



# Development of Teaching Materials Based on Javanese Culture on Folklore Materials in Vocational High Schools

Dhimas Arsyad Arrajiv, Miftakhul Huda<sup>(✉)</sup>, and Ali Imron Al Ma'ruf

Indonesian Language and Literature Education, Faculty of Teacher Training and Education,  
Universitas Muhammadiyah Surakarta, Surakarta, Indonesia  
miftakhul.huda@ums.ac.id

**Abstract.** This study aims to identify needs, develop designs, and determine the validity and effectiveness of Javanese Culture-Based learning modules on Folklore Material in Vocational High Schools. This research applied a research and development method and a mixed-method approach. In developing teaching material products in the form of modules, the researchers refer to the 4D model, which consists of 4 stages: define, design, develop, and disseminate. This research was conducted at SMK Muhammadiyah 4 Surakarta and SMK Muhammadiyah Kartasura. The instruments used by the researchers were questionnaires, interviews, and student understanding tests. The needs analysis results show that modules are needed as student learning resources following the independent learning curriculum. Modules that pay attention to the content of the material concerning learning objectives, learning outcomes, clear and colorful pictures/illustrations, using easy-to-understand language, and the type of evaluation that students like without eliminating the HOTS questions. Systematically, the integration of folklore material based on Javanese culture into 4 Domains: (1) listening, (2) reading, (3) writing, and (4) presenting. Three experts assessed result validity: material, language, and design. The validity of teaching materials in modules based on Javanese culture on folklore material ranges from 0.75–0.89, including valid and very valid categories. The dissemination module stage was distributed and tried at two vocational high schools. The effectiveness of teaching materials in modules is strengthened at this dissemination stage. The effectiveness of the modules is tested through student learning outcomes, student responses, and teacher responses. The results of student learning tests show that 90% of students complete or achieve a KKM (Minimum Mastery Criteria) score of 70. Thus, textbooks are declared effective in the learning process. The effectiveness of teaching materials in the form of modules for teacher responses has an average of 87%, which is included in the very high category. The module's effectiveness for student responses is 91% which is included in the very high category.

**Keywords:** Teaching Materials · Folklore Learning Module · Development of Teaching Materials

## 1 Introduction

In the current era, there is often a need for more knowledge of the millennial generation about the oral culture around them. Especially the lack of teaching materials for high school/middle school students in folklore material in schools, which only introduce well-known folklore in Indonesia, causes students not to know the cultural wealth, such as folklore in their environment. It is necessary to assist teachers, parents, the surrounding environment, and books usually used in schools to strengthen students' national culture following the values of Javanese cultural wisdom. In addressing this problem, the researchers need to research developing teaching materials in the form of teaching modules that contain folklore from local Javanese wisdom to strengthen national culture.

The achievement of learning in schools is strongly influenced by the teaching materials used by the teacher. Teaching materials are media, tools, and texts teachers or instructors use to carry out learning activities [1]. The same opinion is expressed by [2]. Teaching materials are various learning media that teachers and students use in the learning process. Teaching materials in the world of education are beneficial for teachers and students. According to Lisnawati [3], teaching materials designed based on the curriculum and the needs of students in schools are very helpful for teachers and students in the learning process. Teaching materials allow students to study independently and master the competencies that must be achieved. It also facilitates the teacher's learning process for students [4]. Teaching materials can broaden students' abilities and knowledge because they can be adapted to various references, uniqueness, and design characteristics of the teacher who designed them. A teacher must have competence in presenting teaching materials to achieve learning objectives that are understood by students [5].

Teaching materials are very influential in achieving learning objectives [6]. The same thing is also expressed by [7], who argue that teaching materials are an essential component that deserves special attention to support the achievement of learning objectives because there are still many teaching materials whose breadth and depth are not appropriate, making it difficult for them to understand them. Teaching materials that are suitable for use are materials whose contents are accessible for students to understand. According to [8], Good teaching materials are materials that students can easily understand and learn by considering design planning, content, language, and so on based on student needs. Based on these problems, this study wants to plan and develop teaching materials in the form of modules on folklore/saga based on Javanese culture. Modules are teaching materials the teacher makes systematically with the addition of the teacher's creativity to make them more beautiful. It includes instructions, content, objectives, methods, and evaluations that can be studied independently or in groups [9].

