



# Development of Teaching Material Local Wisdom-Based "Pati" in Elementary School

Dewinta, Asmorowati<sup>1\*</sup>, Nur, Fajrie<sup>2</sup>, Sri, Surachmi<sup>3</sup>, Imaniar, Purbasari<sup>4</sup> & Tahira, Adeel Zaman<sup>5</sup>

<sup>1,2,3,4</sup>Muria Kudus University, Central Java 59327, INDONESIA

<sup>5</sup>Szabist-Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Karachi 75600, PAKISTAN

\*Corresponding author Email: Ita.dewinta@gmail.com

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**Abstract:** The objectives of this study were to investigate the need for thematic teaching materials based on Pati local wisdom with the theme “daerah tempat tinggalku” in grade IV Public Elementary School number 1 Pangonan, examine the prototype of thematic teaching materials based on pati local wisdom with the theme “daerah tempat tinggalku” and to describe the appropriateness of thematic teaching materials based on pati local wisdom with the theme “Daerah Tempat Tinggalku” at Public Elementary School number 1 Pangonan. This research method was research and development with the ADDIE model consisting of Analyze, Design, Development, and Implementation. Based on the initial analysis of teachers and students needing local wisdom-based teaching materials that are in accordance with the characteristics of students. The results showed that teaching materials received a score of 78% from material experts, 81% from design experts, teacher response 82% agreed with the use of teaching materials, and there is an increase in student scores. Therefore it is necessary to develop Thematic Teaching Materials Based on Pati Local Wisdom with the theme of "Daerah Tempat Tinggalku" for Grade IV Students of Public Elementary School number 1 Pangonan.

**Keywords:** Teaching material development, thematic learning, pati local wisdom

## 1. Introduction

Education in Indonesia is always changing according to the times and technology. This is shown by the continuous improvement of the education curriculum in Indonesia to improve the quality of education. The current curriculum used is the 2013 Curriculum which has been implemented thoroughly at the elementary, junior high and high school education levels. Wahyudin (2008) states the importance of innovation in education. The teacher is one of the agents of change. Through guru, an innovation can be disseminated and implemented. Teachers are required to find and implement an innovation, especially in the field of education, so that learning skills become more optimal. Schools that carry out learning with the 2013 curriculum all use teaching materials in the form of student books and teacher books from the government. The teaching material is indeed worthy of being used as the main teaching material, but the preparation of teaching materials is made simultaneously for all levels and regions. This certainly has an impact on educators who feel that the teaching material still needs to be made additional companion teaching materials that are more in line with the needs of educators and students. Based on researchers' observations.

This problem also occurs in grade IV public elementary school number 1 Pangonan. Teachers use student and teacher books that have been provided by the Government through the student operational fund (BOS). The books used have not been able to accommodate or adapt to the social environment, culture, geography, stages of student development, initial abilities that have been mastered, interests, family background and so on. Departemen Pendidikan Nasional (2008) states that if teaching materials in accordance with the demands of the curriculum do not exist or are difficult to obtain, then making your own learning materials is a wise decision. To develop teaching materials, references can be obtained from various sources, either in the form of experience or own knowledge, or extracting information from sources, both experts and colleagues. Similarly, we can obtain references from books, mass media, the internet, and others.

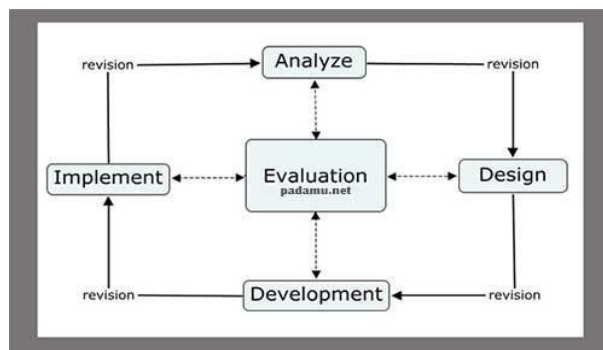
One of the competency components that a teacher as a professional must have is to master the subject matter and basic scientific concepts. Mastery of the material consists of mastering the material to be taught and the basic scientific concepts of the material to be taught. Thus to master the subject matter requires mastery of the material itself. There are two ways of looking at teaching materials or materials, first from the point of view of the content of the teaching materials, and second from the point of view of how the teaching materials are organized.

