



# E-book Based on Project Based Learning Assisted by Kvisoft Flipbook Maker Blended Learning in Elementary Schools

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## ARTICLE INFO

### Article history:

Received June 29, 2023

Accepted December 10, 2023

Available online February 25, 2024

### Kata Kunci:

Bahan Ajar, Project Based Learning, Kvisoft Flipbook Maker, Blended Learning

### Keywords:

Teaching Materials, Project-Based Learning, Kvisoft Flipbook Maker, Blended Learning



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## ABSTRAK

*Blended learning adalah salah satu inovasi yang dapat meningkatkan akses belajar bagi sebagian besar kelompok siswa dan keyakinan mereka tentang seberapa efektif lingkungan belajar. Blended Learning dikombinasikan dengan e-book akan membuat pembelajaran lebih menarik bagi siswa. Penelitian ini bertujuan untuk menghasilkan e-book yang valid, praktis dan efektif menggunakan metode Research and Development (R&D) dan model yang digunakan ialah ADDIE. Pada uji validasi dilakukan dalam tiga tahap, pertama uji validasi oleh dosen ahli dan praktisi didapatkan nilai rata-rata sebesar 92.75 dengan kategori sangat valid. Kedua, tahap validasi peserta FGD didapatkan nilai rata-rata sebesar 90 dengan kategori sangat valid. Ketiga, tahap validasi uji kelompok kecil didapatkan nilai rata-rata sebesar 89 dengan kategori sangat valid. Pada uji praktikalitas yang dilakukan dalam dua tahap. Pertama, uji praktikalitas angket respon guru diperoleh nilai rata-rata sebesar 91 dengan kategori sangat praktis. Kedua, uji praktikalitas angket respon siswa diperoleh nilai rata-rata 81 dengan kategori sangat praktis. Pada uji efektivitas yang dilakukan dalam dua tahap. Pertama, uji efektivitas dari aktivitas siswa diperoleh nilai rata-rata sebesar 84 dengan kategori sangat aktif. Kedua uji efektivitas dari hasil belajar siswa diperoleh nilai rata-rata sebesar 90 dengan kategori sangat efektif. Dari temuan peneliti tersebut dapat disimpulkan bahwasanya e-book berbasis Project Based Learning berbantuan Kvisoft Flipbook Maker Blended Learning di Sekolah Dasar sangat valid, sangat praktis dan sangat efektif untuk digunakan dalam pembelajaran di Sekolah Dasar.*

## ABSTRACT

Blended learning is one innovation that can improve access to learning for large groups of students and their beliefs about how effective the learning environment is. Blended Learning combined with the book will make learning more interesting for students. This research aims to produce valid, practical, and effective using the R&D method and ADDIE models. The validation test was carried out in three stages, the first validation test by expert lecturers and practitioners obtained an average score of 92.75 in the very valid category. Second, in the validation stage, FGD participants obtained an average score of 90 with a very valid category. Third, the small group test validation stage obtained an average value of 89 with a very valid category. The practicality test was carried out in two stages. First, the practicality test of the teacher response questionnaire obtained an average score of 91 in the very practical category. Second, the practicality test of the student response questionnaire obtained an average score of 81 in the very practical category. The effectiveness test was carried out in two stages. First, testing the effectiveness of student activities obtained an average score of 84 in the very active category. The two effectiveness tests of student learning outcomes obtained an average score of 90 in the very effective category. From the researchers' findings, it can be concluded that e-book-based Project Based Learning help Kvisoft Flipbook Maker Blended Learning in elementary schools is very valid, practical, and effective for use in learning in elementary schools.

## 1. INTRODUCTION

The world of education is experiencing a paradigm shift as a result of technological advances. This happens all over the world, including in Indonesia, which ultimately has an impact on learning. Education, as an investment in the future, will not mean anything if it is not accompanied by continuous learning improvement, development, and innovation (Desyandri et al., 2019; Siswanto & Hidayati, 2020). According

to previous study the Indonesian government is preparing a distance learning program using a learning platform (Zen, 2019). Learning online requires device support such as smartphones, tablets, and laptops, which enable access to learning anytime and anywhere (Cole & Feng, 2015; Firman & Rahayu, 2020). According to previous study distance learning has several types, one of which is online combination (*blended learning*) (Muzakkir et al., 2018). According to learning to use blended learning can improve access to learning for most groups of students and their beliefs about how effective the learning environment is (Dziuban et al., 2018). The meaning is learning blended learning can improve access to learning for most groups of students and their beliefs about how effective the learning environment is. Furthermore, according to other study recommend blended learning as a mix of physical and online activities and experiences (Elvianasti et al., 2022). This benefits students, teachers, and administration with increased accessibility and convenience, better learning, and flexible costs.