One of the goals of learning Indonesian in SMA/SMK is to increase literacy skills (language, literature, and critical-creative reasoning) in study and work. Literary literacy skills are critical at the high school/vocational high school level, according to [10]. Indonesian language teachers must choose material in literary works with an accountable literary value. Literary material in Indonesian does not only focus on language, but literary teaching materials must look at several aspects [11]. However, the implementation in learning has not got the expected results. One of the problems in learning literature is the need for more books and teaching materials from adequate teachers [12], even

though one of the determining factors for the achievement and success of learning is the availability of suitable teaching materials [13].

Folklore/saga is Indonesian Language and Literature learning material in high schools/vocational high schools. The availability of folklore teaching materials according to local wisdom is challenging for teachers. Folklore is included in old prose as oral tradition [14]. Furthermore, folklore is interpreted as an oral story that spreads from generation to generation, including legends, sayings, superstitions, and fairy tales that are continuously told to become habits in a culture, group, or subculture. Folklore, part of actual oral literature as a cultural property, belongs to the people whose presence is based on the desire for social relations [15]. The statement is strengthened by [16], which states that oral folklore is told from generation to generation. Folklore contains hope through noble values and ancestors' cultural heritage. In line with this statement, folklore is a wealth of cultural treasures circulating through word of mouth without authorship [17].

The challenge that the teacher must do is how facilitate students in learning folklore through teaching materials. Students' cultural backgrounds must be considered when selecting teachers' literary teaching materials [18]. Because usually, students will be more interested in folklore/sagas that have something to do with their life background. According to [19], if the reader finds similarities between himself and what he reads, it will be easier to understand the contents of the reading. [20] explains that material that is close to students is a provision for students to understand reading and gain an understanding of the life they live.

Integrating local wisdom into teaching materials is an effort to bring students closer to the local culture around them. According to [21], effective teaching materials are based on students' needs, language use, and cultural context. It is necessary to integrate local wisdom to achieve the closeness of teaching materials to student culture, which can be used as an alternative to achieving learning goals and preserving local culture [22]. Sularso clarified that it is necessary to cultivate and sow local wisdom as an actual effort to build student identity and character based on national culture [23]. Local wisdom literary works contain advisory thoughts and learning and are trusted by the community to be used as a way of life [24]. Integrating local wisdom into this folklore teaching material will make it easier for students to understand the material taught by the teacher to students.

Based on observations by researchers in grade ten SMK Muhammadiyah 4 Surakarta and SMK Muhammadiyah Kartasura, problems were found in learning Indonesian in folklore/saga material, specifically in the readiness and availability of reference/alternative books used by teachers. So far, teachers only use reference books in the form of textbooks in learning folklore material which causes students to become passive and not understand the material during the learning process in class. As a result, students have difficulty accepting material while learning folklore material. Therefore, the problem of limited availability of reference books can be overcome by developing Javanese culture-based teaching materials on folklore material in vocational high schools. Following the problems, researchers developed modules that could assist students in understanding folklore/saga material.

Previous research has a relationship with research on developing teaching materials in the form of modules. There are various relevant studies according to the research topic. This research is developing teaching materials for fairy tales intended for elementary schools by highlighting local wisdom, according to [25, 26], and [27]. At the same time, this research focuses on developing Javanese culture-based teaching materials on folklore material in vocational high schools.

In line with this research, several studies have been conducted by [28] and [29] on developing teaching materials for Folklore with Local Wisdom for SMA. The difference with research conducted by researchers is that researchers focus on developing Javanese culture-based teaching materials on folklore material in vocational high schools. Therefore, this study focuses on research on the development of teaching materials in the form of modules on Javanese culture-based folklore material in vocational high schools.

Based on the background of the problems, the researchers want to develop teaching materials in the form of modules on Javanese culture-based folklore material in vocational high schools. The objectives of this study are (1) to identify the need for teaching materials in vocational high schools, (2) to develop teaching materials in the form of modules, (3) to measure the level of validation of Javanese culture-based teaching materials on folklore material in vocational high schools, and (4) trial of root material based on Javanese culture on folklore material in vocational high schools.

