

## Development Of Learning Media For Local Wisdom Pandalungan Through 10 in 1 Box

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### ABSTRACT

The purpose of this research was to assess the validity of the guidebook for the educational program of strengthening literacy-numeracy with local Pandalungan culture through the use of 10 in 1 box media to be used as a guideline for making learning media which improves the ability to understand literacy and numeracy to students. The method used in this research was research and development using the ADDIE development model. There are two important components in this research, namely 1) The first research step is to create and develop literacy and numeracy learning according to the current curriculum reference. Then the results of this study have the stages of the process are divided into five stages, namely, (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. The validity test from the analysis of the results of this validation process revealed that all aspects evaluated by the validator had a percentage above the average, reaching 88.75%, showing that each indicator assessed was in the "very feasible" category. With these research steps, it can be concluded that the educational program guidebook for strengthening literacy-numeracy with local Pandalungan culture through the use of 10 in 1 box media is very feasible to use so that it makes a positive contribution in efforts to preserve and teach local wisdom to the younger generation, while increasing students' understanding of rich and diverse local cultures

**Keyword:** Conservation, Development, Learning Media, Local wisdom.

### INTRODUCTION

Education is one of the most important things for the progress of a nation. Without an education, a country will not be able to master the development of technology that is increasingly sophisticated (Pristiwanti *et al.*, 2022). Education itself is one of the important capitals to advance the Indonesian state. According to the law on the education system No. 20 of 2003, it is stated that education is "a conscious and planned effort to create an atmosphere of learning and learning so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves and society" (Habe & AHIRUDDIN, 2017). There are also those who say that education is all knowledge learning that occurs throughout life in all places and situations that have a positive influence on the growth of each individual being. That education lasts for a lifetime (long life education) (Marianda *et al.*, 2014). In science education, there are suggestions for using a pedagogical approach that pays attention to the context of local wisdom, and the philosophical aspects of the lifestyle of indigenous peoples. One potential pedagogical approach to science learning is the

philosophy behind education for sustainable development (Zidny *et al.*, 2014). Teaching in a broad sense is also a process of teaching activities, and carrying out learning can occur in any environment and anytime (Marianda *et al.*, 2014). From this statement we can convince that education requires several components in order for the definition of education to be achieved. One of these components is learning media.

Learning media is a media used in the learning process as a mediator of an intermediary message between educators and students so that teaching and learning objectives are achieved. In a learning, of course, requires a series or learning components that are expected to realize learning objectives. There are so many learning media that can be used for the learning and teaching process. Learning media greatly determines the effectiveness and efficiency to achieve learning objectives. Along with the development of technology and information, many types of media have been created and created by humans. Starting from media that uphold creativity to media that prioritize content. Therefore, as a teacher or educator, one must be familiar with various media and their characteristics. And use media according to the level of student characteristics. Books are one of the learning media that is very widely used from various circles, from young to adults, humans never escape this learning media. Judging from its understanding Books are collections of paper containing information, printed, arranged systematically, bound and the outside is given protection made of thick paper, cardboard or other materials. Books are also the fruit of someone's thought ideas that contain science from observations, analysis, research, and discoveries to be written so that others can learn from the science (Febriani *et al.*, 2021).

Numeracy literacy ability is a person's ability to reason to understand, interpret, apply and analyze a problem critically by involving symbols, language or mathematical models expressed in various forms of communication both orally and in writing and involving everyday problems (Rezky *et al.*, 2022). The three main keys needed in supporting the numeracy literacy process in learning in schools include: 1) the obligation to carry out numeracy literacy, 2) providing platforms and opportunities for students, and 3) getting support and providing solutions to problems related to numeracy literacy (Evans *et al.*, 2017).

Literacy and numeracy as one of the few language skills and counting numbers have a very important role and contribute to students' self-development. One of the areas in literacy that can be done is reading and writing which can improve a child's language level to improve a child's language skills, then for numeracy the most important part that needs to be improved is the counting and reasoning, where these 2 components need to be mastered by each individual to be used in various aspects of students' daily lives (Capellini *et al.*, 2017).

Based on research conducted by Ashri & Pujiastuti (2021), students' ability to solve literacy problems is quite good, but it is necessary to increase students' accuracy when understanding the content of the story text on the problem. In addition, the numeracy ability of elementary school students is at a low level so it needs to be improved. The importance of students' numeracy literacy skills is very influential in learning objectives. Numeracy literacy is practically contextual, related to understanding issues in communication, professional in workers, recreational, and cultural. The presentation shows that the scope of numeracy literacy is very broad, not only in mathematics subject matter, but also contains other literacy (Latifah & Rahmawati, 2022).