Basic education in Indonesia is under the control of the government, which delegates most of the responsibility for its implementation to regions and schools. Therefore, learning in elementary schools greatly influences the teacher's presentation in class (Alwasilah, 2013; Rusdinal & Afriansyah, 2018). The Independent Learning Curriculum is a new policy program from the Indonesian Ministry of Education and Culture aimed at elementary school and secondary education levels such as junior high school and high school equivalent. According to previous study freedom to learn is the freedom to think and freedom to innovate (Ainia, 2020). According to other study freedom to learn has the essence that students will have the freedom to think so that in the future they can produce superior students who are critical, creative, collaborative, innovative, and participative (Siregar et al., 2020). In the concept of Freedom of Learning, teachers and students are subjects in the learning system. This means that the teacher is not used as a source of truth by students, but rather teachers and students collaborate to search for the truth. This means that the teacher's position in the classroom is not to instill the truth or standardize the truth according to the teacher, but to find the truth, reason, and students' critical thinking skills in seeing phenomena around them (Poerwanti & Tribudhiarto, 2020; Yamin & Syahrir., 2020).

Integrating technology into learning is the right step in Merdeka Belajar's learning. One technology-based learning method is blended learning, namely a combination of direct learning in class with lectures on using technology through electronic devices such as cellphones, laptops, and the like. According to previous study e-book is a digital version of a book that generally consists of a collection of paper containing text or images which aims to be an alternative book format that can be downloaded and read easily anytime and anywhere (Asrowi et al., 2019). E-book is one of the solutions provided by the government through the Indonesian Ministry of Education and Culture to overcome the high prices of books currently available and reduce deforestation as raw material for paper (Afnita et al., 2021; Harjono et al., 2020). Based on preliminary studies, namely observations and interviews conducted at SDN 196/III Sekungkung and SDN 194/III Belui Tinggi, it is known that in these two schools, the teachers only use printed books that have been provided by the school in the learning process, so that students get bored quickly. and boredom in studying which results in student learning outcomes not being in accordance with the specified KKM. Researchers also interviewed two class V teachers at the school and it was discovered that the school had facilities such as an adequate internet network, a projector, and a school laptop that teachers could use in classroom learning.

Based on the facts above, it is possible that the two schools can maximize facilities and utilize technology in the learning process. One of them is the use of teaching materials in the form of e-books. The main advantages namely that it can be saved in various types of electronic formats and can be printed (Anggreni & Yohandri, 2022; Filivani & Agung, 2021). The advantage for users or readers is that they can download from the internet quickly rather than having to visit a bookstore or library. Besides that, e-books are also easy to find when searching (Ibrahim & Alqahtani, 2018; Raihan & Ahmadi, 2018). The disadvantages of e-books are that the current e-book technology is inadequate, including the relatively expensive cost of reading e-books, and the large number of e-book readers. Apart from that, e-books are also less user-friendly due to their appearance, and are not friendly for people with disabilities, especially for the blind who rely heavily on the Brailleprint version. Copyright and piracy are also problems in ebooks (Kharisna & Amini, 2023a).

Next, learning uses models Project Based Learning (PjBL) will provide direct experience and knowledge to students. Model Project Learning (PjBL) is that students can design a problem and find their own solution to the problem (Dharma & Siregar, 2015; Lampropoulos et al., 2019). The PjBL learning model has advantages, namely helping students to design a process in determining an outcome, training students to be responsible for the project they are working on, and that finally the students produce real products which are then presented in class (Azzahra et al., 2023; Zandkarimi., 2013). One application that can provide interesting teaching materials for students is Kvisoft Flipbook Maker. Kvisoft Flipbook Maker is an application created to convert PDF files into flipbooks or digital publications. Additionally, PDF files can be

converted into flipbooks, digital magazines, company catalogs, and other uses Kvisoft Flipbook Maker (Kharisna & Amini, 2023b; Purwanto, 2021).