## 2 Method

Researchers applied research and development methods and a mixed-method approach. Research and Development (R&D), according to [30], is a method for producing a product and testing the product's validity. In line with this opinion, according to [31], Research and Development (R&D) is a research method to develop and validate products designed for education and learning. Meanwhile, this study uses a mixed-method approach, combining qualitative and quantitative research [32]. This study follows the 4D model developed by Thiagarajad [33]. Researchers use the 4-D model in researching and developing Javanese culture-based teaching materials on folklore material in vocational schools because the 4-D model is more thorough and systematic in teaching material development research.

There are two main focuses in research and development: (1) developing products and (2) testing the effectiveness of products in achieving goals [34]. R&D research is slightly different from other educational research. R&D aims to design, produce specific products, validate products, and test the effectiveness of these products [35].

The subjects of this development research were grade ten students at SMK Muhammadiyah 4 Surakarta consisting of 28 students, and grade ten students at SMK Muhammadiyah Kartaura, consisting of 18 students, the total subject was 46 students. The instruments used during the research process included student questionnaires, teacher questionnaires, interviews, documentation, and student understanding tests. This study analyzed the need for student teaching materials using questionnaires and interviews with teachers and students. After getting the required teaching materials, the researcher designed the teaching materials in the form of modules and was validated by three experts: material, language, and design. After validating the teaching materials,

**Table 1.** Validation Criteria

Score	Criteria
0,82–1,00	Very Valid
0,62–0,80	Valid
0,42–0,60	Enough
0,22–0,40	Less Valid
0,00–0,20	Invalid

they would be tested on SMK Muhammadiyah 4 Surakarta and SMK Muhammadiyah Kartasura to test the effectiveness of the teaching materials that have been made.

This study uses Aiken’s formula to determine the validity level of teaching materials developed based on the scores given by experts. Aiken’s formula measures the level of validation of the teaching materials developed [36]. Researchers use the validity criteria in Table 1.

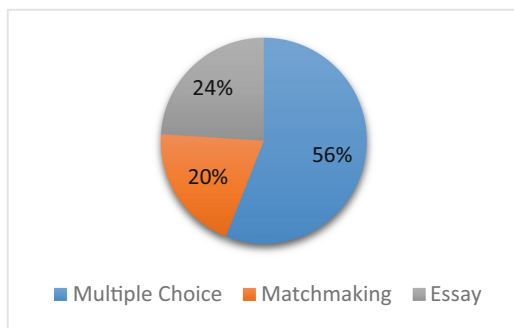
### 3 Results

#### 3.1 Define (Needs Analysis)

This is the initial research stage on developing Javanese culture-based teaching materials on folklore material for SMKs. Based on the basic needs analysis results, the researchers saw that problems occurred during learning, especially folklore material, which is the lack of teaching materials used by teachers and students in studying folklore material. Students and teachers only used one book as a reference for studying folklore which caused a lack of understanding of the folklore around them, especially from Java. Most students only know well-known folklore from outside Java, which causes them to be sometimes not very appropriate to the social conditions of the surrounding area. By developing teaching materials in the form of modules based on Javanese culture, it is hoped that students will know a variety of folklore on the island of Java following the characteristics and local wisdom of the region.

At this stage, the researchers used documents and interview techniques with Eko Purnomo, S.Pd. as a teacher at SMK Muhammadiyah 4 Surakarta, and Vellis Yoelistya Wijaya, S.Pd, M.Pd. as a teacher at SMK Muhammadiyah Kartasura to get information on the independent curriculum that is implemented in grade ten of the two schools. The independent curriculum is the 2013 curriculum which was refined to control learning crises (loss of learning) due to the Covid-19 pandemic. According to [37], the Independent Curriculum is a curriculum that applies diverse learning. This curriculum focuses on actual content so students can understand, deepen, and strengthen their competence.

The data obtained by researchers through interviews and questionnaires show that students prefer teaching materials printed with clear writing, easy to read, easy to understand, and clear colors and pictures. Analysis data of the two schools show that 56% of the students like multiple-choice assignments, 24% of essays, and 20% of matchmaking. The data is presented in Fig. 1.



