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DEVELOPING A DIGITAL LITERACY MODULE TO ENHANCE ELEMENTARY SCHOOL STUDENTS' LEARNING MOTIVATION

Jaja Sudarjat [a)], Wawan Syahiril Anwar [a)], Yudhie Suchyadi [a*)], Rini Sri Indriani [a)], Muthia Khairunnisa P. Yusup [a)]

[a)]*Universitas Pakuan, Bogor, Indonesia*

[*)]*Corresponding Author: yudhie.suchyadi@unpak.ac.id*

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Abstract. The results of observations with several teachers at SD Islam Nurul Iman stated that students need stimulus so that students have adequate literacy skills. The purpose of the research is to develop digital literacy modules for elementary school students, test the feasibility of digital literacy modules, and determine the level of practicality of digital literacy modules applied in elementary school learning. The development research procedure uses the ADDIE (analyze, design, development, implementation and evaluation) model. The subjects of this study are students and classroom teachers of Nurul Iman Islamic Elementary School. The results of the study show that the module developed is in the form of a digital literacy module for elementary school students using the ADDIE model. The modules developed met the criteria were very valid with a percentage of 91.2% based on the assessment from the validators, the modules developed to students received a positive response and met the criteria very well with a percentage of 97%, while the results of the teacher's response received a positive response and met the very good criteria of 100% which can be used in learning.

Keywords: digital literacy; learning motivation

I. INTRODUCTION

Conventionally, the ability to read, write, listen and think can be called literacy. A literate person is a person who is able to read and write or is free from illiteracy. Literacy, which in English comes from the Latin litterat (letters) whose meaning involves mastering writing systems and the conventions that accompany them. Literacy is closely related to the term discourse proficiency. Literacy is broadly interpreted as language skills including the ability to listen, speak, read, and write, as well as thinking which is an element in literacy itself. Abidin (2015) stated that the literacy learning model is a learning model that prioritizes the use of language skills in the learning process. These language skills are related to context, culture, and media, the basic form of this literacy learning model is language skills which include reading skills, writing skills, speaking skills and listening skills. Based on the results of the Program for International Student Assessment (PISA) in 2015 (Literacy, 2018), Indonesia's reading/literacy rate is ranked 62 out of 70 countries with an average score of 397 which shows that the literacy level in Indonesia is relatively low.

Basically, fostering literacy in students is not an easy thing to do, it is necessary to have an environmental awareness approach that can facilitate the literacy process in students obtained through the learning process from time to time. In the modern era, technological advances in today's era are increasingly sophisticated. The use of technology that supports the learning process is also more advanced. Finally, we cannot only use conventional literacy, digital literacy is needed to make it easier for us as prospective educators to be able to introduce local culture to students thoroughly and easily be accepted by students.

Literacy mastery for teachers is part of the competency and plays a very important role in the era of the Industrial Revolution 4.0. Reading and writing literacy is the most basic literacy that must be mastered by a teacher, in order to master other basic literacies (Hardinata et al., 2021). Presidential Regulation No. 87 of 2017 concerning Strengthening Character Education states that teachers are required to be able to strengthen students' character through student literacy development activities (Suchyadi, Mirawati, et al., 2022). In developing students' writing skills, teachers ideally have adequate writing skills. The ability in the field of writing of teachers has an impact on the writing skills of students so that the ability of teachers to write produces students with good character and the ability to create (Suchyadi, Nurlela, et al., 2022). Reading has a very strong cultural influence on the development of student literacy. However, it is unfortunate that teachers' writing skills still do not meet expectations. Many teachers do not have writing skills and many teachers still think that writing is difficult (Gunawan et al., 2022). The low use of the internet in education is also the background to the lack of education on the use of digital technology, resulting in misuse of digital technology such as cyberbullying, hoaxes,

