
Evaluation of Accentuated Pre-loved Dress using Apayao Woven Textiles

Ronald O. Ocampo ^{a*}, Rema Bascos-Ocampo ^a and Don John N. Fronda ^a

^a *Apayao State College, Philippines.*

Authors' contributions

This work was carried out in collaboration among all authors. Author ROO research conceptualization and statistical analysis in the manuscript. Author RBO writing and editing of the manuscript. Author DJNF design and accentuation of the pre-love dress, coordination with evaluators in the manuscript. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/88143>

Original Research Article

Received 06 April 2022
Accepted 10 June 2022
Published 14 June 2022

ABSTRACT

The use of pre-loved dress is becoming a popular in the fashion industry especially in the third world countries. This study used Apayao woven textile to improve enhance pre-loved dresses through accentuation. There are 11 pre-loved dresses used in the study.

The Research and Development model by Borg and Gall was used as the design of the study. The accentuated pre-loved dress were evaluated by experts from the fashion industry and some personnel from the Provincial Tourism Office (PTO).

Results showed that majority of the accentuated pre-loved dresses have very satisfactory rating and they are very much acceptable.

Based on the findings, the following conclusions are drawn: 1). There are 11 improved pre-loved dresses through accentuation of Apayao woven textiles; 2). Majority of the improved pre-loved dresses were rated very satisfactory and excellent. In terms of marketability, most of them are very much acceptable; 3). All the 11 accentuated pre-loved dresses yielded a positive return on Investment (ROI).

In the light of the findings and conclusion, the following are forwarded as recommendations:

1. Utilize Apayao hand woven textiles for the enhancement/ improvement of pre-loved clothing.
2. Apply for industrial design registration of the Intellectual Property Office (IPO) the designs used for accentuating the pre-loved dresses.
3. Conduct training to women and sectoral group to disseminate results of this study.
4. Forward the result of this study to the provincial office and other offices for the promotion, adoption and marketing to boost the loom weaving industry of the province.

Keywords: Pre-loved dress; apayao woven textile; accentuation.

1. INTRODUCTION

The increasing amount of carbon brought about by production of industrial factories is a major environmental concern of all nations around the globe. Carbon emission in 2018 totaled to 36.831 billion tons of Carbon dioxide. It rose up to 2.1% from last year. Last year, the superpower was responsible for almost one-third of all the CO₂ emitted. China has also recently invested in new coal-fired power stations and, with its current policies, GHG emissions are projected to rise until at least 2030.

The second most-polluting nation, in terms of CO₂ emissions, is the United States. Responsible for 15% of global emissions, it's a long way behind China's 27%. But the US has the world's highest per capita CO₂ emissions – 16.6 tons per person, way ahead of the global average of 4.8 tons and China's 7 tons per person [1].

In the clothing industry, the United Nations Environment Programme (UNEP), it takes 3,781 liters of water to make a pair of jeans, from the production of the cotton to the delivery of the final product to the store. That equates to the emission of around 33.4 kilograms of carbon equivalent.

If that is for just one pair of jeans, imagine the environmental cost for everything in our wardrobes. The following statistics, published by the UNEP and the Ellen MacArthur Foundation, give the following idea: Every year the fashion industry uses 93 billion cubic meters of water — enough to meet the consumption needs of five million people; Around 20 % of wastewater worldwide comes from fabric dyeing and treatment; Of the total fiber input used for clothing, 87 % is incinerated or disposed of in a landfill; The fashion industry is responsible for 10 % of annual global carbon emissions, more than all international flights and maritime shipping combined. At this pace, the fashion industry's greenhouse gas emissions will surge more than 50 % by 2030; If demographic and lifestyle patterns continue as they are now, global consumption of apparel will rise from 62 million metric tons in 2019 to 102 million tons in 10 years; Every year a half a million tons of plastic microfibers are dumped into the ocean, the equivalent of 50 billion plastic bottles. The danger? Microfibers cannot be extracted from the

water and they can spread throughout the food chain.