Research conducted by previous study found that e-book based PjBL help Kvisoft Flipbook which is valid, practical, and effective can improve student learning outcomes (Setiyani et al., 2022). Furthermore, research conducted by other study found that e-book can help students learn because it is efficient and flexible (Ormanci & Çepni, 2020). From the findings above as well as the results of previous research, researchers are interested in carrying out development E-book Based Project Based Learning Kvisoft Flipbook Maker Blended Learning Elementary School.

## 2. METHOD

The research methodology used in this research is research and Development(R&D) with the model used as ADDIE. R&D is a research approach used to make certain items and evaluate the performance of the product after it is made (Branch, 2009). The ADDIE model goes through 5 stages: Analysis, Design, Development, Implementation, and Evaluation. This ADDIE development model was chosen because the implementation flow will be more flexible. The findings made at each stage can be taken into consideration for improvements at other stages. Stage analysis was carried out to obtain initial data regarding the needs of students, teachers, and schools by conducting preliminary studies such as interviews and direct observations of both students and teachers. The analysis carried out is in the form of teacher needs analysis, curriculum analysis, and student characteristics analysis. Stage design, from the results of the analysis carried out, the researcher will then design teaching materials or e-books according to the results of the analysis. Teaching materials are designed to make it easier for teachers and students in the teaching and learning process so that learning material can be conveyed well. Stage Development, the e-book design that has been created is then validated. Validation is carried out in three steps. First, validation is carried out by expert lecturers and practitioners. Second, validation is carried out by teachers who have received training in using the application Flipbook Maker When Focus Group Discussion (FGD). Third, validation is carried out by students after learning using e-books developed in small group trials.

Implementation Stage, an e-book that has been validated and revised will then be carried out implementation in learning. This field trial was carried out to determine the level of practicality and effectiveness of Based Learning helps Kvisoft Flipbook Maker Blended Learning. The trial was carried out at SDN 196/III Sekungkung, SDN 82/III Kubang Gedang, and SDN 194/III Belui Tinggi. Evaluation stage, this evaluation can be seen from the assessment of the four previous ADDIE processes, namely Analysis, Design, Development, and Implementation. Assessment at the evaluation stage is carried out by asking questions to teachers and students after using teaching materials or e-books.

## 3. RESULT AND DISCUSSION

### Result

In this section, the results of development research will be explained-book based on Project Based on Learning help Kvisoft Flipbook Maker Blended Learning in Class V Elementary School which uses the ADDIE development model.

#### Needs Analysis

The aim of needs analysis is descriptive preliminary research by collecting information related to teacher and student needs from observations and interviews. From the preliminary research carried out, information was obtained regarding the reduced use of technology in the learning process at the school. Furthermore, teachers only use printed books that have been provided by the school in the learning process, thus making students quickly get bored and bored in learning which results in student learning outcomes not being in accordance with the predetermined KKM. From the results of interviews with the two class V teachers at the school, it was discovered that the school had facilities such as an adequate internet network, projectors, and school laptops that teachers could use in classroom learning. However, due to a lack of knowledge in using available technology, teachers choose not to maximize the available facilities.

Based on the results of the needs analysis, it was concluded that teachers had not utilized technology optimally in their learning even though the necessary facilities were available. At the curriculum analysis stage are several steps taken as follows: (1) Determining Learning Outcomes, (2) Analyzing Learning Objectives and developing them, (3) Creating teaching materials using the PjBL model based on the kvisoft flipbook maker application, (4) Calculating the allocated time necessary in applying the product to the independent learning curriculum. (5) Compile a unique class V e-book for the Indonesian CHAPTER 1 I subject on the topic of acrostics and adjectives. This curriculum analysis mapping is the basis for

developing teaching materials in the form of e-books based on Project Based Learning with the help of Kvisoft Flipbook Maker Blended Learning.

The results of the analysis of student characteristics carried out showed that 75% of students still had difficulty understanding the learning material, as many as 55% felt there was not enough explanation from the teacher regarding the learning material, as many as 57% had difficulty understanding the concept of learning material, as many as 75% of students searched on the internet to overcome their lack of understanding, as many as 77% hope that there will be electronic books with an attractive appearance accompanied by pictures, videos and images. As many as 80% will repeat learning outside of school, as many as 79% will learn from the internet to repeat learning outside of school, as many as 85% of students can use laptops/computers, as many as 70% have laptops/computers, as many as 100% of students have smartphones/tablets, as many as 100% of students say that teachers rarely use media in learning, as many as 86% of students are happy and understand if they learn using electronic books and As many as 75% of students like electronic books that have lots of colors.