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pornography and violence (Nurohmah et al., 2022). This misuse is considered a problem in today's digital society due to the low culture of digital literacy. Several survey institutions have stated facts about the low culture of literacy in Indonesia. Research conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2016 on 61 countries under the name "The World's Most Literate Nations", showed that Indonesia was ranked 60th. Research data states that Indonesia's reading position is 0.001% out of 1,000 people, only 1 person has an interest in reading. Central Connecticut State University research in 2016 recorded that Indonesia's literacy was at the second lowest level out of 61 countries (Marwah et al., 2021). In 2019, the Ministry of Education and Culture compiled the Reading Literacy Activity Index (Alibaca) (Suchyadi & Nurjanah, 2022). The Alibaca index shows that nine provinces are in the medium category, 24 provinces are in the low category, and one province is very low. The average national Alibaca index is at 37.32%, which is considered low. The causes of low interest and reading habits include lack of access (Suchyadi & Indriani, 2022). In general, digital literacy is the ability or skill of users to utilize and apply information tools appropriately according to their use. Gislter, 1997 in (Riel & Christian, 2016) stated that digital literacy is the ability to use technology and information from digital devices effectively and efficiently in various contexts such as academics, careers and daily life. This makes students lose their cultural values that should be imbued and preserved. Literacy skills are very much needed in facing the demands of the 21st century. Because humans who have literacy skills will be able to compete in global life. Regarding the importance of literacy skills, it is not accompanied by reality. Literacy skills, especially children, are still inadequate. Children will be lazy when asked to read books, news, or other sources of knowledge. The results of the focus group discussion (FGD) with several elementary school teachers in Nurul Iman Islamic Primary School in February 2025 confirmed that children need stimulus or stimulation so that children have adequate literacy. The FGD also concluded that schools also have difficulty in facilitating children to develop their literacy skills. This is a note for us to answer the needs experienced at the school. Based on the analysis of needs in schools, an innovation is needed to develop literacy skills, namely by developing a module that can stimulate children to develop these abilities, namely the literacy module. One of the reasons researchers chose the literacy learning module is because the literacy learning module is a learning concept that helps teachers to be able to link lesson materials with real-world situations through interesting literature or reading. In addition, this literacy learning module can also make students more active and increase students' interest in reading so that later reading becomes a culture.

To overcome this problem, teachers must have creativity and the ability to work around it, without reducing the essence and quality of learning. To overcome limited access, teachers can download digital books, Teachers are trained to detect children's reading abilities, then design media and learning strategies to overcome them (Sunardi et al., 2022). Learning will be more meaningful. Students can easily grasp the material being taught. Teachers at school, to carry out digital literacy activities in the habit of accessing, searching for, utilizing information intelligently, carefully, and intelligently (Setyaningsih & Suchyadi, 2021). Teachers must have a high level of digital literacy, so that they can distinguish between true and false information to be informed to students. At school, teachers teach how to sort out the truth of information and instill character in students in utilizing digital technology, so that students can avoid the negative impacts that can be obtained if they are not wise in using the internet. In developing the process of creative thinking skills of teachers, a digital literacy model can be developed. Some problems that can be examined are whether the use of digital literacy can develop teachers' creative thinking skills?, how are teachers' process skills?, teacher understanding is evaluated after the development of a digital literacy model. From the review, it can be concluded that the goal to be achieved in this Activity is to strengthen digital literacy as an innovation of elementary school teachers. Another goal is to determine the ability of elementary school teachers in utilizing technology in their role as educators.

II. RESEARCH METHODS

The module was developed through research and development (R & D). The research and development method is a research method used to produce certain products, and test the effectiveness of the products developed (Sugiyono, 2017). The development model in this study is the ADDIE model. The ADDIE model is one of the research model designs used to develop learning products as a whole with simple and easy-to-learn steps (Asad, Razali, & Sherwani, 2014). The ADDIE model has 5 stages, namely: 1) analysis; 2) design; 3) development; 4) implementation; 5) evaluation. The population in this study were class teachers and students at Nurul Iman Islamic Elementary School in Bogor Regency, with the same characteristics and backgrounds in terms of policy, curriculum, livelihood, environmental and socio-cultural conditions.