Less than 1% of used clothing is recycled into new garments. The Ellen MacArthur Foundation estimates that every year some USD 500 billion in value is lost due to clothing that is barely worn, not donated, recycled, or ends up in a landfill. Some leading brands have answered this call and are working to identify fiber alternatives and develop more eco-friendly processes.

Technology and research are playing a key role in making the industry more sustainable. Athletic shoes and attire are getting made out of materials extracted from the plastic dumped into the ocean. Fish skins and natural dyes are replacing chemicals, fruit skins are substituting furs, and backpacks and purses are getting made out of discarded canvas. Some companies have a return policy so they can recycle the consumers' garments after they have worn out. But this is not enough to lessen carbon emission in the fashion industry.

To minimize expenditures in the clothing industry, people shifted to pre-loved clothing as alternative to brand new clothings. Pre-loved shopping refers to buying clothes, bags, jewelry, and other accessories that have already been used by someone else and now they are up for sale for a second time [2-4].

Normally, items included in pre-loved products are often priced very low as compared to buying that product new; i.e. directly off the shelf (Barnes & Lea-Greenwood:2018;Biana:2020;) [5-7].

The premium that man have to pay to have exclusive rights to be the first consumer to use the product is eliminated in pre-loved shopping and the preloved consumer can enjoy the same product for a drastically reduced price.

In recent years, the ukay-ukay industry invaded the local market in the Philippines. It is clear that people see this market as an alternative to counterpart goods burdened with soaring prices; however, with the invocation of laws that prohibit importation and sale of secondhand garments, consumers of such commodity have different reactions and suggest alternative solutions so as not to be affected negatively (in terms of the economic dimensions of their lives). It is also

seen that most of these second hand garments products are branded and gives prestige to the one wearing it.

1.1 Objectives

This study is conducted to enhance preloved dress through accentuation Apayao woven textile.

Specifically, it is intended to:

1. Accentuate preloved dresses using Apayao woven textiles.
2. Evaluate the accentuated pre-loved dresses by experts
3. Determine market acceptability of the accentuated preloved clothing;

2. METHODOLOGY

2.1 Research Method

The researcher made use Research (R) and Development (D) by Borg and Gall. This research consisted of survey, documentation and literature search of Apayao hand woven textiles, accentuation of pre-loved dresses using Apayao hand woven textiles and product evaluation by experts.

2.2 Locale of the Study

The study was conducted at Apayao State College (ASC)- Luna Campus. ASC luna campus is located at San Isidro Sur, Luna, Apayao. The campus is located in Apayao growth center wherein most government offices are situated.

2.3 Respondents of the study

The respondents who constituted the evaluators of the study were employees of the Provincial Tourism Office and fashion experts. The researcher purposely chosen ten evaluators 3 from the Provincial tourism office, and 7 experts in fashion design.

2.4 Research Instrument

During the research phase of the study, the researcher read extensive literature from published and unpublished sources bearing information about Apayao hand woven textiles.

Aside from literature search and conducted survey and documentation of Apayao woven textiles.

From literature search and survey, the hand woven textiles were used to accentuate pre-loved dresses with the help of fashion experts from Fix saloon located at Jctn Luna, Libertad, Abulug, Cagayan. After which the products were evaluated using Product Evaluation Form containing the following criteria: a) creativity of design; (b) color combination; (c) lay-out (art in designing), (d) intricateness of design; and (e) aesthetic appearance. The Likert scale was used: (5) Like Very Much; (4) Like Much; (3) Like; (2) Moderately Like and (1) Not Like. Space for comments and suggestions were included below the criteria presented.

2.5 Research Procedure

Permission to conduct study was sought from the Apayao State College administration. After request was granted, similar letter was given to the office of the President and the office of the Provincial Tourism Officer of Apayao.

