Development of electronic teaching materials based Flip Book Makers for language skills in elementary schools

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Abstract. This study aims to develop electronic teaching materials for Indonesian language skills based Flip Book Makers. The design used is research and development with the following procedures: (1) needs analysis, (2) developing electronic teaching materials based Flip Book Makers, and (3) validating the electronic teaching materials based Flip Book Makers that have been developed. The legibility test results of the teaching materials showed that the readability criteria could be understood with an average score of 86%. From the results of the research conducted, the development of performance-based teaching materials for Indonesian language skills was deemed feasible.

1. Introduction

Learning is a communication process created by exchanging information between teachers and students and lecturers and students. The communication process in learning can run well when the message conveyed (in the form of knowledge, experience, or ideas) can be captured, understood, and studied by the communicant, then the communicator must think about effective communication methods, because communication errors will cause problems. The term learning is often identified with teaching and is also seen in the Government Regulation of the Republic of Indonesia Number 32 of 2013 Article 19 Paragraph 1 concerning the learning process in educational units which is held interactively, inspiring, fun, challenging, motivating students to actively participate, and providing sufficient space for initiative, creativity, and independence according to the talents, interests, and physical and psychological development of students [1]. In connection with the above, Vygotsky in Liu and Matthews developed a social constructivism theory which has the notion that learning for children is carried out in interaction with the social and physical environment [2]. Discovery or discovery in learning is easier to obtain in a person’s socio-cultural context. The essence of constructivism according to Vygotsky is the interaction between internal and external aspects which emphasize the social environment in learning.

In learning requires teaching materials are good also. Teaching materials frequently used books or modules that have already been printed. The weakness of this printed teaching material is that it is less attractive and is rarely carried by students because it has a large weight. Basically, innovative teaching materials can be created by lecturers by utilizing attractive information technology and can be taken and read anytime and anywhere. Especially now that students are synonymous with gadgets (smart phones) that are always carried by students and will never be left behind. These opportunities should be used by lecturers to improve the quality of learning.
To develop teaching materials, references can be obtained from various sources, both in the form of personal experience and extracting information from sources, experts, and colleagues. Likewise, references can be obtained from books, scientific articles, mass media, the internet, and so on. However, even if the materials according to the curriculum are abundant, it does not mean that we do not need to develop our own teaching materials. For students, often too much material makes them confused, for that subject lecturers need to make teaching materials to serve as guidelines for students. Another consideration is the characteristics of the target. Teaching materials developed by others are often not suitable for student needs. For this reason, self-developed teaching materials can be adjusted to the target characteristics. Apart from the social, cultural and geographical environment, target characteristics, initial abilities that have been mastered, interests, family background, and so on. For this reason, self-developed teaching materials can be adjusted to the characteristics of students as targets in learning.

Thobroni states that learning strategies in constructivism theory are top-down processing (student learning starts with complex problems to solve) [3]. Then, finding the skills needed, collaborative learning or cooperative learning (strategies used for the learning process so that students face the problems more easily) and generative learning (strategies that emphasize the active integration of newly acquired material or knowledge with schemata).

Based on a preliminary study, it was found that there is a need for innovation in creating digital-based teaching materials that can be accessed by students without being limited by space and time. In order for students to easily access these teaching materials, the textbooks developed must utilize software or applications that are compatible with the Android or iOS platform. Researchers assume that about 95% have a cell phone based on Android or iOS. This teaching material is in the form of an e-book based on Flip Book Makers, which is an electronic book application equipped with images, sound and video. This feature is expected to increase student motivation and make it easier for them to read it in real time [4].

With the development and use of computer technology, including the Internet as a means of learning support anyone have interactive characteristics so as to provide support for the implementation process of interaction between faculty, students, and teaching materials [5]. Learning media based e-book is expected to be a supplement to the development of learning resources reach out to all, saving, and appropriate. E-books can be created using the Flip Book Makers application. Flip Makers is a software that allows you to create electronic book applications. Meanwhile, electronic books are books that can be read via a computer [6]. Not only limited to use on computers or laptops, e-books can be read on smart phones so that they will not reduce the practical lifestyle for students. The books studied by students are in hand.

The advantages of the Flip Book Makers application are (1) able to provide a flip effect, namely opening or turning the pages of a book so that it is like reading a real book; (2) making electronic books with this application is very easy; (3) the e-book produced is not only a book, but can be completed with pictures, sound and video; (4) the products we produce can be published in SWF or Flash, HTML form for publication on the website. Meanwhile, the weakness of Flip Book Makers [7] is that the information presented tends to get less attention from readers. The reader certainly has the aim of getting the desired information contained in the e-book and not being amazed by the multimedia effects contained in the e-book.

