

The Analysis of Utilization of Brocade Fabric's Leftover Through A Skill Training Approach at a Vocational School

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Abstract

Fabric's leftover which is obtained from the process of production in the textile and fashion industries have diverse of variety, one kind of them is fabric's leftover of lace. This is one kind of fabric which is easily found in the clothing production house. Generally in Indonesia, lace is one kind of fabric that is often used to make Kebaya, which is a traditional dress of women in Java island. Beside Kebaya, lace usually used for gown or dress.

This project take a part on developing the design and creativity of the material processing techniques as an alternatives ways to use the residual material of lace fabric. On the process, there is collaboration with Textile Craft study program, 14 Bandung Vocational School. Vocational School (SMK) is a school that has aim to generate graduates who are ready to work in the community either independently or not. The request of human resources from the industry for activity-based working practices knitting and crochet industry is rising within a period of two years, while based on the curriculum which has implemented there is no matter about knitting and crochet. Besides upgrading the chances in the development of lace residual, through this research project there is addition knowledge for the vocational school student so they can be well prepared for employment practices in crochet industry

Key Words : Crochet, Lace, Textile Waste, Vocational School

1. Introduction

Leftover of textile fabric production has a potential relationship to many global issues such as issues of creative economic in terms of design and creativity development in inventing textile and textile product innovations, issues of material processing with the concept of recycle, reuse and redesign, and environmental issues that demands human to produce sustainable products so that it is able to minimize nature damage. Socio-cultural issues also relate to textile potential waste / leftover where further process of textile waste / left over will help to create small and medium-leveled industries that empower local people. Below is a chart of the relationship between textile potential waste / left over with global issues:

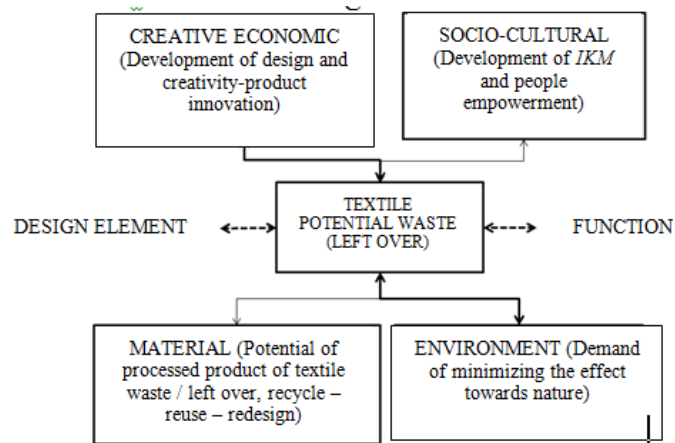


Figure 1. Chart of Textile Waste Towards Global Issue Figure,
Puspitasari (2012)

Textile leftover that is gained from production process at *TPT* (Tekstil dan Produk Tekstil) Industry comes in various types, of which one of them is brocade. This is a type of fabric that is easy to get at various clothing production places. Brocade is used to make many kebayas and party gowns. Indonesian women usually have kebaya to be worn for different purposes. For instance wedding ceremony, traditional ceremony, party, school or college graduation and other occasions that make this type of fabric usage level is very high. Research of utilizing brocade fabric has previously been conducted by Arumsari (2010). Processing method used was “recycle”, with various techniques such as: sewing, plaiting, heating and tufting.



Figure 2. Research of Utilizing Brocade Fabric
Arumsari (2010)

As a design and creativity development attempt, there is another technique that is used in this project: crochet. Crochet itself is a method of tighten the thread between the hook holes, both manually and by machine (Englewood, 1972: 368). In the making process of fabric sheets with crochet technique, specific needle is used to tight the thread onto the thread tights that is formed previously. The thread thereafter is tight following the certain pattern until it is gained to the expected result.

Vocational school is a school that has a vision to produce graduated students who are ready to work both independently or not. In this research, training is conducted at Textile Craft course of study at SMKN 14 Bandung. Students’ involvement in this research is aimed to be as the representative of human resources that are prepared to jump and involve in Fashion and

Textile Industries in Bandung thereafter. In addition, there are other factors that influence the training to be conducted, that are:

1. Students in textile craft are prepared to become potential human resources in TPT industry. It is in line with the school's vision that is to produce graduated students that are ready to work both independently and not.
2. Brocade wastes / left over become one of material that is used in the class practicum.
3. Crochet lesson is not inserted in the prevailing curriculum. In previous curriculum, crochet is inserted as one of the lesson. Through this training, students will get skill insight of crochet that suits the competency expertise in textile craft

The demand of human resources for industrial internship program from knitting industrial in these two years also become one of the reasons why this training is conducted. The aim is to broaden the students' opportunities to get guidance to the placement of the internship program.