After all letters was approved, literature review and survey were conducted to list down Apayao hand woven products. Then evaluation follows using criteria designed by the researcher after models. The evaluation tool uses the 5-point scale. Evaluation of accentuated pre-loved dresses were done by experts in fashion design and some members of the Provincial Tourism office.

Data were gathered through presenting the finished products to the respondents and giving them evaluation papers for them to evaluate the said accentuated pre loved dress. The criteria in evaluating the accentuated pre-loved dresses includes a) creativity of design; (b) color combination; (c) lay-out (art in designing), (d) intricateness of design; and (e) aesthetic appearance.

2.6 Statistical Treatment of Data

Descriptive statistics such as Mean and the 5 point Likert Scale will be used in the interpretation of data gathered.

The table is presented below:

Table 1. Limits and verbal description from the scale used in the study

| Scale | Limits of Description | Verbal description |
|-------|-----------------------|-------------------------------|
| 5 | 4.20 – 5.00 | Like Very Much / Excellent |
| 4 | 3.40 – 4.19 | Like Much / Very Satisfactory |
| 3 | 2.60 – 3.39 | Like / Satisfactory |
| 2 | 1.80 – 2.59 | Moderately Like / Fair |
| 1 | 1.00 – 1.79 | Not Like / Needs Improvement |

The researchers with the help of fashion experts from fix saloon in Libertad, Abulug, Cagayan determine the price of the accentuated dresses.

3. RESULTS AND DISCUSSION

3.1 Characteristics of Apayao Hand Woven Textiles

The color of the original lyapayao fabrics is indigo blue. The indigo blue color is believed that came from Malatayum plant (*Indigofera tinctora*). This plant is already propagated in Abra. Later development includes additional color in the fabrics such as other shades of blue, black and red. These are woven alternately to form small stripes. These hand woven textiles are used only for aken (skirt) and abag (G-String). According to Edan and Begay [8], there is no color distinction to show social status among lyapayao but this depends on the completeness of the attire to include the use of accessories such as earrings, necklaces and others. Social status is

distinguished through the addition of other fashion accessories such as necklaces, bracelet, bags and others. Bright colored fabrics are usually worn by younger lyapayao [9-14].

The handwoven textile is accentuated with embroidered designs as shown in the photograph below. The embroidery symbolizes a connected hand with 5 fingers. This depicts the industriousness of the lyapayao. Traditionally, lyapayaos engaged in slash and burn agricultural system with 4 to 5 years rotational fallow system. They are also engaged in blacksmithing industry, basket weaving, fishing and hunting. These traditional livelihood requires intensive labor for them to produce food and income for their families. The interconnectedness of each embroidered fingers symbolizes the bayanihan system of the lyapayao which is called “*Ammoyo, Inamoyo, or Tagnawa* for building houses and working in the farms. They are closely connected with each other and form themselves into village or *Ili*.



Fig. 1. The original hand woven textiles of the lyapayao. Dominant colors are white, red, blue and black



Fig. 2. The embroidery symbolizes hand and fingers which depicts the industriousness of the Iyapayao

Improvements in Apayao hand woven textiles came over time. During the time of Honorable Betty C. Verzola (Mayor-Luna), there were improvements of the *abel* (loom weave) Apayao.

The influx of additional colors such as violet, white, yellow, green and others were observed. Some *abel* are also accentuated with silver and gold threads to make the fabrics more appealing.



Fig. 3. Some modifications made to improve Iyapayao handwoven textiles

Table 2. Pre-loved dresses before and after accentuated with Apayao textiles

| Dress no. | Before | After |
|-----------|---|--|
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

