

Development of Learning Module of Lampung Ship ornament for Students

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Article Info

Article history:

Received 17 January 2026

Received in revised form 2

April 2026

Accepted 9 May 2026

Keywords:

Lampung Ship Rnament

Learning Media

Module

Abstract

The aim of this study was to determine the understanding of vocational students using the learning module of Lampung ship ornaments. This research uses the development method or Research and Development adopted from Borg and Gall. The stages of this research include needs analysis, planning, initial product development, initial field test, revision of test results, main product field test, product revision, results of learning modules. The subjects in this study were vocational students totaling 28 students consisting of 7 students for the limited feasibility test, and 21 students for the field trial. The data were collected through validation sheets, creativity questionnaires, and learning outcomes. The results of this study are as follows. (1) The learning module of Lampung ship ornaments is declared feasible to improve understanding for vocational students. (2) The learning module on Lampung ship ornaments can improve students' understanding with very good criteria. This shows that the Lampung ship ornament learning module can improve understanding and learning outcomes for vocational students.

Introduction

Lampung Province is a province located at the southern tip of the island of Sumatra and is known as "Sang Bumi Ruwa Jurai". Sang Bumi is defined as a great household with rooms, while Ruwa Jurai is defined as two elements of the community groups that live in the Lampung Province area (Pandensolang, 2015: 52). In addition, it also means that one earth is two different cultural flows (groups), namely the flow (Jurai) of the Saibatin tribe and the Pepadun tribe. Lampung Province when viewed from its geographical location and historical background intersects with various cultures. From prehistoric culture to historical times. The Lampung Saibatin community is also commonly referred to as the coastal Lampung community because most of the people live in coastal areas, so the community has a variety of arts and cultures (Jainah et al., 2024; Daryanti et al., 2019; Kadju & Timang, 2026).

The culture found in the Lampung Saibatin community is thick with the atmosphere of maritime life and the natural environment of the coastal area so the background of the creation of various kinds of art and works of art. Therefore, the artwork produced in general is very thick with the atmosphere of maritime life and one of the concepts of ideas which is then realized in the form of artwork, namely woven fabrics. Woven fabrics originating from Lampung have a variety of motifs that are very rich in meaning and have the characteristics of each fabric including typical Lampung woven fabrics with ship motifs or commonly called ship cloth (Hartono et al., 2026; Mahadewi et al., 2026; Hartono & Setiyono, 2025).

This ship cloth has a beautiful and very distinctive motif, and every motif found on the ship cloth has an interesting meaning to be understood (Noerhasmalina & Khasanah, 2023; Amirulloh & Badaruddin, 2024; Kusnadi, 2023). However, this ship cloth is not well known

to the wider community because its existence is rare and has been very rarely found because currently the ship cloth is no longer made (Sultana et al., 2026; Hartono et al., 2025).

Education is one way to create an accomplished successor to the nation and be able to compete internationally (McGrath, 2025; Mukti et al., 2023; Abera, 2023). Education is a benchmark in the development and progress of a nation because education is one of the supporting factors of a nation. Educated people are produced from hard work through the learning process. Learning is a process that occurs in every person throughout his life, the learning process generally occurs due to the interaction between a person and his environment (Firmansyah & Saepuloh, 2022; Conrad et al., 2022; Yulia et al., 2025). The teaching and learning process as a form of visualization of the interaction of the students and educators certainly has a goal that will determine the form and results of the motive due to the interaction (Dietrich & McWatt, 2025; Glushkova & Staribratov, 2026; Wibawa et al., 2024). Therefore, educators are expected to play a more role as facilitators and motivators of the learning process within the scope of students, helping and making it easier for students to get learning experiences that are in accordance with their needs and abilities so that there is an active interaction. However, in reality, everything goes less than optimal and as a result the understanding of students is also less than optimal. Many efforts have been made to solve this problem, one of which is by teachers utilizing learning media which is one way that teachers can help students gain a more interesting learning experience and an increased level of understanding (Lubis et al., 2023; Katona et al., 2022; Kandia et al., 2023; Fatchurahman et al., 2022).

