books that we can read through computers. Asmi<sup>(1)</sup> argue that the advantages of this application are (1) it is able to give a *flip effect* , namely opening or turning page by page of a book so that it is like reading a real book; (2) the creation of electronic books with this application is very easy; (3) the resulting e-book is not just a book, but can be equipped with pictures, sound, and video; (4) the products we produce can be published in the form of SWF or *Flash, HTML* to be published through *the website* . Meanwhile, according to *Borg and Gall*, the weakness of *Flip Book Makers* is that the information conveyed tends to get less attention from readers. Readers certainly have a goal to get the desired information contained in the *e-book* and not be fascinated by the *multimedia effects* contained in the *e-book*.<sup>(1)</sup>

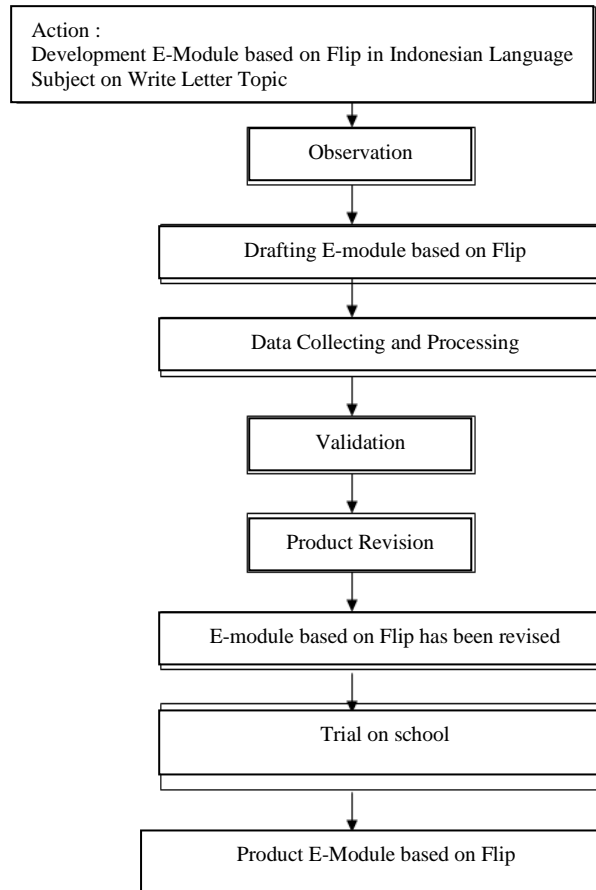
With the increasing convenience of technology media, there are many choices of media that can be used, one of which can accommodate needs anytime anywhere and realtime can see or monitor the use of website-based media (online). According to Rusman (in Taufik. 2018: 54) As with learning media in general, web-based learning ( *Web-Based Learning* ) also has various advantages. So it can be synthesized that the multimedia in this e-module is used as a tool to convey messages / material content that combines two or more media elements, including text, images, graphics, photos, sound, films and animations in an integrated manner. So it feels right

to choose e-modules as an alternative solution from learning resources that are integrated with various electronic advantages in packaging material content (integrated with images, animations, videos, and simulations) and can be accessed anytime and anywhere with the help of the internet network. websites).

Referring to the description above, the researchers hope that by developing an interesting learning teaching material in the form of a *Flip -based E-Module* to overcome problems in the classroom in learning Indonesian content, it will make it easier for students to learn the material independently. This research is focused on developing a *Flip -based E-Module* on Indonesian Language Learning in Letter Writing material as well as knowing the feasibility and effectiveness to be used as teaching materials for Indonesian language learning in the 7th grade of YPIS Maju Binjai Private Junior High School.

