

Upcycling Wedding Gowns: Development Of Design, Materials And Ornaments

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Abstract— This study aims to analyze: a) upcycling of bridal gowns in terms of design development, material uniformity, decoration and upcycling feasibility. This type of research is research exploration. Research procedures include a) problem collection, b) Gathering wedding gowns, c) developing wedding dresses from design aspects, material harmony, decoration d) design validation e) design revisions, f) realizing the product. Observations were made on 2 wedding dresses. There are 30 Observer experts in the field of fashion. Data were analyzed quantitatively descriptive, using percentages, then categorized. The results of the research on one and two wedding gowns that are viewed from the development of the design are very good, the harmony of the material is very good, the decoration details are very good.

Keywords—*design development, material, ornaments, upcycling, wedding gown,*

I. INTRODUCTION

The wedding gown industry is one of the largest waste contributor industries, in terms of usage, storage and manufacturing costs. Wedding gown designs are demanded innovative and modern. The waste produced comes from bridal clothes that are no longer used, or up to date and the rest of the production. The prepared material has many types and volumes. The material used is taken a little, as needed, so it gives a lot of waste. Waste wedding dresses consist of bridal gowns that fail products, have poor quality, no more storage space. (Huffington Post, 2013). The high fashion waste is also caused by the many shops that offer bridal or salon gowns that get rid of their grief because they are not up to date damaged / defective and cannot be repaired.

The alternative for bride dress waste is to process wedding gowns using the upcycling method. This upcycling technique was chosen to redesign discarded wedding gowns (Braungart & McDonough, 2002). Usability for customers is to be able to buy fashionable wedding dresses at affordable prices and (Braungart & McDonough, 2003). Upcycling is to reuse something by producing something more high-quality and valuable than the original (Kress and Fry 2016: 190). Anderson (2014), upcycling is using something that is not valuable or that is not used to be something valuable without having a negative impact on the environment.

Research on 29 designs has a high value added upcycled luxury bag for the Dubai fashion market developed from pre-consumer waste produced from the manufacturing process and sewing fashion products. The design generated from the following research is planned to be sold as a limited exclusive line on Harvey Nichols and Dubai Bloomingdale from the S / S 2014 season. Market analysis and design models proposed in the current study generally apply in the development of future trade markets (Kim, Hyun Joo. 2014).

Developing bridal gown collections using upcycling techniques to be profitable, marketed and sustainable without creating waste. This research defines and analyzes fashion industry waste, sustainable methods and techniques, along with addressing the impact of fast fashion waste on humans. Upcycling techniques are the least wasteful, because they involve the transformation of clothing, textiles, and materials that are dumped into items of higher value or value. Researchers developed a collection of wedding dresses, by recycling two discarded gowns and only using discarded textiles. Upcycled couture, shown at the annual CSUN fashion show in spring 2016. (Karkazian, Talene Lynn 2016).

This study aims to understand current upcycling behavior and behavioral influencing factors to develop design interventions and policies for order development to increase the upcycling scale. The results of the study show provide insight into the latest recycling behavior. Behavioral factors that influence upcycling are demographic characteristics, upcycling has the potential to create high attachments that lead to longevity products. The survey revealed specific key behavioral factors (intentions, attitudes and subjective norms) and potential target groups of people in art and design aged 30 years or more) based on group differences. Fifteen (15) promising designs and interventions to formulate policies to improve upcycling. (Kyungeun, Sung. 2017).

Research on developing methods for craft-based recycling design through literature review, interviews and practical research on plastic waste materials. Research shows certain factors that lead to successful upcycling designs are: (1). Passion for design or making crafts; (2) Experience, related background and practice; (3) Good tools, machines and accessories; (4) Creative thinking. There are six phases that are repeated in this method: (1). Brainstorm what products will be made; (2) Build an inspirational council to choose what products to make; (3) Concept visualization; (4) Making

experimental prototypes; (5) Producing products; (6) Reflection on process. These phases are considered as an iteration, there may be several iterations depending on the situation (Wang Jin, 2018).

The next research that will be carried out is upcycling the bridal gown in terms of design development, material suitability, decoration and the feasibility of upcycling the wedding gown.