According to Wagiran (2012), education based on local wisdom is education that teaches students to always be sensitive to the situations they face. The pillars of local wisdom education are as follows: (1) human existence since being in the womb is the foundation of an educated human being; (2) education must keep away from untrue and hasty ways of thinking, and must be based on truth and nobility; (3) Education should not only develop psychomotoric and cognitive aspects, but also must develop affective domains; (4) cultural education and tourism need to be developed synergistically in character education. Shufa (2018) explain that the definition of local wisdom is, "a tendency towards local / regional wealth in the form of knowledge, beliefs, norms, customs, culture, insights and so on which are inheritance and are maintained as an identity and guidelines in teaching us to act right in life. Seeing this background, it is necessary for teachers to design and develop teaching materials according to the needs of students, especially in grade IV public elementary school number 1 Pangonan, Tlogowungu District, Pati Regency. The development that will be carried out is to include Pati's local wisdom treasures in the form of special foods, legends, community leaders, and tourist attractions in the Pati Regency into theme 8 learning materials, namely "Daerah tempat Tinggalku".

## 2. Research Methods

This study employed a research and development method design or Research and Development (R&D). According to Masyhud (2016), development research is a process used by researchers to develop and validate educational products (models, approaches, modules / teaching materials, and / or learning media). The model used is the ADDIE model. This model is arranged in a systematic sequence of activities or sequentially as an effort to solve problems related to learning resources and adjusted to the needs and characteristics of students (Arumugam, Kway, & Mohamed Isa, 2019). "This model has five steps or stages that are easy to understand and implement in developing development products such as textbooks, learning modules, learning media, multimedia and so on" (Tegeh et al., 2014).

The ADDIE model (Fig. 1) consists of five steps, namely Analyze (analysis), Design (design), Development (development), Implementation (implementation), and Evaluation (evaluation). These steps or stages must be carried out systematically, not allowed to be done randomly. The reasons for using the ADDIE model are every the stages contained in this research model undergo revision and evaluation so as to minimize the weaknesses of both the process and product implementation.



**Fig. 1: ADDIE Research and Development Model Stages Scheme (Source: Branch, 2009)**

The steps that were taken in this research are: 1) Analysis, The analysis stage is the stage where the researcher analyzes the need for the development of teaching materials and analyzes the feasibility and development requirements. The stages of the analysis carried out by the author include three things, namely needs analysis, curriculum analysis, and character analysis of students; 2) Design, The second stage of the ADDIE model is the design stage. At this stage, teaching materials are designed to be developed according to the results of the previous analysis. At this stage, researchers also compile instruments that will be used to assess the teaching materials developed; 3) Development, the development stage is the product realization stage. At this stage the development of teaching materials is carried out according to the design. After that, the teaching materials will be validated by experts and teachers. In the validation process, the validator uses instruments that have been prepared previously. Validation is carried out to assess the validity of the content (material) and design; 4) Implementation, The fourth stage is implementation. Implementation is limited to schools designated as research sites. The classroom teacher conducts learning with the help of developed teaching materials. The researcher acts as an observer and records everything on the observation sheet that can be used as an improvement in teaching materials; 5) Evaluation, At this stage, the researcher made the final revision of the thematic teaching materials developed based on the input obtained from the response questionnaire or field notes on the

observation sheet. This is so that the thematic teaching materials developed are truly appropriate and can be used by a wider school.

### 2.1 Data Source

According to Saifuddin (2002), primary data or first-hand data is data obtained directly from research subjects using measurement tools or direct data collection tools on the subject as a source of information sought. The research subjects used by the researcher were grade IV teachers and 20 grade IV public elementary school number 1 Pangonan students as test subjects. Meanwhile, secondary data used in this research are archives from institutions, books, study results, theses, journals, internet, etc. which are in accordance with the research, namely the development of teaching abhan based on Pati's local wisdom.

### 2.2 Data Collection Technique

The data collection techniques used in this research and development were observation, interviews and document analysis. According to Sugiyono (2015), based on the implementation of data collection, observation is divided into two, namely participant observation and non-participant observation. In this research and development, the researcher acts as a non-participant observation; Interviews were conducted by researchers with structured sources. The researcher has provided several questions that will be answered by the speakers. Interviews were addressed to grade IV teachers and grade IV students at public elementary school number 1 Pangonan. The questionnaire used in this study was a validation questionnaire for material experts, design experts, and teacher responses.

### 2.3 Test Analysis Technique

The instruments used to collect data in this research trial were (a) a needs analysis sheet, (b) an observation sheet, (c) a validation questionnaire sheet for content / teaching material expert validation, (d) a validation questionnaire for a teaching material design expert, e) questionnaire sheet for assessment of responses by the teacher, (e) test of student learning outcomes.

