

## **Innovative Learning of Fiction Writing through an E-Module Integrating Local Wisdom “Andum Alpukat”**

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### **Abstract**

The use of E-Modules is not new for educators; however, there remains a limited number of studies that specifically develop Flipbook-based interactive modules integrating local cultural values to enhance elementary students' fiction writing skills. This study aims to evaluate the feasibility of the interactive E-Module “Andum Alpukat” as a learning medium, employing a research and development (R&D) design that combines qualitative and quantitative approaches. The development process involved validation by material experts, module design experts, peer reviewers, and trials conducted individually, in small groups, and in large groups with fifth-grade students at SD Negeri Pulosari 1 Bareng Jombang. The findings reveal that the module received a feasibility score of 75% from material experts, 93.75% from design experts, 97.5% from peer reviewers, and 89.99% based on student responses. These results indicate that the “Andum Alpukat” interactive E-Module is both feasible and effective in improving students' fiction writing skills. The study concludes that a modified Flipbook aligned with students' learning needs can produce a high-quality and engaging instructional medium. The implications of this study suggest that similar modules have strong potential for broader implementation within Merdeka Curriculum-oriented classrooms and for fostering culturally grounded creativity in fiction writing to strengthen meaningful learning experiences.

**Keywords:** Fiction writing; Interactive module; Local wisdom; Andum Alpukat

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## **INTRODUCTION**

The rapid advancement of technology has transformed the paradigm of education from the use of conventional modules to digital-based learning modules. This technological development contributes significantly to the field of education while fostering innovation in teaching and learning processes (Fatmawati et al., 2025; Mahmudiyah & Rachmadyanti, 2021). Educators who are proficient in information and communication technology possess a crucial foundation for developing learning modules and addressing instructional challenges.

The integration of technology in education serves as a solution to various problems encountered in the learning process. This is evident through the utilization of technological devices such as laptops and mobile gadgets (Robbi'atna & Subrata, n.d.). Education is a key factor that determines the quality of human life, as it plays an essential role in shaping individuals who are knowledgeable, possess good character, and have practical skills beneficial to their surroundings (Fatmawati et al., 2025).

Education must be regarded as a fundamental need, equal in importance to other basic human necessities. In the teaching process, the quality of learning outcomes is influenced by the teacher's ability to apply appropriate strategies, including the effective use of engaging and relevant learning modules (Mahmudiyah & Rachmadyanti, 2021). A module, in essence, serves as a vital component of instructional materials within the educational system.

Fiction writing is a learning activity oriented toward the ability to organize thoughts clearly, precisely, and coherently. This activity requires abstract and imaginative thinking skills, which often pose challenges for students who are still in certain stages of cognitive development. According to Wardhani (2014), fiction writing as an abstract object is difficult to comprehend for students who are still in the concrete operational stage. Meanwhile, elementary school students, who have begun to enter the stage of formal thinking, require a contextual learning approach. Therefore, teachers are expected to connect fiction writing activities with students' daily experiences through the use of interactive modules (Sari, 2021).

Fiction writing instruction at the elementary level is also expected to strengthen students' rediscovery ability, namely the ability to find appropriate solutions based on problems encountered in previous learning experiences (Sari, 2021). This process necessitates a connection between prior learning experiences and new concepts being introduced, in order to create a meaningful learning experience (Supriyono, 2018).

Meaningful learning emphasizes that students should not only acquire knowledge but also practice, internalize, and understand how to learn and interact with others. Therefore, to make fiction writing instruction more meaningful, it is necessary to develop learning modules that integrate students' experiences, values, and real-life contexts.

An interactive module serves as a learning medium that assists students in understanding and mastering concepts within the fiction writing learning model (Indartiningsih et al., 2023; Azizah, 2022). This aligns with the statement of Permansasah and Murwaningsih (2018), who explain that instructional media are tools that can be perceived through sight and hearing, aiming to help teachers conduct learning more effectively and efficiently.

In comprehending the concept of fiction writing, students need to be engaged in a series of real, logical, and contextual activities. Therefore, learning aids are essential in the teaching of fiction writing to bridge students' understanding of abstract concepts. The presence of an interactive module for fiction writing can provide meaningful and enjoyable learning experiences that align with students' cognitive development levels (Indartiningsih et al., 2023). Furthermore, a fiction writing teaching aid can be defined as a set of concrete objects designed and organized to help students internalize concepts and principles in the writing process. Through the use of visual aids and interactive modules, abstract concepts in fiction writing can be represented in tangible models and real-world applications, making it easier for students to comprehend and apply their writing skills effectively.

In writing instruction, the Merdeka Curriculum encourages students to write based on their personal experiences, observations, and reflections on their surroundings. This approach aligns with the principles of project-based learning and thematic learning, emphasizing the integration of cognitive, affective, and psychomotor aspects. The Merdeka Curriculum focuses on students' active participation in the learning process, positioning learners as the main agents of their own learning (Wulan et al., 2022).