II. LITERATURE REVIEW

A. Upcycling Wedding Gown

Upcycling is the creativity to transform used goods into useful without going through the process of processing materials. The quality of goods that are changed to more have good function values. Upcycle is a method to stop the demands of the large number of productions that will become waste (Shruti Kuswaha, Charu Swami 2016). Upcycle is a particular recycled form that uses wasted material or old products, is not desirable to be a quality new product (Kim Hyun Joo, 2014). The purpose of upcycle is to prevent waste of material by utilizing existing material. (Benson and Stephen, 2009).

The technique used for Upcycle wedding gowns is to change the design of clothing and add variety, decoration or materials. 1) Changing out-of-date clothing models to up-to-date clothes, by changing the wedding dress model into a useful back dress. 2) Adding material or decoration can beautify and add quality from clothing. Adding decorative materials can use new materials or old materials that are still suitable for use.

B. The Development of Wedding Gown Designs

A wedding gown is a gown that consists of one or two upper lower parts that are joined (sewn) into one, the silhouette of a variety of dresses can be loose or body shape and the length of the dress also varies (Hasanah et al, 2011; 70). There are 5 types of wedding dresses: 1) classic / traditional, 2) Romantic, 3) Victorian, 4) Outdoor / garden, and 5) Contemporary. The color of the wedding gown is white, Ivory, diamond white, alabaster, light gold, and champagne. Wedding dress design (Holly, 2007): ball-gown, empire, A-line, Sheath, mermaid, trumpet. The hallmark of wedding dresses is trains, which means tail dresses. Train or this tail is a cloth that is behind the dress and can be part of the dress or just be an addition, the tail can also be placed on the back of the waist or stretched to the floor from the back of the shoulder. According to The Wedding Gown Book, Elizabeth Shimer (2004; 45), there are 4 types of trains, namely: sweep, chapel, cathedral, and royal.

The Upcycle wedding dresses cannot be separated from the development of design. According to Triyanto, 2012; 46) development is a process carried out by a creator in processing, making and determining the style of various objects. To make a design development must understand the concepts of design types, design elements, design principles and design development techniques. Designers need to pay attention to structural design, decoration design, design elements, design principles. The design development technique consists of: stilton, distortion, transformation, deformation techniques.

C. Wedding Gown Material

Some types of fabrics used to make wedding dresses: Lace, silk, taffeta, satin, brocade, charmeuse, chiffon, damask, georgette, jersey, organza, tulle and wool. (Elizabeth Shimmer (2004: 48) and Tina Andrea (wedding inspiration: 2009) Bridal dress decorations consist of: appliques, beading, edging, embroidery, jewels, pearls, sequins.

III. RESEARCH METHODOLOGY

This type of research is quantitative descriptive research. Describe the upcycling of wedding gowns through the exploration stage of design including design development, material harmony, decoration and the feasibility of wedding gowns. Upcycling techniques use 2 techniques, change the design and add material and upcycling decoration materials that are suitable for use but have torn defects, holes, designs designed for sources of inspiration, up to date wedding dress designs. Data collection techniques using observation. The Observer consists of wedding dress practitioners, bridal gown designers, salon and bridal entrepreneurs, fashion designers, and fashion design lecturers in Surabaya. The number of observers is 30 people. The research design is as follows.

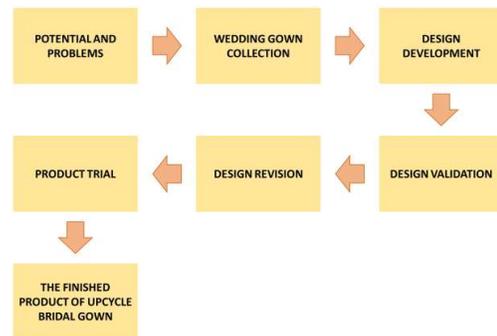


Figure I. Research Design

The steps of the research that have been carried out by the researcher: 1) Reviewing the potential and problems include: a) Literature study on upcycle wedding gowns, b) Interviews with bridal gown designers and experts on wedding dress upcycle. 2) Collection of bridal gowns that are looking for used bridal gowns that will be upcycle in bridal gowns and bridal boutiques 3) Design development that is developing designs of used wedding gowns, each of the 3 designs 4) Design validation includes: a) selection of wedding dress designs will be on upcycle, b) Selection of bridal gown designs performed by wedding gown designers 5) Revised designs include: a) revision of the design of upcycle wedding dresses chosen by wedding dress designers b) revisions to the design of wedding gowns chosen by fashion lecturers 6) Manufacture of products that make upcycling products bridal gown designs I and upcycling bridal gown designs II 7) Product revisions namely product revisions carried out by fashion experts 8) Data deployment process of product distribution includes: a) managing research data b) drawing conclusions.