2. Training of Processing Brocade Leftover Using Crochet Technique

Lesson of brocade leftover using crochet technique is given in the session of stitching class. Since it is included in the teaching-learning process, therefore this training concept uses Quantum Teaching & Learning. Literally, training and learning have different meanings, however those two things are related each other. Simamora (1999) stated that training is a series of activity that is designed to improve one's skills, knowledge, experience or attitude. Whilst, learning is an interaction process between the students and teacher, as well as with the learning source in a learning environment (DITPSMK, 2008: 2).

Vocational school as a formal education institution is responsible to create human with ability, skills, and expertise in certain subject (Anonim, 2010: 2). Therefore, in the teaching-learning process in the vocational school, the students are attached to various skills practices that support the competency in each of their field, as well as the students of SMKN 14 Bandung.

This training is conducted as a test to the concept of processing brocade leftover using crochet technique. A successful training program is determined by the components inside. Five components in the brocade leftover processing using crochet technique are as follows:

1. Training target
 - Participants are able to crochet
 - Participants are able to process brocade leftover using crochet technique
 - Participants are able to apply it as functional product
2. Trainer
 - Trainer gives lesson that supports the training target to be achieved. Lessons to be given by the trainer are:
 - a. Alternative of utilization / process brocade leftover using crochet technique
 - b. Crochet Technique
 - Lesson given is about basic stitch in crochet technique such as single stitch, double stitch, half double stitch and triple stitch
 - c. How to process wastes / leftover of brocade using crochet technique
 - Lesson given is relating with the practicum of processing brocade leftover using crochet technique
 - d. Product Making

Lesson given is product making procedure using experiments from the previous lesson.

3. Material for practicum

In order to achieve the training target, it is important that the material given to students is in line with the lesson given by the trainer:

- a. Visualization of Crochet technique, mattress thread, and *hakken* are used to practice crochet technique
 - b. Brocade left over (rag), *hakken* and nylon are used to practice how to process brocade left over with crochet technique
 - c. Upholstery, used to cover the inside of the product in order to get a neat result
 - d. Stitch equipments: thread and needle, used to connect one part to another in the product making
4. Training method: demonstration is the method used in this training where, here, the trainer gives example of materials. Students are asked to pay their attention on the working procedure shown by the trainer.
5. Trainee: participant of the training are students at SMKN 14 Bandung grade X who join a knitting class. Number of students is 68 persons which will be divided into two classes: Class X Textile 1 and Class X Textile 2. Each consists of 34 students.

This training program is conducted within eight to ten sessions with 1 hour for each session.

Lesson delivery about the concept of brocade with crochet technique to the students of Textile Craft SMKN 14 Bandung will be conducted in Embroidery lesson. The reason why Embroidery lesson is chosen to be inserted the concept of this waste management is because based on the experiment result has been conducted, textile sheets of brocade fabric waste is attached to the application of crochet technique, therefore the most suitable lesson with the proposed concept is Embroidery lesson.

Table below explains the learning plan in the classroom:

No	Session	Agenda	Learning Material	After Learning Target	Activity
1	First	Get to know each other and material socialization.	Knowledge of Waste, the 2013 Trend and Utilization with Crochet technique	Understand the effect of waste and its utilization with crochet technique as well as a brief of the 2013 eco fashion trend	Introductory Material (Lecturing and Discussion)
2	Second	Crochet Practicum	Chain stitch	Students make chain stitch and its composition (30 of length, 8 of width)	Crochet Practicum

No	Session	Agenda	Learning Material	After Learning Target	Activity
3	Third	Crochet Practicum	Single-double stitch	Make composition of Single-double stitch	
4	Forth	Crochet Brocade Practicum	Application Single-double stitch on Brocade	Make 1 composition of technical application of Crochet on Brocade (15 x 15 cm2)	Crochet Practicum – Brocade Waste
5	Fifth	Crochet Brocade Practicum	Application of Single-double stitch on Brocade	Make 1 composition of technical application of Crochet on Brocade (15 x 15 cm2)	
6	Sixth	Crochet Brocade Practicum	Technical application of Crochet on Brocade (15 x 15 cm2)	Make a product with crochet technique using waste of brocade fabric	Production
7	Seventh	Crochet Brocade Practicum	Technical application of Crochet on Brocade	Make a product with crochet technique using waste of brocade fabric	
8	Eighth	Crochet Brocade Practicum Closing	Technical application of Crochet on Brocade	Make a product with crochet technique using waste of brocade fabric	
9	Ninth	Additional production time			Optional
10	Tenth	Additional production time			

Trainer is placed as a guest teacher in knitting lesson. Therefore it needs a learning model that is suitable and fun for students in order to achieve the training target.

