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Development of Digital Library at SDN Bontoa, Tamalanrea District, Makassar City

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Abstract

Schools already have references in printed books, but teachers need more references in digital form so that they can be integrated in class and/or in students' independent learning as a learning resource. The purpose of this study is to (1) Develop a Digital Library at SDN Bontoa, Tamalanrea District, Makassar City (2) Measure the Feasibility and Validity of the Digital Library at SDN Bontoa, Tamalanrea District, Makassar City. The approach used in this study is development research using the ADDIE model which consists of 5 stages, namely (Analysis, Design, Development, Implementation and Evaluation). The data analysis technique uses a Likert scale, final data conversion and percentage of answers. The results of this study indicate that the assessments given by media experts and material experts for this Digital Library are in the feasible/valid category so that they can be recommended as a learning resource. This is proven by the existence of expert validation instruments and material experts who are in the feasible/valid category. The digital library at SDN Bontoa, Tamalanrea District, Makassar City can be used as a reference in digital form so that it can be integrated in class and/or in students' independent learning as a learning resource.

Keywords: Digital Library.

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INTRODUCTION

Education is very important for life, both national and state life. The progress of a nation is influenced by the quality of education of the nation itself, because high education can form quality human resources that are prepared to face the development of science and technology. In its application in Indonesia, education refers to a system called the national education system (SISDIKNAS) which is an integrated whole of all educational units and activities that are interrelated to strive to achieve national education goals. Law No. 20 of 2003 states that: Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual religious strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state.

The government is trying to improve educational facilities by digitizing the world of education, in order to improve learning resources. Utilizing various learning resources is an effort to solve learning problems (Duffy and Jonassen, 1992). Learning resources are defined as all places or environments, objects, and people that contain information that can be used as a vehicle for students to carry out the process of changing behavior. One of the learning resources that is often used in the teaching and learning process is the library.

The library is essentially a center for learning resources and information sources for its users (Darmono, 2001). The library is an information system in which there are activities of collecting, processing, preserving, conserving and presenting and disseminating information. The library as it exists and is developing now has been used as one of the centers of information, sources of knowledge, research, recreation, preservation of the nation's cultural treasures, and providing various other services. In addition, according to the library is a room, part of a building, or the building itself which is used to store books and other publications according to a certain arrangement for use by readers, not for sale.

The library as a center of knowledge sources, because the library, teachers and students and the community can search for various sciences and knowledge needed, both for current and future needs. In the world of education, the development of information technology has begun to be felt to have a positive impact because with the development of information technology, the world of education has begun to show quite significant changes. Many things are felt to be different and changed compared to the way it developed previously. At present, distance and time are not significant problems in gaining knowledge, various applications have been created to facilitate it (Fitria, 2013). Technology-based education is an education system in which the teaching and learning process takes place by utilizing information and communication technology

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facilities (Badry, 2014). In this system, the interaction between teachers and students does not have to meet face to face (meet) physically as in conventional learning systems, but they meet in the information technology space (internet) by utilizing a media called a computer. According to Law No. Article 1 Paragraph 1 of Law No. 11 of 2019 states that the National Science and Technology System is a pattern of relationships that form planned, directed, and measurable, as well as sustainable links between institutional elements and resources so that a network of science and technology is built as a complete unit in supporting the implementation of science and technology as a scientific basis in the formulation and determination of national development policies.

The development of technology also participates in the development of digital library formations starting from input activities to output processes. The existence of digital libraries is due to facilitate library service users in searching for and obtaining information that is certainly based on science and technology.

A digital library is an organization that provides resources including specially trained librarians to select, organize, provide access, understand, distribute, maintain integrity, and serve the needs of digital works by making collections available (Irmayanti, 2011). Basically, a digital library is the same as a regular library, except that a digital library uses computer-based work procedures and digital resources.

A digital library is a library that stores collections in the form of electronic files and distributes them electronically through a computer network (R. Iswanto, 2019). A digital library is an information system consisting of hardware and software. Processing, servicing, and providing access to information are carried out using electronic devices in the form of computers (F. Siyasih, 2021).

