

# The Effectiveness of Developing E-Book Learning Media in Class Management Course

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**Abstract:** The purpose of this study is to know the increase of the college students' cognitive learning outcomes who use e-book learning media developed in the Class Management course in the Primary School Teacher Education department, Faculty of Science Education, State University of Medan. This research type is Research and Development with the ADDIE model, namely analysis, design, development, implementation and evaluation. The instruments used for data collection are tests. The results of the increase of the college students' cognitive learning outcomes analysis show that the initial average score is 85.3 while the final average score is 89.8. When viewed from the gain score, obtained a gain score of 0.307 which is classified as the medium category.

**Keywords:** E-Book Learning Media, Class Management Course, College Students' Cognitive Learning Outcomes

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## 1. INTRODUCTION

Indonesian society is currently faced with the progress and development of education which is a factor in the success of a nation. Education is one of the important components in human life. Education is necessary to gain balance and perfection in the development of individuals as well as society. According to Ki Hajar Dewantara in Nurkholis defines education as an effort to advance children's ethics, mind and physique, in order to advance the perfection of life, namely living and reviving children in harmony with nature and society [1].

Different opinions expressed by Peraturan Pemerintah No. 60 Tahun 1999, in Pasal 2 for the purposes of national education, namely: (1) prepare students to become members of society who have academic and/ or professional abilities who can apply, develop and/ or enrich the characteristics of science, technology and/ or art, (2) develop and disseminate science, technology and/ or art and strive for their use to improve the standard of life of the community and enrich national culture [2]. Therefore, education has a very important role to ensure the development and continuity of the nation's life. Education is an effort process in forming intelligent and skilled humans, realizing quality and creative human resources to be able to compete in the face of scientific advances.

Based on the result of observation carried out in the Class Management course which has been taught in the department of Primary School Teacher Education State University of Medan, it was found that the Class Management course was dominated by power point learning media. According to Mardi et al. in Ardiansah & Miftakhi said that power point is one of

the application programs from Microsoft that can be used to make presentations, both for conducting a meeting and planning other activities including being used as a learning medium in schools. Thus, when learning is dominated by power point learning media that is less interesting, it causes students to feel bored and less enthusiastic when learning takes place so that the learning process does not run effectively and also the learning objectives are not achieved optimally. The factors that cause power point learning media are less attractive are as follows: (1) too much writing on each slide, (2) lack of visual content such as images, videos, and diagrams, and (3) using strange fonts or too small so that it is difficult to read [3].

Education consists of several educational components that have a contribution to the quality of education in the future producing quality graduates. According to Noeng Muhajir in Supendi revealed that the components of education consist of: (1) objectives, (2) subject educators, (3) educators, (4) environment [4]. Then, according to the Undang-Undang Republik Indonesia No. 14 Tahun 2005 Pasal 1 concerning Teachers and Lecturers, that lecturers are professional educators and scientists with the main task of transforming, developing, and disseminating science, technology, and art through education, research, and community service [5].

To realize an interesting and effective learning process, lecturers are an important part of the implementation of education that must have high creativity. The era of the Industrial Revolution 4.0 is marked by the rapid development of science and technology. Technology has a very important role to play. College students who learn through the digital native process tend to be more interested in learning using

learning media or technology-based teaching materials that can be accessed through digital devices such as smartphones. This is what makes lecturers must be able to use technology in developing learning media or innovative teaching materials.

One of the optimization efforts that can be done by lecturers is by procuring innovative, interesting, and informative e-book learning media. According to Istikomah, et al., e-book learning media is an electronic learning media created to make it easier for students to receive learning resources. A student is able to learn practically with his/her e-book, the nature of e-books can be accessed on mobile phones and other electronic devices. E-books are arranged with visual and audio media so that they do not cause saturation in students in learning [6].

Based on the description above and to overcome problems that occur in the field. Researchers are interested in conducting a study entitled "THE EFFECTIVENESS OF DEVELOPING E-BOOK LEARNING MEDIA IN CLASS MANAGEMENT COURSE". So, the formulation of the problem in this study is how is the increase of the college students' cognitive learning outcomes who use e-book learning media developed in the Class Management course in the Primary School Teacher Education department? Meanwhile, the purpose of the study is to find out the increase of the college students' cognitive learning outcomes who use e-book learning media developed in the Class Management course in the Primary School Teacher Education department. Thus, this research is expected to have a contribution to the development of science and can enrich science, especially those related to learning media with e-book learning media that are able to trigger a fun and effective learning process.