Learning media is an inseparable part of a series of learning approach systems in the teaching and learning process (Azhura et al., 2024; Kotiash et al., 2022; Jannah et al., 2026). The use of learning media certainly greatly helps the smoothness and achievement of learning objectives. In addition, learning media are supporting elements in the learning process so that it runs smoothly and effectively (Masrupah et al., 2026; Sabilla & Prayitno, 2026; Kurniawan et al., 2026). The use of learning media must be in accordance with the objectives of the material to be conveyed so that by utilizing the learning media and learning resources chosen by the teacher can achieve the expected competencies (Novela et al., 2026; Nafisah & Prasetyaningtyas, 2026; Aldi et al., 2025). Learning media has several types that can be used by educators, namely print media such as books, hand outs, modules, and magazines. Learning media can be concluded as a tool for the teaching and learning process, namely everything that can be used to stimulate thoughts, feelings, attention and abilities or skills of students so that it can encourage the learning process. Learning media has an important position in the teaching and learning process, therefore the delivery of the symbolic meaning of this ship-patterned woven fabric is very suitable to be delivered at school as a source of learning media.

Module is one type of learning media that is often used as teaching material for educators and students in teaching and learning activities (Suarmita et al., 2025; Holisoh et al., 2025; Darmastuti & Mardiaty, 2025). Nasution (2003: 205) says that a module is a complete unit and consists of a series of learning activities arranged to assist students in achieving objectives that are specifically and clearly outlined. The main purpose of using modules for learning media is to train students' independence in learning. Therefore, a good module is needed which contains a summary of the learning material, but the module is a learning media that is able to help students to be more independent in learning a material.

Thus, students need a module that is not only good in visual appearance but must get an innovative module, in order to increase students' independence and interest in learning the material (Pardede et al., 2025; Fahmi et al., 2025; Amini et al., 2025). This is one way that can stimulate student motivation to increase understanding in learning about the symbolic meaning

of this ship-patterned woven fabric well, namely by creating learning media in the form of creative and interesting modules so that students can understand the material presented (Kandiri et al., 2025; Rahmi et al: Wulandari et al., 2025). In this study, the Vocational High School (SMK) Negeri 5 Bandar Lampung became one example of application in conveying the symbolic meaning of this ship motif woven fabric.

Methods

The method used in this study was Research and Development method developed from Borg and Gall's development model. The approach was used because the study was designed to create, validate, modify and test a learning material for vocational students about ornaments in lampung ships. The development process was divided into eight phases: Needs analysis, product planning, initial product development, limited field trial, revision of trial results, broad field trial, revision of product, and final product development.

The subjects of this study are 28 students of grade XI, Creative Crafts of Wood and Rattan in SMK Negeri 5 Bandar Lampung. A limited field trial was conducted with seven students and a broad field trial was conducted with 21 students. The limited trial was conducted to seek initial feedback on the module and the broad trial to test the viability of the module and to see how students comprehend the module after it was used.

Various instruments such as interviews, expert validation sheets, student response questionnaires, and learning tests were used to collect data. At the stage of needs analysis, interviews were held with teachers and students. The module was validated for feasibility by one material expert and one media expert using expert validation sheet. The introduction, content and display of the module were evaluated by using student questionnaires in the limited and broad field trials. Students' understanding level was measured in learning tests form pre test and post test before and after students used the module.

The module was assessed by the material expert on learning and material aspects, and the media expert on display and usefulness aspects. Assessment instruments were in the form of modified 4 point Likert scale ranging from 1 to 4. The scores were expressed as percentages, obtained/maximum x 100 percent. The results were interpreted within 4 categories, very good – 71 percent to 100 percent, good – 51 percent to 70 percent, not good – 31 percent to 50 percent, very poor – below 30 percent. When the module was in good or better category the module was considered as feasible.

Five criteria were used to evaluate the students' understanding: simplicity, harmony, rhythm, unity and balance. The pre test was carried out prior to students' involvement with the Lampung ship ornament learning module, and the post test was carried out after the learning process using the learning module. Descriptive Quantitative analysis was used to analyze the data; the average scores and percentages were calculated. The module was revised and improved with qualitative comments and suggestions by validators and students prior to the production of the module.. This validity test aims to interpret the validity value that has been obtained, so the validity assessment qualifications are used in Table 1.

$$\text{Response score (\%)} = \frac{\text{average}}{\text{Maximum score}} \times 100\%$$

Figure 1. Percentage Formula

Tabel 1. Criteria for scoring percentage

Criteria	Scale Score	Presentase
Very good	4	71%-100%
Good	3	51%-70%
Not good	2	31%-50%
Not good	1	<30%

