

Development of Industrial Learning Pacthwork on the Collaboration of Fire Tongue and Gerga Adep Ornaments

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The development of industrial engineering learning of craft patchwork tablecloths in the dining room in collaboration with fire tongue and Gerga Adep ornaments is a research on craft art creativity within the fashion education study program at Medan State University. The results of the development of craft industrial engineering learning are as follows: 1) Self-study in google classroom with a percentage of 77%; 2) Learning through zoom percentage 83%; 3) Mastery of the material percentage 78%; 4) Concept map of 78% percentage; 5) Scientific papers 93% percentage; 6) Sketch of 79%percentage form; 7) Design motif percentage 79%; 8) The application of motifs on tablecloths is 96% percentage; 9) Critique of craft journals patchwork with a percentage of 76%; 10) The percentage of dining table cloth crafts is 85%. The development of craft industry learning is carried out with the aim of improving human resources.

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I. Introduction

[1] The nature of development is a business activity in formal or non-formal education which is carried out in a planned, systematic, and responsible manner in introducing, guiding, and developing a product that is balanced, in harmony, knowledge, skills with talents and abilities as a provision of skills themselves in order to add, improve, develop themselves to achieve optimal and independent skill quality

[2] Development is a learning system that aims to assist student learning processes, which are designed to support and influence internal learning processes in order to create conditions in a planned manner and learning objectives can be achieved.

[3] While learning is a process of planned, implemented, and evaluated learning activities in order to achieve effective and efficient learning objectives. Learning has two components, firstly learning is a system and secondly learning is a process, so learning is a process of teacher activities to make students learn. The learning system consists of several structured components, namely learning objectives, learning media, strategies, learning methods and approaches, class organization, learning evaluation, and follow-up learning in the form of remedial and enrichment.

[4] Craft is a branch of art that produces works of art and functional objects or decorative objects made using simple tools or manual tools instead of machines and relies on hand skills on the basis of Nusantara (Muria) ethnic cultural values.

[5] Design crafts are crafts whose emphasis is on creating works to meet the needs of the community whose products are the result of collaboration from the use of traditional elements in craft objects based on adaptation of design principles.

[6] Patchwork is a form of craft that combines pieces of cloth with one another that have different colors or motifs and then becomes a new shape. Patchwork is a traditional art originating from European societies which was first discovered in the United States, because in the past it was difficult to get textile materials, so they used the remnants of damaged fabrics or fabrics that were not used by cutting them and sewing them into shapes that could be used. reused, for example blankets. However, the development of Patchwork does not only produce blankets, but also various other products such as bed linen, pillowcases, wall decorations, paintings, and others.

[7] Collaboration is a method of responding to changes so that the object remains active and remains effective in an environment while still involving other relevant knowledge with the desired goal, thus which stakeholders are involved in collaboration, in the form of the collaboration process will be different. different. The collaboration in batik management is due to dependence on other forms of craft.

[8] Ornaments are part of the art form found in our society, for example buildings, jewelry, household appliances, clothing, and other products. The existence of ornaments has existed since prehistoric times until now, its presence is still needed as a tool to satisfy the human need for a sense of beauty. Ornaments also function to decorate beauty, for example to add to the beauty of an object so that it looks more attractive and

nicer. In ornaments, symbolic values or meanings of the shape of objects are found that are related to the philosophy of life of the people who make them, so that the objects they apply have a deep meaning, accompanied by certain expectations from the forms of ornaments produced by humans or society.

[9] The development of patchwork craft learning is carried out online at the Fashion Design Education study program at the State University of Medan to improve students' creativity, knowledge, and skills. This learning is carried out creatively and innovatively, so that the preservation of regional cultural heritage that is almost extinct is maintained in today's modern era. So that students are expected to be able to create Nusantara craft products that are superior, attractive, and have unique Nusantara cultural characteristics and have functional values for people's lives. So, thanks to the knowledge and skills gained, it is hoped that the younger generation will be able to open up new fields in the home craft industry and be able to become designers who are able to compete in the international market. Thus the craft products produced by students can increase their love of local products based on the traditional culture of the North Sumatra region which is growing and able to compete in the global market.

II. Study Of Theory

Learning development is an effort to improve the quality of learning through materials, methods, and substitutions. The material is defined as an aspect of teaching materials that is adapted to the development of knowledge, while the methodology and substance are related to the development of theoretical or practical learning strategies.

Textile craft learning is learning crafts or works of art in which the process uses textile materials. In this textile craft learning has a very important scope in creating a creative work of art, this starts from ideas, thoughts, feelings, appreciation, human creations that have aesthetic value, then manifested in the form of objects through creative activities using textile materials.