In the questionnaire instrument, a five-scale Likert scale analysis was used (Widoyoko, 2016: 124) with guidelines 1: Very Poor, 2: Poor, 3: Enough, 4: Good, 5: Very good. Then processed by making a percentage with the analysis formula:

$$P = \frac{\sum xi}{\sum x} \times 100 \% \tag{1}$$

Information:

$\sum xi$  = The total score obtained from the validator

$\sum x$  = Total ideal score

P = Percentage

And in giving meaning the result can be seen in table 1.

**Table 1: Validity Meaning**

Percentage	Validity Level
80-100	Valid / Not revised
60-79	Enough Valid / Not Revised
40-59	Less valid / partially revised
0-39	Invalid / Revised

Meanwhile, to determine student learning outcomes, the average classical completeness is used to be compared with the classical completeness value in the previous theme, namely the "Indahnya Keragaman di Negeriku."

## 3. Result and Discussion

The results of the study included the need for thematic teaching materials based on Pati local wisdom in elementary schools, prototypes of thematic teaching materials based on Pati local wisdom, and the appropriateness of thematic teaching materials based on Pati local wisdom in elementary schools. Overall, it is described as follows. Field studies refer to the real conditions in the field obtained from observations and interviews, then the data obtained is analyzed based on students' perceptions and teacher perceptions. Then the development needs analysis is carried out by filling out the needs questionnaire by students manually and by the teacher which is carried out via google form (Roslan et al.,

2021). The results of the needs analysis obtained are used as a reference for researchers to develop thematic teaching materials based on Pati's local wisdom.

Based on students' perceptions of the need for thematic teaching materials development based on local wisdom in grade IV elementary school, it was obtained through interviews and observations of grade IV students from public elementary school number 1 Pongonan. This is the first step in understanding the needs of students to the linkage of local culture in Pati district to learning. thematic. From the observations it can be seen that students want the teaching material to be arranged completely and have clear objectives, also equipped with student activities that are tailored to the achievement of the indicators to be achieved. The order of the presentation of thematic teaching materials based on local wisdom of Pati must be sequential and interrelated. In providing the motivation that students want, namely teaching materials that are complemented by performance activities and storytelling or role-playing activities, and completeness of Information on thematic teaching materials based on Pati local wisdom desired by students, namely teaching materials that present information according to facts that are easily found in the neighborhood.

In the analysis of needs, the results of the analysis are obtained by covering four aspects, namely related to (1) content, (2) language, (3) presentation, and (4) graphics. The teacher wants teaching materials to be developed in full color and the most important thing is to prioritize wisdom. local area in Pati Regency.

The prototype of teaching materials developed by the researcher includes the beginning, the ingest part, and the ending or the final part of the teaching materials which are packaged in the fourth grade student book theme 8 "Daerah Tempat Tinggalku "

In validating the prototype of thematic teaching materials based on local wisdom for grade IV students involving expert judgment from content or material experts and design experts and practitioners. In developing a product, it needs validation by experts so that the thematic teaching material products based on local wisdom of Pati for primary schools are truly valid and suitable for use.

**Table 2: Results of Content or Material Expert Validation**

No.	Rated aspect	Skor
1.	Purpose fit	4,0
2.	Completeness of the material	4,0
3.	Suitability of Material	3,5
4.	The accuracy of using the language	4,3
5.	Completeness of evaluation or test	3,5
6.	The attractiveness of teaching materials	4,0
amount		23,3
Average		3,9

Based on table 2, the overall validation of material content experts on thematic teaching materials based on local wisdom of Pati which includes six aspects, namely content suitability, material completeness, material suitability, accuracy in using language, completeness of evaluation and attractiveness of teaching materials obtained a total score of 23.3 with average -averaged 4.2 of the totals. After getting the average then analysed and get the following results:

$$NA = \frac{\sum SR}{\sum SI} \times 100\% \text{ with calculations } NA = \frac{23,3}{30} \times 100\% = 78\% \quad (2)$$

So, the results of the validator's assessment on the aspect of the feasibility of the material content for thematic teaching materials based on Pati's local wisdom in elementary schools were 78%.