Method of Quantum Teaching & Learning is implemented in this training. This method is one of learning models that is used to create fun learning situation for the students. Philosophy of the learning method which is known as TANDUR is the abbreviation of:

T = Tumbuhkan (Grow), through material about this utilizing brocade leftover with crochet, the students are given explanation and picture of the advantage they will get.

A = Alami (Natural), create and give direct experience that is understandable by the students. This concept is invested through a learning approach so that the students are able to directly feel and do stages of processing brocade waste with crochet.

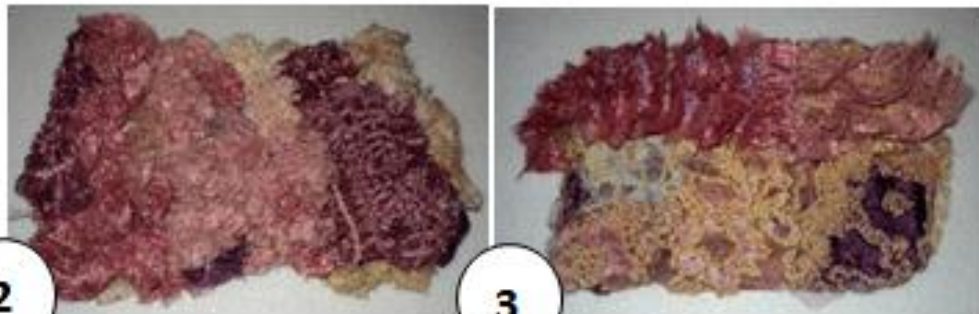
N = Namai (Naming), on each material of types of basic stitches, the students here are given instructional and easy to remember patterns.

D = Demonstrasikan (Demonstrate), students are asked to pay attention to facilitator who give demonstration about crochet, and then ask them to sit in group. Thereafter, the students are asked to re-demonstrate of what the facilitator has taught to enable them to teach other.

U = Ulangi (Repeat), participants are asked to repeat together when the class is dismissed or in the moment the teacher is going around while seeing and helping on anything that is considered as difficult to be done.

R = Rayakan (Celebrate), appreciation is given to students whenever they face obstacles, assignments or tests from facilitator or guru. The appreciation is given by conditioning other students surround them to see that they love them which is not to all students they will do that.

This training activity that is inserted in knitting produces three products made by the students.



Remarks :

No	Product	Function
1.	Fabric sheets	Application on clothing
2.	Small bag	A storage place
3.	Small bag	A storage place

3. Conclusion

The method of Quantum Teaching and Learning is suitable to be implemented on a processing of brocade leftover training using crochet. This is because in this teaching-learning process that is

conducted previously in this Embroidery class, the concept of Quantum Teaching & Learning also conducted by the related teacher team.

Ideally, to achieve certain competency to process brocade leftover using this crochet technique, it is required 3 stages of learning that is adjusted to the initial student's qualification. Those three stages are divided as follows:

No	Tahapan	Kualifikasi Awal	Kulifikasi Akhir
1	Beginner	Unable to apply crochet technique	Able to do basic stitches that are : - Chain stitch - Single stitch - Half double stitch - Double stitch - Triple stitch Able to produce simple product using crochet technique
2	Intermediate	Able to do basic stiches, that are : - Chain stitch - Single stitch - Half double stitch - Double stitch - Triple stitch Able to make simple a product with crochet technique	- Able to combine brocade leftover with crochet technique by virtue of surface design - Able to apply crochet technique to brocade left over
3	Advanced	- Able to combine brocade leftover with crochet technique based on surface design principle. - Able to apply crochet technique on fabric left over using structure design	- Able to apply all basic stitches by virtue of surface design - Able to combine fabric left over by virtue of combination of structure and surface design - Able to make composition creation well by virtue of element and principle of design.

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