Based on the type of textile craft products, there are two groups, namely: decorative objects and disposable objects or a combination of both, for example: wall hangings, chair cushion covers, tablecloths, bed covers, curtains, serving hoods, and so on. The principles of textile craft are realized through ideas, experience, and knowledge. So the idea that will be realized can reach and be easily accepted by the community, its realization must fulfill; 1)Unity, objects that are embodied have aesthetic artistic

value, which means they have a good and perfect unity and combination of some of their constituent elements. 2) Complexity, objects of aesthetic value are basically not simple, this is what is meant by containing elements that combine with certain complexity, for example contradicting, opposing, and balancing each other. 3) Intensity (seriousness), an object of aesthetic value is not an empty object, but has a quality that stands out in its appearance. The object can display a soft or rough nature, gloomy or cheerful, happy or sad, so that the object that is displayed earnestly produces a certain message.

[10] There are two types of textile craft designs, namely: 1) structural design is a design of the arrangement of lines, colors, shapes, and textures. This design is also a picture of an object made with descriptions of size, color, and shape. For example; woven fabric. 2) Garniture design is a design that gives a visual touch to the surface of the fabric or clothing that functions as an element of decorative decoration. There are three ways of designing a decorative design, namely: By the color and pattern, By construction details, By decorative trims.

III. Research Method

The research method used in this research is the explosive qualitative method. The explosive qualitative method is a method of seeking new inspiration by means of critical thinking in order to produce new designs that have never been designed by others. This method produces a tablecloth craft in the dining room, which is a collaboration of Thai flame ornaments with Gerga Adep Pakpak Dairi. The process of developing patchwork craft learning on flame ornaments with Gerga Adep is as follows:

1) Learning of patchwork craft industry engineering on zoom media.

This learning is carried out by means of face-to-face learning activities in the practice of craft industrial engineering. Lecturers provide learning materials in the form of theory and practice in the post-covid-19 era online or offline. Submission of material by lecturers can be through Microsoft PowerPoint, Corel Draw, or video via zoom media. So that lecturers can guide students directly in completing project assignments or scientific paper assignments. Such is the function of online zoom media in patchwork craft learning activities.

2) Learning industrial engineering patchwork on google classroom media.

This learning is done offline. On google classroom media, lecturers can send teaching materials and statements of practical or theoretical assignments with a predetermined period of time. Then in the Google Classroom media, students can send the results of practical and theoretical assignments in the form of presentations on Microsoft PowerPoint, and scientific papers packaged in PDF form on the day that the lecturer has determined. And lecturers can give and send an assessment of the results of student assignments directly in

the folder of each student, namely the google classroom media. Thus the benefits of google classroom media in this learning activity.

3) Concept Map

Concept maps are part of the student's theory task. On the concept map, students explain briefly, systematically, and in a structured way about the patchwork craft industry organization with each scope of work to the market share of patchwork crafts created into new products.

4) Sketch Drawing

The drawing sketch is done manually which results in a new motif. Students make new motifs using 2B pencils and A4 paper or drawing paper. The new motif is done through the collaboration of the tongue of fire ornaments with Gerga Adep. The image results in the form of a new black and white motif.

5) Pattern design and tablecloth design

The design of the motifs and the design of the tablecloth is done using Corel Draw media. The process of sketching the image is developed into a new motif which is then applied to the design drawing of the tablecloth product. The motifs and tablecloths are designed by applying design principles and applying elements of art.

6) Making patchwork crafts

Making patchwork crafts is done using patchwork, thread, sewing needles or embroidery needles, and basic fabric materials according to the design concept that has been made previously. Patchwork crafts are made manually by using hand sewing skills in a skillful and neat manner. So that the expected results in making patchwork crafts are artistic and have functional values for the community.

7) Scientific papers

Scientific papers are made in a structured and systematic manner based on the rules of scientific writing. Papers made by students are made to perfect the craft products that have been created by students. So that scientific works created by students can be read by everyone in improving the knowledge and skills of the community in the field of household linen patchwork. The scientific

paper contains the background of creation, problems, objectives and benefits, theoretical studies, discussions on the creation of patchwork crafts, conclusions, and a bibliography.

The activity steps in designing basic motifs on corel draw media are as follows:

1. Drawing paper

Drawing paper size 5 X 5 cm. How to make drawing paper in corel draw, namely: 1) click file; new; click name: Basic motif design; fill width: 5 cm; fill height: 5cm; rendering resolution: 300 dpi; and click OK. Then a white drawing paper measuring 5 X 5 cm appears which is ready to be painted or drawn according to the design concept.