Results and Discussion

Initial Product Development

In this stage is a series of production processes to produce learning media or modules that are expected to be developed, including making learning modules. The information that has been collected at the previous stage is used as a reference in developing the learning media development design. The development of the learning module in this research is entitled Application of Lampung Ship Ornament and its Symbolic Meaning in Wood Creative Craft Learning. The learning module consists of 3 (three) chapters or sections, in chapter 1 is the history of Lampung ship ornaments, in this chapter there are sub-chapters namely about Lampung province and Lampung Ship ornaments. Then in chapter 2 the symbolic meaning of Lampung ship ornaments, in this chapter there are sub-chapters namely ornaments, ship ornaments and symbolic meaning of ship ornaments. Chapter 3 is the application of Lampung ship ornaments in wood carving, in this chapter there are sub-chapters namely drawing or pattern design, wood carving materials, occupational safety and health and carving techniques on wood.

Product Validation

The validation of learning module products involves 2 (two) validators or experts in the field of materials, especially art education and teaching material development media, which consists of material validation and media validation. The results of this validation aim to determine the feasibility of the product as a learning module. The results of the learning module material expert validation assessment can be seen from 2 (two) aspects, namely the learning aspects of table 2 and the material aspects of table 3.

Tabel 2. Validation of learning aspect materials

No	Assessment Indicators Learning aspects	Assessment Score
1	Suitability of material with Learning Outcomes	4
2	Suitability of material with indicators of success	4
3	Independent learning opportunities	3
4	The accuracy of the selection of materials in describing the material	4
5	Accuracy of language selection in exercise questions	4
6	I understand the lesson more easily after the teacher uses learning media	4
Total		23
Average		3,83
Response score (%)		95,75%

Description :

Maximum score = 4

$$\text{Average} = \frac{\text{Total score}}{\text{Total Indicator}} = \frac{23}{6} = 3,83$$

$$\text{Response Score} = \frac{\text{average}}{\text{maximal score}} \times 100\% = \frac{3,83}{4} \times 100\% = 95,75\%$$

In Table 3, it can be seen that the results of the learning aspect material expert assessment obtained a percentage of 95.75% which is categorized as very good, so this product is very suitable for use.

Tabel 3. Material validation of material aspects

No	Assessment Indicators Material aspects	Assessment Score
1	Suitability of the material to the needs of students	4
2	Coverage of material to achieve goals	4
3	Clarity of material	4
4	Systematic presentation of material	4
5	Appropriateness of font size, type and color	4
6	Clarity of language use	4
7	Accuracy of images to explain the material	4
8	Clarity of images to explain the material	4
9	Appropriateness of image size	3
10	The accuracy of the questions is associated with competence	3
11	The suitability of the question with the material	4
12	The level of understanding of the question	3
Total		45
Average		3,75
Response score (%)		93,75%

Description :

Skor maksimal = 4

$$\text{Average} = \frac{\text{Total Score}}{\text{Total Indicators}} = \frac{45}{12} = 3,75$$

$$\text{Response Score} = \frac{\text{Average}}{\text{Maximal score}} \times 100\% = \frac{3,75}{4} \times 100\% = 93,75\%$$

In Table 3, it can be seen that the results of the material expert assessment of the material aspect obtained a percentage of 93.75% which was categorized as very good, so this product is very suitable for use. The results of the learning module media expert validation assessment can be seen from 2 (two) aspects, namely the display aspect in Table 4 and the usefulness aspect in Table 5.

Table 4. Media validation of display aspect

No	Assessment Indicator Display aspect	Assessment Score
1	Appropriateness of layout selection	4
2	Suitability of module cover layout	4
3	Suitability of module cover font	4
4	Appropriateness of font type selection	4
5	Consistency of font selection	4
6	Appropriateness of font size selection	4

7	Clarity of images to explain the material	4
8	The accuracy of the image to explain the material	4
9	Appropriateness of image size	3
10	Moodul cover color harmony	4
11	Color harmony in moodul content	3
Total		42
Average		3,81
Response score (%)		95,25%

Description:

Maximum score = 4

$$\text{Average} = \frac{\text{Total Score}}{\text{Total Indicators}} = \frac{42}{11} = 3,81$$

$$\text{Response Score} = \frac{\text{Average}}{\text{Maximum score}} \times 100\% = \frac{3,81}{4} \times 100\% = 95,25\%$$

In Table 4, it can be seen that the results of the media expert assessment of the display aspect obtained a percentage of 95.25% which is categorized as very good, so this product is very suitable for use.