One of the efforts to overcome this problem is by developing teaching materials used in learning activities to take place. One of the teaching materials that is quite practical, effective and efficient (does not require a lot of money) to obtain is non-printed e-book teaching materials using Kvisoft Flipbook Makers software. The development of e-books has now become a trend and makes it very easy for writers to distribute their writings. That way, you can imagine if the preparation of e-books does not require a large budget as is the case with printed books.

The development of teaching materials is expected to facilitate the learning process and improve learning outcomes. In addition, it is hoped that it can help in shaping the character or attitude of students, especially in the Basic Indonesian Language Skills course. Language skills which include listening,
speaking, reading, and writing skills, although they can be differentiated and defined, language skills cannot be eliminated.

2. Methods
This study uses the Borg and Gall version of the Research and Development design as a process used to develop and validate educational products [8,9]. This research was conducted in the Primary School Teacher Education Study Program of STKIP PGRI Bandar Lampung involving 92 students and 2 lecturers with Indonesian language expertise as a research sample in order to analyze the need for electronic teaching materials based on Flip Book Makers in the Basic Indonesian Language Skills subject. In addition, to analyze the feasibility of teaching materials, it involves 1 material expert lecturer and 1 learning media expert.

Broadly speaking, this study describes the results obtained from three stages of development research including (a) an analysis of the need for teaching materials for Electronic Language Skills based on Flip Book Makers for students; (b) development of an e-book for Language Skills based on Flip Book makers; and (c) a feasibility test for a Flip Book Makers based Language Skills textbook.

In the next stage, after an expert assessment is carried out, the student product trial stage is continued. Further action is that at this stage there will be three trial stages. The first is testing the prototype of the material individually (one to one trying out). Second, a small group tryout consisting of 5 people and a field trial (a whole class of students) consisting of 80 students.

3. Results and discussion
In this part of the research findings presented include three things: 1) analysis of the needs of teaching materials Language Skills in Primary Schools; 2) developing electronic textbooks based on Flip Book Makers in the Language Skills course in Elementary Schools; and the feasibility of electronic textbooks based on Flip Book Makers in the Language Skills course in Elementary Schools.

3.1. Need analysis of teaching materials for language skills in elementary schools
Based on the results of preliminary observations and interviews on needs analysis, it is known that learning using textbooks is something that is normal and has absolutely been done in almost all courses by all lecturers. However, textbook content is less innovative. Meanwhile, the learning objectives expected by the lecturers vary, from mastery of material, skills, to changes in student attitudes and behavior. However, without innovation in textbook development, the learning objectives will be difficult to achieve. In fact, it is pointed out that student interest in learning has decreased.

Some student respondents stated that the lecturer in explaining the lecture material referred to the expository approach or lectures and more had full discussion in learning. Even though the learning method seems to be still lecturer-centered, the lecturer also invites students to participate in learning, namely by answering questions raised by the lecturer. Students can also ask the lecturer about the material that has been discussed previously. This effort is made so that lectures can take place more democratically with feedback from lecturers to students.

Obstacles encountered in the field are that students in the lecture process tend to focus more on gadgets or cellphones. Then, in relation to the availability of teaching materials from lecturers, even though students have printed textbooks, students are reluctant to study them. Not to mention if students forget to bring textbooks during lectures. In fact, the materials arranged along with assignments and exercises are in lecture textbooks. Therefore, the development of electronic teaching materials based on Flip Book Makers is absolutely necessary in order to minimize problems in learning.

Lecturers are expected to be able to develop innovative textbooks so that they are able to achieve the desired lecture indicators, such as improving learning outcomes. In addition, students' learning motivation tends to be low when given printed textbooks. One effort that can be done to make this happen is to develop an e-book with the Flip Book Makers application. It is hoped that the use of e-books can improve students' abilities, attitudes, interests, and learning motivation. This is because
students in the era of high technology tend to like learning using electronic media (Information Technology and Computers).

Based on the findings in preliminary research conducted as data collection for the preparation of prototypes as accurate data, data triangulation is the right way to use it. Triangulation of data allows researchers to reduce the possibility of misinterpretation in collecting data. According to Denzin and Lincon, the results of the observations are used as a measure to review the truth and reduce environmental conditions [10].