### Design Stage

The next stage is to design the e-book according to the results of the analysis that has been carried out. The e-book design is created in an application (software), namely Kvisoft Flipbook Maker, which can be stored in storage such as a laptop or computer, Compact Disk (CD), and Flashdisk. This is to make it easier for teachers and students to use these teaching materials at school. To produce an e-book, then create a flowchart and storyboard. Flowcharts and storyboards can help researchers develop e-books. Making flowcharts and storyboards will help in developing a learning media product, so that the development process will be focused and in accordance with the development objectives.

### Development Stage

At this development stage, it is intended to produce teaching materials or e-book which is valid and suitable for use. E-book based Project Based Learning help Kvisoft Flipbook Maker Blended learning in class V Elementary School is validated by experts in their respective fields. The first validation was carried out by expert lecturers and practitioners totaling five validators who carried out the validation e-book that the researchers developed, where four validators were from universities and one person was from elementary school. Next Focus Group Discussion (FGD) to add input to improving teaching materials from teachers regarding operational methods of teaching materials that have been designed, at the end of the meeting a validation questionnaire was distributed as well as suggestions and comments on improving teaching materials that had been developed.

Validation activities carried out by expert lecturers and practitioners include several aspects of statements, namely, content aspects, language aspects, presentation aspects, and graphic aspects. The validation results from the content aspect obtained an average value of 89 with a very valid category. The validation results from the language aspect obtained an average score of 96 with a very valid category. The validation results from the presentation aspect obtained an average value of 90 in the very valid category and the graphic aspect obtained an average value of 96 in the very valid category. From the validation test results for these four aspects, an average value of 92.75 was obtained in the very valid category.

The validation results in the content aspect obtained an average score of 88 which was in the very valid category, in the grammatical aspect an average score of 91 was obtained in the very valid category, in the presentation aspect the average score was 94 in the very valid category and in the aspect Graphics obtained an average value of 87 with a very valid category. Overall validation test results against e-book an average score of 90 was obtained with a very valid category. From the results of the validation carried out during the FGD, it can be concluded that this is true e-book-based Project Based Learning help Kvisoft Flipbook Maker Blended Learning in elementary schools is very valid and feasible to be implemented in learning.

### Implementation Stage

After validating and the e-book is declared valid, then the next thing to do is implementation. At this stage, the researcher conducted a trial in large groups. The researchers conducted large group trials at SDN 196/III Sekungkung, SDN 194/III Belui Tinggi, and SDN 159/III Semumu with a total of 49 students and 2 teachers. This product trial was carried out in each school which was still monitored and observed by researchers.

Practical teaching materials are teaching materials that provide convenience for users, both teachers and students. Test the practicality of e-books using an instrument in the form of a questionnaire which will be filled out by teachers and students later. The practicality test questionnaire sheet consists of 11 questions which are divided into five aspects, namely, the practicality aspect of use with 4 questions, the

time efficiency aspect with 1 question, the suitability aspect of illustrations with 1 question, the language aspect with 2 questions and the evaluation aspect with 3 questions.

The effectiveness test uses learning outcomes as an indicator to see whether the e-book that was developed is e-book effective or not to improve learning outcomes. Assessment of learning outcomes is carried out using 30 questions consisting of 25 multiple-choice questions and 5 answers. For the results themselves, at the time test, the average score obtained in the two schools was 69, learning is carried out using an e-book that the researcher developed and questions given obtained an average value of 90. From the explanation above, it can be concluded that the student's grades at the two research schools experienced a significant increase in their learning outcomes after using e-book-based Project Based Learning help Kvisoft Flipbook Maker Blended Learning. So it can be concluded that e-book that the researchers developed can be effectively used to improve student learning outcomes.