Data analysis to find out the wedding gown upcycling products in terms of aspects of design development, material suitability, decoration, and the feasibility of wedding dress upcycling products using percentages and mean values.

IV. RESULT AND DISCUSSION

A. Result

a. Wedding gown products in terms of design development

1. Conformity Development of Upcycling Wedding gown Designs

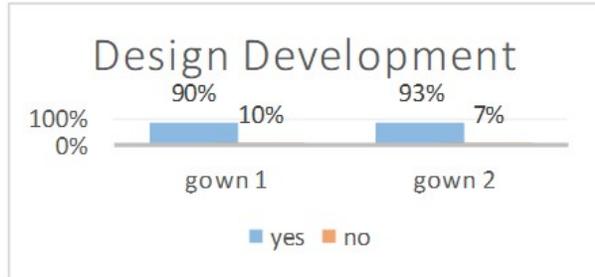


Figure 2. The Percentage of Results Will Be Design Development

2) Attractive Wedding gown Upcycling

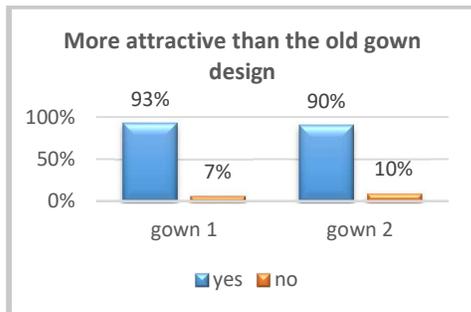


Figure 3: Attractive Upcycling

Based on the review of the more attractive designs of the old gowns, the bridal gown upcycling I was 93% "yes" and 7% "no". It can be categorized as the new "very good" upcycling wedding gown design. As for upcycling II wedding gowns for 90% "yes" answers and 10% "no" answers. Categorized the design of the new upcycling wedding dress "very good".

Table 1 the Average Value of the Finished Product Design

Gown 1		Gown 2	
Yes	No	Yes	No
90%	10%	93%	7%
93%	7%	90%	10%
Average	Average	Average	Average
92%	8%	92%	8%

On average the results of the development of the design of the wedding gown upcycling, the wedding gown upcycling I the average answer "yes" 92% and the answer "no" 8%. Wedding dress upcycling II the average answer is "yes" 92% and the answer is "no" 8%.

b. Wedding Gown Products Viewed From Material Harmony

Upcycling I wedding gown products and upcycling II wedding dresses, viewed from decoration details can be seen in Diagram 4.3 and 4.4.

1) Harmony of Material Combination

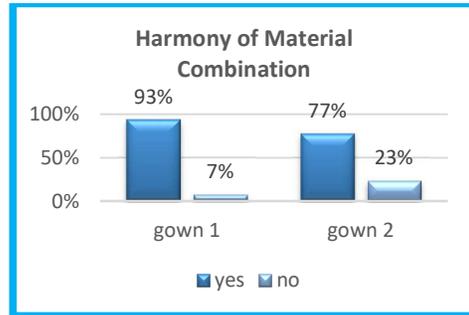


Figure 4. The Harmony of Ingredients

Based on figure 4, the harmony of the material on the wedding gown is measured in terms of the harmony of the material mix, the bridal gown upcycling I is 93% the answer "yes" and 7% the answer "no". Categorized as harmony the wedding dress material is "very good". Whereas upcycling II wedding dresses are 77% "yes" and 23% "no". Categorized as harmony of wedding dress material "good".