Very rapid progress and change in all areas of life is one of the impacts that will continue to be felt by humans in all nations, including the Indonesian nation, so alternative solutions are needed related to the education system in the literacy and

numeracy section. According to research (Suryanti *et al.*, 2020) literacy and numeracy can be improved by using the local wisdom of their respective cultures in the region. One of the cultures that can be made to be Improving literacy and numeracy skills is the local wisdom of Pandalungan culture.

Pandalungan is a term to refer to the culture assimilated between Javanese and Madurese. The daily language of the Pandhalungan people is actually more Madurese mixed with Javanese. When viewed from the physical characteristics that stand out is the accent. In everyday conversations, for example, the Pandalungan community still has a good Madurese accent when speaking Indonesian. The pandalungan cultural area includes Pasuruan, Probolinggo, Situbondo, Bondowoso, Jember and Lumajang regencies. An example of art from the local wisdom of Pandalungan is the Lahbako dance originating from Jember (Hairul, 2022).

The contribution of this research is to combine educational science with local wisdom of Pandalungan to improve the literacy and numeracy skills of loaded students. Based on the description of the problem, the researcher compiled a program guidebook to carry out community service activities with the specific aim of improving literacy and numeracy skills through the media of 10 in 1 Box students of SD Negeri Baletbaru 02 Jember. The purpose of this study is to examine the validity of the educational program manual for strengthening literacy-numeracy containing local culture through the use of 10 in 1 box media.

## **METHOD**

The method used in this study is research and development using the ADDIE development model (Sugiyono, 2020). The location of the research was conducted at SDN Baletbaru 02 Sukowono, Jember. The explanation of the stages of the ADDIE development model, namely:

1. **Analysis**, The analysis stage is the first stage that aims to analyze problems so that an educational program can be carried out to strengthen numeracy literacy containing local wisdom of pandalungan culture through 10 in 1 box media in science-mathematics learning at SDN Baletbaru 02 based on observations, interviews, documentation, and literature studies.
2. **Design**, This planning stage aims to design a program manual that can be a guide for teachers and students in numeracy literacy education activities. This program manual is based on observations and literature review.
3. **Development**, The development stage is a stage that aims to produce a program manual related to how to make and use 10 in 1 box media. At this stage, validation is also carried out by experts to determine the validity in terms of readiness and material in the program manual.
4. **Implementation**, The implementation stage is carried out through piloting program manuals to students of SDN Baletbaru 02 Sukowono. The program handbook will be used during the process of numeracy literacy education activities in improving students' science-mathematics learning.
5. **Evaluation**, The evaluation stage is the final stage of designing the program manual after implementation. The stages of research carried out are described in Figure 1 below.



Figure 1. ADDIE Development Model

The instrument used to assess the feasibility of the program guidebook to be implemented for upper grade students is between grade 5 to grade 6 of SDN Baletbaru 02 using a questionnaire consisting of 5 indicators with a likert scale of 1-4, namely 4 (very worth it), 3 (enough decent), 2 (less decent), and 1 (not worth it). After the data is obtained, to calculate the percentage score can use the following equation 1.

$$Result = \frac{Total\ score\ obtained}{maximum\ score} \times 100\% \quad (1)$$

Furthermore, to find out how feasible the media is, it can use the eligibility category based on the criteria in Table 1 below.

TABLE 1. MEDIA ELIGIBILITY CRITERIA

Percentage	Validity Criteria
$75\% < p \leq 100\%$	Very Worth It
$50\% < p \leq 75\%$	Enough Decent
$25\% < p \leq 50\%$	Less Decent
$0\% \leq p \leq 25\%$	Not Worth It

[13]

## RESULT AND DISCUSSION

### Result

This media development research was conducted from June to August 2023 at the Media Laboratory of the Physics Education Study Program, FKIP University of Jember. The development model used is the ADDIE model. In this study, the analysis phase was carried out through an analysis of the culture of *pendalungan* associated with literacy and numeracy abilities. One of the main components of this activity is the educational program manual, which aims strongly to broaden the horizons of local wisdom for students. At the design stage, activities were carried out to design a 10 in 1 box media containing the local wisdom of the *Pendalungan* culture along with the program guidebook. The book covers a variety of essential elements, from the title page, introduction, table of contents, to the introduction of the program. Furthermore, the book includes an in-depth description of ten types of local wisdom learning media that have

been produced. Not only that, the structure of this book also includes information about the drafting team that has contributed to planning and development. Figure 2 clearly shows the visual display of the development of all the content.







g h  
Figure 2. Program manual view







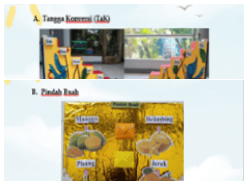

Figure 2a is the front page of the book. Figure 2b is a preface view of the book. Figure 2c is a 62-page table of contents display. The 2d picture is a display of chapter 1, an explanation of student creativity programs, community service, and education on strengthening literacy-numeracy with local content. Figure 2e is a display of media descriptions consisting of 10 kinds of numeracy literacy learning media with local content of pendalungan. Figure 2f is what the drafting team looks like. Figure 2g is the author's biographical sheet. The 2h image is the back page of the book.