The ADDIE Model research procedure has 5 stages, namely: the first stage is analyzing the needs needed for renewal or innovation in increasing student learning motivation and researchers analyze in Elementary Schools. After conducting a literature study and collecting materials, the next stage is to design a digital literacy module. Furthermore, the module is developed based on the design. So the next stage is to test the quality of the module assessed by the validator, the results of the validator's assessment are calculated whether they meet the predetermined criteria.

The next stage is to test the practicality of the digital literacy module for students and teachers, the results of student and teacher responses are used to determine whether the digital literacy module can be applied in learning. To determine the level of practicality of the digital literacy module, researchers use a questionnaire to determine the responses of teachers and students. The last stage is evaluation, where in this stage it is used as a reference to perfect the product being developed.

III. RESULT AND DISCUSSION

The product developed is a digital literacy module for elementary school students. This module product contains an

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optimized product in the form of a digital literacy module development product.

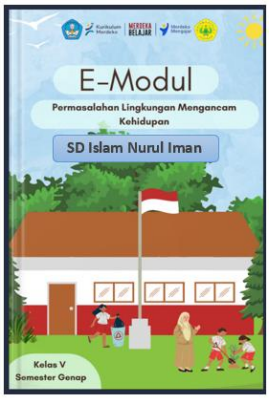

Figure 1. Cover module

Figure 2. Features on the module

Figure 3. Material in the module.

The digital literacy module feasibility process is carried out by design experts, media experts, and material experts. The results are in the form of suggestions, comments and input that can be used as a basis for analyzing and revising the developed module and as a basis for conducting product trials on students. To obtain a feasible module, it must be validated by a validator through a validation sheet that has been prepared. The validators who assess are 3 validators according to their fields of expertise, The presentation results obtained from the three experts, namely learning experts, literacy experts and media experts, are then totaled to determine the overall presentation. The goal is to determine the feasibility of the digital literacy module for elementary school students from the assessment of the three experts. Here is the combined calculation of the three experts:

Table 1. Combined presentation of the three experts

Expert Assessment	Results Validator	Percentage
Learning expert	85	89,4%
Literacy expert	87	91,5%
Media expert	88	92,7%
Total		273,7%
Combined Percentage Results		91,2%

Based on the assessment of the three validators where the average assessment of the three obtained a score of 276% with a combined percentage result of 91.2% so that from these results it can be concluded that the literacy module is in the very feasible category. In addition to having eligibility criteria, the digital literacy module developed must meet practical criteria. In the sense that the module developed can be applied in learning. A digital literacy module is said to be practical if it meets positive responses from students and teachers. The following is a recap of student responses and teacher responses. From the results of student responses, an average criterion of 97% gave a positive response to the digital literacy module, and met the criteria of "very good".

In this case, researchers found a problem, namely that the level of reading or literacy in Indonesia is relatively low. This is also reinforced by observations that confirm that children need stimulation in order to have adequate literacy. With these problems, it can provide problem-solving ideas for researchers, namely by developing an attractive digital literacy module for elementary school students to support the learning process so that students and understand and can improve their literacy. This development uses the ADDIE model which includes five stages, namely: analyze, design, development, implementation and evaluate. The potential possessed by SD Islam Nurul Iman is having an LCD projector and learning that combines blending learning. Therefore, researchers developed a digital literacy module for elementary school students. This is also reinforced by the opinion of (Almuharomah et al., 2019) that the existence of manual modules is less in demand, then with the existence of digital modules it can provide significant results to develop students' literacy skills. This study is also reinforced by previous research which states that learning should not stop at achieving basic skills, but instead must be designed to achieve high order competencies (Rudyanto, 2014). Research by Yulaika et al., (2020) explains that students easily understand the material presented in electronic modules based on digital flipbooks with supporting features in them so that student learning outcomes increase. Jayul (2020) states that education today must be able to utilize technology in the learning process. With technology, learning activities will be

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more effective and what is conveyed is easy for students to understand.