The Indonesian Language subject holds a strategic role within the curriculum, aiming to develop both receptive skills listening and reading and productive skills writing and speaking which are closely linked to creative thinking and literary appreciation (Ekawati et al., 2025). Consequently, writing is no longer viewed as a mechanical

activity, but rather as a process of thinking, creating, and expressing oneself meaningfully. As stated by Qadaria et al. (2023), writing is an essential component of language proficiency, vital for conveying ideas, thoughts, and emotions through both fictional and non-fictional texts.

Writing fictional stories integrates linguistic competence, creative thinking, and narrative structuring skills. In elementary schools, fiction writing includes creating short stories, fables, or imaginative tales that depict not only human experiences but also objects and natural phenomena (Atmojo, 2020). To write creatively, students must be trained to generate ideas from various sources such as personal experiences, observations, and readings, including technology. Technology plays a significant role as a supportive tool in teaching fiction writing. When used wisely, technology can provide optimal benefits in education, tailored to learners' specific needs (Anggraeni et al., 2025). In the midst of globalization and rapid digital transformation, primary education faces the challenge of cultivating 21st-century skills among students from an early age. Competencies such as digital literacy, critical thinking, collaboration, and creativity must be developed through relevant and contextual learning approaches (Juni Agus Simaremare & Emelda Thesalonika, 2022). In this context, the use of interactive e-modules has proven effective in enhancing students' motivation, engagement, and learning outcomes (Zhang et al., 2021; Huang et al., 2023).

Learning aids play a crucial role in the process of teaching fiction writing. The presence of interactive modules helps students gain meaningful and enjoyable learning experiences. An interactive module functions as a set of concrete tools designed to instill abstract concepts or principles of fiction writing. Through visualization and interactivity, abstract ideas can be transformed into concrete forms, making them easier for students to comprehend. Moreover, interactive modules allow teachers to present objects that are otherwise difficult to access directly either because of their size or classroom limitations. Thus, the use of interactive modules can significantly enhance the effectiveness of learning and improve students' learning outcomes.

Conceptually, a module is a learning device that integrates various learning resources and educational system components to achieve instructional objectives (Inanna et al., 2021). It acts as a communication medium between teachers and students that systematically delivers learning messages. In this research, the developed module is a digital-based e-module titled "Andum Alpukat", which aims to improve elementary school students' fiction writing skills (Ayurini & Mariana, 2025). Several previous studies have examined the development of e-modules and digital media in Indonesian language learning, including fiction writing. For example, the study by Wahyuni and Pratiwi (2021) showed that an interactive Flip PDF-based e-module could enhance students' motivation and understanding in narrative writing; however, it did not incorporate elements of local wisdom that could strengthen contextual relevance for elementary students.

Another study by Nurhayati et al. (2022) successfully developed a multimedia-based e-module for short story writing, but its design was limited to text and images without interactive features that allow students to explore the writing process step by step. In addition, Putri and Kurniasari (2023) found that digital e-modules can improve students' creative writing skills, yet the study did not include multi-level trials (individual, small group, and large group), resulting in less comprehensive feasibility validation. In contrast to previous studies, the present research introduces the interactive e-module "*Andum Alpukat*", which not only utilizes technology and Flipbook-based design but also integrates local cultural values and undergoes a complete validation process by material experts, design experts, peer reviewers, and various stages of student trials, thereby producing a more contextual, interactive, and empirically feasible learning medium.

The “Andum Alpukat” e-module is designed as an educational innovation that combines technology with local wisdom. Through this module, students not only learn to write creatively but also internalize cultural values embedded in the local story of Andum Alpukat. The main benefits of developing this e-module include: (1) providing new innovation in fiction writing instruction at the elementary level; (2) assisting teachers in easily designing and developing digital teaching materials; and (3) enhancing students’ motivation, creativity, and fiction writing skills through a contextual and engaging learning approach.

## RESEARCH METHOD

This research and development study employed a mixed-method approach, integrating both qualitative and quantitative techniques to obtain a comprehensive understanding of the development and feasibility of the “Andum Alpukat” interactive e-module. The mixed-method approach follows the logic of triangulation described by Pratiwi and Meilani (2018), in which findings from one method enrich and validate those from the other. In this study, quantitative data included expert validation scores, peer-review assessments, student response scores, and learning outcome results. Meanwhile, qualitative data were collected through classroom observations and open-ended interviews with teachers and students. These data sources were triangulated to compare numerical trends with contextual insights, thereby strengthening the overall interpretation of findings. the ADDIE model can be utilized as a framework that guides the learning process to ensure it is well-structured, effective, and efficient.