Table 5. Media validation in terms of usefulness

No	Assessment Indicators Expediency aspect	Assessment Score
1	Ease of use of the module	4
2	Clarity of user instructions	4
3	Clarify the delivery of material	4
4	Overcoming the limited time and sensory power of students	4
5	Improve understanding of the material	3
Total		19
Average		3,8
Response score (%)		95%

Description:

Maximal Score = 4

$$\text{Rata-rata} = \frac{\text{Total score}}{\text{Total Indicators}} = \frac{19}{5} = 3,8$$

$$\text{Response Score} = \frac{\text{Averange}}{\text{Maximal score}} \times 100\% = \frac{3,8}{4} \times 100\% = 95\%$$

In Table 5, it can be seen that the results of the media expert's assessment of the usefulness aspect obtained a percentage of 95% which was categorized as very good, so this product is very suitable for use.

Limited Field Trial

At the limited feasibility test stage, a small group trial was conducted involving 7 students at SMK N 5 Bandar Lampung. This test was carried out to obtain real evidence that could strengthen the limited feasibility of the module, particularly in terms of the introduction, material content, language clarity, visual appearance, and ease of use. Through this stage, the researcher was able to observe how students interacted with the learning module directly during the learning process. This was important because students' responses could show whether the module was understandable, attractive, and appropriate to their learning needs.

At this stage, input was needed to identify the shortcomings of the module when it was used by students under the direct guidance of the researcher. The evaluation results obtained from this trial were then used as the basis for revision. The purpose of this revision was to improve the quality of the developed module so that it became more effective, practical, and suitable for classroom learning. Each student was given an assessment sheet or questionnaire after using the learning media. The questionnaire was designed to collect student responses related to the quality of the learning module, including their praise, criticism, suggestions, and overall impression of the module. These responses provided useful information for improving the module before it was tested or implemented on a broader scale.

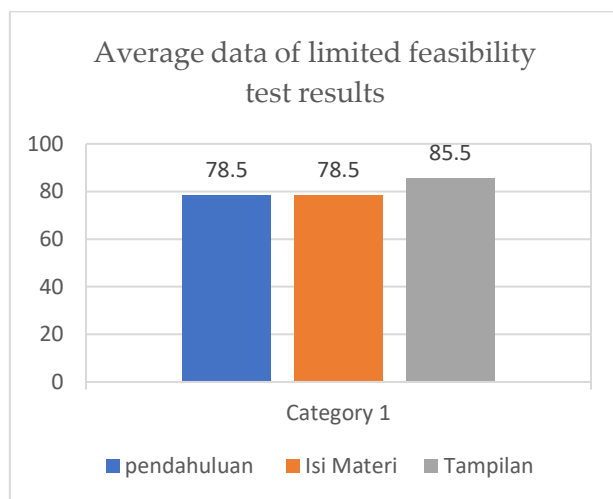


Figure 2. Limited feasibility test results

Based on the results of the limited feasibility test assessment conducted by students, the module introduction aspect has an average scale score (1-4) of 3.14 and a scale (1-100) value of 78.5 so that it falls into the very good category. The average score of the material content aspect of the scale (1-4) is 3.14 and the scale (1-100) is 78.5 so that it falls into the very good category. The average score of the display aspect of the scale (1-4) is 3.42 and the scale (1-100) is 85.5 so that it falls into the very good category. It can be concluded that the results of the feasibility test show that the media can be tested to the next stage, then the module is revised according to student suggestions.

Broad Field Trial

This field trial was conducted in two classes at SMK N 5 Bandar Lampung, involving a total of 21 students. This stage was carried out to determine the practicality and quality of the learning module when used in a real classroom setting. Through the use of this learning module, students are expected to become more active, creative, and independent in understanding the learning material, so that their learning outcomes can also improve.

During the field trial, students were given the opportunity to study and use the module directly in the learning process. After using the module, each student completed the activities provided and gave an assessment of the quality of the media through the assessment sheet that had been prepared. The assessment covered several aspects, including the introduction aspect, material content aspect, and display aspect. The responses and evaluations obtained from students were then used as input to identify the strengths and weaknesses of the module, so that further improvements could be made before the module was used more widely.

