

THE EFFECTIVENESS OF IMPLEMENTING INTERACTIVE DIGITAL BOOKS SOCIAL STUDIES SUBJECTS IN VOCATIONAL HIGH SCHOOL STUDENTS

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Abstrak

The aims of this study were: (1) to test the effectiveness of the application of Interactive Digital Books teaching materials for social studies subjects in the learning conducted by teachers in SMK; (2) knowing the supporting and inhibiting factors for the application of Interactive Digital Books teaching materials for social studies subjects in learning conducted by teachers in SMK. This type of research is descriptive. The subjects in this study were class X students for the 2020/2021 academic year. The results of this study are: (1) the effectiveness of the application of Interactive Digital Book teaching materials is seen based on the average percentage of students' responses to the use of Interactive Digital Book teaching materials which is 88.70% with very good criteria. Furthermore, 92% of students obtained mastery of the learning outcomes test; (2) Supporting factors in the application of Interactive Digital Book teaching materials are obtained from observations during the learning process, namely: (a) the availability of LCD projectors in classrooms; (b) students have personal laptops; (c) students' basic skills in operating a computer; (3) The inhibiting factors in the application of Interactive Digital Book teaching materials are the size of the laptop which is relatively large (10-14 inches) and the weight makes the Interactive Digital Book not portable to carry anywhere, then the limitations of the material, where this Interactive Digital Book only discusses basic competencies tracing early civilizations in the Indonesian archipelago.

Keywords: Effectiveness, Interactive Digital Books, Social Studies Learning

INTRODUCTION

Teaching materials are part of learning resources, which play a role as a tool or means in helping students achieve Core Competency (I) [1]. The forms of teaching materials used in the learning process vary, one of which is textbooks or learning books. The role of textbooks in the learning process Textbooks are the most important infrastructure that absolutely every school must have, where relevant textbooks will create systematic and orderly learning.

One form of textbooks is e-books. Interactive Digital Books are known as Interactive Digital Books or electronic books, in English the term E-book stands for Electronic book. The initial e in the word Interactive Digital Book, E-learning, E-laboratory, E-education, E library means electronics which is implicitly interpreted based on digital electronics technology [2]. Vassiliou and Rowley state that: (1) an Interactive Digital Book is a digital object that appears as a result of integrating the concept of a book with the features available in an electronic environment; (2) Interactive Digital Books usually have several features such as search and cross-reference functions, hypertext links, bookmarks, annotations, highlights, multimedia

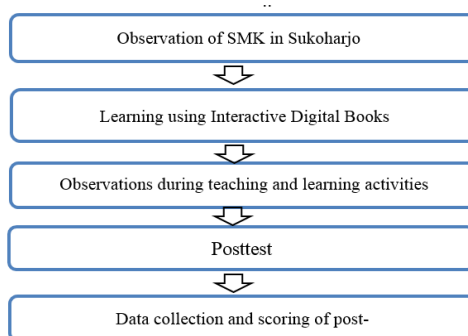
objects and tools [3].

The government has made efforts to increase the use of Interactive Digital Books in the learning process in schools by providing Electronic School Books (BSE) in pdf format which can be downloaded free of charge via the sites bse.kemdikbud.go.id and bse.mahoni.com. BSE still has weaknesses that should be refined. BSE which is packaged in the form of an Interactive Digital Book does not yet have more value than printed teaching materials which are widely circulated. BSE only displays some unattractive static images because it is still in the form of a 2-dimensional Interactive Digital Book. The enhancement of the 2D Interactive Digital Book is the Interactive Digital Book. The concept of Interactive Digital Book refers to the interaction between the user and the E-book which allows the user to run and manipulate various forms of media, such as text, sound, video, computer graphics, and animation. The interaction between the user and the Interactive Digital Book in question is: (1) there is feedback when the user (2) the user can run video, audio and animation, as well as various other tools.

The Social Sciences Digital Book is an interactive teaching material in the form of a flip book. The flip book itself refers to the effect produced by the eBook as if opening the book in real terms sheet by sheet. Interactive Digital Books for IPS subjects are made using the book creator application. The selection of the book creator application in the development of interactive teaching materials for Digital Books is based on: (1) the book creator application can be used online for free through the website www.bookcreator.com; (2) easy to operate; (3) Digital Books can be published in EXE or HTML format. The features available in the interactive IPS Digital Book are Add an item; inspector, read book. Interactive Digital Books for IPS subjects cannot be said to be good if they are not useful for teachers and students. Therefore, an analysis of the effectiveness of Interactive Digital Books for social studies subjects was carried out for class X Vocational School students for the 2020/2021 academic year in Sukoharjo.