**Fig. 1.** Types of assignments that students like

Regarding folklore/saga, most students only know well-known folklore from outside Java, such as Malin Kundang, Lake Toba, and Tangkuban Prahur. Students do not understand folklore originating from Java, especially Central Java. The analysis results regarding the type of folklore reading show that students like the type of intensive reading, around 65%, rather than extensive reading, 35%. The data shows that students do not have other handbooks for learning folklore material. This encourages researchers to develop Javanese culture-based teaching materials on folklore material in vocational high schools so that students understand folklore originating from their region.

Based on the analysis of the needs of teaching materials, it is known that the teaching materials needed by the teacher are teaching materials whose contents follow learning objectives, learning outcomes, exciting content, language that is easy for students to understand, and colorful illustrations to attract students' attention. Therefore, the researchers will formulate to design teaching materials according to the needs of students and teachers in printed form and *e-books*, such as the learning module for folklore/saga based on Javanese culture in Vocational High Schools. It will be designed by paying attention to the content of the material following learning objectives, learning outcomes, clear and colorful pictures/illustrations, language that is easy for students to understand, and the type of evaluation that students like without eliminating the HOTS questions.

### 3.2 Design

The next step is designing. In this step, the researchers design teaching materials based on Javanese culture in folklore. Based on the analysis of teaching materials, the initial design of teaching materials in modules based on Javanese culture will discuss one material entitled "Folklore/Saga Based on Javanese Culture." This material is divided into four domains based on the independent learning curriculum: (1) Listening to folklore/saga read by other people to understand and analyze messages in narrative texts in the form of folklore/saga. (2) Reading to assess and criticize the characterization and plots in folklore/saga and short stories, associating it with the life values applied in the past and present. (3) Writing ideas, thoughts, views, directions, or written messages for various purposes logically, critically, and reflectively in the form of fictional texts, and (4) Presenting narrative texts in the form of monologues coherently and creatively.

The design of learning modules based on Javanese culture on folklore material was based on an initial analysis about the needs of teaching materials for students and teachers, carried out using questionnaires, documents, and interviews. Planning begins with designing the components of teaching materials (modules) to simplify and clarify the module's contents when made. The development of teaching materials in the form of modules is adapted to students' learning outcomes in folklore material and indicators in achieving the learning objectives of folklore material. The components of teaching materials, according to [38], include (a) objectives, (b) instructions, (c) activity materials, (d) activity sheets, (e) worksheet keys, (f) evaluation, and (g) evaluation keys. The design of module components based on Javanese culture on folklore material is developed based on material teaching components according to the needs of students and teachers. The components of teaching materials developed include cover, introduction, module identity, learning outcomes, module activity instructions, learning materials, learning activities, learning objectives, evaluation, summary, and bibliography. Teaching materials must follow the researchers' designed component frameworks to match the design [39] (Fig. 2).

Material, language, and design experts will validate it at this design stage. First, in developing the learning module, the researcher covered the Javanese culture-based learning module on folklore material. In doing this module, the researcher gave the cover color according to the character of Javanese culture and adapted it to the needs of grade ten students at SMK Muhammadiyah 4 Surakarta. The cover was designed as attractive

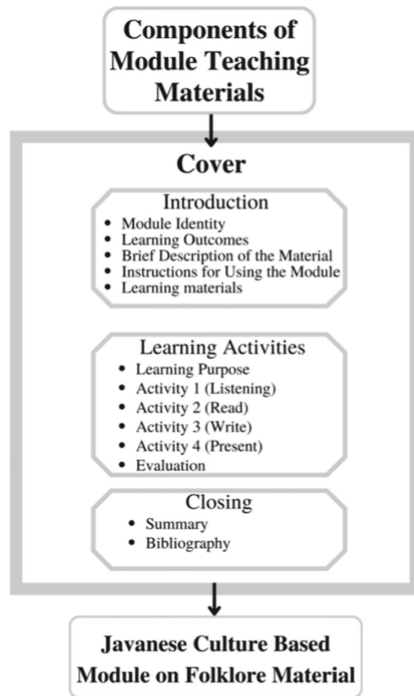


Fig. 2. The description of the Teaching Materials of the Javanese Culture-based Folklore Module

as possible, so students were interested in reading and learning the module's contents. Researchers make modules with the dominant color choice of blue, which gives a calm and joyful effect. The illustration of the solo palace was used to show that this module is based on Javanese culture. The image of the palace is very characteristic of Javanese culture, which makes students more interested in reading modules based on Javanese culture on folklore material (Fig. 3).