Based on the results of observations conducted in August 2024 at SDN Bontoa, Tamalanrea District, Makassar City, the school library can only be accessed offline, students and teachers come to the library to search for, borrow and return books directly to the library staff. The results of interviews with librarians and homeroom teachers of class VI SDN Bontoa, Tamalanrea District, Makassar City in September 2024, so far the school has had references in the form of printed books, but teachers need more references in digital form so that they can be integrated in class and/or in students' independent learning as a learning resource. Another problem faced by the library is that the room is not large enough to accommodate students who want to come to read books in the library and the activities carried out in the library are still manual, which poses many risks such as the length of the book search process and the loss of books. Therefore, it is necessary

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to build a digital library that is used to store and manage books in digital form. On the other hand, students at the school, namely the upper class, namely class 6, are required to bring cellphones because there is a self-development subject that requires them to bring cellphones all day long on Saturdays.

Based on the description above, the purpose of this article study is to see how the development of digital libraries at SDN Bontoa, Tamalanrea District, Makassar City.

RESEARCH METHODS

Time and Place of Research

The research location will be conducted by researchers at SDN Bontoa, Tamalanrea District, Makassar City. This location is the target location for the research because based on the results of observations conducted in August 2024, the school already has references in the form of printed books but requires more references in digital form so that they can be integrated in class and/or in students' independent learning as a learning resource. The research period is approximately 3 months. Starting from December 2024 to February 2025 with the agenda of producing products, validation/feasibility of media experts and validation/feasibility of material experts.

Research Design

The design of this study entitled Development of Digital Library at SDN Bontoa, Tamalanrea District, Makassar City uses the ADDIE model developed by Robert Maribe Branch (2009). According to Sugiyono (2019), the term ADDIE stands for Analysis, Design, Development, Implementation, and Evaluation. Why ADDIE? Because the development stages are clear, systematic, effective, and efficient so that it is suitable for use as a digital library development.

Data collection

The instruments used in this development research are questionnaires and interviews. Questionnaires are a technique for collecting data which contains written statements and is submitted to media experts and material experts, as well as librarians and students in order to obtain responses and information needed by researchers. The questionnaires created are in the form of a needs identification questionnaire, a media expert questionnaire, a material expert questionnaire, and a librarian and student response questionnaire to the product that has been developed. While interviews are used to identify and see what needs are currently needed.

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Data Analysis Techniques

The data obtained from the research instrument are in the form of quantitative and qualitative data. The data analysis technique used in processing the data obtained in this study uses qualitative data analysis techniques, namely qualitative descriptive data analysis to process product review data. This data analysis technique is carried out to group information from qualitative data in the form of input, responses, criticisms and suggestions for improvement contained in the questionnaire. Furthermore, the results of the data analysis are examined as a reference in improving the products that have been developed. While quantitative data is analyzed as part of obtaining a picture of the resulting product. This development research analyzes data by describing and developing data that has been collected from the results of the development, the results of media feasibility, the responses of librarians and students in the trial design to obtain data from the media that has been developed

RESULTS AND DISCUSSION

Results

This research and development produced a product in the form of a Digital Library at SDN Bontoa, Tamalanrea District, Makassar City, which was developed using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluations). The steps in this ADDIE Model are:

Analysist

Needs analysis is the initial stage of the ADDIE model used in this study, so that researchers can find out the needs of students regarding the Digital Library as a basis for product development. This needs analysis was conducted on 30 students to provide an overview of the needs related to digital library products.

At this stage, namely identifying the needs of students with the aim that the results of the development of the Digital Library are right on target and in accordance with the needs of users in this case students and librarians. Identification of students was obtained from the results of interviews with the principal, homeroom teacher and librarian so far the school has had references in the form of printed books but teachers need more references in digital form so that they can be integrated in class and or in student independent learning as a learning resource. Another problem faced by the library, the room is not large enough to accommodate students who want to come to read books in the library and the activities carried out in the library are still manual so that they cause many risks such as the length of the book search process and the loss

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of books. therefore, it is necessary to build a digital library that is used to store books in digital form. Based on this, students need to be facilitated in the form of Digital Library media.

