

LITERATURE REVIEW: ARE CONTEXTUAL-BASED E-BOOKS EFFECTIVE IN LEARNING?

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Abstract

This study aims to analyze and find out whether the use of contextual-based e-books can be effective in improving students' critical thinking skills during the learning process. This type of research is using a literature study approach. The method used in writing this article uses the literature review method, the source of which was obtained on the Google Scholar website with the issue of the past 4 years. From the 10 articles, it was found that the development of contextual-based learning e-books in some subjects was very effectively used in the learning process by using the ADDIE, 4-D, and Borg and Ball development models. The data collection technique in this research is to collect data using various scientific articles that are relevant to the research topic. The data that has been collected then be analyzed further and presented in scientific writing. In this literature review, the articles that will be used and analyzed were obtained using data from Google Scholar between 2019 and 2022. The results of this literature review show that the use of contextual-based e-books in the learning process is effective for improving students' critical thinking skills.

Keywords: E-book, contextual approach, critical thinking skills

1. Introduction

Education is one of the important aspects to improve the quality of human resources in supporting the progress of a nation. Rusyada and Nasir (2022) state that education will provide many benefits for individual change or human resources, both intellectually, spiritually, and emotionally. Another opinion by Zakiya (2019) explains that education is a means of interaction between teachers and students which can be used as the delivery of ideas and learning materials so that they are channeled properly and usefully. So, it can be concluded that education is a very important aspect in the progress of a nation because with education an individual can acquire and improve his abilities in terms of knowledge, attitudes, and so on as well as a means to improve the quality of existing human resources.

The role of education in the modern era as it is today must be able to adapt to the times, especially with increasingly rapid technological developments. More advanced technology is very useful to support the learning process (Ardiva, 2019). One of the roles of technology that can be felt in the world of education is the development of various kinds of learning media and available teaching materials. The use of multimedia learning will help students to form mental models so that learning materials will be easier to understand (Baharudin, 2018). Zubaidah (2017) explains that the understanding of students during the learning process will have an impact on mastering their critical thinking skills. The ability to think critically is a very important aspect to be mastered by students.

Critical thinking skills as currently required by every individual (Nanda and Kustijono, 2017). In line with this, Ambarwati (2019) argues that the ability to think critically is the goal of education because skills with critical thinking make students learn more deeply where students are trained to think about what they learn, not just what other people think. According to Liberna in Ridho (2021), critical thinking skills are problem-solving skills for everyone to be able to do activities through serious thinking, being active, analyzing thoroughly in absorbing the information received, and being able to provide rational reasons for the actions to be taken. Thus, focusing on the learning process is more important, not only reading media that displays memorization content but must accommodate students' critical thinking (Ridho, 2021). Therefore, teachers must be able to deliver learning materials well and follow the characteristics of students to suit modern learning, active inquiry, and explore problems to encourage students to build critical thinking powers (Changwong, 2018). The solution to improve students' critical thinking skills is to apply innovative learning media (Fajari, 2020).

Use The right learning media is an important part of learning activities as a means to make it easier for teachers and students to master the competencies that need to be mastered. Learning media can be used as intermediaries to convey messages or communicate something. The characteristics of learning media, learning media can be divided into four types, namely *audio* media, *visual* media, *audio-visual media*, and multimedia (Ambhara et al, 2017). Multimedia is a combination of two words, namely "multi" and "media". Multi means many while media is the plural form of medium which means intermediary. Multimedia is one type of learning media that unities digital and analog technology in the fields of *entertainment*, *publishing*, *communication*, *marketing*, *advertising*, and also *commercial* (Asyhar, 2012: 75). One of the multimedia referred to is *e-books* or digital books. This *e-book* or digital book is a development of textbooks adapted to technological developments. In its use, this *e-book* has several weaknesses that must be improved by displaying simulations by combining video, audio, or images that are packaged attractively into the form of a learning *e-book*. But on the other hand, the use of this *e-book* also has several advantages, namely this *e-book* can be used easily anytime, anywhere, and can be used by anyone because users can use it online or offline.