RESEARCH METHODS

This type of research is descriptive. The aim of the study was to determine the effectiveness of interactive digital book teaching materials for social studies subjects. This research consisted of several stages, first selecting several SMKs in Sukoharjo Regency, second carrying out learning using Interactive Digital Books for social studies subjects. Third, observation during teaching and learning activities. Fourth, do a post-test. Fifth, data collection and scoring of the final results.



Picture 1. Design and Research Steps

This research was conducted in several SMKs in Sukoharjo Regency. The time used in carrying out this research was for 6 months. The subjects in this study were class X students for the 2020/2021 academic year at several SMKs in Sukoharjo Regency...

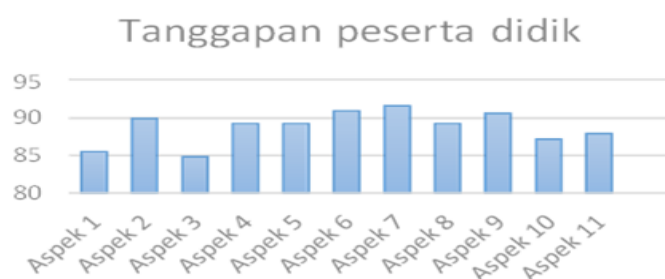
The effectiveness of Social Science Interactive Digital Book teaching materials is seen from: (1) Student responses; (2) student learning outcomes test during the post test. Interactive Social Interactive Digital Books are effective if the percentage of test completion reaches 80%. Regulation of the Minister of Education and Culture Number 104 of 2014 states that the KKM standard is 2.67 on a scale of 1-4.

Student responses to Interactive Digital Books were obtained from questionnaires filled in by students. Students fill out the questionnaire by giving scores according to the rubric (SS = Strongly Agree, S = Agree, KS = Less Agree, and TS = Disagree). Data on students' responses to the E-book were analyzed using a percentage descriptive technique using the following formula:

$$Persentase = \frac{\sum x}{SMI} \times 100\%$$

RESEARCH RESULTS AND DISCUSSION

1. Effectiveness of the implementation of Interactive Digital Book teaching materials



Gambar. 2. Students' Responses to Interactive Digital Books

The assessment aspects of Interactive Digital Books include: (1) The physical appearance of the E-book teaching materials is attractive; (2) Interactive Digital Book teaching materials are easy to use in operation; (3) Use sentences that are easy to understand and do not cause double interpretations; (4) The size and type of letters used are easy to read; (5) Basic competence and clear learning objectives; (6) The material presented is clear; (7) The presentation of the material in the Interactive Digital Book teaching materials is systematically arranged; (8) Appropriateness of drawings and materials; (9) The video/animation shown is in accordance with the material; (10) The linkages between practice questions in the Interactive Digital Book teaching materials are clear and in accordance with the material presented; and (11) The examples given help in understanding the material. The percentage of students' responses to the Interactive Digital Book can be seen in Figure 2

Processing of teaching materials for Interactive Digital Books for Social Studies subjects in learning conducted by students at Vocational High Schools is classified as very good. This can be seen based on students' responses to interactive teaching materials E-books with an average percentage of 88.70%. Completeness test of student learning outcomes by 92%.

Based on the results of informal interviews with several students, the advantages of using digital books compared to conventional books include: Firstly, these electronic books are practical, because they are not physical so they are simply stored on smartphones or flash discs and laptops. When needed, just open it and no longer complain that the bag feels heavy containing many thick books. Secondly, since these e-books are not physical, they are softcopies and not printed on paper. So save space, because you no longer need to provide space to store your book collection. Everything is stored on the device used to read it. Third, the form that does not have a physical form and is in the form of softcopy, then electronic books are then easy to access. Namely, it can be read or opened on various types of devices. Fourth, there are many free electronic books available on various digital media, but so are paid electronic books. However, the information in paid electronic books is usually detailed and carries material that is only presented by experts. Fifth, the paper used to print books comes from tree trunks that are processed by factories. The more books printed on paper, the more trees on earth are cut down. This certainly encourages deforestation and global warming. Therefore, for those of you who pay attention to the environment, one can priorities digital books. Because it is guaranteed to be more environmentally friendly because it is not printed on paper media. Another advantage is the customization facilities on electronic books that increase the comfort and experience of reading books. For example, the appearance of the book can be enlarged so that it can be clearer when read. Then it can be displayed vertically or horizontally according to the needs of the reader.

2. Factors supporting and inhibiting the application of interactive digital book teaching materials

The results of observations during the learning process on supporting and inhibiting factors in the use of Interactive Digital Book teaching materials can be seen in Table 2.

Table 2: Supporting and Inhibiting Factors in Use of Interactive Digital Book Teaching Materials

Supporting factors	Obstacle factor
<ul style="list-style-type: none"> - Availability of LCD projectors in classrooms - Students have personal laptops - Basic skills of students in operating computers. 	<ul style="list-style-type: none"> - The size of the laptop is relatively large (10-14 inches) and the weight makes the Interactive Digital Book not portable to carry anywhere. - The material in the E-book is limited in the sense that it is only for the basic competency of the loop control structure.