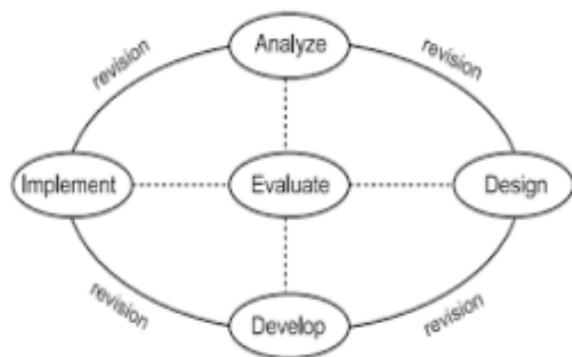


Figure 1 ADDIE Development Model

This study involved 40 fifth-grade students at SD Negeri Pulosari 1 Bareng, Jombang, aged 10–11 years, with a relatively balanced gender distribution. Most students were familiar with using mobile devices for learning, although they had limited prior experience with structured interactive e-modules. This context guided the development of an instructional product that aligned with their characteristics and supported the Merdeka Curriculum implemented in the school.

The e-module was developed using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation), chosen for its systematic structure and flexibility in adapting to various instructional development needs (Rachmadyanti et al., 2025; Risal et al., 2022). Each stage was carried out sequentially, ensuring that the resulting product was effective, feasible, and aligned with instructional goals.

### Quantitative Analysis

Quantitative data were analyzed using descriptive statistical percentages. Raw validation scores were converted into percentages using the percentage formula. These

percentages were then matched with feasibility criteria adapted from Fatirul, Noor, and Achmad (2018):

Table 1. Module Feasibility Criteria

No	Interval	Classification
1	84% – 100%	Highly Feasible
2	68% – 83%	Feasible
3	52% – 67%	Fairly Feasible
4	36% – 51%	Less Feasible
5	20% – 35%	Not Feasible

The e-module was considered feasible for instructional use if the overall feasibility score reached at least 80%. Students' responses were analyzed using SPSS version 19 and categorized based on a normal distribution curve (Very High, High, Moderate, Low, Very Low). These categories helped determine the level of student acceptance and engagement with the interactive e-module.

### Qualitative Analysis

Qualitative data from observations and interviews were analyzed through data reduction, coding, and thematic categorization. Open-ended comments were grouped into themes such as usability, design quality, emotional engagement, and learning support. These themes informed revisions to the e-module, particularly in terms of interactivity, visual design, and accessibility. Triangulation was performed by comparing quantitative outcomes (e.g., percentage scores and response categories) with qualitative insights (e.g., perceived benefits and challenges), ensuring that interpretation and product revisions were grounded in strong, multidimensional evidence.

Furthermore, students' responses toward the e-module were analyzed using quantitative data processed through SPSS version 19. The data were evaluated using a five-point Likert scale, categorized according to a normal distribution curve.

Table 2. Students' Response Criteria

Category	Score Range
Very High (VH)	$S > (Mi + 1.5 SDi)$
High (H)	$(Mi + 0.5 SDi) < S \leq (Mi + 1.5 SDi)$
Moderate (M)	$(Mi - 0.5 SDi) < S \leq (Mi + 0.5 SDi)$
Low (L)	$(Mi - 1.5 SDi) < S \leq (Mi - 0.5 SDi)$
Very Low (VL)	$S \leq (Mi - 1.5 SDi)$

If the students' response scores fall into the Very High (VH) category, the developed interactive e-module is considered to have received positive feedback and is effective in enhancing students' fiction writing skills.

## RESULTS AND DISCUSSION

### Result

The interactive module developed in this study is an E-Module produced through a series of development and feasibility testing processes. The E-Module was designed using the Flipbook to create a visually appealing, interactive, and user-friendly learning tool for students.

The development of this interactive module was based on a modified Research and Development (R&D) model, which was adapted into six systematic stages, including: (1) identifying learning potentials and problems, (2) collecting research data, (3) designing the prototype of the interactive module, (4) validating and testing the module's feasibility, (5) revising or refining the module based on validation results, and (6)

conducting a trial implementation before integrating the module into the actual learning process.

### **Problem Identification**

Based on observations conducted at SDN Pulosari 1 and interviews with the fiction writing teacher, the researcher identified several initial findings regarding the learning process at the school. First, the learning activities at SDN Pulosari 1 Sidoarjo were still dominated by a passive learning model, where students acted more as objects of instruction rather than active participants in the learning process. This condition occurred because teachers tended to employ conventional teaching methods, focusing primarily on lecturing without considering classroom dynamics or interactive strategies. Consequently, students only listened and took notes without engaging actively in learning.

Second, the use of traditional printed modules contributed to student boredom and low motivation during learning activities. To address these issues, the researcher formulated a solution by leveraging digital technology potential through the development of an interactive e-module titled "Andum Alpukat" as a supporting medium in fiction writing instruction. It is expected that this interactive e-module will enable students to learn fiction writing more easily and enjoyably, thereby enhancing their motivation, engagement, and overall response toward creative writing activities.

### **Data Collection**

At this stage, the researcher conducted activities aimed at collecting relevant data and reference materials to support the development process of the interactive e-module "Andum Alpukat." The collected data consisted of student worksheets (LKS) and textbooks containing materials on fiction writing, as well as the curriculum documents used to elaborate the Learning Outcomes (Capaian Pembelajaran) that served as the foundation for the module content. In addition, the researcher examined several examples of other interactive modules to serve as comparative references and design inspiration in creating the structure and layout of the developed e-module.