The concept map developed by researchers is based on the objectives of folklore/saga material adapted to the Independent Learning curriculum. The purpose of this folklore/saga material is "After studying the text structure of the folklore/saga and the rules used in writing folklore/saga texts. Students can identify the characteristics of folklore/saga and the values contained in the saga. Students can also use the values contained in the saga to make short stories. The indicators in the Javanese culture-based folklore module are also adapted to the Independent Learning curriculum with four domains (1) listening, (2) reading, (3) writing, and (4) presenting (Fig. 4).

Introduction in planning Javanese Culture-Based Folklore Module Teaching Materials has several sub-sections: (a) Module identity, concerning the module's characteristics, which contains subjects, classes, time allocations, titles, and phases; (b) Learning Achievements, which contain learning objectives, domains, and learning indicators; (c) A brief description of the material; (d) Instructions for Using the Module, which contains steps for using the module correctly; (e) Learning materials containing various materials regarding folklore/saga (Fig. 5).

Folktales integrated with this module are folktales related to Javanese regional stories. The story chosen is the folklore of Prince Sambernyawa and Panji Semirang. This original story from Javanese culture tells of a king in a Javanese kingdom with supernatural powers and values that can be drawn from this folklore. Tasks made by researchers will also be associated with folklore originating from Java. The exercise is related to folklore originating from Java. In this way, it is hoped that students can increase their knowledge of folklore originating from their region, Java. Students are also more relevant to the story because it has the same cultural relationship. The researchers added illustrative



**Fig. 3.** Front and back covers of Javanese Culture-Based Folklore Module Teaching Materials



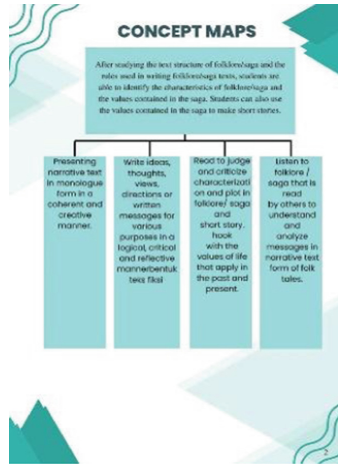


Fig. 4. The Concept map of Javanese Culture-Based Folklore Module Teaching Materials

**A. MODULE IDENTITY**  
 Course : Indonesian Language  
 Class : X  
 Time Allocation: 2 x 45 Minutes  
 Module Title : Folklore  
 Phase : E

**B. LEARNING OUTCOMES**

Learning Objectives	Domain	Learning Indicators
After studying the text structure of folklorage and the values used in writing folklorage texts, students are able to identify the characteristics of folklorage and the values contained in the saga. Students can also use the values contained in the saga to make short stories.	Listening	Listening the saga read by other people to understand and analyze messages in folklor/narrative texts
	Reading and View	Reading to assess and criticize the characteristics and plot of saga and short stories. Knowing with the values of life that apply in the past and present
	Writing	Write a short story based on the value in the saga
	Speaking and present	Presenting narrative text in monologue form in a coherent and creative manner

**C. SHORT DESCRIPTION OF MATERIAL**  
 Folklore is a form of human creative activity. In other words, it is very exciting. Are you ready? Your main preparation is that you are in good health so that you can study this module well. In this module, you will learn folklore material.  
 Folklore is a story that originated from the community and developed in the community in the past which characterizes each nation that has a diverse cultural value that includes the cultural and historical wealth of each nation. Folklore also has a structure that builds it, namely the setting and content structure that will be studied in this module.  
 Hikayat is one example of folklore. All text genres have certain characteristics, values and linguistic rules. Familiar with historical story ones, the three exercises you will study folklore from Java, Javanese folklore is less recognizable due to the lack of modules containing folklore based on historical values. For this reason, this module will study Javanese culture-based folklore so that students will recognize stories from their own region. This module contains material about identifying the characteristics of folklor / hikayat and the values contained in hikayat. Students can also use the values contained in hikayat to create short stories and present them in the form of oral monologues.