## **2 Research methods**

This study aims to produce products with valid and practical quality. The product developed in this study is a learning device in the form of a *flip - based E-module* in Indonesian Language subjects with Official Letters using the *Research and Development* model of the ADDIE model, so that the development design refers to the stages of the ADDIE model, namely the Analysis stage. , Design, Development, Implementation and Evaluation. This research was conducted at YPIS Maju Binjai Private Junior High School class VII which is located at Jalan Tengku Amir Hamzah. No. 638, Jati Karya.Kec. North Binjai, Binjai City, North Sumatra. The implementation of this research was carried out in the even semester of the 2021/2022 academic year. Broadly speaking, the product development framework is as follows:



**Figure 1.** product development framework

## **3 Research Results and Discussion**

### **3.1 Research Results**

#### **3.1.1 Stages of Analysis**

At the analysis stage, there are 3 things that are most studied, namely curriculum analysis, student character analysis and needs analysis, curriculum analysis in the form of analysis carried out by choosing Indonesian language material to be taught with media, and analyzing Competency Standards, Basic Competencies and indicators that must be achieved by students . Analysis of the characteristics of students , in addition to the material developed, it is also necessary to know the characteristics of students as targets for developing this media. Student analysis was conducted to determine the characteristics of class V II students . Needs Analysis, analysis of the use of teaching materials aims to determine the extent to which the use of media used when learning Indonesian and how the media is made in order to meet the needs of students. This analysis was carried out by discussing with the teacher in question and it was found that

the teacher needed innovation in teaching materials, especially computer-based teaching materials to be able to attract students' attention to the material presented. Based on the three analyzes that have been carried out, it is necessary to develop *Flip -based E-Module media* on Indonesian Language Learning in Letter Writing material and to know the feasibility and effectiveness to be used as teaching materials for Indonesian language learning in 7th grade of YPIS Maju Binjai Private Junior High School.

### 3.1.2 Design Stages

The following are the stages of media development design with a *flipbook maker* :

1. Collection of Reference Materials

The material to be developed comes from existing modules, which are obtained from the website :

[file:///E:/TESIS%20NANA%20S2%20UNIMED/TESIS%20NANA%20FIX/B%20Indo%20B%20Modul%205\\_sip%20for%20ISBN.indd.pdf](file:///E:/TESIS%20NANA%20S2%20UNIMED/TESIS%20NANA%20FIX/B%20Indo%20B%20Modul%205_sip%20for%20ISBN.indd.pdf)

2. Storyboarding \_

*Storyboard* is a description of the picture in the manufacture of teaching materials made to facilitate the process of making a product. The following is an overview of the developed media



Figure 2. Design story board

### 3.1.3 Development Stage

The following activities in the development stage are activities to validate the draft product development and revision after expert input, then the product is revised according to the suggestions and input from the validator team , after which small trials and field trials are carried out at YPIS Maju Binjai Private Junior High School so as to produce E-Module products based on flip.

a. Material Expert Validation

Based on the results of the material expert's assessment that has been assessed as in table 4.1 above, it can be seen that the statements related to product assessment are 15 items with 4 aspects, obtained a decent score assessment of 15 items, a fairly decent score of 0 items and less feasible 0 items.

Table 1. Material Expert Validation Results

No	Aspect of	Indicators	Assesment	Maximum Score	Score Percentage	Total
1	Content	Material Conformity	12	12	100%	100%
2		Material Accuracy	12	12	100%	
3		Material Creativity	12	12	100%	
4	Quality	Material Delivery Techniques	12	12	100%	100%
5		Material Presentation	12	12	100%	
6		Material Streamlined Flow	12	12	100%	
7	Language	Sentences contained in the E-Module are clear and understandable	12	12	100%	100%
8		The use of the term in the E-Module is appropriate	12	12	100%	
9		There is no Double interpretation	12	12	100%	
Average			108	108	100%	

Then the data was analyzed by calculating the percentage score of teaching materials developed according to material experts, obtained:

$$P = \frac{f}{N} \times 100\% = \frac{(15 \times 4) + (0 \times 3) + (0 \times 2)}{(4 \times 15)} \times 100\% = \frac{60}{60} \times 100\% = 100\% \quad (1)$$

b. Learning Design Expert Validation

Based on the results of the material expert's assessment that has been assessed as in table 1 above, it can be seen that the statements related to product assessment are 20 items with 3 aspects, obtained a decent score of 16 items and a fairly decent score of 4 items.