#### Evaluation Stage

This evaluation stage is based on comments, suggestions, input, and contributions from all evaluating validators' e-books. At this evaluation stage, there are two evaluations the researcher carries out, namely formative and summative evaluation. Formative evaluation is an evaluation that explains the quality results of the product that the researcher has developed, and whether the researcher will make revisions to the product or not. In this research, the formative evaluation was actually carried out at previous stages. This formative evaluation can be seen by researchers from the assessment of the four previous ADDIE processes, namely analysis, design, development, and implementation. Summative evaluation is an evaluation carried out to determine students' mastery of the material that was developed with the material used by the teacher. This evaluation can be carried out by asking questions at the end of the lesson. Researchers have also done this at the previous stage. So, both formative and summative evaluations have been carried out by researchers at previous stages.

#### Discussion

Development e-book based project based learning help Kvisoft flipbook maker blended learning the validity test is in the very valid category after looking at the three validations carried out. In the first stage, the validation carried out by expert lecturers and practitioners obtained an average score of 92.75 in the very valid category, then the validation carried out by teachers at the FGD stage obtained an average score of 90 in the very valid category, and finally the validation carried out by students at the small group trial stage obtained an average score of 89 with a very valid category. From the three validity tests carried out, it can be concluded that e-book-based Project Based Learning helps Kvisoft Flipbook Maker Blended Learning very valid for use in learning (Purwanto, 2021; Setiyani et al., 2022).

Development e-book based Project Based Learning help Kvisoft Flipbook Maker Blended Learning from the practicality test it is in the very practical category after being seen from two aspects. In the first stage, looking at the teacher response questionnaire, an average score of 91 was obtained in the very practical category. In the second stage, looking at the student response questionnaire, an average score of 88 was obtained in the very practical category (Kharisna & Amini, 2023a; Wahyuni & Rahayu, 2021). From the two practicality tests carried out, it can be concluded that e-book based Project Based Learning help Kvisoft Flipbook Maker Blended Learning very practical to use in learning.

From the results of the practicality test of the teacher response questionnaire that was carried out, it was found that the e-book that was developed is e-book which is very practical to implement in the learning process in elementary schools. This is reinforced by the results of the practicality test carried out, where averages score was obtained for the teacher response questionnaire of 91 in the very practical category. This is in line with the opinion of previous study practicality is practical, namely easy to do, easy to check and equipped with clear instructions for use, making it easier for teachers and students to operate the teaching materials (Arikunto & Suharsimi, 2009).

From the findings and reinforced by the opinions of experts, which e-book that the researchers developed is in the very practical category and easy to operate in learning for teachers and there are instructions for use-book inside it (Kharisna & Amini, 2023a; Raihan & Ahmadi, 2018). From the results of the practicality test of the student response questionnaire that was carried out, it was found that the e-book that was developed is e-book which is very practical to implement in the learning process in elementary schools. This is reinforced by obtaining an average score for the practicality test of the student response questionnaire of 88 in the very practical category. This is in line with the opinion of other study practical teaching materials can be easily used in the teaching and learning process by teachers and students (Nurhamidah & Roza, 2020).

According to previous e-books can be used to improve learning outcomes and student activities (Silva et al., 2019). Furthermore, according to other study there will be an increase in student learning



outcomes after using e-books (Wang & Chiu, 2020). From the experts' statements, researchers will test the effectiveness of two aspects, namely, learning outcomes and student activities. This effectiveness test is to see students' activeness during the learning process. Observations regarding student activity are carried out using student activity observation instruments which consist of aspects of viewing activities( visual activities), listening activities(listening activities), speaking activities(oral activities), and writing activities(writing activities). Observations were carried out in each lesson, namely three lessons, with 49 students in two different schools.

From the findings and expert opinions above, we can see the practicality of e-books. From a student's perspective, it can be judged by whether a lesson is easy or a note-book is used in learning. Development e-book based Project Based Learning help Kvisoft Flipbook Maker Blended Learning from the effectiveness test it is in the very active category after looking at it from two aspects. The first aspect, namely student activity, obtained an average score of 86 in the very active category. The second aspect is the learning outcomes obtained by the average value post-test of 90 with the very effective category. From the two effectiveness tests carried out, it can be concluded that e-book-based Project Based LearninghelpKvisoft Flipbook Maker Blended Learning can make students active and effective in improving learning outcomes.

#### 4. CONCLUSION

The research carried out is development research e-book Based Project Based Learning help Kvisoft Flipbook Maker Blende Learningat V Elementary School. From the researchers' findings, it can be concluded that e-book-based Project Based Learning help Kvisoft Flipbook Maker Blended Learning in elementary schools is very valid, practical, and effective for use in learning in elementary schools.

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