The development of contextual-based learning media is one of the alternative learning media that can be used to improve students' critical thinking skills. Contextual learning is a learning concept that will train teachers to connect the subject matter being taught with real-world situations that are often encountered by students in everyday life and to encourage students to build relationships between their knowledge and its application in everyday life. (Komalasari, 2017). Contextual-based learning is expected to be able to create learning situations that are more realistic and related to the real world, making it easier for students to understand the subject matter being studied. Based on research by Oktaviani (2017), Satriawan (2019), and Rahmawati (2019), it can be concluded that the use of contextual-based learning media can improve students' critical thinking skills. Because with contextual-based learning, students find it easier to analyze examples and relate the material they learn to their real lives. Based on the explanation above, therefore the researcher wants to study further the effectiveness of the use of contextual-based *e-book* learning media and whether it has an effect on improving students' critical thinking skills during the learning process.

Books as Learning Resources

R. Abdullah (2012) explained that learning resources can come from people, messages, materials, techniques, tools, and settings used by students and teachers during the learning process in the classroom and outside the classroom to create good quality learning and according to learning objectives. Prastowo (2012) states that learning resources can be grouped into several types, namely in the form of books, magazines, brochures, posters, encyclopedias, or modules. Choosing the right learning resources according to Romizowski in Abdullah (2012) is to consider the factors of learning methods and learning objectives that will be used during the learning process, as well as cost and time factors in their use. There are various forms of teaching materials, one of which is *electronic books* or digital books that are considered by increasingly advanced technological developments. *E-books* are presented with a combination of digital information in the form of text, images, video, and audio that are packaged in the form of files that can be used with the help of computers, Android *phones*, or other electronic devices. *E-book* teaching materials are expected to make it easier for students to understand the learning material being studied (Septi & Susanti, 2019). The advantage of using *e-books* according to (Indrayanti, 2010) is to increase student interest in learning, as a measure of learning outcomes, students can achieve results according to their abilities, as well as teaching materials that can make students more motivated to use them in learning. In addition to the advantages of using *e-books*, in its use, this *e-book* also has several disadvantages that must be refined again by displaying simulations by combining video, audio, and images that are packaged attractively into *e-books*.

Contextual-Based Learning E - book

Contextual-based *e-books* will be prepared by linking the subject matter to be studied with real-life situations that occur in the daily environment of students. Contextual-based *e-book* teaching materials are expected to make it easier for students to learn and understand the material because it is associated with everyday life that they often encounter. This *e-book* is used as a complementary teaching material that is compatible with the basic competencies used in the stage of observing and gathering information in the learning process. *Contextual-based e-books* have the advantage that it makes it easier for students to master the material being studied and students easily gain knowledge and can solve problems in everyday life to prepare them for when they enter the world of work. According to Listiyadi (2014), another advantage of using contextual-based *e-books* is that students can learn independently, making it easier for students to understand the material that has been presented in the *e-book* even without the help of the teachers. The contextual approach is defined as a learning approach that is used to help teachers connect the material studied with real life and be able to motivate students to link their knowledge by applying the subject matter in everyday life (Zakiah, 2019).

Learning topics designed with a contextual approach will be closer to the real lives of students so that they can help practice their critical thinking skills (Sheila, et al, 2021). The contextual approach will focus on various examples of cases in real life that exist around students so that they can increase learning motivation and improve critical thinking skills in solving problems (Fitriah, 2017) and (Yunita & Hermansyah, 2018). It can be concluded that the contextual approach is a learning concept that can help teachers to convey material by connecting with case examples in everyday life to encourage students to form relationships from their knowledge of everyday life.

Effective Use of E-Book

Effectiveness is one indicator that shows the achievement of various aspects and the achievement of the targets that have been designed in the learning process. The aspects of effectiveness according to Muasaroh (2010) are aspects of tasks or functions, aspects of planning or programs, aspects of provisions and regulations, and aspects of goals or ideal conditions. *E-books* are learning media in the form of electronic books that can be used with computers and smartphones. An electronic book is a digital version of a printed book consisting of a collection of papers containing descriptions of material and images that are made into digital form (Yusup & Istifarida, 2018). Digital books are flexible digital learning resources that can be used to facilitate learning activities so that teachers can access both groups and individuals (Mawarni & Muhtadi, 2017). *E-books* have many advantages, namely interactive content, affordable prices, and easy to store on computers and smartphones (Hidayat, Suyatna, & Suana, 2017). According to (Pustpitarsari & Rakhmawati, 2013) the e-book teaching materials developed at this time consist of video, audio, and images so that they have an attractive appearance, with an attractive appearance, students are easier to understand and remember the concepts in the material.