2) Selection of New Material Colors Match with Old Materials

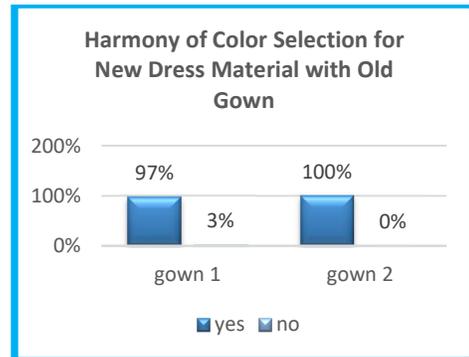


Figure 5. Harmony in Color Selection

Based on the figure 5 indicator results so that the harmony of the material on the wedding gown is seen in terms of the harmony of the choice of material colors, the wedding gown of the first dress for 97% of the answers "yes" and 3% the answer "no". It is categorized as the choice of the color of the wedding dress material "very good". Whereas the bridal gown upcycling II is 100% "yes" and 0% answer "no". Categorized the selection of wedding dress colors "very good".

Table 2 the Average Value of the Product Mix of Ingredients

Gown 1		Gown 2	
Yes	No	Yes	No
93%	7%	77%	23%
97%	3%	100%	0%
Average	Average	Average	Average
95%	5%	88.5%	11.5%

The average bridal gown product is covered in terms of the harmony of the wedding gown material and the average "yes" answer is 95% and the answer is "no" 5%. Wedding dress upcycling II the average "yes" answer is 88.5% and the answer is "no" 11.5%.

c. Wedding Gown Products Viewed From Decoration Details

Upcycling wedding gown products that are reviewed from decoration details can be seen in diagrams 5

1) Suitability Details on Upcycle Wedding Gown



Figure 6. Suitability of Decoration Details

Based on the figure 6 of the product indicators, details of bridal gown trimmings are viewed in terms of the suitability of the details of the gown, wedding gowns, and I for 90% of the answers "yes" and 10% of the answers "no". It was explained that the product indicators detail the gowns of bridal gowns that are viewed from the suitability of "very good" decoration details. Whereas for wedding dresses, upcycling II is 100% "yes" and 0% "no". Categorized as the suitability of the details of bridal gown decoration upcycling "very good".

2) Harmony Details on Upcycle Wedding Gowns with Materials



Figure 7. Harmony of Decoration Details with Ingredients

Based on the figure 7 indicator of the product details on bridal gown decoration, which are viewed from the harmony of the decoration details with the material, for the wedding gown upcycling I is 97% "yes" and 3% "no". It was explained that the results indicator became the details of the wedding

gown upcycling I which was viewed from the suitability of the "very good" decoration details. Whereas for wedding gowns upcycling II is 97% "yes" and 3% "no". The categorical suitability of the upcycle wedding gown details is "very good". So, the average harmony of bridal gown decorations is the average "yes" answer of 93.5% and the answer is "no" 6.5%. Wedding dress upcycling II the average "yes" answer is 98.5% and the answer is "no" 1.5%

Table 3: The Average of Decoration Harmony

Gown 1		Gown 2	
Yes	No	Yes	No
90%	10%	100%	0%
97%	3%	97%	3%
Average	Average	Average	Average
93.5%	6.5%	98.5%	1.5%

d. Development of Upcycle Wedding Gowns

The product of the design of the bridal gown upcycling I and the bridal gown upcycling II, which is viewed from the product of the development of the bridal gown upcycling can be seen in the bar chart in diagrams 4.7 and 4.8.

1) Upcycle Wedding Gown Products Up To Date



Figure 8. The Wedding Gown Products Upcycle Up to Date

Based on the 7's indicator chart, the product of the development of bridal gown designs is including up to date, and the wedding gowns are 87% "yes" and 13% "no". It was explained that the product indicators for the development of bridal gown designs were included to be "very good". Whereas for upcycling II wedding dresses 80% for "yes" answers and 20% "no" answers. It was explained that the indicators for the development of bridal gown designs were included to be up to date "very good".

2) Upcycle Wedding Gowns Worth Using

Based on Figure 8 of the product indicators, the development of the upcycling wedding gown design is feasible to wear, for the bridal gown upcycling I for 97% of the answer "yes" and 3% the answer "no". It was explained that the indicator of the wedding gown upcycling deserves to be used "very well". Whereas for wedding gowns upcycling II is 100% for "yes" and 0% answers for "no" answers. Explained that the upcycling wedding dress indicator deserves "very good". Used.