**D. INSTRUCTIONS FOR USE MODULE**  
 In order for your learning to be meaningful, what you need to do is:  
 1. Make sure you understand the competencies to be achieved  
 2. Start by reading the material carefully  
 3. Do the exercise questions  
 4. If you have completed the exercise questions, try to open the answer key at the end of this module, the end of this module. Calculate the score that you get  
 5. If the score is still below 70% to re-read the material, or re-work the wrong questions before you attend the material  
 6. If your score is at least 70, you can move on to the next lesson

**E. LEARNING MATERIALS**  
 This module is divided into 8 lessons, in this module there are material descriptions, sample questions, worksheets, practice questions and evaluation questions. Activities include identifying the characteristics of folklorage / hikayat and the values contained in hikayat. Students can also use the values contained in hikayat to create short stories. This module is very useful for you. You can be more sensitive to understand your surroundings. Your sensitivity will be used to understand information in the form of values and people. If there are any words that you do not understand, you can look at the glossary to get an idea of the meaning of the word. You can do it.

Fig. 5. Introduction to Javanese Culture-Based Folklore Module Teaching Materials

pictures to illustrate the stories so that students would understand and be more interested in reading the folklore given (Fig. 6).

The researchers made the exercises and evaluations as attractive as possible so that the students working on them were more interested and did not feel they were working on monotonous questions. The exercises and evaluations are related to the folklore shown, Prince Sambernyawa and Panji Semiring, to find out how far students have understood the module's contents. Exercises are also made in groups to hone students' activeness in discussions. One exercise that can be used in groups is that students are asked to find the values contained in the folklore so that they simultaneously discuss the values contained in the folklore. The evaluation is based on analyzing the needs of teaching materials without reducing the difficulty in achieving learning objectives (Fig. 7).

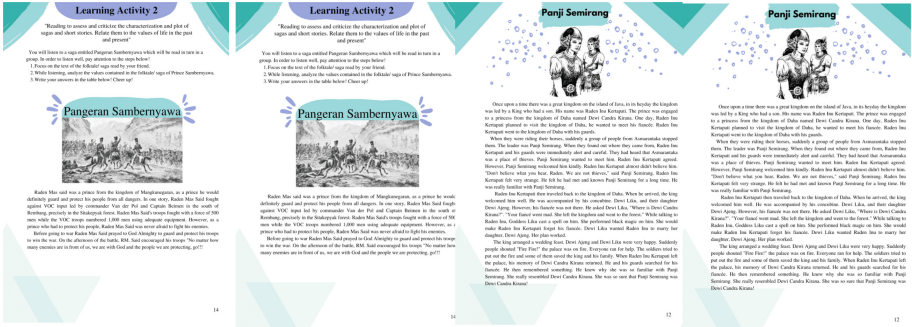


Fig. 6. Introduction to Javanese Culture-Based Folklore Module Teaching Materials

**Let's practice!**

Name : \_\_\_\_\_  
Date : \_\_\_\_\_

Value Type	Definition	Excerpts from Folktales/ Sayings
Religious Values		
Education Value		
Moral Values		
Cultural Values		
Social Value		

**Evaluation Sheet**

Put a cross (X) on the answer that you think is the most correct!

- In folklore, there are a number of characteristic characteristics, that is, it has ...
  - Place and neighborhood
  - Rich people's houses
  - People people's houses
  - A crowd place
- In folklore / folktales is mysterious, which means ...
  - The name of the author is unknown
  - Includes the author's name
  - Putting the author first
  - Commented author with the main character
- The value of folklore / folktales taken from the culture that has developed from generation to generation is its consistency in ...
  - Cultural Value
  - Religious value
  - Educational value
  - Religious value
- In folklore we recognize two elements, namely intrinsic elements and extrinsic elements. Intrinsic elements are ...
  - Elements that compare a literary work from within that outline the structure of a literary work
  - Elements that make up a literary work from outside the literature itself
  - The linguistic element
  - The building block of a language
- The following are intrinsic elements in the folktale, except ...
  - Theme
  - Character and characteristics
  - Religious Value
  - Setting