2. Methods

The analysis used in this literature review research uses literature review method, the source of which was obtained on the Google Scholar website with the issue of the past 4 years. From the 10 articles, it was found that the development of contextual-based learning e-books in some subjects was very effectively used in the learning process by using the ADDIE, 4-D, and Borg and Ball development models. The data collection technique in this research is to collect data using various scientific articles that are relevant to the research topic. To get maximum results in writing this literature review, it is based on the Research Question (RQ). The purpose of this Research Question (research question) is structured to focus more on the review of literature and can facilitate researchers in searching for related data. Research Questions (RQ) in this study are:

Table 1. Research Question

ID	Research Question	Motivation
RQ 1	What are the models used in the development of contextual-based learning e-books?	Identify the methods used in the development of contextual-based learning e-books
RQ 2	Is the use of contextual-based learning e-books effectively used to improve critical thinking skills?	Identify the effectiveness of using contextual-based learning e-books to improve critical thinking skills

Source: Hidayatul Islami (2020)

The articles used in this *literature review* are articles obtained using *Google Scholar* using the keywords contextual-based *e-book development* to improve critical thinking skills, contextual-based e-book development, and contextual-based e-book *development* on economics subjects. The articles were then selected according to the research topic so that 10 research articles were collected which were considered representative of all research articles on contextual-based *e-books* to improve students' critical thinking skills.

3. Results and Discussion

Contextual-Based E-book Development Model

The results of the *review* obtained are 3 contextual-based e-book development models, namely the ADDIE development model (*Analyze, Design, Development, Implementation, Evaluation*), 4D (*Define, Design, Development, Disseminate*), and Borg & Gall as well as 2 experimental models. The following is table 2 regarding the widely used contextual-based learning e-book development model:

Table 2. The Contextual-Based Learning E-book Development Model used

No	Development style	Reference
1.	ADDIE	(Zakiyatus S., 2020), (Kiki A., & Hadma, 2021)
2.	4D	(Septi R. & Susanti, 2019), (Artika V., & Susanti, 2020), (Izzah & Yuni, 2022), (Mujtahidatul A., 2019), (Artika V., & Susanti, 2020)
3.	Borg & Gall	(Yuliana, Siti, & Ikbal, 2021)
4.	Experiment	(Tika Aprilia, 2021), (Najmul & Nurjanah, 2019)

Source: Edited by the author 2022

Based on the results of the analysis that has been done by the author, it is known that the contextual-based learning *e-book development model* to improve critical thinking skills that are widely used is the 4D development model (Define, Design, Development, Disseminate). This model is carried out in four stages, namely the stages of defining, designing, developing, and distributing. However, on average, the articles that have been analyzed for development only reach the third stage due to various obstacles and limitations experienced by researchers. Unlike the 4D development model which only goes through 4 stages, the ADDIE development model is carried out in 5 stages, namely *analysis, design, development, implementation, and evaluation*. Another development model that is often used in development research is the Borg & Gall development model. The Borg & Gall model is carried out in 10 stages, namely Research and Information Collecting, Planning, Develop Preliminary Form of Product, Preliminary Field Testing, Main Product Revision, Main Field Testing, Operational Product Revision, Final Product Revision, Dissemination, and Implementation. In this Borg and Gall model, not many people use it in development due to the many stages that researchers have to go through. And research models other than development that are sometimes used are experimental research models with *True-experimental (pretest only control group design)*.

The Effectiveness of Using Contextual-Based Learning E-books

Based on the results of the article analysis that has been done by the author, it is known that the use of contextual-based learning *e-books* to improve students' critical thinking skills can be said to be effective in their use based on the feasibility of developing the *e-book*. The *e-book display* is equipped with illustrations and pictures to make it easier for students to observe and understand when studying, there are *motivation quotes notes*, as well as a *mini quiz* with HOTS-based questions. Based on the appearance, language components, materials, and graphics, this *e-book* is considered very suitable for use in learning. The students also responded well and stated that they were quite helped in understanding the material by using this contextual-based *e-book*. So, it can be concluded that using this contextual-based *e-book learning media* can train students' critical thinking skills and can increase students' learning motivation because the teaching materials provided have been linked to students' daily lives.