### **Product Design**

The product design phase in developing the interactive e-module "Andum Alpukat" for fiction writing can be seen at <https://heyzine.com/flip-book/71affc600f.html>. The design phase consists of three main phases: pre-production, production, and post-production. (1) The pre-production phase includes activities such as preparing content, designing the module layout, and creating visual designs. (2) The production phase involves using a flipbook as the primary platform for developing the interactive module. During this phase, all components prepared in the pre-production phase are integrated into a cohesive product. This integration process utilizes the flipbook to connect visual and textual elements, creating an interactive and digitally accessible module. (3) The post-production phase focuses on refinement, design revision, and interface testing to ensure that the module is visually appealing, functional, and aligned with learning needs.

### **Design Validation**

The design validation stage is a crucial process in developing the interactive e-module "Andum Alpukat" for the subject of fiction writing. This stage aims to ensure the feasibility, quality, and appropriateness of the product before its implementation in the learning process. The feasibility assessment focused on two main aspects: content validation and module validation.

In this study, the validation process was carried out by subject matter experts and module design experts who possess relevant competencies in their respective fields. The completed e-module design was submitted to these experts for evaluation, feedback, and

suggestions for improvement regarding both the content and visual presentation. This process ensured that the developed e-module was not only valid in terms of material accuracy but also engaging and suitable for elementary school learners. The results of the content validation test are presented in Table 3.

Table 3. Results of Content Validation Test

No	Criteria	Score (%)	Category
1	Content completeness	75	Feasible
2	Curriculum alignment	75	Feasible
3	Image relevance to material	75	Feasible
4	Content appropriateness	75	Feasible
5	Student motivation support	75	Feasible
6	Relevance to learning practice	75	Feasible
Average		75%	Feasible

Based on Table 3, the content validation achieved an average score of 75%, which falls under the “Feasible” category. This indicates that the e-module’s material meets the required standards for use in the learning process. However, the content expert suggested adding a dedicated section for material identification and learning objectives to make the e-module more complete and systematically organized.

#### Module Feasibility Test

Following the content validation process, the next step was the module feasibility test, which evaluated the visual design, layout, and readability aspects of the interactive e-module “Andum Alpukat” for the fiction writing subject. The assessment focused on the clarity of the visual presentation, the alignment of design elements with the learning material, and the overall attractiveness of the module in supporting the learning process. The results of the module expert validation are presented in Table 4 below.

Table 4. Results of Module Feasibility Test

No	Criteria	Score (%)	Category
1	Compatibility of module layout with content	100	Highly Feasible
2	Relevance of images to material	100	Highly Feasible
3	Attractive layout	100	Highly Feasible
4	Appealing color composition	100	Highly Feasible
5	Appropriateness of font style	75	Feasible
6	Overall design attractiveness	75	Feasible
7	Attractiveness of learning layout design	100	Highly Feasible
8	Accuracy of image placement	100	Highly Feasible
Average		93.75%	Highly Feasible

As shown in Table 4, the interactive e-module “Andum Alpukat” achieved an average score of 93.75%, categorized as “Highly Feasible.” This indicates that the module’s design, layout, and visual elements meet the required standards and are suitable for use in teaching fiction writing at the elementary school level.

#### Design Revision

The design revision stage was carried out based on the feedback and suggestions provided by the validation experts, consisting of both content and module specialists. Overall, the feasibility test results indicated that the “Andum Alpukat” interactive e-module is feasible for instructional use. However, several improvements were recommended to enhance both content clarity and visual appeal prior to classroom implementation. The expert suggestions are summarized in Table 5 below.

Table 5. Expert Suggestions

Module Expert Suggestions	Content Expert Suggestions
Add a dedicated page for student assignments	Expand the content beyond bullet points to include more detailed explanations.

Based on these recommendations, revisions were made by adding a student assignment page and elaborating the instructional content to ensure greater clarity and comprehension. These revisions aimed to improve the overall quality of the e-module, making it not only visually engaging but also pedagogically effective in helping students develop their fiction writing skills.

### Product Testing

After the validation process by experts was completed, the next step was the product testing stage, conducted with fifth-grade students at SD Negeri Pulosari 1 Bareng Jombang. This stage aimed to collect direct feedback from students regarding the interactive e-module "Andum Alpukat" used in the fiction writing lesson, as well as to identify its strengths and weaknesses prior to broader implementation.

The testing was designed to ensure that the developed product aligns with the students' learning styles, needs, and characteristics. Furthermore, this stage also sought to evaluate the effectiveness of the e-module in improving students' fiction writing skills. Product testing consisted of two phases: peer evaluation and student trials.

### Peer Evaluation Test

The peer evaluation involved fellow teachers who assessed the feasibility of the interactive e-module "Andum Alpukat" based on module presentation, language clarity, and content quality. The results of the peer evaluation are presented in Table 6 below.