Fig. 7. Training and Evaluation of Javanese Culture-Based Folklore Module Teaching Materials

The module development stage has gone through revisions based on experts' suggestions: material, design, and language experts. The purpose of the revision based on the advice of experts is to achieve teaching materials that are appropriate, good, and ready to be disseminated. This is in line with [40]; obtaining teaching materials suitable for research, and development must go through a process of improvement/revision. The researchers have revised the module based on experts' suggestions, including the presentation of material presented from the subject matter to supporting material, consistency in the use of symbols, selection of cover designs using high-resolution images, and fixing ambiguous sentences that confuse students.

### 3.3 Develop (The Validity)

After the researchers have finished designing teaching materials in the form of modules and produced into E-books, the teaching materials will be validated by experts consisting of a material expert, Dini Restiyanti Pratiwi, S.Pd., M.Pd., a language expert, Yunus Sulistyono, S.S., M.A, Ph.D., and a design expert, Gallant Karunia Assidik, S.Pd., M.Pd. This validation process aims to obtain the validity value of teaching materials before

**Table 2.** Recapitulation of Expert Assessment Results

No	Expert	Validity	Criteria
1	Material	0,84	Very Valid
2	Language	0,89	Very Valid
3	Design	0,75	Valid

the dissemination stage. The assessment results from a material expert, language expert, and design expert are presented in Table 2.

Based on the assessment of material, language, and design experts, it was stated that the validation results of the teaching materials designed by researchers were valid and very valid. This shows that the design of teaching materials in modules based on Javanese culture in folklore material is suitable for use/testing on students with slight revisions. Researchers immediately corrected comments from experts to improve the quality of teaching materials.

Comment from Dini Restiyanti Pratiwi, S.Pd., M.Pd., as a material expert, stated that teaching materials based on Javanese culture in folklore material was good, excellent, and engaging. The objectives in the module have been formulated and follow the four domains according to the independent learning curriculum. The module provides insight to students about the diversity of stories in Java. Pictures and illustrations in the module follow the material and are easy to understand. The advice given by the material validator is to pay attention to several things that must be corrected regarding the presentation of the material so that it is presented from the primary material to the supporting material, the consistency of the use of symbols, numbers, or letters must be considered better using numbered and punctuation so that more attention is given. According to [41], the most important aspects of teaching materials are the suitability of KD (in this case, CP), learning objectives, and the suitability of the material.

Comments from Yunus Sulistyono, S.S., M.A, Ph.D., as a language expert, state that the language used in teaching materials in the form of modules based on Javanese culture in folklore material is already communicative, the sentences used represent the contents of messages or information, the language used follows the level of education of students, and the spelling used is correct. Suggestions given by the language validator are to improve the language that confuses students and pay attention to the consistency of symbols or icons used in the module. Language is an essential aspect of teaching materials. That is why language is useful in conveying the aims and objectives of teaching materials [42].

Comments from Gallant Karunia Assidik, S.Pd., M.Pd., as a design expert, state that the module design follows ISO standards (A4), the color elements used on the cover are related to each other, the illustrations describe the content/teaching materials, the use of clear fonts and the separation between paragraphs is appropriate. The advice the design validator gave researchers is that the cover design selection can be improved by using high-resolution images, and the title layout is adjusted to the cover design. According to [43], teaching materials must be made as attractive as possible so that students are

interested in reading the material and knowing the content contained in the teaching materials.

The validity of Javanese culture-based folklore module teaching materials ranges from 0.75–0.89, including in the very valid category. This validity is proven by the scores obtained from experts to assess how valid the teaching materials being developed are. In line with these results, according to [44], the feasibility of teaching materials must be based on expert validators. So, the results of the validators are proven to be accurate, and the modules developed are tested for feasibility.

The researchers have shown and explained the results of expert validation who strengthened the research on the development of Javanese culture-based teaching materials in folklore that has been tested for validity and is ready to be tested. Following the opinion of [45], good and quality teaching materials are valid from several expert opinions. That way, the teaching materials being developed are very valid and ready to proceed to the deployment and trial stages (disseminate).