Figure 8. upcycling wedding gowns worth wearing

Table 4 Develops the Results into Upcycle Wedding Gowns

Dress 1		Dress 2	
Yes	No	Yes	No
87%	13%	80%	20%
97%	3%	100%	0%
Average	Average	Average	Average
92%	8%	90%	10%

So, the average feasibility of a wedding gown upcycling wedding gown upcycling I the average answer "yes" 92% and the answer "no" 8%. Wedding dress upcycling II the average "yes" answer is 90% and the answer is "no" 10%.

B. Discussion

a. Wedding gown upcycling products are reviewed from design development

1) The Conformity Development of Upcycle Wedding Dress Design

The results of the research on the development of wedding gown designs upcycle in terms of suitability Development of bridal gown designs upcycling, development of bridal gowns upcycling I, II developed into a new design without removing the characteristics of an object and the principle of development.

The development of bridal gown designs is developing a structural design that is also called silhouette (Soekarno 2004; 10) before the gown is developed, the silhouette of old dresses in the form of A line with strapless silhouette and A line skirt, after the design development was changed to silhouette, I line with strapless and pias skirt. Silhouette I is a silhouette in which the body part is straight but the bottom is wide or enlarged (Soekarno, 2004: 10).

The development of the bridal gown upcycling II design before the gown was developed, the silhouette of the old gown was the silhouette of H line. After the development of the design it was changed to a silhouette Line straight skirt section was changed to a half-circle gown with a tail. Line silhouette is a form of clothing variations of various silhouettes, can be added in the back with a long shape

2) The Attractive Upcycle Wedding Gowns

The results of the study of aspects of wedding dresses upcycling more interesting than the old design, it is known, Design development pay attention to design elements,

namely size, size, shape of clothing models are elements that need to be taken into account in fashion design (Soekarno, 2004: 28).

Upcycling I wedding gowns are more interesting because changing the silhouette of the skirt also adds a cape, the cape is designed to be detachable or removable. The length of the cape is limited to sweeping the floor, this type is suitable for marriages that are not too formal (Elizabeth Shimer 2004: 45).

The development of the Upcycling II wedding gown is more attractive because it fosters the design of the skirt, the new design skirt is developed into a half-circle skirt with splits in the front and chapel / chapel tail trains with a length of 1-1.5 m. This type of tail is suitable for formal weddings (Elizabeth Shimer 2004; 45).

b. Upcycling wedding gown products viewed from material harmony

1) Upcycle Wedding Gowns Have Harmony in the Combination of Materials

The results of the research into the aspects of the harmony of the wedding gowns of upcycling have the right combination of techniques and fabrics so that they can make an essential wedding dress. The combination of wedding gown material upcycling takes into account the texture of the material to be selected. Harmony in the combination of bridal gowns upcycling has the existence of harmony and compatibility between objects one and the other objects when combined (Soekarno, 2004: 29). In an upcycle wedding dress one combines the type of satin and tile. The two upcycle wedding dresses combine satin and chiffon material.

2) The Color Selection of Wedding Gown Material Matched with Old Wedding Gown Material

The results of the study from the aspect of harmony in the color of the wedding gown are viewed from the color selection. The material for the bridal gown upcycling I, II is a new color. In choosing the color of the material selected colors that are similar or as close as possible similar to the color of the original material. The color of the original gown material is ivory color. The color of clothing greatly affects the overall appearance so that the choice of colors that are suitable, harmonious, and in accordance with time and opportunity is very appropriate (Soekarno, 2004: 14). Colors and materials as well as harmony in the form of fashion (Soekarno, 2004: 29).

c. The upcycling wedding gown products are reviewed from the details of decoration

1) The Upcycling Wedding Gowns Have Decorative Details That Are Suitable for Wedding Dresses

The results of the study of the harmony of the bridal gown decoration are seen in terms of the suitability of the details of the wedding gown for bridal dresses. It can be seen that; the original decoration details of the one wedding gowns are lace applications on the body part. The details of the two upcycle wedding gowns are beads combined with sequins. Details of new upcycle wedding gowns use additional lace applications on both pearl and jewels gowns. The details of one upcycle wedding dress decoration and two upcycle wedding gowns are appropriate, this is in accordance with Tina Andrea (2009) that there are 7 types of ornaments used in wedding dresses

namely applique, beading, edging, embroidery, jewels, pearls and sequins.