At the development stage, the guidebook is subjected to a validation test involving three experts. Input from experts was used to refine the program manual. Revisions and improvements are made based on suggestions and recommendations provided by experts, so that the guide becomes more structured and informative. After that, before the book is handed over to students, the book will undergo a validation process by three experts in the field of media and materials. From the assessment of the validators, several revisions were applied. These changes are recorded in the results before and after the revision which can be seen in Table 2 below.

TABLE 2. REVISED RESULTS OF VALIDATOR ASSESSMENTS

Before revision	After revision	Information
		Improvements to the manual template from a network dancer to a labako dancer



Before revision	After revision	Information
		<p>Improvements to the table of contents to adjust points in page numbering and optimize efficiency by changing the media annotations in each chapter to subchapters.</p>
		<p>Improvements to the second subchapter of chapter 1 from 10 pages to 5 pages.</p>
		<p>The improvements in chapter 2 involve adding more images than before that feel monotonous, as well as inserting images that demonstrate how the media is used.</p>
		<p>Improvements to subchapters in order to distinguish from one media to another.</p>

The results of testing by validators are in the form of responses and questionnaire assessments, then the results are analyzed and product revisions are carried out in accordance with comments and suggestions from validators. The data results are shown in Figure 3 below.

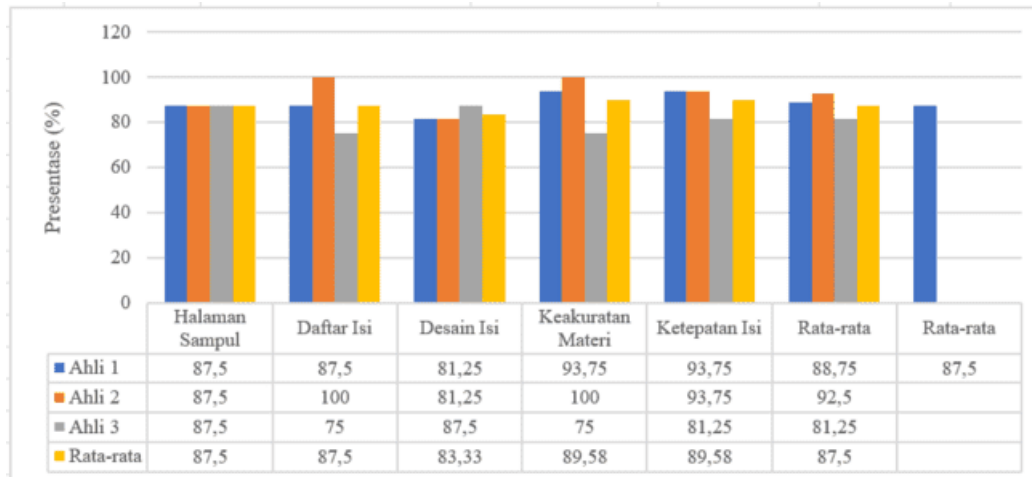


Figure 3. Percentage of program manual validation results

Figure 3 illustrates that each aspect has an above-average percentage, reaching 88.75%. This results in a total percentage of overall aspects of the three validators of 87.5%. By referring to the media eligibility criteria in the table, these results are declared as "very viable" category after product revision. Validation also shows that each indicator falls into the "very viable" category. The use of images on the cover page has been harmonious with the theme of the book, the type and size of the letters, and the selected images have their own charm. The designed table of contents blends well with the contents of the book. The content design has also been arranged well, both in order between subtopics, image illustrations, and layout arrangement. The book material shows a high level of accuracy, with a foundation from the study of relevant literature and research.

At the implementation stage, the media was shown and used by five students then based on the results of the interviews the students responded well. Students feel happy to be able to use learning media filled with local wisdom of the pendalungan culture. Students are interested in learning literacy and numeracy using learning media containing local wisdom of pendalungan culture. This indicates that the local wisdom approach not only increases students' interest in learning, but also facilitates a better understanding of the learning material presented.