Table 1. Results of Student Needs Identification

No	Question	Number of Students Who Answered		
		Yes	Sometimes	No
1	Have you ever heard of Digital Library before?	5	25	0
2	Are you interested in using the Digital Library as a learning resource?	9	1	0
3	Do you prefer to study using media such as Digital Libraries?	28	2	0
4	In your opinion, can the Digital Library be used for independent learning at home?	29	1	0
5	Do you agree if certain subjects are presented digitally?	30	0	0
Amount		21	29	0

The scale used in this questionnaire is the Gutman scale which aims to obtain data from respondents that are clear with information on the questionnaire, namely yes = 2, sometimes = 1, and no = 0. The results of the needs identification questionnaire assessment table 4.1 data is seen above. Based on the results of the needs analysis, the answer YES with a score of 121, the answer SOMETIMES with a score of 29 and the answer NO with a score of 0.

From the results of the needs analysis, students at SDN Bontoa, Tamalanrea District, Makassar City need the development of a digital library. So that these results become a guideline for researchers in making the developed digital library.

Design

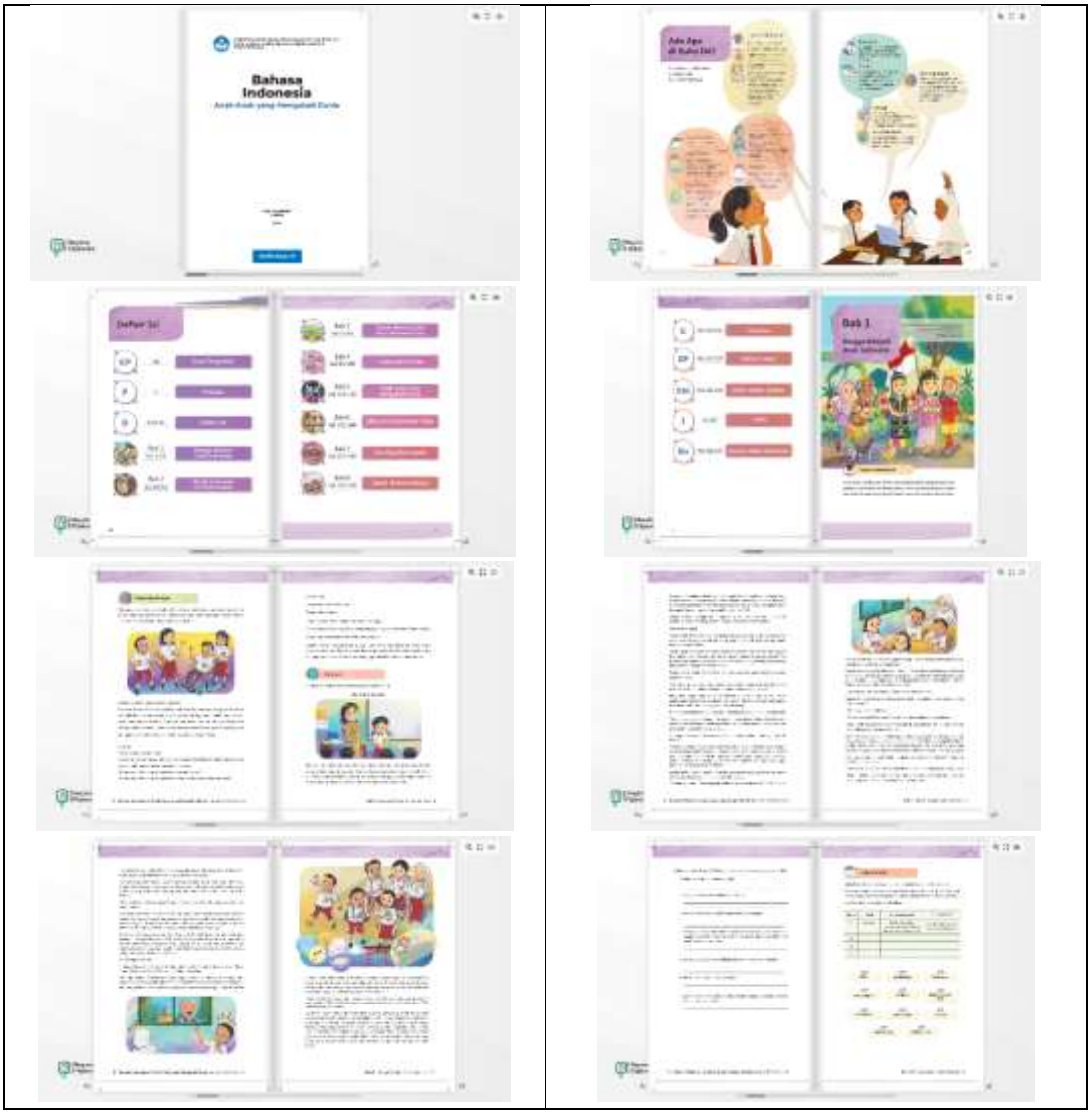
The Design Stage in the ADDIE Model is to design the Digital Library product that will be developed. In this second stage, it is focused on two steps of activity. First, the researcher chose this digital library to be created using Schils (School Integrated Library System).