B. DISCUSSION

The processing and use of Interactive Digital Books for social studies subjects in the learning carried out by students at Vocational High Schools is classified as very good. This can be seen based on the student's response questionnaire to the Interactive Digital Book with an average percentage of 88.70%. The aspects assessed in this questionnaire include, among others: (1) Ease of use of navigation buttons in Interactive Digital Books; (2) clarity and suitability between the material and content contained in the Interactive Digital Book; and (3) content such as animations, videos, and questions that can be accessed in the E-book. Furthermore, 92% of students obtained mastery of the learning outcomes test. This is in line with the results of research by Santoso et al (2018) which showed that the learning outcomes of students who used interactive digital books were higher than students who used printed books. Furthermore, Interactive Digital Book teaching materials have added value in increasing students' motivation to read and study independently [5]. In line with this, in the research of Li et al (2018) stated that teaching materials significantly affect students' internal motivation in learning [6].

Supporting factors in the application of Interactive Digital Book teaching materials were obtained from observations during the learning process, namely: (1) availability of LCD projectors in classrooms (2) students have personal laptops; (3) basic skills of students in operating computers. The availability of adequate school facilities such as LCD projectors in each classroom and computer laboratories can be supporting factors that make it easier for educators to teach and encourage educators to be more creative in creating fun learning so that students will be motivated to learn. This is supported by research [7] which states that the condition of adequate school facilities has a positive effect on the psychology of students and educators so that they can improve the quality of learning [7]. Adequate facilities will encourage educators to be more creative in developing learning multimedia. In addition to supporting factors in the use of Interactive Digital Books. The inhibiting factors in the application of Interactive Digital Book teaching materials are: (1) the relatively large size of the laptop (10-14 inches) and the weight make the E-book not portable to carry anywhere; (2) The material in the Interactive Digital Book is limited only to the basic competence of the loop control structure.

The results of the feasibility test of digital book development show very practical criteria. In accordance with the criteria for practicality in the large group trial, the digital book in learning

History is declared very practical and suitable for use. These results are in accordance with Darmayanti, Hariani, & Haryadi's research [8] which states that inquiry-based student books are able to help students to improve their learning outcomes in the learning process because examples, illustrations, and the right colour selection as well as simple language selection can attract students' attention to read it and be able to reduce student boredom in learning. In addition, student books are able to provide opportunities for students to be able to provide feedback or measure their mastery of the material provided by providing practice questions, and assignments [9].

Student books are one of the learning tools that determine whether or not learning objectives are achieved [9]. A student book is a book that contains subject matter in the form of concepts or notions that students will construct through the problems in it [10]. Student books assist students in obtaining alternative teaching materials in addition to existing textbooks and student books function as guidelines for students who will direct all their activities in the learning process, as well as the substance of the competencies that should be learned. The inquiry learning strategy has several advantages, namely emphasizing the development of cognitive, affective, and psychomotor aspects in a balanced manner, emphasizing maximum student activity to search and find, meaning that the inquiry strategy places students as learning subjects, and develops the ability to think systematically, logically, and critically, or develops intellectual abilities as part of the mental process [11]. The presentation of an interesting e-book will indirectly increase the attractiveness of the e-book so that students' interest in reading will increase. Through this reading interest, it will make an encouragement for students to carry out learning activities better. As stated by Himala [12], the writing and selection of words and sentences will greatly affect the purpose of conveying material which has an impact on the understanding of students. In the research of Saputro, Rohaeti, & Prodjosantoso [13], it was found that guided inquiry-orientated learning sessions will arouse students' basic knowledge and develop problem-solving skills with critical thinking. Critical thinking itself is a thought process in making reasoned decisions, based on consideration of existing evidence and contextual aspects of the problem presented, as well as the concept of critical thinking.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions from the results of this study is

1. Processing of Interactive Digital Book teaching materials for social studies subjects in learning conducted by students at Vocational High Schools is classified as very good. This is seen based on students' responses to the use of Interactive Digital Book teaching materials with a percentage of 88.70%. Furthermore, 92% of students obtained mastery of the learning outcomes test.
2. Supporting factors in the application of Interactive Digital Book teaching materials are obtained from observations during the learning process, namely: (1) the availability of LCD projectors in classrooms; (2) students have personal laptops; (3) basic skills of students in operating computers.
3. The inhibiting factors in the application of Interactive Digital Book teaching materials,

namely: (1) the relatively large size of the laptop (10-14 inches) and the weight makes the Interactive Digital Book not portable to carry anywhere; (2) The material in the E-book is limited only to the basic competence of the loop control structure.

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