## 2. METHOD

This research is a type of research and development. According to Sugiono in Wanto, et al., the definition of Research and Development (R&D) is often interpreted as a process or steps to develop a new product or improve an existing product [7]. Furthermore, according to Effendi & Hendriyani in Wanto, et al., research on model development with interactive media can also be done online. One type of research that can be a link or breaker of the gap between basic research and applied research is research and development. Research and Development is a type of research that aims to produce a certain product and test the quality of the product [8].

This research and development uses descriptive analysis techniques. Descriptive analysis techniques are carried out to analyze data by describing the data that has been collected from the results of development. This research will be carried out in the department of Primary School Teacher Education State University of Medan for 11 months, starting from January to November 2022. The product that will be produced in this study is an e-book learning media in the Class Management course in the department of Primary School Teacher Education State University of Medan. While there are several elements of research subject, such as:

- a. Material expert  
This research requires a material expert as a validator or giver of advice or comments regarding aspects of content and learning.
- b. Media expert  
Media expert has the right to validate *e-books* developed in terms of appearance, media elements and grammar.
- c. Test subject  
The selection of the subject will be carried out

randomly with the hope that it can become a source of data from representatives of the department of Primary School Teacher Education State University of Medan college students in semester V of the 2022/2023 academic year.

The data collection techniques in this study are observation and test. Observation will be carried out to find out the character of the college students and the technology used by the college students so that the product to be developed is in accordance with the result of the observation. Tests are used to collect data about the increase of the college students' cognitive learning outcomes before and after participating in learning using e-book learning media. The development model used in this study is the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. This paper only explains the effectiveness of the product being developed.

## 3. RESULT AND DISCUSSION

### 3.1 Result

This stage is a field trial. The trial was carried out in learning using e-book learning media for the Primary School Teacher Education department college students in class E 2022. The data from the results of this field trial were used to determine the increase in college student cognitive learning outcomes. The results of the pre-test and post-test as well as the increase in college students' cognitive learning outcomes are presented in the following table.

Table 1. Pre-Test Result

Subject	Question Item															Correct Answer	Score
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	0	1	1	1	1	1	1	1	0	1	1	1	0	1	1	12	80
2	1	1	1	1	1	1	1	1	1	1	0	1	1	0	13	86.7	
3	1	1	1	1	1	1	1	1	0	1	1	1	1	1	14	93.3	
4	1	1	1	1	0	1	1	0	1	1	1	1	1	1	13	86.7	
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100	
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100	
7	1	0	1	1	1	0	1	1	1	1	1	1	1	1	13	86.7	
8	1	1	1	1	1	1	1	1	1	1	1	0	1	1	14	93.3	
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100	
10															0	0	
11	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93.3	
12	0	1	1	1	1	1	1	1	0	1	1	1	1	1	13	86.7	
13	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93.3	
14	1	1	1	1	1	1	1	1	1	1	0	1	1	0	13	86.7	
15	1	1	1	1	1	0	1	1	0	1	1	1	1	1	13	86.7	
16	0	1	1	1	1	1	1	1	1	0	1	1	0	1	12	80	
17	1	1	1	1	1	1	1	1	0	1	1	1	1	1	14	93.3	
18	1	1	1	1	1	1	1	1	0	1	1	1	1	1	14	93.3	
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100	
20	1	1	1	1	1	1	1	1	0	1	1	1	1	1	14	93.3	
21	0	1	1	1	1	1	1	1	1	1	0	0	1	1	12	80	
22	1	0	1	1	1	1	1	1	1	1	1	1	1	0	13	86.7	
23	1	0	0	0	1	1	1	0	1	0	0	1	0	0	6	40	
24	1	1	1	1	1	0	0	1	1	1	1	1	1	1	13	86.7	
25	0	1	1	1	1	1	1	1	1	1	0	1	1	0	12	80	
26	1	1	1	1	1	1	1	1	1	1	1	0	1	0	13	86.7	
27	1	1	1	1	1	0	0	1	0	1	1	1	1	1	12	80	
28	0	1	1	1	0	1	1	1	1	1	0	1	1	0	11	73.3	
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100	
30	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93.3	
31	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93.3	
32	1	1	1	1	1	1	1	1	0	1	1	1	1	1	14	93.3	
33	1	1	1	1	1	1	1	1	0	1	1	1	1	0	13	86.7	
34	0	1	1	1	1	1	1	1	0	1	1	1	1	1	13	86.7	

Based on the table, it can be seen that in the pre-test used 14 questions and 34 college students as subjects who answered the questions.