The second activity is to determine the learning material based on the identification of

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student needs, then compile it and pour it into Heyzine Flipbooks which will be included in the Digital library.

The Merdeka curriculum book design is part of a digital library as a learning resource for students and a reference for teachers.



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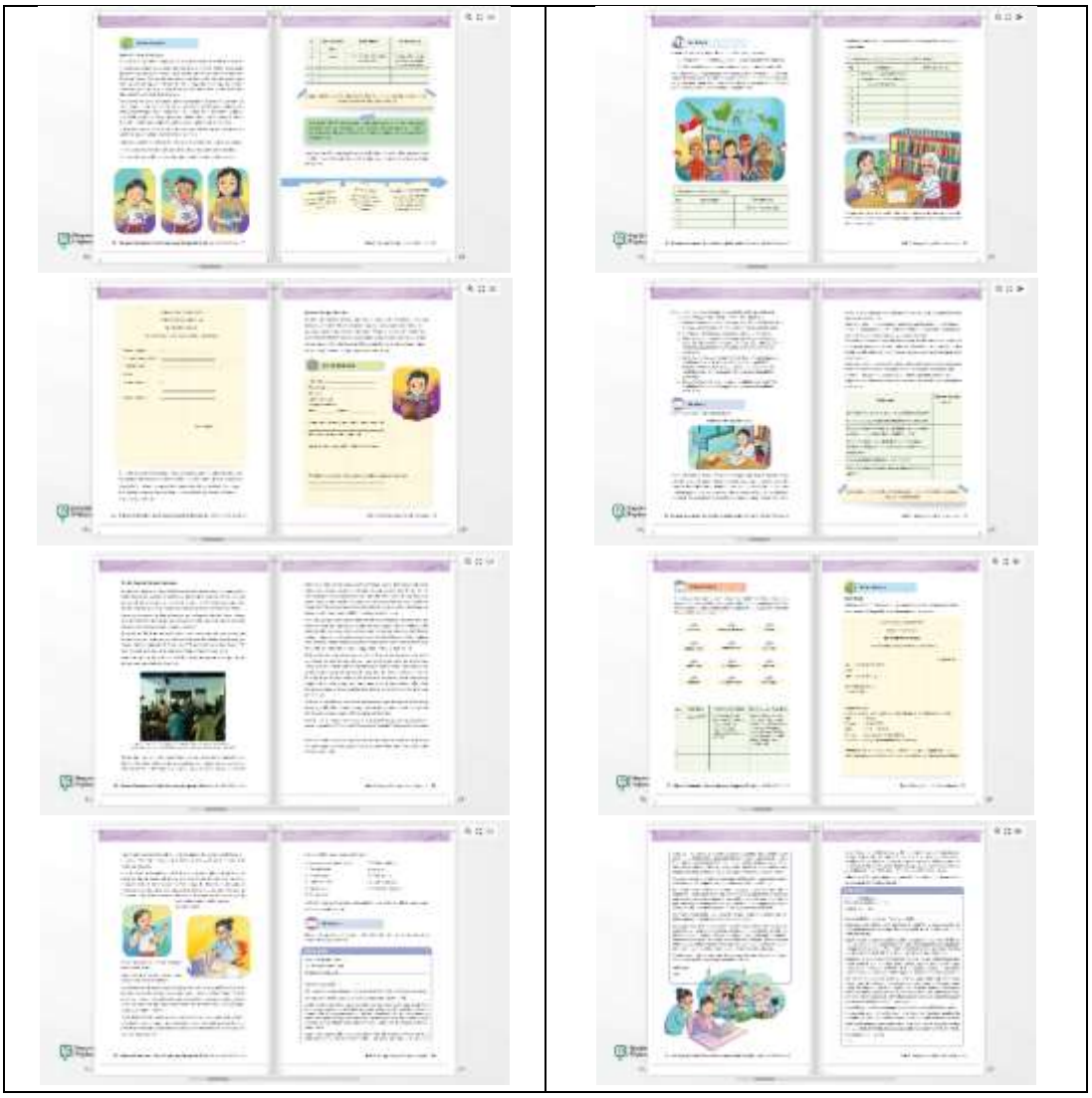