Table 6. Peer Evaluation Results

No	Aspect	Item	Score	Category	
1	Module	1	5	Highly Feasible	
		2	4	Feasible	
2	Language	1	5	Highly Feasible	
		2	5	Highly Feasible	
		3	5	Highly Feasible	
3	Content	1	5	Highly Feasible	
		2	5	Highly Feasible	
		3	5	Highly Feasible	
Total		8	39		
Percentage			97.5%	Highly Feasible	

Based on the data presented in Table 6, the peer evaluation test yielded an impressive average score of 97.5%, which falls under the "Highly Feasible" category. This score reflects a positive assessment from the evaluators, suggesting that the e-module meets high standards of quality. Specifically, the module was praised for its visual appeal, ensuring that the design and layout were engaging for elementary students. Additionally, the language used was found to be appropriate, with terminology that was clear and accessible. Furthermore, the content was deemed relevant and suitable for the intended educational objectives at the elementary level.

### Student Trial

The student trial involved 40 fifth-grade students to determine their responses toward the use of the interactive e-module "Andum Alpukat" in fiction writing lessons. The findings are presented in Table 7 below.

Table 7. Student Trial Results

No	Statement	Aspect	1	2	3
1	Do you like this module?		100	80	100
2	Do you always attend class		80	100	100
3	Do you know the basics?		80	100	80
4	Do you understand the basic concept?		80	100	80
5	Do you understand the topics covered?		100	100	80
6	Do you like the module's?		100	80	80
Average			90	93.33	86.66
Total Percentage					89.99%

As shown in Table 7, the average student response score was 89.99%, categorized as "Strongly Agree." Specifically, the attractiveness aspect scored 90%, the ease of use 93.33%, and the usefulness 86.66%. These findings indicate that students gave a positive response toward the e-module, perceiving it as engaging, user-friendly, and beneficial for developing fiction writing skills.

### Learning Outcome Test

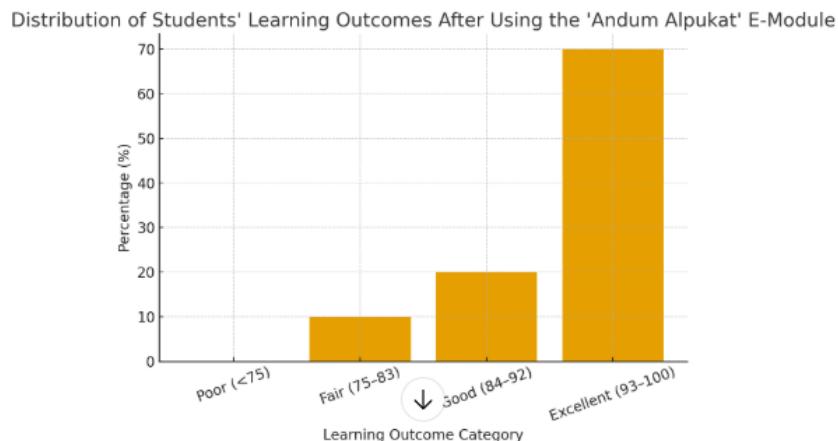
Following the product trial, a learning outcome test was conducted to measure students' achievement after using the e-module. The results are shown in Table 8.

Table 8. Students' Learning Outcomes

Score	Category	Percentage
< 75	Poor	0%
75–83	Fair	10%
84–92	Good	20%
93–100	Excellent	70%

Based on Table 8, 28 students (70%) achieved the Excellent category, 8 students (20%) achieved Good, and 4 students (10%) were in the Fair category. These findings demonstrate that the "Andum Alpukat" interactive e-module effectively improved students' learning outcomes and successfully met the classical mastery learning criteria for fiction writing.

The content experts rated the module as 'feasible' because the material aligns with the curriculum and supports the achievement of learning objectives, while the design experts and peer reviewers assessed the module as 'highly feasible' due to its appealing visual presentation, layout, and color composition, which are appropriate for elementary school learners. Students also demonstrated very positive responses in terms of attractiveness, ease of use, and usefulness, with average scores exceeding 85%. In addition, more than 70% of students achieved the 'Excellent' category in their fiction-writing learning outcomes, indicating the effectiveness of the e-module in enhancing students' writing skills. To clarify these patterns further, the inclusion of a simple graph or diagram illustrating the distribution of student responses or improvements in learning outcomes may be considered, enabling readers to grasp the key trends more quickly and visually. The corresponding graphic is presented below.



## Discussion

The development of the Interactive E-Module "*Andum Alpukat*" for teaching fiction writing demonstrates that digital learning media embedded with local cultural narratives can serve as a highly effective and contextually relevant instructional tool for elementary school students. Validation results from material experts, media experts, and peer reviewers, along with student trial data, indicate that the module meets the criteria of "feasible" to "highly feasible," particularly in terms of content accuracy, instructional clarity, navigation, and visual appeal. These findings reinforce previous studies by Nuraini et al. (2020) and Budyastuti & Fauziati (2021), which showed that interactive modules can enhance student motivation and engagement. However, this study makes a more substantial contribution than earlier works by not only focusing on digital interactivity but also integrating a local wisdom-based narrative (*Andum Alpukat*), thereby providing students with a more meaningful, culturally grounded learning experience.