Table 2. Design Expert Validation Results

No	Aspect Of	Assessment	Indicators Maximum	Score	Percentage	Total
1	Content Quality and Purpose	Product selection accuracy	4	4	100%	92,86%
2		Product suitability	4	4	100%	
3		Complete menus	3	4	75%	
4		Color composition balance	4	4	100%	
5		The product's ability to attract students' interest in learning	4	4	100%	
6		The E-Module does not contain SARA elements	4	4	100%	

7		The suitability of the media with the conditions/situation of students	3	4	75%	
8	Instructional Quality	Provide learning opportunities to students	4	4	100%	96,87%
9		Provide assistance to students to study independently	4	4	100%	
10		Product capabilities motivate students in learning	4	4	100%	
11		Flexibility of product use	4	4	100%	
12		Product relationship with conventional learning systems	4	4	100%	
13		Appropriateness of the quality of the test and its assessment in the product	4	4	100%	
14		The product's ability to have a positive impact on students	3	4	75%	
15		Product capabilities have a positive impact on teachers and their learning	4	4	100%	
16		Technical Quality	Readability of the text used in the e-module (size, shape and type of letters)	4	4	
17	Ease of students in using e-modules		4	4	100%	
18	The display quality of the products used is very good		4	4	100%	
19	Accuracy in color selection		4	4	100%	
20	The quality of program management used		3	4	75%	
Average			76	80	95%	

Then the data was analyzed by calculating the percentage score of teaching materials developed according to learning design experts, obtained:

$$P = \frac{f}{N} \times 100\% = \frac{(16 \times 4) + (4 \times 3)}{(4 \times 20)} \times 100\% = \frac{76}{80} \times 100\% = 95\% \quad (2)$$

### 3.1.4 Implementation Stage

At this stage, the completed E-Module is then implemented for class VII teachers at YPIS Maju Binjai Private Junior High School. Previously, the teacher started distributing links to teaching materials containing *Flippbook -based E-Modules* with Official Letters and Official Letters, which the teachers then opened them from their respective *cellphones* .

**Table 3.** Recapitulation of the teacher response

No.	Question	Yes	No	Assesment Percentage
1.	The suitability of the material with general learning objectives	6	0	100%
2.	Material suitability with specific learning objectives	6	0	100%
3.	Suitability of the material with the stages of preliminary learning activities	6	0	100%
4.	The suitability of the material with the stages of the core learning activities	6	0	100%
5.	The suitability of the material with the stages of closing learning activities	6	0	100%
6.	The suitability of the material with the learning method	5	1	83,33%
7	The suitability of the learning method with the preliminary stage of learning activities	5	1	83,33%
8	The suitability of the learning method with the core stage learning activities	6	0	100%
9	The suitability of the learning method with the closing stage of learning activities	6	0	100%
10	Consistency between the subject matter and sub topics	6	0	100%
11	Learning materials are arranged systematically	5	1	83,33%
12	The suitability of learning materials with the characteristics of students	6	0	100%
13	The suitability of the material with the learning method	6	0	100%
14	Learning materials can increase knowledge about letter material	6	0	100%
Total		81	3	96,42%

The researcher demonstrates the learning teaching materials first before the teacher installs the learning materials. After that, the teacher is invited to use learning teaching materials and try to do the evaluation contained in the teaching materials. Furthermore, the teacher was asked to fill out a respondent's questionnaire containing 14 statements to provide responses to the *e - module* teaching materials .

Based on the results of the recapitulation of the teacher response questionnaire that has been carried out, it can be obtained that the teacher's assessment states that teaching materials are effective as much as 96.42 % . To determine the achievement of learning objectives in terms of



student responses, if the number of students who gave a positive response was greater than or equal to 80% of the many subjects studied for each trial, and the results obtained were 96.42%, the media developed was declared effective.

### 3.1.5 Evaluation Stage

The following is a recapitulation of pre-test and post-test scores of student learning outcomes:

**Table 4.** Recapitulation learning outcomes

No	Pretes Value		Postes Value	
	Value Range	Total Student	value range	Total Student
1	0 - 24	2	0 - 24	0
2	25 - 49	14	25 - 49	3
3	50 - 74	12	50 - 74	0
4	75 - 100	2	75 - 100	27

Based on these data, the final achievement of this research is only to increase learning outcomes with the achievement of student learning completeness criteria if in the class there are 85% who have achieved KB 65%. To find out the mastery of learning classically, the formula is used:

$$PKK = \left( \frac{\text{Total of Student}}{\text{Total of Research Subject}} \right) \times 100\% \quad (3)$$

$$= \frac{27}{30} \times 100\% = 90\%$$

The results of the acquisition of learning mastery are obtained by 90%, so the flipbook-based e-module teaching materials developed can be declared effective to improve student learning outcomes.