3.2. Development of electronic textbook based Flip Book Makers on language skills training courses in elementary schools

The development phase of the E-book on Indonesian Language Skills in Elementary Schools is carried out based on the development steps of the Borg and Gall Model by adjusting the steps to the needs in the field. The stages include analysing the needs of teaching materials, designing teaching materials that will be designed through the preparation of teaching material prototypes, developing initial drafts of modules through the validation process by experts. The research process described in this article does not include implementation, evaluation of products developed, and continuous improvement. The module development design framework can be seen in Figure 1 and table 1.

![Figure 1. Basic language skills for elementary school students.](image)

**Table 1. Analysis of the need for language skills textbooks in elementary schools.**

| Num. | Topic / Material                                      | Explanation |
|------|-------------------------------------------------------|-------------|
| 1.   | The Nature of Language Skills                         | ✓           |
| 2.   | Listening Skills                                      | ✓           |
| 3.   | Speaking Skills                                       | ✓           |
| 4.   | Reading Skills                                        | ✓           |
| 5.   | Writing skills                                        | ✓           |
| 6.   | Learning Language Skills in Elementary Schools        | ✓           |
| 7.   | Assessment of Language Skills in Elementary Schools   | ✓           |

After the developed product is structured, the next step is to implement the product through a series of practice and product trials. In the initial stage, validation of the module first, at this stage there are two aspects to be evaluated, namely validation of material and language. This stage is in accordance with that done by Asmi and Surbakti in his research that after compiling a textbook draft, the next step is
expert validation [7]. Validation is carried out on the initial draft of the module that has been developed first, which aims to see the feasibility of the module to be developed which will reduce errors during the trial phase. Validators who are appointed to carry out validation are competent experts in their fields.

3.3. Feasibility of electronic textbooks of language skills based Flip Book Maker in elementary schools

At the initial stage is the validation of the teaching materials developed. There are two aspects to be evaluated, namely material and language validation. Validation is carried out on the initial draft of the textbook that has been developed in advance to see the feasibility of the textbook to reduce errors at the trial stage. Validators who are appointed to carry out validation are competent experts in their fields. The draft electronic textbook that has been designed is then validated by the expert. The scores and suggestions given by the experts are used as a reference for improving the module for improvement. The results of the material and language validation are presented in Figure 2.

Based on the results of expert validation, a mean result of 4.3 with a percentage of 86% can be categorized as very good on the Likert scale. These results are based on the aspect of appraisal of suitability and correctness as well as the weight of the material contained in the module which is measured by experts making judgments based on 20 statements relating to the learning model. Meanwhile, based on the results of expert validation which aims to test the feasibility of the module on the language part that will be applied to the learning process, the mean result is 4.5 with a percentage of 90% which can be categorized as very good on the Likert scale. These results are based on aspects of assessment of language suitability, legibility, and the weight of the material contained in the textbook measured by 25 statements.

The revised product of an electronic textbook based on the Flip Book Makers application; the development aims to facilitate the learning process in the Language Skills course in Elementary Schools. The use of e-learning instructional media is also made to facilitate learning and to assist students in thinking critically about the material to be studied [11]. In addition, the use of the Flip Book maker can also help students improve student learning outcomes [12]. Below is the content of the book material after the revision from the expert validator.

- Language Skills; Overview
- Listening Skills
- Learning Listening Skills
- Speaking Skills
- Learning Speaking Skills
- Reading Skills
- Learning Reading Skills
- Writing Skills
- Learning Writing Skills
- Learning Language Skills in the Context of the 2013 Primary School Curriculum
- Learning Literature Skills in Elementary Schools

The textbooks have been consulted and revised by experts and / or practitioners. Advice based on the knowledge and or experience of experts and practitioners. Textbooks developed are validated by experts and declared very valid according to Hobri's criteria so that the developed textbooks can be implemented [13]. This is also in accordance with the research of Prasetyo and Senam [14] and Yuliarti [15] which categorized the mean score of more than 4.20 (84%) which is a very good category and can be applied in learning. The validity of the textbooks of the Language Skills course for PGSD STKIP PGRI Bandar Lampung students based on the results of expert / practitioner validation is valid and worthy of being tested on a large scale.

4. Conclusion
Based on the results of research and discussion, it can be concluded that there is a need for innovative media or teaching materials in the learning process, especially in the Language Skills subject in Elementary Schools. The development of Flip Book Makers-based Electronic Textbooks can be used as a solution for innovative teaching material needs for students. In addition, based on the results of expert validation, it was found that based on material experts, they got a score of 4.3 or 86%. Meanwhile, from the results of the linguist validation, the score was 4.5 or 90%. Thus, Flip Book Makers Based Electronic Textbooks on Language Skills Subjects are declared worthy of being tested on a limited and broad scale.

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