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Development of Local Wisdom Learning Through Pancasila Education E-modules for Elementary School Students

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ABSTRACT

The purpose of this study is to introduce local wisdom to participants who were raised through Pancasila Education learning. This study uses the R&D method with the ADDIE model. The ADDIE model consists of five stages, namely analysis, design, development, implementation, and evaluation, to develop a Pancasila Education e-module oriented to local wisdom. The analysis techniques used are data redaction, reliability testing, and validity testing to test the questionnaire on local wisdom in the module. The feasibility test of the Pancasila Education e-module product-oriented to local wisdom uses material experts, language experts, and e-module presentation experts. Interviews and observations are used to analyze the needs of educators and students. Students often use teaching modules, and with the development of teaching through e-modules, researchers can introduce local wisdom to students. The results of this study are that the Pancasila Education e-module has characteristics that include attractive images on the LKPD display and teaching materials, diverse character animations, learning that is in accordance with the learning stages, and teaching materials that are adapted to local wisdom to increase environmental awareness and introduce local wisdom around students. The learning outcomes achieved by students have also increased. These findings indicate the need for the development of e-modules that are oriented toward local wisdom to foster environmental awareness and introduce local wisdom around students and at school. In conclusion, the development of this e-module is very important so that students are more active in the learning process and create innovative and sustainable educators in Elementary Schools.

Keywords: ADDIE model, e-module, local wisdom, R&D

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INTRODUCTION

Education is a transformative experience that shapes an individual's mindset and character. In the Fourth Industrial Revolution era, the education system is expected to cultivate students who think critically, creatively, and innovatively in problem-solving while also promoting communication and collaboration (Yamin & Syahrir, 2020). As cited in Specia and Osman (2015), Bell Hooks describes education as a practice of freedom that fosters an engaging teaching and learning process for both educators and students. However, many students struggle to participate effectively in their learning experiences, leading to less conducive classroom atmospheres due to low motivation, discomfort, inadequate communication skills, mismatched learning styles, and unclear assessments (Anwar, 2017). Therefore, educators must create a conducive learning environment.

Educators play a crucial role in learning and must possess quality teaching skills to nurture a competitive and reputable generation (Murniarti, 2021). As educational policies evolve, teachers must adapt accordingly. One alternative for facilitating independent learning is to utilize e-modules tailored to students' environments. Prastowo (2014) defines e-modules as teaching materials created with accessible language for students, enabling self-directed learning with minimal educator assistance. Anwar (2017) emphasizes that e-learning modules should be systematically designed, combining content, methods, and evaluations to achieve desired competencies. The learning process must extend beyond theoretical understanding, incorporating the students' environment.

Interviews with educators at SD N 1 Wonoboyo reveal a lack of familiarity and confusion in developing e-modules that adapt centrally provided materials to student needs. The development of e-modules must align with the curriculum, student requirements, teaching methods, material quality, and evaluation methods. Consequently, many schools rely solely on government-provided textbooks, which may not suit students' characteristics or environmental contexts (Adnyana & Yudaparmita, 2023). Addressing these educational challenges is essential for ensuring a smooth learning process and facilitating students' comprehension of the material. In the independent learning program, students should think freely and independently when designing e-modules that reflect their characteristics. Educators have the autonomy to select curriculum elements for e-learning modules based on student needs, fostering creativity and critical thinking (Pandapotan, 2018). Culture-based learning models prioritize student work across diverse cultural backgrounds (Supriyadi, 2011). Anwar (2017) argue that this model is vital as it shapes cultural character and national values in elementary education.

PROBLEM STATEMENT

To implement the independent learning program, teachers must design e-modules that challenge students' critical and creative thinking. The quality of e-modules can be assessed

through several aspects: content suitability, language appropriateness, presentation clarity, and graphic quality (Specia & Osman, 2015). By considering these aspects, educators can create effective e-modules that enhance students' motivation and understanding. Research indicates a need to increase environmental awareness through school learning. The lack of local wisdom-based e-modules inspires this study, which aims to develop modules using three learning models: PBL, PJBL, and Discovery Learning.

RESEARCH QUESTION

This research aims to answer the following questions based on the background and literature review. What is the development procedure for Pancasila Education E-modules? What is the validity of Pancasila Education E-modules? What is the impact of using Pancasila Education E-modules on student learning outcomes?

METHOD

According to Amirhud et al. (2021), the orientation of this Research and Development (RnD) approach is to produce products in the form of learning tools for students. This research was developed using the R&D method with the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) development model, according to Sasongko and Purwandari (2023).

RESULTS AND DISCUSSION

Results

Analysis

The interview results revealed that educators had not yet developed electronic learning modules that integrate local wisdom. Students' environmental awareness was still largely influenced by habits at home, and existing electronic learning modules were not yet adapted to the local wisdom surrounding the students. The observations showed that students were less active in learning, educators had not communicated the learning objectives during the opening of lessons, and students were still confused about the local wisdom around them, which impacted their environmental awareness. Moreover, students still hesitated to ask educators questions during the learning process.

Design

The researcher designed the e-module cover using Canva, utilizing the platform's various features. Once the cover was complete, the researcher organized the contents of the e-module. These contents included the validator's name page, foreword, introduction, character descriptions, a concept map of learning outcomes, usage instructions, table of

contents, teaching materials, and the LKPD. In developing the e-module, the researcher incorporated stages from Problem-Based Learning (PBL), Project-Based Learning (PJBL), and Discovery Learning to guide the problem-solving process. Contextual problems were presented to engage students, with the expectation that, by relating the problems to real-life situations, students would better grasp the core issues presented by the teacher. The design of the local wisdom-oriented e-module follows these principles.