### 3.2 Discussion

Education plays an important role in the delivery of scientific information that will make the public know, understand, understand, and have broader insights. In addition, with the insight that we get from education, it can raise our motivation to move forward, spur and rise from backwardness. Agree according to Umaroh (in Dewi and Arief, 2021: 1910) states that education has a very important role in efforts to improve one's quality. Quality learning is able to develop all the potential possessed by students. So it is expected that in the educational unit the learning process is carried out interactively, inspiring, fun, challenging, motivating students to participate actively, and providing sufficient space for initiative, creativity, and independence in accordance with the talents, interests, and physical and psychological development of students.

Therefore, teachers must be able to create and develop Indonesian language learning teaching materials that can attract students' attention, make it easier for students to understand Indonesian language material, especially letter writing material. Although face-to-face learning is limited, students do not find it difficult when they have to understand a material like learning before a pandemic. And the most important thing is that the teaching materials prepared by a teacher must be electronic (*e-learning*) which can be shared or sent via email or WA group. So that students can still learn by using *smartphones* at home. The development is carried out in 5 stages, namely first, the analysis stage to determine the initial needs in developing teaching materials, the second stage is the design of teaching materials which is the stage of making the design of teaching materials to be developed, the teaching materials in this study were compiled using *flipbook maker software*, the third stage is product development and manufacture is the manufacture of teaching materials based on *storyboards* and designs that have been made.

Furthermore, the fourth stage is implementation, which is a stage to determine the practicality of the operation of teaching materials, the teacher's response to the teaching materials used, and whether or not the teaching materials are appropriate to be produced and distributed. The last stage is evaluation, which is the stage of evaluating student learning outcomes data through tests.

The results of the assessments given by the Material Validation Expert Team, and the overall design of the product developed are declared valid and feasible with few revisions. This is in accordance with the results of previous research conducted by Kalimatus Sa'diyah (2021) regarding the development of an E-module based on a digital *flipbook* that has been developed, it was concluded that an E-module based on a digital *flipbook* was feasible theoretically with a validation result of 0.91 included in the valid and empirically feasible category with the results of the readability test being at level 10 which corresponds to class 10 and the student response getting an average score of 82% in the positive statement including the very valid category and in the negative statement getting an average value of 39% which is included in the invalid category.

After the researcher conducted a product validation test by material and design experts, from several assessment results that were still lacking and needed to be revised, the researchers improved the media according to the indicators that still needed to be improved. After the media has been revised according to the direction of the validation expert team, it is time for the media to be tested or implemented on the selected sample, namely teachers and students of class V II SMP YPIS Maju Binjai to determine the effectiveness of the teaching materials that have been developed.

Based on the results of the recapitulation of the teacher response questionnaire that has been carried out, it can be obtained that the teacher's assessment states that teaching materials are effective as much as 96.42%. To determine the achievement of learning objectives in terms of student responses, if the number of students who gave a positive response was greater than or equal to 80% of the many subjects studied for each trial, and the results obtained were 96.42%, the media developed was declared effective. Furthermore, at the evaluation stage will be tested the effectiveness of the teaching materials developed obtained from the results of student learning tests assessed through pre-test and post-test. Based on these data, the final achievement of this research is only to increase learning outcomes with the achievement of student learning completeness criteria if in the class there are 85% who have achieved KB 65%. The results of the acquisition of learning mastery are obtained by 90%, so the flipbook-based e-module teaching materials developed can be declared effective to improve student learning outcomes.

The results of this study are in accordance with the results of previous research by Darmayasa (2017) with the topic of *E-Module* Science oriented towards valid Character Education which resulted in the conclusion that the results of the expert assessment of the topic showed that the e-module was very good (100%), (b) the results of the expert assessment from the e-module shows that the product is rated very well (99.33%). Learning design results Expert opinion shows that the e-module is very good (99.09%), and individual test results show that the modulus of elasticity is very good (92.90%). The results of the small group test showed that the e-module was very good (91.13%). Field test results showed that the product was very good (91.01%).