2. Basic motif design

The basic motif is designed on page 1. The steps for making the basic motif design are: 1) display a manual drawing sketch that has been scanned and stored in data E. Then the sketch image appears on the corel draw screen; 2) on each shape, click the pen tool to make outlines for each shape on the drawing sketch; 3) Click the default palette to determine the color to be selected and apply each shape to the sketch image. Then left-click the mouse to apply color to the center fill of the image shape. And right-click the mouse to apply the outline color of the image shape. 4) Giving color to other parts of the motif by clicking the pick tool, in order to select other image shapes to give other colors to the default palette. 5) thus the next step in giving color to other image shapes, to produce a perfect basic motif in accordance with the design concept.

3. (Layout) Basic Motif Border

The basic motif layout is designed on page 2. The layout is drawn following the shape of the basic motif by applying black. The process of making the basic motif layout, namely: 1) click on page 1 which contains the basic motif. Then select all the shapes on the basic motif using the mouse. 2) Click Ctrl C and click Ctrl V on page 2. 3) Right mouse click on the X area of the default palette and click select black on the default palette as the basic motif layout color.

4. Separation of color 1, color 2, to color 3 on the basic motif.

Separation of color 1 is done by clicking the pick tool for the basic motif on page 1 which is specifically for the red color. Then press Ctrl C and Ctrl V on page 3. Then the red motif appears on the screen on page 3.

Next is the separation of color 2, namely the yellow shape on page 4. The process of separating the yellow shape is as follows: 1) click the pick tool for basic motifs on page 1, then press Ctrl C and Ctrl V on page 4. Then the shape appears on the page 4 screen. yellow pattern.

And finally the separation of color 3, namely the black shape on page 5. The process of separating the black shape is as follows: 1) click the pick tool for basic motifs on page 1, then press Ctrl C and Ctrl V on page 5. Then it appears on the screen page 5 black pattern. Thus the process of separating the 1st red color, the 2nd yellow color separation, the 3rd black color separation on the basic motif.

The next step in the creative process on design principles is the principle of rhythmic repetition of forms, which are as follows:

1) Drawing paper making

Drawing paper measuring 15 X 15 cm. The process of making drawing paper is: click new, click name and fill in name: master motif, click width: 15 cm, click height: 15 cm, rendering resolution 300 dpi, preview mode: enhanced, and click OK. Then a 15 X 15 cm drawing paper appears on the page 1 screen in Corel Draw.

2) Rhythm (repeat) basic motif

Making repeat basic motifs as master designs, as follows: 1) pick tool for all basic motif shapes on page 1 which is stored in the basic motif data file. 2) press Ctrl C and Ctrl V on 15 X 15 cm drawing paper. Then the basic motif appears in the middle of the paper. 3) press Ctrl V, appear duplicate to 2. Then press the right arrow on the keyboard. So that the 2nd duplicate motif is side by side with the 1st duplicate basic motif. 4) Press Ctrl V to display the 3rd duplicate. Then press the left arrow on the keyboard. So that the 3rd duplicate motif is side by side with the basic motif of the 1st duplicate. 5) Click the pick tool for the entire motif group 1, motif 2, and motif group 3. 6) press Ctrl C and press Ctrl V, then a duplicate of the 4 motif group appears. press the up arrow on the keyboard until it shifts and is side by side with the 3rd motif group. 7) press Ctrl V, then a duplicate of the 5th motif group appears. Then press the down arrow on the keyboard until it shifts and is side by side with the 3rd motif group towards the bottom. Thus the drawing paper size 15 X 15 cm is full with the repetition of the same motif that fills the surface of the drawing paper on the Corel Draw screen.

3) Repeat motif layout

Select all the motifs on page 1 by clicking the pick tool, press Ctrl C, then . 2) display the page 2 screen and press Ctrl V, then all the duplicate motifs on page 1. 3) click the X by pressing the left mouse button. Then the color of the overall motif will be erased or lost. 4) then right-click the mouse, then select black in the default palette. So that the outline (layout) of the entire motif appears. This is the process of making a repeat of the outline of the motif on page 2 on the surface of the 15X15 cm drawing paper.

4) Repeating the shape on the separation of color 1, color 2, to color 3.

Making the repetition of the shape 1 red, as follows: 1) pick tool for the shape 1 red basic motif on page 1 which is stored in the basic motif data file. 2) press Ctrl C and Ctrl V on 15 X 15 cm drawing paper. Then the basic red color appears in the middle of the paper. 3) press Ctrl V, appear duplicate to 2. Then press the right arrow on the keyboard. So that the 2nd duplicate motif is side by side with the 1st duplicate basic motif. 4) Press Ctrl V to display the 3rd duplicate. Then press the left arrow on the keyboard. So that the 3rd duplicate motif is side by side with the red color of the 1st duplicate of the basic motif. 5) Click the pick tool for the entire red motif group 1, the red motif 2, and the red motif group 3. 6) press Ctrl C and press Ctrl V, then a duplicate of the 4th motif group appears. Then press the up arrow on the keyboard until it shifts and is side by side with the 3rd motif group. 7) press Ctrl V, then a duplicate of the 5th motif group appears. Then press the down arrow on the keyboard until it shifts and is side by side with the 3rd motif group towards the bottom. Thus the 15 X 15 cm drawing paper is full of repetitions of the same red 1 color pattern that fills the surface of the drawing paper on the Corel Draw screen. So that the repetition of the shape in color 2, and the repetition of the shape of color 3, is the same as the stages of the work step process carried out on color 1 red.