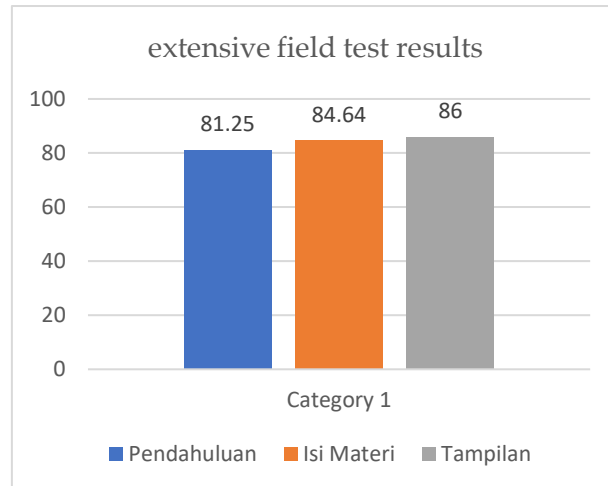


Figure 3. Broad field test results

Based on the results of the broad field test assessment conducted by students, the module introduction aspect has an average scale score (1-4) of 3.25 and a scale (1-100) value of 81.25 so that it falls into the very good category. The average score of the material content aspect of the scale (1-4) is 3.38 and the scale (1-100) is 84.65 so that it falls into the very good category. The average score of the display aspect of the scale (1-4) is 3.44 and the scale (1-100) is 86 so that it falls into the very good category. It can be concluded that the results of the feasibility test show that the learning media in the form of this module are included in the excellent category.

Pre-test and post-test results

This test was conducted to determine the level of student understanding of the learning material delivered through the learning module. This test was conducted using 2 (two) methods, namely: (1) pre-test; and (2) post-test. Pre-test is given before students use the learning module product, and Post-test is given after students use the learning module product. Data on student assessment results before being given a pre-test learning module are as follows in Figure 4.

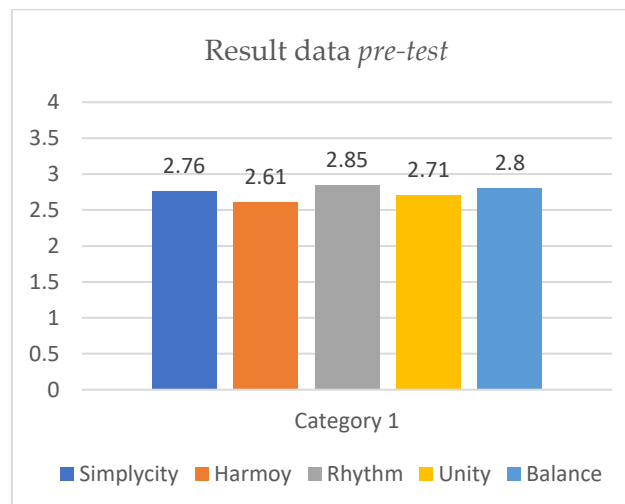


Figure 4. Results before given the module

From the results of the level of student understanding before being given the module has an average scale score (1-4) on the aspect of simplicity of 2.76 or with a scale score (1-100) of 58,

on the aspect of harmony of 2.61 or 55, the aspect of rhythm of 2.85 or 60, the aspect of unity of 2.71 or 57, the aspect of balance of 2.80 or 59, so that it falls into the good category.

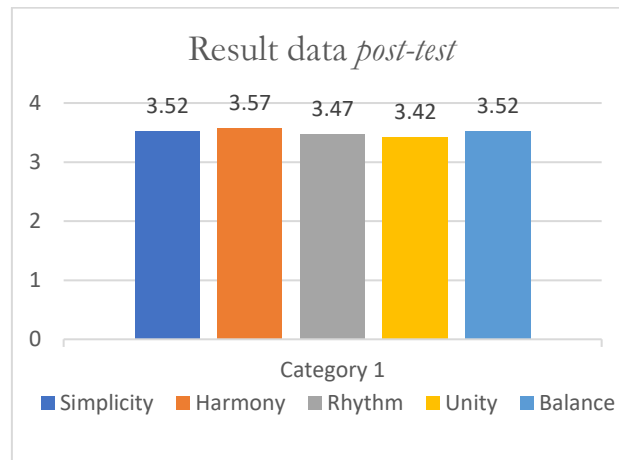


Figure 5. Results after being given the module

From the results of the level of student understanding after being given the module has an average scale score (1-4) on the aspect of simplicity of 3.52 or 74, on the aspect of harmony of 3.57 or 75, the aspect of rhythm of 3.47 or 73, the aspect of unity of 3.42 or 72, the aspect of balance of 3.52 or 74, so that it falls into the excellent category.