The effectiveness of the *Andum Alpukat* E-Module can be explained through the lenses of constructivism and culturally responsive pedagogy. Culturally responsive pedagogy emphasizes the integration of local cultural narratives to serve as cognitive bridges for students, allowing them to construct new knowledge based on their sociocultural contexts. For example, the incorporation of local stories into instructional materials not only enhances learner engagement but also fosters the development of cultural identity among students, which aligns with principles of culturally responsive pedagogy (Tarihoran, 2025; Masri et al., 2025). A study focusing on narrative writing instruction based on local wisdom highlighted the positive impact of embedding indigenous narratives in educational practices, demonstrating how culturally relevant teaching materials can facilitate students' connections to community values and lived experiences (Masri et al., 2025; Simbolon, 2025).

Furthermore, the E-Module's design is consistent with Mayer's multimedia learning theory, which posits that the combination of text, imagery, and animations aids cognitive processing (Mashagbh et al., 2019; Sweller et al., 2019). This theory underscores the importance of minimizing cognitive load through effective multimedia design; instructional materials presented in multiple modes can enhance comprehension and retention of information (Castro-Alonso et al., 2021; Ge & Xiao-yun, 2021). The findings indicate that when visual and auditory information is seamlessly integrated, students can manage cognitive resources more effectively, leading to improved learning outcomes (Ayres, 2015; Saraswaty et al., 2024). For instance, research demonstrated that students performed better and retained information more when learning materials

adhered to Mayer's principles, emphasizing the value of reducing extraneous cognitive load (Yip et al., 2025; Ge & Xiao-yun, 2021).

Combining culturally relevant stories with interactive multimedia features makes the *Andum Alpukat* E-Module an advanced pedagogical instrument. Its framework facilitates not only literacy acquisition but also promotes critical thinking through culturally grounded content delivery (Tarihoran, 2025; Masri et al., 2025). By bridging theoretical approaches—such as social constructivism and cultural literacy—the E-Module represents a comprehensive tool for fostering an inclusive and equitable learning environment (Nurlia et al., 2025; Ogodo, 2024). As the educational context evolves with technology, the integration of local cultural elements into interactive digital platforms positions this E-Module as a vital resource for culturally responsive and multimodal learning (Mashaghbh et al., 2019; Simbolon, 2025).

The evaluation phase revealed an improvement in students' fiction writing skills, especially in story structure, character development, and narrative coherence. Nevertheless, the implementation process did not fully align with the initial plan. Several technical constraints such as inconsistent device readiness and unstable internet connectivity limited students' ability to explore all module features optimally. These challenges highlight the need for improved technical preparation in future implementations, including providing offline access options, clearer technical guidelines, and more flexible usage scheduling. Minor deviations from the planned procedures also emphasize the importance of closer supervision during trial phases to maintain fidelity to the development design.

This study opens multiple avenues for future research. The *Andum Alpukat* E-Module may be implemented in schools with different characteristics to examine the consistency of its effectiveness across diverse learning environments. Developing an Android-based or standalone application version could further increase accessibility and allow students to use the module independently outside the classroom. Longitudinal studies are also recommended to examine the long-term retention of fiction writing skills after using the module. Moreover, qualitative investigations into students' experiences and perceptions of the integration of local cultural content would provide deeper insights into how cultural identity shapes digital literacy engagement. By positioning this research within the broader landscape of digital, culture-based, and ethnopedagogical learning innovations, the study demonstrates not only local relevance but also contributes to broader scholarly discussions. Future comparative studies such as contrasting this module with game-based writing tools, interactive videos, or other forms of digital storytelling will further enrich the understanding of how culturally grounded digital media can sustainably enhance student literacy competencies.

## CONCLUSION

This study aimed to develop and evaluate the feasibility and effectiveness of the Interactive E-Module "*Andum Alpukat*" in improving fiction writing skills among fifth-grade students at SD Negeri Pulosari 1 Bareng Jombang. Based on the research and development procedures carried out, it can be concluded that the e-module meets the feasibility criteria as an interactive learning medium and successfully fulfills the main objective of the study—namely, providing engaging, contextually relevant, and pedagogically meaningful digital instructional material to support students' fiction writing abilities.

The findings indicate that the module was validated by experts and deemed suitable for classroom implementation, supported by highly positive student responses regarding its attractiveness, usability, and overall usefulness. Furthermore, the module demonstrated effectiveness, as evidenced by the learning outcomes showing that more

than 70% of students achieved mastery. Thus, the “*Andum Alpukat*” Interactive E-Module can be categorized as an effective learning tool that meaningfully supports students in developing structured and creative fiction writing skills. However, several limitations must be acknowledged, including the study being conducted in a single school context, a relatively small sample size, and a short implementation period. These constraints may limit the generalizability of the findings. Future research should therefore involve a broader range of schools, larger participant groups, and longer intervention periods to strengthen the external validity of the results.