Table 2. Post-Test Result For Questions A

Subject	Question Item															Correct Answer	Score
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	14	93,3
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
5	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	14	93,3
8	1	1	0	1	1	1	1	1	0	1	0	1	0	1	1	11	73,3
9	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	14	93,3
10																0	0
11	1	1	0	1	1	1	0	1	1	1	1	1	1	0	1	12	80,0
13	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93,3
15	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	14	93,3
16	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93,3
20	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	14	93,3
21	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	13	86,7
23	1	0	1	1	1	1	1	0	1	1	1	0	1	1	1	12	80,0
24	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	13	86,7
27	1	1	1	1	1	1	0	1	0	1	1	1	0	1	1	12	80,0
32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
33	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	13	86,7

Based on the table, it can be seen that in the post-test for question A used 14 questions and 17 college students as subjects who answered the questions.

Table 3. Post-Test Result For Questions B

Subject	Question Item															Correct Answer	Score
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	13	86,7
4	1	1	0	1	1	1	0	1	1	1	1	1	1	0	1	12	80,0
6	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93,3
7	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	13	86,7
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
14	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	13	86,7
17	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	14	93,3
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0
19	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93,3
22	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	12	80,0
25	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	13	86,7
26	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	13	86,7
1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	13	86,7
4	1	1	0	1	1	1	0	1	1	1	1	1	1	0	1	12	80,0
6	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93,3
7	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	13	86,7
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	100,0

Based on the table, it can be seen that in the post-test for question B used 14 questions and 17 college students as subjects who answered the questions.

Table 4. Gain Analysis Of College Students' Cognitive Learning

Subyek	Total Pre-test Skor	Total Post-test Skor	Sid Gain
1	80	86,7	0,3350
2	86,7	93,3	0,4962
3	93,3	100	1,0000
4	86,7	80	-0,5038
5	100	93,3	0,0000
6	100	93,3	0,0000
7	86,7	86,7	0,0000
8	93,3	73,3	-2,9851
9	100	93,3	0,0000
10			0,0000
11	93,3	80	-1,9851
12	86,7	100	1,0000
13	93,3	93,3	0,0000
14	86,7	86,7	0,0000
15	86,7	93,3	0,4962
16	80	93,3	0,6650
17	93,3	93,3	0,0000
18	93,3	100	1,0000
19	100	93,3	0,0000
20	93,3	93,3	0,0000
21	80	86,7	0,3350
22	86,7	80	-0,5038
23	40	80	0,6667
24	86,7	86,7	0,0000
25	80	86,7	0,3350
26	86,7	86,7	0,0000
27	80	80	0,0000
28	73,3	80	0,2509
29	100	93,3	-1,0000
30	93,3	93,3	0,0000
31	93,3	93,3	0,0000
32	93,3	100	1,0000
33	86,7	86,7	0,0000
34	86,7	100	1,0000
Total Score	2900	3053,3	0,307
Score Average	85,3	89,8	0,306
Lowest Score	0	0	
Highest Score	100	100	
Gain Category			Medium

Based on the table, it can be seen that the initial average score is 85.3 while the final average score is 89.8. When viewed from the gain score, obtained a gain score of 0.307 which is classified as the medium category. This shows that the use of e-book learning media based Kvisoft Flipbook Maker application can improve college students cognitive learning outcomes.

### 3.2 Discussion

This research and development uses in the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The results of the pre-test and post-test as well as the increase in college students' cognitive learning outcomes show that the initial average score is 85.3 while the final average score is 89.8. When viewed from the gain score, a gain is 0.307 which is classified as the medium category. Based on the results, the research that has been done proves that the development of e-book learning media based Kvisoft Flipbook Maker application can improve college students cognitive learning outcomes.

### 4. CONCLUSION

Regarding product effectiveness, the initial average score is 85.3 while the final average score is 89.8. When viewed from the gain score, a gain is obtained with an average = 0.307 which is classified as the medium category.

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