At the evaluation stage, the use of 10 in 1 box media can attract interest in learning and motivate students in learning literacy and numeracy. Students have high enthusiasm to take part in learning using the 10 in 1 box media containing the local wisdom of the pendalungan culture. Students also have a high curiosity about Pendalungan culture. Participating in games or activities that reflect the values and traditions of local culture, students can understand and appreciate their cultural heritage more deeply. This not only enriches their learning experience but also supports the preservation and development of local wisdom among the younger generation. Thus, the use of this learning medium has a significant positive impact on student education in various aspects.

This contributes to a better understanding of local wisdom for students. The material is in accordance with the concept of puppetry culture, the presentation of the concept also reflects the accuracy of the material, and does not cause much interpretation. Furthermore, regarding the accuracy of the content, this guidebook is designed to be used by elementary school students with easy-to-understand language and designs that suit the character of students. In this case, this book can attract students to further explore the local wisdom of pendalungan culture.



## Discussion

This development research succeeded in developing a learning media guidebook that focuses on significant aspects of local wisdom. This guidebook contains such as a table of contents, introduction, and various types of learning media. The admission and evaluation process consisting of validation and revision is carried out before the book is given to the student. The results of this validation confirm that the book meets very decent standards, with a high percentage rate based on the assessment of the validator group. The visual design and content of the book are rated as good quality, and the content presented is substantially in accordance with the aspects of local wisdom in question. This book is considered to have the potential to attract students' attention in an effort to explore material related to local wisdom in more depth.

While designing this program guidebook, researchers encountered several challenges that needed to be overcome. Overall, there are difficulties in understanding some references related to local wisdom of masterminding by students, which results in difficulties in compiling the content of the book. In addition, in the design aspect, researchers also face difficulties in finding themes that suit the character of elementary school students. All of these challenges are obstacles faced by researchers during the preparation stage of the program guidebook.

Based on these challenges, there are several solutions that can be provided by highlighting other parts of the content of the manual. Some parts that can be highlighted are in terms of the area to be used (Jember Regency), the contents of the guidebook, and the design of the book itself. then based on the research conducted ( Kurnia *et al.*, 2017) Discussing the local wisdom of Jember as a learning material, also has several challenges that need to be overcome, including the selection of themes or topics that need to be discussed and the content in comics to be used as an interesting and fun learning media.

Research conducted by Kusumaningrum & Masruro (2022) which uses media based on local wisdom applied to students, is proven to increase students' enthusiasm and interest in learning. states that the development of teaching materials based on local wisdom in elementary schools is valid, practical, and effectively applied in the learning process as an effort to facilitate students in understanding the material and improve student learning outcomes (Made Arini & Sudatha, 2023). Stating that, the use of local wisdom in the learning process about local potential and uniqueness aims to form students' understanding of local wisdom in their place of residence, besides that students can get to know the natural, social and cultural environment, and have skills (Elisa *et al.*, 2022).

The use of local wisdom is very helpful for students in understanding literacy and numeracy material, in addition to being introduced to local culture, literacy and numeracy skills are increasing as research conducted by Pratiwi & Ariawan (2020) which relates mathematics with the theme of local wisdom received a positive response from elementary school students. In addition to improving literacy and numeracy skills, local wisdom can also be used as a means to shape the character of the nation's successors. Research conducted by Arvianti & Wahyuni (2020) which uses the theme of local wisdom to improve the learning ability of elementary school students and as a means to mold the character of the nation's successors starting from an early age. States that the use of PjBL digital modules with local wisdom can motivate students with appearance and content that attracts students' attention so that it can improve student learning outcomes (Bektiarso *et al.*, 2023).

## CONCLUSION

Based on the results and discussion of local wisdom learning media development activities that have a significant impact. One of the central components of the project is the educational program handbook which aims strongly to broaden students' understanding of local wisdom. The results of the analysis of this validation process revealed that all aspects evaluated had a percentage above average, reaching 87.5%. Therefore, this book is declared very worth it, even after going through the product revision stage. This validation also shows that each indicator assessed falls into the "very worth it" category. As a final result, the guidebook makes a positive contribution to preserving and teaching local wisdom to the younger generation, while increasing students' understanding of the rich and diverse local culture.

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L.N. provided guidance on the research concept for the development of the program manual. K.C.A.U. conducted activities to draft the article. N.N.M. conducted data administration and drafted the article. N.P.A. designed the program guidebook. T.W.N. conducted field observations. N.A. drafted the article. All authors have read and approved the published version of the manuscript.

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