Furthermore, at the evaluation stage, the effectiveness of the developed teaching materials will be tested obtained from the results of student learning tests assessed through pre-test and post-test. Based on the data in table 4.5, the final achievement of this research is only to increase learning outcomes with the achievement of student learning completeness criteria if in the class there are 85% who have achieved KB 65%. The results of the acquisition of learning mastery

are obtained by 90%, then the media developed can be declared effective to improve student learning outcomes.

The results obtained are in accordance with the results of previous studies, namely there is research from Maharcika, et al (2021) about developing an electronic module ( *e* - module) with the ADDIE model concluded that the validity test by experts obtained an overall average of 95.56% which was at intervals of 81%-100% so that the electronic module ( *e* - module) has very valid criteria. In addition, the average response of teachers and students to the electronic module ( *e* -module) of 87.19 % is in the 81%-100% interval with a very practical category.

The development of technology in our lives will also have an impact on the development and growth of language as a means of supporting the growth and development of culture, science and technology. In the era of globalization, the Indonesian people must play a role in the world of free competition, both in the fields of politics, economy, and communication. New concepts and terms in the growth and development of science and technology (IPTEK) indirectly enrich the repertoire of the Indonesian language. Thus, all cultural products will grow and develop in accordance with the growth and development of science and technology, including the Indonesian language, as well as acting as an infrastructure of thinking and a means of supporting the growth and development of science and technology.

Likewise, the knowledge that must be obtained by students must also be faced with the challenges of the current digital era. Children as the successors of a modernizing nation must be more sophisticated and require students to be able to adapt and follow the developments of this digital era 4.0. For example, to get information, students can get not only from the teacher's explanation at school or printed books, but they can get it from social media, and work on questions. Information or materials used in learning Indonesian can be easily obtained digitally. Various types of applications that can bridge teachers and students have emerged, such as *Edmodo*, *webex*, *google classroom*, *google form* and so on.

#### **4 Conclusion**

Based on the data from the research and discussion that have been described, it can be concluded that the Flip-based E-Module is declared valid by the validator so that it is declared feasible as a learning medium. Furthermore, based on the assessment of the children's tests obtained , the E-Modul was declared to have the effectiveness of learning media at YPIS Maju Binjai Private Junior High School .

#### **References**

- [1] Asmi, Ar, Surbakti, AN, Hudaidah. 2018. Development of Flip Book Maker-Based E-Module Character Education Materials for Learning Pancasila Course MPK Sriwijaya University *Journal of Social Science Education*. Srivijaya.
- [2] Darmayasa. 2017. "The Effectiveness Of The Implementation Of The Flipped Classroom Learning Strategy On Motivation, Discipline And Learning Results.Pdf," *Medwell Journals* , Vol. 12, No. 9, PP. 1611–1617, 2017, Doi: 10.3923
- [3] Dewi, and Aref. 2021. Implementation of Online Learning During the Covid-19 Pandemic. *Basicedu Journal*. Indonesia
- [4] Maharcika, Suarni, Gunamantha. 2021. Development of an Electronic Module ( *E* -Modul) Based on *Flipbook Maker* for the Sub-theme of Work Around Me Class Iv Sd/Mi. Pendasi: Indonesian Journal of Basic Education
- [5] Kinzie, Mario, Andrew. 2021. Online Learning Using E-Modules in Flipped Classroom Statistics to Improve Reasoning Ability and Entrepreneurial Intention. *Jinotep (Journal of Learning Technology Innovation) Studies and Research in Learning Technology*. Manado

- [6] Prastowo, Adi. 2015 Creative Guide to Making Innovative Teaching Materials. Yogyakarta: DIVA Press
- [7] Pinontoan, KF ., Walean. , M. , Lengkong, AV 2021. Online Learning Using E-Modules in Flipped Classroom Statistics to Improve Reasoning Ability and Entrepreneurial Intention. *Journal of Innovation and Learning Technology*. Indonesia