Figure 1. Book Design for the Independent Curriculum Version

DISCUSSION

This research is a type of digital library development research using the ADDIE development model with several stages including the Analysis, Design, Development, Implementation, and Evaluations stages. This development aims to produce a digital library to obtain appropriate and valid media so that it can be implemented in the learning process in the classroom or independent learning of students.

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The result of this research and development is to develop a digital library. The procedure for developing a digital library begins with the analysis stage by conducting a needs analysis. After conducting a needs analysis, the researcher determines a digital library product design as an additional reference for teachers and independent learning resources for students. The focus of this research is to produce a digital library.

At the stage of the development process that has been carried out, there are several supporting factors that are the background for the development of a digital library with the results of library products at Bontoa State Elementary School, namely researchers conducting a needs analysis survey through a questionnaire to identify student needs with learning conditions at that time being carried out offline in class. There are various alternative media that have been developed in the era of the development of science and technology as it is now according to Hamalik Arsyad, (2016:19) who stated that: "The use of learning media in the teaching and learning process can arouse motivation and stimulation of learning activities, and even bring psychological influences to students" Because of his interest in media systems that are able to present a combination of several components/objects. Digital library media is considered very suitable for delivering media because of its advantages visually.

As Abdillah (2010) electronic teaching materials are "A set of materials or lesson substances that are arranged in a coherent and systematic manner and display a complete figure of the competencies that students will master in learning activities packaged in interactive multimedia". Teaching materials are an important component in the implementation of the teaching and learning process. Based on a number of theories and the results of the needs analysis on the questionnaire for identifying student needs that support the foundation for developing a digital library with digital books in the independent curriculum version with heyzin flipbook.

The digital library that will be determined by researchers based on a needs analysis that will be the basis for developing a digital library. At the needs identification stage, respondents or students stated that loading text content, images and digital books of the Merdeka curriculum can help and understand learning and 30 respondents of grade VI students agreed on the digital library and also needed it during learning and independent learning of students. The results of the identification of student needs obtained based on the questionnaire questions aim to obtain data for the development of the identification of digital library development needs with the results, namely the results of the analysis of the answer Yes with a score of 121, the answer Sometimes with a score of 29, and the answer No with a score of 0 so that the results of the identification of these needs become a reference in developing digital library media products.