### 3.4 Disseminate

The final stage of developing teaching materials is dissemination. According to [46], the dissemination stage is the dissemination of teaching materials after being validated by experts on the target subject. At this stage, the teaching materials were distributed and tested in SMK Muhammadiyah 4 Surakarta and SMK Muhammadiyah Kartasura to test the effectiveness of the developed teaching materials. This distribution was done in grade ten Pharmacy at SMK Muhammadiyah 4 Surakarta and grade ten Culinary at SMK Muhammadiyah Kartasura.

This dissemination stage was carried out by the researchers entering the class and distributing the E-book link via any flip web so students could easily open it. The researchers tested the module on students, and students worked on the exercises and evaluations available in that module. Researchers chose to distribute e-books to students because they are more flexible and efficient. With e-books, students can carry the module anywhere and open it anytime.

After the dissemination stage, the researchers tested the module's effectiveness on students and teachers. The effectiveness of this module was tested through the results of student practice, student responses, and teacher responses through questionnaires. Researchers give learning tests to students to determine the effectiveness of teaching materials. The effectiveness of teaching materials was processed by descriptive statistical analysis of student assignments to the material with practice tests for students of grade ten SMK Muhammadiyah 4 Surakarta and SMK Muhammadiyah Kartasura using the module, showing that 90% of students exceeded the KKM score of 70. With these results, the teaching material developed includes the effective learning process level.

Furthermore, the researchers measured the level of effectiveness by using a questionnaire for teachers and students to assess how effective this module was. The effectiveness of teaching materials is strengthened at this stage of dissemination. The average data on the module's effectiveness on teacher responses is 87%, included in the very high category. The module's effectiveness on student responses is 91%, also included in the very high category (Table 3).

**Table 3.** Recapitulation of Module Effectiveness Results

No	Respondent	Effectiveness	Category
1.	Grade ten students of SMK Muhammadiyah 4 Surakarta	91%	Very high
2.	Grade ten students of SMK Muhammadiyah Kartasura	98%	Very high
3.	Grade ten teacher of SMK Muhammadiyah 4 Surakarta	87%	Very high
4.	Grade ten teacher of SMK Muhammadiyah Kartasura	80%	Very high

The research results show that the Javanese Culture-Based module on Folklore Material shows a very high average effectiveness of 80% -98%. It shows that this module can be used by students as learning media and can contribute to introducing Javanese folklore in the learning process. Students can open and carry the module anywhere and anytime.

## 4 Conclusion

Based on the analysis of the needs of grade ten students at SMK Muhammadiyah 4 Surakarta and SMK Muhammadiyah Kartasura and teachers, teaching materials are needed in the form of modules according to the independent learning curriculum as student learning resources. The module needed is a module that pays attention to the content of the material according to learning objectives, learning outcomes, clear and colorful pictures/illustrations, using easy-to-understand language, and the type of evaluation that students like without eliminating the HOTS questions. At the product design stage, the teaching material developed/module includes cover, introduction, module identity, learning outcomes, module activity instructions, learning materials, learning activities, learning objectives, evaluation, summary, and bibliography. At the development stage, the teaching materials are tested for validity. The validity of teaching materials in the module based on Javanese culture on folklore material ranges from 0.75–0.89, including valid and very valid categories. The researchers have revised the module based on experts' suggestions, including the presentation of the material from the subject matter to the supporting material, the consistency of the use of symbols, the selection of cover designs using high-resolution images, and fixing ambiguous sentences that confuse students. At the dissemination stage, the researchers enter the class, distributing the module link via any flip web so students can easily open it. The researchers tested the module on students, and students worked on the exercises and evaluations available in the module. After the dissemination stage, the researchers tested the module's effectiveness on students and teachers. The level of effectiveness of teaching materials is strengthened at this dissemination stage. The effectiveness of this module is tested through the results of student practice, student responses, and teacher responses through questionnaires. The results of student training show that 90% of students exceed the KKM score of 70. With these results, the teaching material developed is included in the effective level of the learning process. The module's effectiveness on teacher responses has an average of 87% in the very high category, and the module's effectiveness on student responses shows an average of 91%, which is also included in the very high category.

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