Embellishments on upcycling wedding dresses serve to beautify wedding gowns, by Elizabeth Shimer (2004: 45) Plain wedding gowns can be embellished with beads and other equipment. Beads and embroidery are used to add wealth and texture to plain cloth. Small sequins and colorful gems and gems are sewn to give a decorative impression

2) Details of Wedding Gown Embellishments Have Hardness with Material

The research results from the aspect of suitability of decorative details for wedding gowns can be seen that upcycle one wedding gown and two upcycle wedding gowns use ornaments such as lace, pearls and jewels or gems. The color of the material used in the bridal gown upcycling I, II tends to be ivory white. This affects the choice of colors for decoration details used, the color of the decoration used for wedding gowns upcycle one and the wedding gown upcycle two is broken white for pearls and ivory is chosen for brocade. An item that is up cycle is designed with high quality and good details will make it unique and irreplaceable (Cassidy and Li-Chou, 2013).

d. Development of results to be an Upcycle wedding dress

1) Upcycling wedding dress products including dresses that are up to date

The results of the research from the aspect of developing the results become upcycle wedding dresses that are reviewed from the bridal gown products including the up to date gowns. The wedding dress that will be on upcycle is a used dress with conditions that are no longer up to date, damaged or torn in some parts. The aim of this upcycle is to use fashion that is no longer a trend in fashion that is trendy again. To cycle wedding gowns, you need to pay attention to the trend of wedding gowns that are currently in effect, decorations that are suitable for wedding gowns and materials that match the wedding gown.

Wedding gown upcycling I before being done upcycling is an A line bridal gown without decoration and there are defects on the back of the dress. After this one wedding dress on upcycle was changed, the dress was changed to a trumpet silhouette with ornate details tailored to the wedding gown. The two wedding dresses before being upcycle are straight dresses with pleated details at the waist and silver and yellow gem details on all parts of the chest. After upgrading the two wedding gowns, it was changed to a tailed dress and all the jewelry was removed because it did not match the color of the material, replaced with lace with pearl decoration. Upcycle is a method that makes more value on a product, material, clothing that has been damaged or not used anymore (Benson and Stephen, 2009).

2) Upcycle Gown Brides Worth Reusing

The results become research from the aspect of the development of the results into upcycle wedding gown that are reviewed from the upcycling wedding dress products including gowns that are worth wearing. The upcycle wedding gown is a wedding gown that has been added to the value of selling power and is already worth using because the damaged materials have been replaced. The quality of upcycle goods is changed to have more good function values (Levi, 2015). Upcycle is changing goals or reusing

something, by producing higher quality and higher value from the original (Kres and Fry, 2016)

V. CONCLUSION AND SUGGESTION

A. Conclusion

Based on the results of research and discussion it can be concluded that.

1. Wedding gown products upcycling I, II in terms of design development, there are two aspects that are considered "very good". Namely the design of upcycle wedding gowns according to the design and design of upcycle wedding gowns is more attractive than the old dresses.
2. Wedding gown products upcycling I, II, in terms of harmony of materials, there are two aspects that are considered "very good", namely the harmony in the combination of materials with the percentage and consistency of the selection of old material colors.
3. Wedding gown products upcycling I, II, in terms of decoration details, there are two aspects that are considered "very good", namely the suitability of decorative details for wedding gowns and the harmony of decorative details with upcycle wedding gowns.
4. The development of bridal gowns upcycling I, II, there are two aspects that are considered "very good", namely upcycle wedding dresses including up-to-date wedding dresses and upcycle wedding gowns that are suitable to wear

B. Suggestion

There are a number of things suggested, such as:

1. It is recommended that before unpacking the wedding gown to be upcycle, first learn about the design of old gown, sewing techniques from old dresses, and the construction of old gown patterns so that when the workmanship is easier and directed.
2. It is recommended to research upcycle wedding gowns then use more decorative details for example: sequins, pearls, brocade

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