The feasibility of the digital literacy module can be assessed from its validity. The validity of the digital literacy module can be determined from the results of the assessment of the validators, the validators involved in this validation process are 3 experts, namely learning experts, literacy experts and media experts. Validation is carried out to assess whether the digital literacy module is suitable for use in the learning process and to find out comments and improvements from the validators so that later researchers can make improvements and perfect the digital literacy module for elementary school students. The results of the validation of the three experts are as follows:

Based on the results of the validation experts obtained, it can produce a digital literacy module for elementary school students with the category "very valid". The results of this study are also supported by research that developed a digital literacy module based on articulate study'13 which stated that the developed module was "very feasible" and "very interesting" to be used as an interactive digital module during learning (Irwandani et al., 2017). This is also reinforced by research (Violadini & Mustika, 2021) that the E-module based on the inquiry method developed has very good quality and is feasible so that it can be used as a tool to assist students in the learning process. This is also reinforced by research that developed a digital module that the developed module is valid and does not need revision (Khasanah & Nurmawati, 2021). The STEM-based digital learning module developed is very valid with a value of 92.44% and is practical at 81.70% to be used as an alternative teaching material that can be used in learning Operating Systems (Suryani et al., 2020). QR-Code based e-module to train students' digital literacy skills on environmental change material that is valid in terms of the validity of the e-module content, presentation and language with a validity percentage of 93.56% with a very feasible category (Pratiwi, 2022). The practicality of the digital literacy module was also assessed based on student response questionnaires and teacher response questionnaires after a product trial. The trial was carried out to determine how practical the developed digital literacy module was.

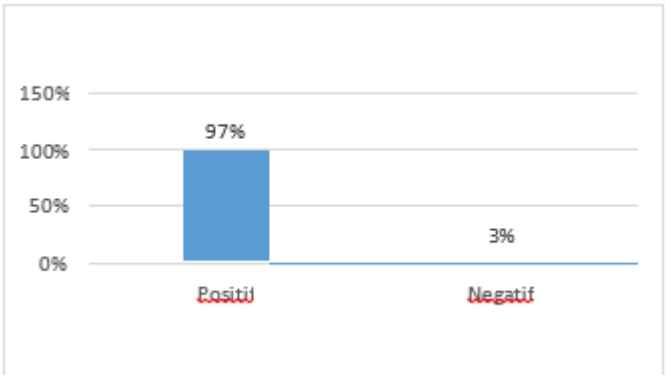

Figure 4. Diagram of student response results

From the summary diagram of the responses in Figure 5 given by the students above to the practicality trial of the module, the percentage of student responses was 97% which was categorized as "very good".

Based on the criteria of practicality reviewed from student responses, it can increase student learning motivation, namely the digital literacy module can improve literacy skills and student learning motivation. The digital literacy module can increase student learning motivation. The digital literacy module can encourage students, especially the millennial generation, to continue to maintain its sustainability so that it is not swallowed up by time. This is in line with the research of Sari, N., S., Farida, N., and Rahmawati (2020) who developed a discovery learning-based module to train students' literacy categorized as practical to apply. Learning must be able to provide the widest possible space for students to build knowledge and experience from basic skills to high levels so that students' creativity and literacy skills can develop, this is very relevant considering that real-world problems are generally not simple and convergent, but complex and divergent, even unexpected (Rudyanto, 2015). The same opinion was also conveyed by (Atmaja & Murtadho, 2021) The practical tested e-module is to support teachers and students in practicing online teaching and learning activities easily

IV. CONCLUSIONS

The results of the study showed that the modules developed met the criteria of being very feasible based on the validator's assessment with a percentage of 91.2%, the modules developed met the practical criteria used in learning based on student responses with a percentage of 97%. The modules developed can be used as teaching materials for students in developing learning motivation as well as getting to know so that it remains sustainable

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