**Table 3: Design Expert Validation Results**

No.	Rated aspect	Skor
1.	hint	4,0
2.	Cover quality	4,0
3.	Text clarity	4,5
4.	Color quality	4,0
5.	layout quality	3,7
6.	Animation quality	4,0
7.	Background quality	4,0
amount		28,2
Average		4,0

Based on table 3 as a whole, the validation of design experts on thematic teaching materials based on Pati local wisdom which includes seven aspects, namely instructions, cover quality, text quality, colour quality, layout quality, animation quality and background quality obtained a total value of 28.2 with an average. 4.0 of the totals. The final score of feasibility in the expert validation of thematic teaching material design based on local wisdom of Pati is calculated by the calculation formula for the final score as follows.




$$NA = \frac{\sum SR}{\sum SI} \times 100\% \text{ with calculations } NA = \frac{28,2}{35} \times 100\% = 81\% \quad (2)$$

So, the results of the validator's assessment on the design feasibility aspect of thematic teaching materials based on Pati's local wisdom in elementary schools were 81%.

Based on the validation of content experts and media experts, an average of 80% is obtained and it can be interpreted that the teaching materials are feasible to be tested.

After the revision was carried out, the teaching materials were tried out, and the results were as follows:

**Table 4: Results Of Revisions That Have Been Implemented**

Expert	Before revision	After Revision
MATERIAL EXPERTS	Many terms are not understood by students	<p><u>Glosarium</u></p> <p>Allegro : tempo permainan musik yang cepat.                      Amanat : pesan atau tujuan yang hendak disampaikan penganang melalui karyanya.                      Andante : komposisi musik dalam tempo lambat.                      Antagonis : tokoh yang bewatak jahat dan menentang cerita                      Cerita rakyat : kisah yang asal musalnya bersumber dari masyarakat serta tumbuh berkembang dalam masyarakat di masa yang lampau.</p> <p>Added glossary</p>
DESIGN EXPERT		
TEACHER	Added Pati culinary material	<p><u>Nasi Gandul</u></p> <p>Nasi Gandul ini makanan khas Pati memakai 13 h. rasa nasi gandul ini segar, gurih, manis karena ikan kecap yg humayun banyak. ciri khasnya an di atas daun pisang yg ditaruh dipiring, inilah pa katanya dinamakan nasi gandul, gandul : dhal/mengambang jadi tidak langsung di piring : atas namanya. Tapi versi lain memetakan, jika</p> 

From the results of the analysis of table 5, it can be concluded that 82% of teachers receive and respond positively to thematic teaching materials based on Pati's local wisdom and can be used as a companion book in learning in grade IV, as well as being used as a reference for teachers when teaching.

**Table 5: Recapitulation of Teacher Responses to Teaching Materials**

No	Rated aspect	Score	Percentage	Category
1	Content eligibility	4,3	86%	Agree
2	Language	4,0	80%	Agree
3	Presentation	4,0	80%	Agree
4	Graphics	4,0	80%	Agree
<b>Average</b>		4,2	4,1	82%

For student learning outcomes obtained from the subject of 20 fourth grade students public elementary school number 1 Pangonan. In the pre-test obtained an average value of 72.35 and on the post-test using thematic teaching materials based on local wisdom obtained an average value of 80 , 25. Actually this is enough to be used as a reference for that product developed in the form of thematic teaching materials based on local wisdom Pati is suitable for use in elementary schools.

This is in accordance with previous research conducted by Wulandari, Utaminingsih, & Kanzunudin (2020) with the title Development of Class VI Elementary School Thematic Teaching Materials Based Local Wisdom. The results

showed that from the assessment of thematic teaching materials based on local wisdom it was in the very good category and was feasible to use.

#### 4. Conclusion

The results of textbook validation in the development research model show that (1) content experts judge textbooks to be of good quality; (2) instructional media experts are well qualified. Qualitatively, there are several inputs provided by experts and researchers who have carried out revisions according to the direction of the experts; (3) The mean results of students' scores in learning Theme 8 "Daerah Tempat Tinggalku" have increased.

In this study, it shows that thematic teaching materials based on local wisdom of Pati are very suitable for use, especially for fourth grade students of public elementary school number 1 Pangonan.

The results of this study have the following implications: 1) It is hoped that with thematic teaching materials based on the local wisdom of Pati in elementary schools, especially in grade IV, students are expected to be able to realize the concept of learning in everyday life. Lessons on the sub-theme of "Daerah Tempat Tinggalku"; 2) In learning activities, there are various kinds of local wisdom in the Pati area, including regional stories, historical places, typical food and drinks, which are expected to not only add insight, but also foster the creativity of students to always be creative and care and understand their environment; 3) Can be used as a means to preserve and pass on local cultures to children starting from an early age which is packaged in an attractive manner.

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