The creative activities carried out in making patchwork crafts on household linen, especially tablecloths in the dining room, are as follows:

1) background (background)

The background of the tablecloth in the dining room goes through several processes, namely: 1) scissors the basic material in the form of black and red boxes, 2 pieces of cloth with a size of 50 cm X 2.5 m. 2) scissors black base cloth measuring 2 m X 2.5 m. 3) cut the basic cloth with black and red checkered patterns as much as 2 pieces of cloth material with a pentagon shape with a width of 2.5 m. The three forms of material that have been cut out above will be the background for the patchwork motif.

2) Print motifs

The motif is printed on black and red checkered patchwork, then cut out to follow the shape designed on the motif. the process of printing the motif on the fabric is carried out through tracing assisted with carbon paper and 2B pencil media. so that the shape of the motif can be painted on the surface of the patchwork.

3) Attaching the shape of the motif to the fabric background

The attachment of the motif on the black cloth background is done manually using a feston stitch. In the center of the red circle shape apply a trail stab stitch that resembles the shape of the pistil of a flower petal. The attachment of the motif on the surface of the black base cloth and the plaid base cloth is composed according to the concepts and design principles. Then the five red plaid basic fabrics and black base fabrics are sewn side by side to form a hexagon.

4) Application of strap accessories on the product

Applications of images or rope accessories are attached and sewn to both ends of the tablecloth by sewing. Images or rope accessories serve to add to the value of the beauty of the tablecloth product. The picture is made from a bundle of wool yarn which is twisted with a length of 50 cm on each strand of yarn. Thus the process of making tablecloths in the dining room created with interesting concepts and creativity and artistic value.

This study uses a quantitative descriptive approach to analyze how the ability to develop industrial engineering learning of craft patchwork dining room tablecloths with the collaboration of Thai flame ornaments and Gerga Adep Pakpak Dairi on students of the Fashion Design Study Program, Medan State University in the even semester of 2021.

The population and sample of the study were 150 students of Fashion Design Education in the even semester of 2021, so the students studied were students who took part in the patchwork craft industrial engineering course.

In this study using purposive sampling technique and Slovin technique with a sample of 30 people. To collect data the research was conducted through a questionnaire instrument (questionnaire). The questionnaire was developed and compiled with indicators of 10 skill variables needed in the craft industry. The indicators are compiled based on expert theoretical studies which are developed into statements using a modified Likert scale with measurement indicators and the effectiveness of the model designed and applied to learning.

Analysis of the data with the percentage technique through the categorization of formulas, as follows:

$$\frac{\text{Total acquisition score}}{\text{The highest total score ideal}} \times 100\%$$
$$\frac{\text{Acquisition Total Score}}{\text{The highest answer x number of respondents x Number of questions}} \times 100\%$$

Table 1: Scale

Percentage of Achievement	Criteria
90 – 100 %	Very high
80 – 89 %	High
65 – 79 %	moderate
55– 64 %	Low
0 – 54 %	Very low