Based on the results of the literature review, several development models were found that are often used in development research. Among them are ADDIE, 4D, and Borg & Gall models. The Borg & Gall development model develops and validates items from the world of education. The resulting output is not only about existing products, but also discoveries about knowledge from answers to practical problems or questions. The 4D development model has 4 stages of development, namely, define, design, develop, and disseminate. The 4D development model is more often used to develop learning tools, but in research, this model is usually only carried out until the 3rd stage. And finally, the ADDIE development model provides an approach that focuses on providing feedback for continuous improvement. In several research articles regarding the development of learning media to improve students' critical thinking skills, researchers mostly use the 4D development model. In line with the opinion of Mulyatiningsih (2016), the 4D development model was chosen because this model has simpler and more systematic stages, in which each stage in the 4D model has been adapted to the learning implementation plan, and the disseminate stage can be carried out with limited distribution to teachers and students only. In addition, the 4D model includes a complete development process. For example, the define stage, is equivalent to analysis, at the development stage includes validation, revision, implementation, and evaluation activities, and the last stage is the disseminate stage. Therefore, this 4D development model is preferred and used by researchers for the contextual-based e-book learning media development model.

At this time learning in schools has been using *e-books* as a medium of learning in the learning process. To increase the activeness of students in learning, it is necessary to approach the use of learning *e-books*. One of

these approaches is contextual-based learning *e-books* used by teachers and students in schools. Contextual-based learning *e-books* are designed by connecting subject matter with everyday life so that students are motivated to learn and improve learning achievement. Contextual-based *e-books* can make it easier for students to learn and understand subject matter because it is related to real life, this *e-book* is positioned as a companion teaching material that has conformity with basic competencies used in the stage of observing and collecting information in the learning process (Septi, 2019).

The use of contextual-based *e-books* has a positive impact on learning carried out in the classroom and outside the classroom. Several previous studies found that the use of contextual-based learning *e-books* could increase students' learning motivation (Septi, 2019) and (Tika Aprilia, 2021). In addition, the use of contextual-based *e-books* can also improve learning outcomes and students' critical thinking skills in several subjects such as accounting, science, citizenship education, and mathematics lessons (Artika Vivi, 2020), (Izzah Rosyadah, 2022), (Mujtahidatul A., 2019), and (Zakiyatus S., 2020). So, it can be concluded that the use of contextual-based *e-books* does provide many benefits and is very effectively used in the learning process. This article only discusses the effectiveness of using contextual-based *e-books* as teaching materials to improve students' critical thinking skills, it is hoped that further research can examine further the effectiveness of other learning media as a means to improve students' critical thinking skills and other high-level abilities.

4. Conclusion

This research has succeeded in identifying and analyzing the contextual-based *e-book development model* and the effectiveness of using contextual-based *e-books* to improve students' critical thinking skills based on *Research Questions*. Based on several articles obtained from *Google Scholar* as many as 10 articles were reviewed. The results of the articles that have been analyzed are a contextual-based *e-book development model* to improve students' critical thinking skills. 3 development models are often used, namely the 4D development model, ADDIE, and Borg & Gall. However, the most widely used module development model is the 4-D model (Define, Design, Development, Disseminate). Based on the results of the review, it can be concluded that the use of contextual-based learning *e-books* in various subject areas is considered very feasible and effective as a learning medium for students at various school levels. In addition, contextual-based *e-books* will increase students' learning motivation, and learner independence in learning, and improve learning outcomes because the subject matter delivered is easier to understand so that it can train students' critical thinking skills.

Based on the results of the *literature review*, it has been found that the use of contextual-based *e-books* to improve students' critical thinking skills is very effectively used in the learning process. Then in the use of contextual-based learning *e-books*, it is very feasible to use during the learning process because before using this contextual-based *e-book* students are less able to understand the subject matter well and students are less enthusiastic about participating in learning activities because learning only depends on the teacher's explanation and less exercise. With this contextual-based *e-book*, students become more enthusiastic about participating in the learning process and their critical thinking skills can be said to increase. So, from 10 articles on the development of contextual-based *e-books* to improve students' critical thinking skills, it was found that the use of contextual-based *e-books* was effectively used as one of the learning media for teachers and students during the learning process.

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