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The next stage is planning (Design) from the results of the planning process then designing the digital library to be developed. The development stage (Development) is the stage where media production, expert validation, and media revision are carried out. Experts are asked to assess the digital library that has been produced. The assessment of the digital library is carried out by filling out a material assessment questionnaire for material experts, and a media questionnaire for media experts. The average value given by the material validator is in the feasible/valid category and the material can be used with minor revisions with comments and suggestions and the average Media validator is in the feasible/valid category for use, the media can be used with minor revisions in the Digital Library Usage Guide at SDN Bontoa.

Next is the Implementation stage. After the digital library product is declared feasible and valid, the next process is the feasibility and validity test of the product. At this feasibility and validity test stage. the subjects of the trial were 30 students at SDN Bontoa class VI. The results of the feasibility and validity test of the digital library product made using Schils (School Integrated Library System) and heyzin flipbook were 93% in very good qualifications with the statement that it does not need to be revised, with the assessment aspect of the combination of the arrangement of writing, images, and digital books in the product being attractive and harmonious with a very feasible assessment, the instructions for use are clearly stated in the product with a very feasible assessment, the product can be used easily with a very feasible assessment. the words or terms used are consistent and easy to understand with a very valid assessment, the existence of digital books for each subject can be said to be very good for use in the learning process or independent learning of students.

The digital library developed by the researcher was assessed by the first Validator Lecturer (V1) Bhakti Prima Findiga Hermuttaqien, S.Pd., M.Pd. and the second Validator Lecturer (V2) Dr. Muhammad Nur Abdullah, M.Pd. This response obtained results with feasible and valid qualifications. and the response of the librarian developed by the researcher can be categorized as very good based on the results of the feasibility and validity test of the digital library product. Based on the results of the trial that has been carried out by the researcher on the digital library in class VI of SDN Bontoa, it can be stated as feasible and valid. The content of the digital library, namely digital books in the independent curriculum version, can also make it easier for educators to achieve learning outcomes and is very appropriate and easy to operate in the learning process in the classroom. In line with Hamalik's explanation (2002: 139) (Fajarini, 2018: 2) that: Teaching materials are an important part of the teaching and learning process which occupies a position that determines the success of teaching and learning related to the achievement of learning

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objectives and determining teaching and learning activities and also teaching materials need to be considered carefully.

The achievement of a proper and valid digital library can be used as an additional reference in helping the teaching and learning process in the classroom and independent learning of students so as to provide a good response for both librarians and students. There are several advantages of the digital library that has been developed, including: There are digital books, Easy to access, Simple and easy to access anytime and anywhere, interest in independent learning and motivation of students in learning. In developing digital library media, there are several obstacles faced by researchers, but the obstacles faced from the beginning of the development process until the completion of the digital library product can be resolved so that a digital library is produced for SDN Bontoa class VI students whose quality has been tested.

CONCLUSION

Based on the formulation of the problem and the results of the development of the digital library, the researcher can conclude that the digital library products implemented at SDN Bontoa, Tamalanrea District, Makassar City can be used as references in digital form so that they can be integrated in class and/or in students' independent learning as learning resources.

1. Digital Library Development Needs

   From the results of the needs analysis, students at SDN Bontoa, Tamalanrea District, Makassar City need the development of a digital library. So that these results become a guideline for researchers in making the digital library that is developed, seen from the results of the distribution of the Needs Analysis Questionnaire which shows that Based on the results of the needs analysis, the answer YES with a score of 121, the answer SOMETIMES with a score of 29, and the answer NO with a score of 0.

2. Level of Eligibility and Validity of Digital Libraries

   At the development stage in creating a digital library, the researcher conducted a feasibility test which was validated by media experts and material experts. Based on the validation results, this digital library showed results that were feasible and valid for use, then made revisions and conducted a feasibility test of the digital library based on the overall results being in good/feasible qualifications. The responses of students and librarians were also in very good qualifications. So the digital library can be said to be very feasible to be used as a learning resource.

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