IV. Results and Discussion

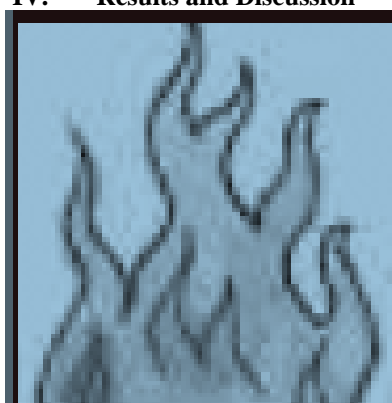


Figure 1. Flame Tongue Ornament



Figure 2. Gerga Adep Ornaments

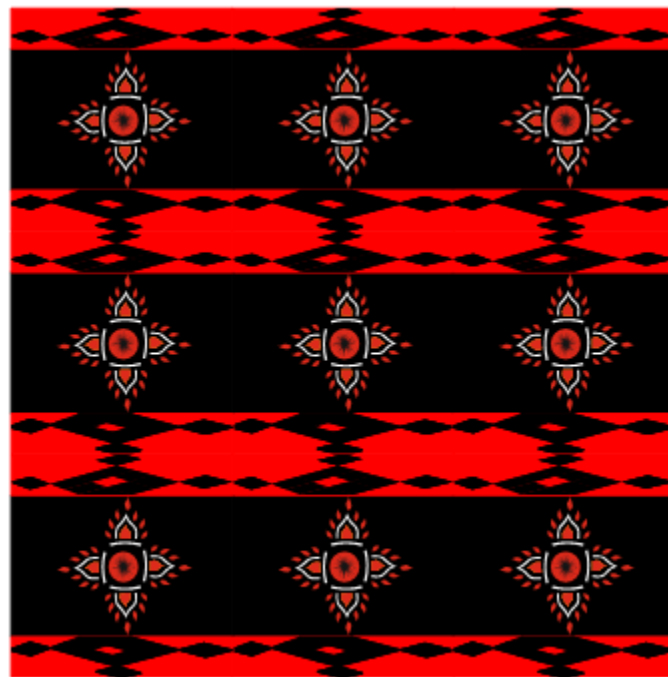


Figure 3. Design of new motifs and applications on tablecloths



Figure 3. Design of new motifs and applications on tablecloths



Figure 4. Tablecloth products in the dining room

Figure 1 is a symbol of the Thai flame tongue ornament. The flame ornament is an ornamental variety found in handicrafts in the form of ceramics and candle decorations. The flame ornament has a vertical meaning, which means a relationship of belief to the Buddha, which is the beginning of all life. So the tongue of fire is a symbol of soul awareness and meditation, so fire is depicted with candles.

Picture 2 is the Gerga Adep ornament from the Pakpak Dairi area. Ornaments with human patterns are one of the ornaments that have existed since prehistoric culture. The Pakpak area has a human ornament in the form of Gerga Adep, which is a breast-milk ornament. This gerga is usually located on the left and right of the door of the traditional traditional house of the Pakpak tribe. There are 4 Adep Gerga Adep namely 2 Adep on the left and 2 Adep on the right side of the front door of the house. For the Pakpak community, Gerga Adep symbolizes fertility, which means expecting many offspring, lots of luck, and includes the symbol of soil fertility. So for the Pakpak people, they say that the milk that is made rather large is considered a symbol of a woman who has many children.

Figure 3 is a design motif and product design for tablecloths in the living room. The design of the motif and the design of the tablecloth is designed using Corel Draw media. The steps taken in the process of making the design of the motifs and tablecloth products are as follows: 1) making a manual sketch; 2) scan process on manual sketch on laptop and save on data E; 3) on corel draw media, lay out the basic motifs; 4) designing the basic motifs; 5) separation of color 1, color 2, color 3 on the basic motif; 6) repeat or repetition of basic motifs; 7) application of motifs to tablecloth products in the dining room.

Picture 4 is a tablecloth product in the living room designed through a collaboration of Thai flame ornaments and Gerga Adep Pakpak Dairi. The tablecloth craft is made by hand manually using the patchwork or patchwork method. The process of patchwork embroidery applies several stitches, namely feston stitches, trail stitches, and basting stitches. The tablecloth craft is made with a regional cultural background that is almost extinct, which is then developed into textile products in the form of unique and artistic household linen.

Visual Aesthetic Value Approach

The aesthetic value of the dining room tablecloth craft is seen in the unique decoration. This is inseparable from the application of the elements of art and design principles. So that these craft products have aesthetic values and good functional values for human life. First, balance. The tablecloth craft applies the principle of balance to the surface of the base cloth. The principle of this balance can be seen from the layout of the flame stylized decoration placed on the center of the base cloth, in which there are 4 groups of fire tongue decorations, namely the top, bottom, right side, and left side with the same size and distance. Then the Gerga Adep stylized decoration is placed on the center of the tablecloth base cloth. So it can be concluded that balance is part of the layout of visual forms that are arranged in a measurable distance, size of shape, arranged and systematically, this is what is applied to tablecloth products, especially in decoration.

Both rhythms. The tablecloth craft above also applies the principle of rhythm to every element of art contained in the visual form, including: curved lines, vertical lines, horizontal lines, and diagonal lines. These line elements produce different shapes and the same shape to produce an aesthetic motif. So that the repetition of the form of the elements of art produces the beauty of the rhythm of creativity in decoration. Then the principle of rhythm is applied to the plaid pattern found on the maroon base cloth. The red plaid base cloth is placed on the right and left sides of the center of the black base cloth. This can be seen in the repetition of the Thai flames and Gerga Adep Pakpak Dairi decorative forms on the surface of the basic cloth which has regional cultural characteristics.