Practically, this study offers important implications for teachers, schools, and curriculum developers. Teachers may adopt this interactive module as an alternative medium to enhance student engagement and creativity in fiction writing. Schools can incorporate it into digital learning innovations aligned with the Merdeka Curriculum. Meanwhile, curriculum developers may consider integrating culturally grounded digital media and interactive technology into literacy learning materials. Future development is also recommended to integrate the module into Android-based or standalone applications to expand accessibility and foster greater learner autonomy in digital learning environments.

## REFERENCES

Achmad, F. N. (2018). *Metode Penelitian & Pengembangan*. Surabaya: Jakad Publishing.

Anggraeni, K. H., Hendratno, H., & Sukartiningsih, W. (2025). Integration of ethnopedagogy in the P5 module based on Besutan art as a medium for preserving Jombang culture. *Journal of Innovation and Research in Primary Education*, 4(2), 232–240. <https://doi.org/10.56916/jirpe.v4i2.1224>

Ansas, V. N., & Azizah, A. (2022). Penguatan literasi digital dalam pengembangan modul interaktif untuk guru bahasa asing di wilayah Sukabumi guna menghadapi situasi pembelajaran pasca-pandemi. *Jurnal ...*, 3, 43–54.

Arinda, F. (2017). Pengembangan multimodul interaktif ilmu pengetahuan sosial SMP. *JINOTEP: Jurnal Inovasi dan Teknologi Pembelajaran*, 2(2), 302–306. <https://doi.org/10.17977/um031v2i22016p302>

Arip, N., & Pandu, P. (2022). Pemanfaatan kecerdasan buatan pada modul interaktif berbantuan Google Assistant. *Jurnal Genesis Indonesia*, 1(01), 24–32. <https://doi.org/10.56741/jgi.v1i01.17>

Ayurini, O., & Mariana, N. (2025). Eksplorasi etnomatematika pada tumpah: Sebuah alat sederhana untuk mengajar konsep matematika di sekolah dasar. *Jurnal ...*, 13(9).

Ayres, P. (2015). State-of-the-art research into multimedia learning: A commentary on Mayer's handbook of multimedia learning. *Applied Cognitive Psychology*, 29(4), 631–636. <https://doi.org/10.1002/acp.3142>

Binavia Wardhani, S. (2014). Pengembangan modul berbantuan video tentang Adobe Audition pada mata pelajaran produktif multimedia untuk meningkatkan hasil belajar siswa kelas XI. *Jurnal Mahasiswa Unesa*, 01, 1–6.

Budyastuti, Y., & Fauziati, E. (2021). Penerapan teori konstruktivisme pada pembelajaran daring interaktif. *Jurnal Papeda*, 3(2), 112–119. <https://doi.org/10.36232/jurnalpendidikandasar.v3i2.1126>

Castro-Alonso, J., Wong, R., Adesope, O., & Paas, F. (2021). Effectiveness of multimedia pedagogical agents predicted by diverse theories: A meta-analysis. *Educational Psychology Review*, 33(3), 989–1015. <https://doi.org/10.1007/s10648-020-09587-1>

Ekawati, N. A., Ayu Ekawati, N., & Subrata, H. (2025). Learning to sing tembang macapat. ELSE (Elementary School Education Journal). <https://doi.org/10.30651/e>

Fatmawati, E. N., Mariana, N., & Ekawati, R. (2025). Ethnomathematics in traditional culinary practice: Mathematical concepts in the preparation and sale of Nasi Pecel Tumpang in Kediri. *JIRPE*, 4(3), 1242–1250. <https://doi.org/10.56916/jirpe.v4i3.1530>

Fatirul, N.A.W. (2018). *Metode Penelitian & Pengembangan*. Surabaya: Jakad Publishing.

Fitri Rahmawati, B. (2020). Penggunaan modul interaktif Canva dalam pembelajaran daring. *Fajar Historia*, 4(2), 60–67. <https://doi.org/10.29408/fhs.v4i2.3135>

Ge, S., & Xiao-yun, L. (2021). Strategies for information design and processing of multimedia instructional software—based on Richard E. Mayer's multimedia instructional design principles. *International Journal of Educational Technology and Learning*, 10(1), 40-46. <https://doi.org/10.20448/2003.101.40.46>

Haryadi, R., & Kinanti, S. N. (2022). Pengembangan bahan ajar berbasis video untuk peserta didik. *EduFisika*, 7(2), 169–176. <https://doi.org/10.59052/edufisika.v7i2.21778>

Inanna, N, Ampa, A. T., & Nurdiana. (2021). Modul elektronik (E-module) sebagai media pembelajaran jarak jauh. *Seminar Nasional UNM*, 1232–1241.