Based on the results of the level of student understanding before being given a learning module and after being given a learning module on Lampung ship ornaments, it can be concluded that the results have different data that can be seen from the pre-test and post-test results described in Figure 6.

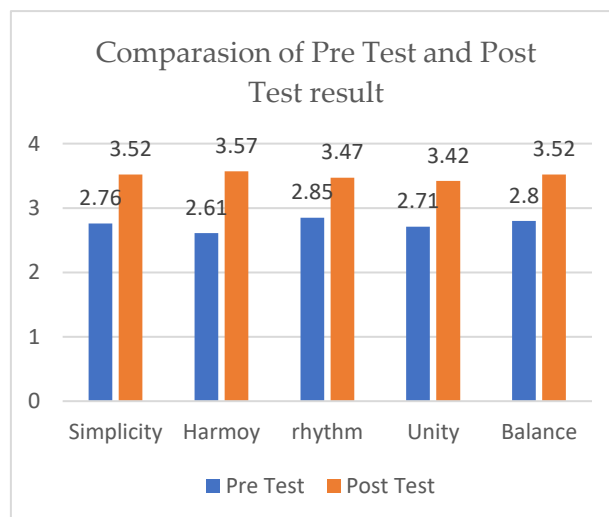


Figure 6. Comparison of Pre-test and Post-test

Based on Figure 6, it can be explained that students' understanding before being given a learning module about Lampung ship ornaments and students' understanding after being given a learning module about Lampung ship ornaments has changed. Before being given the learning module, seen from the simplicity aspect before being given the module has an average of 2.76 and after being given the module has increased to 3.52. Aspects of harmony before given the module has an average of 2.61 and after given the module has increased to 3.57. The rhythm aspect before being given the module has an average of 2.85 and after being given the module has increased to 3.47. The unity aspect before being given the module has an average

of 2.71 and after being given the module has increased to 3.42. The balance aspect before being given the module has an average of 2.80 and after being given the module has increased to 3.52. Based on the comparison between the two data on the results of students' understanding of learning Lampung ship ornaments before being given the module and after being given the Lampung ship ornament learning module, it can be stated that the module on Lampung ship ornaments is feasible and successful to improve student understanding for students in vocational schools.

Conclusion

Based on the results of research and development, the Lampung ship ornament learning module can improve students' understanding and learning outcomes, especially vocational students majoring in creative wood and rattan crafts. This research uses eight stages, namely needs analysis, planning, initial product development, initial or limited trial, limited trial revision, main or broad trial, product revision, results in the form of learning modules. This Lampung ship ornament learning module can be concluded as follows:

The Lampung ship ornament learning module was declared very good and feasible after going through several validations, based on the results of the third stage of material expert validation, the results obtained in the learning aspect were declared very good with a percentage scale (1-100%) obtained an average score of 95.75% so that it was included in the very good category, in the material aspect it was declared very good with 93.75%. Based on the results of the material expert validation, it can be concluded that the learning module developed is very good and feasible to be used as an alternative learning media in vocational schools, especially the wood and rattan creative craft department. The Lampung ship ornament learning module was declared very good and feasible after going through several validations, based on the results of the third stage of media expert validation, the results obtained in the display aspect were declared very good with a percentage scale (1-100%) obtaining an average score of 95.25% so that it was included in the very good category, in the aspect of usefulness it was declared very good with 95%. Based on the results of media expert validation, it can be concluded that the learning module developed is very good and feasible to be used as an alternative learning media in vocational schools, especially the wood and rattan creative craft department.

The implemented Lampung ship ornament learning module can improve student understanding with very good criteria, from the assessment indicators seen from the simplicity aspect before being given the module has an average of 2.76 has increased to 3.52. The aspect of harmony before being given the media has an average of 2.61 has increased to 3.57. The rhythm aspect before being given the media has an average of 2.85 has increased to 3.47. The unity aspect before being given the media has an average of 2.71 has increased to 3.42 and the balance aspect before being given the media has an average of 2.80 has increased to 3.52.

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