The three units. The principle of unity is applied to the craft of tablecloths in the dining room. This can be seen from the diversity of colors in craft products, namely maroon and black. Similarly, the basic color of the craft product fabric above applies 2 colors, namely maroon and black. Then the diversity of symmetrical and asymmetrical lines and visual forms that are designed to become new forms, also produces a unified whole. Until the creation of a unique, creative, and innovative craft design model that has cultural characteristics. So that the tablecloth craft product produces aesthetic value and functional value for human life. So it can be

concluded that the value of unity comes from the diversity of types of colors, lines, and shapes that are composed and formed into a unified whole that produces unique, ethnic, and innovative aesthetic values. Likewise in the symbol of Bhineka Tunggal Ika which has different meanings in terms of ethnicity, language, religion, and culture, but remains one unit within the Unitary State of the Republic of Indonesia, namely the Unitary State of the Republic of Indonesia.

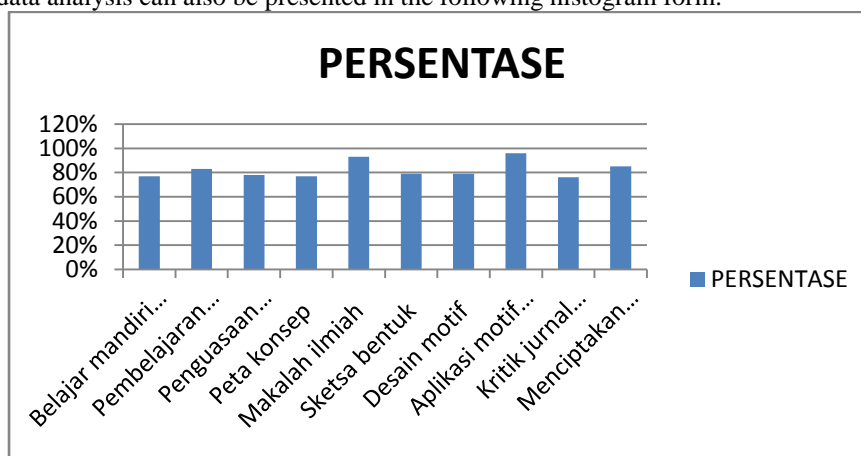
The results of the study are described based on the average value (mean), median value (median), lowest value (minimum), highest value (maximum), total score (sum), percentage of respondents' achievement level and their categories. Furthermore, the results of the evaluation data analysis of the development of industrial engineering learning of pactwork craft tablecloths in the dining room collaboration with Thai flame ornaments and Gerga Adep Pakpak Dairi in the Even Semester of 2021 State University Fashion Education Study Program.

No	Learning Evaluation Results	Mean	Mdi	Mode	Min	Max	Sum	%	Category
1	Independent study on google classroom	3.83	4	4	3	5	115	77%	Moderate
2	Learning via zoom	4.13	4	4	3	5	124	83%	High
3	Material mastery	3.90	4	4	3	5	117	78%	Moderate
4	Concept maps	3.87	4	4	3	5	116	77%	Moderate
5	Scientific paper	3.73	4	4	3	4	112	93%	Very high
6	shape sketch	3.93	4	4	3	5	118	79%	Moderate
7	Pattern design	3.97	4	4	3	5	119	79%	Sedang
8	Application of motifs on tablecloths	3.83	4	4	3	4	115	96%	Very high
9	Patchwork craft journal criticism	3.80	4	4	3	5	114	76%	Moderate
10	Dinning table cloth craft	4.27	4	4	3	5	128	85%	High

Table 2: Data Analysis Results

Table 2 above shows the results of "Development of industrial engineering learning of craft patchwork tablecloth collaboration with Thai flame tongue ornaments and Gerga Adep Pakpak Dairi" at the Fashion Design Study Program, State University of Medan, including the medium category of self-study evaluation in Google Classroom with a percentage of 77%. Learning outcomes through zoom on the development of industrial engineering practice learning in the craft industry are in the high category with a percentage of 83%. Mastery of the material for learning craft industrial engineering is in the medium category with a percentage of 78%. The results of the concept map on the development of craft industrial engineering learning are in the medium category with a percentage of 78%. The results of scientific papers on the development of industrial craft engineering practice learning are in the very high category with a percentage of 93%. The results of the form sketch on the development of craft industrial engineering learning are in the medium category with a percentage of 79%. The results of the motif design on the development of craft industrial engineering learning are in the medium category with a percentage of 79%. The results of the application of motifs on tablecloths to the development of craft industrial engineering learning are in the very high category with a percentage of 96%. The results of the criticism of the craft patchwork journal on the development of craft industrial engineering learning are in the medium category with a percentage of 76%. And the results of the dining table cloth craft on the development of industrial engineering learning in the even semester of 2021 are in the high category with a percentage of 85%.