Development

In this development stage, the researcher carried out expert validation to obtain the feasibility of the product to be applied to class V students. The researcher used material validation experts, discussion experts, and e-module presentation experts to obtain this feasibility. This stage is carried out before implementing the e-module for class V students. Material field experts obtained a validation questionnaire calculation of 87.34%, declared unrevised/suitable for application. Experts in the language sector obtained a validation questionnaire calculation of 80% without revision, which is feasible to apply. Experts in e-module presentation obtained a questionnaire calculation of 92%, which was declared not revised / suitable for implementation. Expert calculations show that the Pancasila Education e-module, oriented towards local wisdom, can be implemented.

Implementation

Suggestions and input provided by validation experts are corrected first. After the revision, the researcher implemented the e-module for class V students. The implementation process was carried out in 2 meetings. The first meeting applies the material in the e-module and works on the LKPD in the e-module. Students work on all sub-chapters of the local wisdom-oriented LKPD. After implementation, the teacher will give evaluation questions to determine students' understanding of the material and provide questionnaires to determine student responses. This table shows the grades of class V students before the implementation of the e-module. The results of these scores showed that several students were not good.

Table 1 shows the grades of class V students after implementing the e-module. The resulting value is included in the

Table 1
Results of scores before implementing the e-module

Value Criteria	Amount	Percentage
60	1	4%
63	1	4%
67	1	4%
68	4	14%
70	1	4%
74	3	11%
75	1	4%
77	2	7%
78	5	18%
79	1	4%
80	4	14 %
81	3	11 %
82	1	4 %

good category. The improvements before and after were good. These results prove that implementing local wisdom-oriented e-modules can improve student learning outcomes. Understanding of the material "Me and the Environment Around Me" in the Pancasila Education subject is quite good.

Evaluation

Evaluation is the final stage carried out to provide value to products that have been validated and tested. A formative evaluation form is used at this stage, and a student response questionnaire is filled out. The response questionnaire consists of 10 questions. The response questionnaire given to students consisted of 10 questions. These questions include the appearance of the e-module and the learning experienced by students. Each student fills out one questionnaire, after which the results obtained are tested for validity and reliability to determine the level of validity and reliability of the questionnaire. The following are the results of the validity and reliability test of the questionnaire:

Table 2
Validity test and reliability test

School name	Validity test	Reliability Test
SD N 1 Wonoboyo	Valid 10	0,81

Table 2 shows the validity tests for the limited and broad tests are said to be valid because they meet the calculated indicator, which is greater than the t table. The questionnaire given was said to be reliable/reliable because Cronbach's Alpha results were greater than the significance level of 0.6. With good questionnaire test results, students' responses to the application of e-modules are very good.

Discussion

The Pancasila Education e-module features attractive images that enhance teaching materials and LKPD. Created using Canva, these images stimulate curiosity, concentration, and interest in learning (Fajri et al., 2022). They significantly influence learning outcomes by engaging students and helping them understand the material (Adnyana & Yudaparmita, 2023; Efend, 2021). Animated images, in particular, are effective learning tools (Prilosadoso et al., 2021). The e-module's animated characters enhance engagement, especially for fifth-grade students, and reduce reading monotony (Fitri & Ardipal, 2021). Integrating animation encourages student involvement, boosting interest and positively influencing learning outcomes (Annisya & Baadilla, 2022). Clear learning stages help educators effectively guide the learning process. The LKPD aligns with PBL, PJBL, and Discovery learning models, facilitating learning even without memorization (Abarang & Delviany, 2021).

Incorporating local wisdom helps convey core content effectively, enriching the educational experience and fostering character education (Nurafni et al., 2020). Contextual learning using local wisdom heightens environmental awareness and aligns with current curricula, promoting effective teaching (Kormasela et al., 2020). The feasibility of the Pancasila Education e-module was evaluated by three experts holding doctoral degrees. The results of the validation tests showed that the material expert gave a score of 87.34%, the language expert gave 80%, and the e-module presentation expert gave 92%. These scores indicate that the e-module is suitable for use without the need for revision. This validation confirms that the e-module meets the established indicators and is appropriate for educators and fifth-grade students in elementary schools. Additionally, the e-module has been aligned with the current independent curriculum. The effectiveness of the Pancasila Education e-module is oriented towards local wisdom.

The effectiveness of the Pancasila Education e-module oriented to local wisdom is evident from the comparison of student learning outcomes before and after its implementation. Initially, scores from tests consisting of 10 multiple-choice and five essay questions, based on the topic "My Environment," were below the standard completion score, ranging from 60 to 82. After using the e-module, scores improved to 80–90, exceeding the standard completion score. In addition to better academic performance, students demonstrated the ability to express opinions and suggest ways to maintain environmental awareness and protect their surroundings.

CONCLUSION

The Pancasila Education e-module oriented towards local wisdom features attractive images in the LKPD and teaching materials, animations of various characters, learning content aligned with stages, and teaching materials adapted to local wisdom to promote environmental awareness. This product enhances students' environmental awareness and has been evaluated by several experts. Material experts rated it 87.34%, linguistic experts 80%, and e-module presentation experts 92%, declaring it suitable for use without revision. Learning outcomes improved significantly after implementing the e-module, with students demonstrating a notable difference in performance and the ability to express opinions on environmental awareness.

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