Indartiningsih, D., Mariana, N., & Subrata, H. (2023). Perspektif glokal dalam implementasi Teaching at the Right Level (TaRL). *Jurnal Elementaria Edukasia*, 6(4), 1984–1994. <https://doi.org/10.31949/jee.v6i4.7547>

Irfan, M., & Ristiana, E. (2019). Indonesian Journal of Primary Education, 3(2), 16–27.

Juni Agus Simaremare, & Emelda Thesalonika. (2022). Development of early grade Indonesian e-modules using Kvisoft Flipbook. *Jurnal Iqra'*, 7(2), 286–300. <https://doi.org/10.25217/ji.v7i2.2678>

Khaerunnisa, F., Sunarjan, Y., & Atmaja, H. T. (2018). Pengaruh modul Canva terhadap minat belajar sejarah. *Indonesian Journal of History Education*, 6(1), 29–39.

Kurnia, L. D., Octaria, D., & Nopriyanti, T. D. (2022). Pengembangan modul interaktif menggunakan PowerPoint pada materi relasi dan fungsi. *Jurnal Pendidikan Matematika Raflesia*, 7(1), 84–92. <https://ejournal.unib.ac.id/index.php/jpmr>

Mahmudiyah, V. K., & Rachmadyanti, P. (2021). Pengembangan media Bianglala Keragaman Budaya.

Mashagbh, A., Din, R., Nasir, M., Halim, L., & Al-Batainah, R. (2019). Reliability and validity of online individualized multimedia instruction instrument for engineering communication skills. *Creative Education*, 10(12), 3041–3048. <https://doi.org/10.4236/ce.2019.1012228>

Masri, M., Mantasiah, R., Azis, A., & Sahabuddin, R. (2025). Integrating local wisdom into narrative writing instruction in Indonesian high schools. *International Journal for Multidisciplinary Research*, 7(5). <https://doi.org/10.36948/ijfmr.2025.v07i05.55387>

Nurlia, N., Nurhayati, B., Syamsiah, S., & Karim, H. (2025). Cultural literacy in biology education: Theoretical foundations and future directions. *Salud Ciencia Y Tecnología*, 5, 2163. <https://doi.org/10.56294/saludcyt20252163>

Ogodo, J. (2024). Culturally responsive pedagogical knowledge: An integrative teacher knowledge base for diversified STEM classrooms. *Education Sciences*, 14(2), 124. <https://doi.org/10.3390/educsci14020124>

Pratiwi, I. T. M., & Meilani, R. I. (2018). Peran modul interaktif dalam meningkatkan prestasi belajar. *Jurnal Pendidikan Manajemen Perkantoran*, 3(2), 33. <https://doi.org/10.17509/jpm.v3i2.11762>

Putri, A. F., & Kurniasari, D. (2023). Digital e-module to improve creative writing skills. *Indonesian Journal of Language and Literacy*, 5(3), 200–210.

Rachmadyanti, P., Lutfi Choirunnisa, N., & Mariana, N. (2025). Exploring intercultural learning experiences. *Asian Journal of Social and Humanities*, 4(01).

Rosyadi, Y. I., & Pardjono. (2015). Peran kepala sekolah sebagai manajer dalam meningkatkan mutu pendidikan. *Jurnal Akuntabilitas Manajemen Pendidikan*, 3(1), 124–133. <https://doi.org/10.21831/amp.v3i1.6276>

Saraswaty, D., Adawiyah, D., Sulistiyo, U., & Haryanto, E. (2024). The impact of multimedia learning models on listening comprehension: A systematic review of self-efficacy and technology integration. *PIJED*, 3(2), 588-608. <https://doi.org/10.59175/pijed.v3i2.341>

Simbolon, H. (2025). Integrating local folklore into language education: A case study of the Danau Toba narrative in Indonesian secondary schools. *Jurnal Tahuri*, 22(1), 68–82. <https://doi.org/10.30598/tahurivol22issuelpage68-82>

Sweller, J., Merriënboer, J., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, 31(2), 261–292. <https://doi.org/10.1007/s10648-019-09465-5>

Tarihoran, I. (2025). Developing culturally responsive English e-books using speech act theory for young EFL learners. *English Review Journal of English Education*, 13(3), 861–874. <https://doi.org/10.25134/jmcmf52>

Wahyuni, S., & Pratiwi, H. (2021). Pengembangan e-modul interaktif berbasis Flip PDF. *Jurnal Pendidikan Bahasa Indonesia*, 8(2), 112–123.

Wulan, A., Cahyani, P., & Subrata, H. (2022). *Jurnal Review Pendidikan Dasar*, 8(2). <http://journal.unesa.ac.id/index.php/PD>

Yip, C., Lim, P., Lai, F., Hah, Y., Eong, K., & Ding, J. (2025). Teaching nurses ophthalmic surgery protocol: Are cognitive-theory-based teaching slides (CTS) superior to traditional teaching slides (TTS)? <https://doi.org/10.21203/rs.3.rs-6352971/v1>