The results of data analysis can also be presented in the following histogram form:



The results of the data analysis described in the table and histogram image above explain that the development of industrial engineering learning for patchwork tablecloths in collaboration with Thai flame ornaments and Gerga Adep Pakpak Dairi "at the Fashion Design Study Program, Medan State University has ten indicators, namely: 1) Independent learning on google classroom; 2) Learning via zoom; 3) Material mastery; 4) Concept map; 5) Scientific papers; 6) Sketch the shape; 7) Motif design; 8) Application of motifs on tablecloths; 9) Critique of craft journals patchwork; 10) Craft table cloths. Based on the results of the analysis above, it shows that the development of industrial engineering learning of patchwork craft tablecloths in collaboration with the Thai tongue of fire ornaments and Gerga Adep Pakpak Dairi "at the Fashion Design Study Program, State University of Medan can be developed according to the function of today's community needs. The new patchwork craft industry product created by Unimed Fashion Design students in 2021 departs from the culture of two countries, namely the culture of Thailand and the culture of Indonesia, North Sumatra, which was developed through a two-cultural collaboration process that produces household linen crafts for dining room tablecloths. The ten indicators above have a positive impact on students. that is, students are prepared to be able to open jobs in the patchwork craft industry and craft designers. As well as preparing students to enter the world of industrial work, both the textile industry and the garment industry which continue to compete in the world of globalization. Thus, the results of regional culture continue to develop and be preserved by increasing the knowledge, skills, and creativity of the young generation which is the hope of the nation.

V. Conclusion

The development of patchwork craft learning in the collaboration of Thai flame ornaments and Gerga Adep Pakpak Dairi is a creative activity for students of the Fashion Design Education Study Program at Medan State University. This patchwork craft learning is carried out online, namely online without having to hinder the creativity development activity itself. The process of patchwork craft learning activities are as follows: 1) Patchwork craft industrial engineering learning is carried out zooming; 2) Patchwork craft learning is done using google classroom media; 3) create a concept map; 4) sketching pictures; 5) make motif designs and product designs; 6) making patchwork crafts; 7) making scientific papers.

Furthermore, the results of the analysis of the development of industrial engineering learning of patchwork craft tablecloths in the collaboration of fire tongue ornaments and Gerga Adep: 1) Independent study in google classroom with a percentage of 77%; 2) Learning through zoom with a percentage of 83%; 3)

Mastery of the material with a percentage of 78%; 4) Concept map with a percentage of 78%; 5) Scientific papers with a percentage of 93%; 6) Sketch the form with a percentage yield of 79%; 7) Motif design with a percentage yield of 79%; 8) Application of motifs on tablecloths with a percentage of 96%; 9) Critique of craft journals patchwork with a percentage of 76%; 10) Dining table cloth crafts with a percentage of 85%.

The making of motif designs and tablecloth craft designs using coreldraw is carried out in several stages, namely: 1) making drawing paper measuring 5X5 cm; 2) create basic motifs; 3) make a layout of motifs; 4) separation of color 1, color 2, color 3 on the basic motif; 5) then proceed with the repetition of the basic motifs measuring 15X15 cm; and the application of motifs to the design of tablecloths designed using CorelDraw media.

The creative process carried out in creating tablecloth crafts in the dining room using patchwork or patchwork techniques, namely as follows: 1) making the background for the tablecloth with a combination of two materials, namely black base material and red checkered base cloth; 2) print motifs on plain red patchwork

and red checkered patchwork; 3) the attachment of the motif on the surface of the black base cloth as the background cloth. The attachment of the motif uses a feson stitch and a trail stab. 4) application of string of thread accessories on craft products with thread braiding techniques.

In Thai society the symbol of the tongue of fire symbolizes soul awareness and meditation. So the fire is described as a candle. The Gerga Adep ornament is a symbol of a woman's milk. Gerga Adep symbolizes fertility which means expecting many offspring, lots of fortune, and soil fertility for the people of the Pakpak Dairi area. So the results of regional culture can be a source of ideas in the development of Indonesian household linen crafts through the development of patchwork craft industrial engineering learning. So that students gain knowledge and skills in the field of craft and design, as well as prepare the younger generation to be ready to be independent entrepreneurs in the era of globalization. Creative activities carried out by the younger generation can support the development and preservation of the culture of the archipelago which is almost lost due to the development of the modernization era which is now all-instant.

REFERENCES

- [1]. Gusti Putu Suryadarma. (2020). *Development of Science E-Flipbook Integrated Illegal Sand Mining on River Basin to Improve Environmental Care Attitude*, Published by IJECA International Journal of Education & Curriculum Application. DOI:10.31764/ijeca.v3i1.2036. <http://journal.ummat.ac.id/index.php/IJECA>.
- [2]. Carina Van Rooyen. (2013). *Africanus: Journal of Development Studies*, ResearchGate. <https://www.researchgate.net/publication/265842514>
- [3]. Malik Ghulam Behlol. (2010). *Concept of Learning*, International Journal of Psychological Studies. DOI: 10.5539/ijps.v2n2p231. www.ccsenet.org/ijps.
- [4]. SinikkaPöllänen.(2012). *The meaning of craft: Craft makers' descriptions of craft as an occupation*. Scandinavian Journal of Occupational Therapy.DOI:10.3109/11038128.2012.725182.
- [5]. Nithikul Nimkulrat. (2012). *Hands-on Intellect: Integrating Craft Practice into Design Research*. ResearchGate. <https://www.researchgate.net/publication/278367044>.
- [6]. Kudirat Oyewumi Jimoh. (2020). HANDMADE EMBROIDERY PATTERN RECOGNITION: A NEW VALIDATED DATABASE. Malaysian Journal of Computing. DOI:10.24191/mjoc.v5i1.6749. eISSN: 2600-8238 online.
- [7]. Ali UsmanHali.(2021). *A Collaborative Teacher Training Approach in Different Cultures in the Era of Technology*.International Journal of Instruction.e-ISSN: 1308-1470. www.e-iji.net.
- [8]. Fatemeh Ahani. (2017). *The Distinction of Ornament and Decoration in Architecture*. Journal of Arts and Humanities. eISSN 2167-9053. DOI:10.18533/journal.v6i5.1188.
- [9]. Viktorija Mecnika. (2015). *Technical Embroidery for Smart Textiles: Review*. Materials Science Textile and Clothing Technology. DOI: 10.7250/mstct.2014.009.
- [10]. Toekio Soengeng . (1987). *Getting to Know Indonesia's Ornamental Variety*: Ban Angkasa.
- [11]. Hamdani Hamid, *Education System Development in Indonesia*, (Bandung : Pustaka Setia,2013), h. 125. (K.teori).
- [12]. Gagne dan Briggs. (1979). *Understanding Learning*. <http://www.scribd.com/doc/50015294/13/B-Understanding-learning-by-multiple-experts> (accessed November 1, 2011).
- [13]. Iskandar. (2009). *Educational Psychology, a new orientation*. Ciputat: Gaung Persada (GP) press.
- [14]. Arsyad, Azhar. 2003. *Instructional Media*. Jakarta: Raja Grafindo Persada.
- [15]. SP. Gustami. (1991). *"Indonesian Crafts" Dilemma of Guidance and Development*. Art Journal of Knowledge and Art Creation, Issue I03 October, BP. ISI Yogyakarta.
- [16]. Agus Sachari, (2001). *Design and the World of Indonesian Art and Discourse on Cultural Transformation*. Bandung: ITB.
- [17]. Arikunto, S. 2001. *Research Procedure*. Jakarta: Rineka Karya.
- [18]. Aunurrahman. (2009). *Study and Learning*. Bandung : Alfabeta.
- [19]. Wacius Wong. (1995). *Some Principles of Dwimatra Drawing*. Bandung: ITB Publisher.
- [20]. Hamzah B.Uno.(2011). *Learning Model Creating a Creative and Effective Teaching and Learning Process*. Jakarta: Bumi Aksara. h.129.
- [21]. Aristo, Rahadi. 2003, *Learning Media*. Jakarta : Ministry of National Education.
- [22]. Arsyad, Azhar.2013. *Instructional Media*. Jakarta: Rajawali.
- [23]. Aristo, Rahadi. 2003, *Learning Media*. Jakarta : Ministry of National Education.
- [24]. Syafii, et al, 2003, *Handicrafts and Arts*. Jakarta: The Open University.
- [25]. Aisyah, Siti et al, 2007. *Supplements for Crafts and Arts*. Jakarta: Open University.
- [26]. Iskandar Wiryokusumo. 2011. *Fundamentals of Curriculum Development*. Jakarta: Earth Literacy.
- [27]. Kadjim. 2010. *Skills Education*. Surabaya: Masterpiece. [13] Sugihartono, et al. (2013). *Educational Psychology*. Yogyakarta: UNY Press.

- [28]. Moses, Melmambessy. 2012 "Analysis of the Effect of Education, Training, and Work Experience on Work Productivity of Employees of the Papua Province Mining and Energy Service." Business Research & Management Media 12.1.
- [29]. Cristen Torrey. 2009. *Learning how: The search for craft knowledge on the internet*. Conference: Proceedings of the 27th International Conference on Human Factors in Computing Systems, CHI, Boston, MA, USA. DOI:10.1145/1518701.1518908.
- [30]. Calasibetta, Charlotte, Dr. 1975. *Fairchild's Dictionary of Fashion*. New York: Fairchild Publications.