4



5



6



7



8



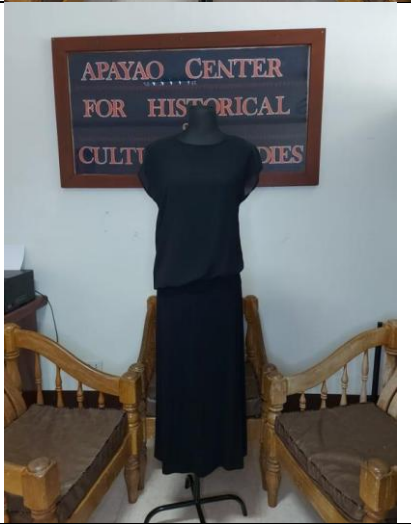
9



10



11



There are 11 pre loved dresses accentuated with Apayao textiles. Each of these dresses were enhanced through accentuation of *Abel ti Apayao* which is a combination of indigo blue, red and blue and maroon with a little of yellow. The researchers through the guidance of fashion experts choose Apayao textiles to suit the fabrics used in the pre-loved dresses.

Of the 11 accentuated preloved dresses, there are 2 dresses rated with excellent with mean ratings of 4.38 and 4.24. There are 6 that are rated very satisfactory while 3 are rated satisfactory. The highest overall mean rating is obtain by dress number 9, with a mean rating of 4.38. This is being followed by dress number 7, 10, 11, 5, 2, 4 and 7 with mean ratings of 4.24, 4.18, 4.04, 3.96, 3.88, 3.46 and 3.42 respectively. Dress number 1 obtain the least mean rating of 3.06 described as satisfactory using the 6 criteria.

In terms of creativity, dress number 10 obtain the highest mean rating of 4.3. Dress number 9 obtain the highest mean rating in terms of color combination, lay-out, intricateness of design and aesthetic appearance with mean ratings of 4.3, 4.4, 4.5, and 4.5 respectively.

Using the five point likert scale with 5 the highest and 1 the lowest. The market acceptability of the accentuated preloved dresses is presented in Table 4.

In terms of market acceptability dress number 9 has the highest acceptability rating of 4.5 described as very much acceptable. This is followed by dress number 8, 10 and 2 with mean ratings of 4.27, 4.2 and 4.2 respectively. The least acceptable accentuated pre-loved dresses are dress number 1 and dress number 6 with mean ratings of 3.11 and 3.27.

Table 3. Evaluation of experts for the accentuated pre-loved dresses

| Dress | Evaluation Criteria | | | | | Overall Mean | Descriptive Value |
|-------|---------------------|-------------------|------------|---------------------|-----------------------|--------------|-------------------|
| | Creativity | Color combination | Lay-out | Intricate of design | Aesthetics appearance | | |
| 1 | 3.2 | 3.1 | 3.1 | 3 | 2.9 | 3.06 | S |
| 2 | 3.9 | 3.7 | 4.1 | 3.8 | 3.9 | 3.88 | VS |
| 3 | 3.3 | 3.2 | 3.4 | 3.2 | 3.3 | 3.28 | S |
| 4 | 3.3 | 3.4 | 3.5 | 3.5 | 3.6 | 3.46 | Vs |
| 5 | 4.1 | 3.9 | 3.8 | 3.9 | 4.1 | 3.96 | Vs |
| 6 | 3.3 | 3.2 | 3.1 | 3.3 | 3.4 | 3.26 | S |
| 7 | 3.5 | 3.4 | 3.3 | 3.4 | 3.5 | 3.42 | Vs |
| 8 | 4.1 | 4.2 | 4.3 | 4.3 | 4.3 | 4.24 | E |
| 9 | 4.2 | 4.3 | 4.4 | 4.5 | 4.5 | 4.38 | E |
| 10 | 4.3 | 4.2 | 4.1 | 4.2 | 4.1 | 4.18 | Vs |
| 11 | 4.1 | 3.9 | 3.9 | 4.2 | 4.1 | 4.04 | Vs |

Table 4. Market Acceptability of the accentuated pre-loved dresses

| Dress | Mean acceptability | Verbal description |
|-------|--------------------|----------------------|
| 1 | 3.11 | Acceptable |
| 2 | 4.2 | very much acceptable |
| 3 | 3.4 | much acceptable |
| 4 | 3.41 | much acceptable |
| 5 | 4.1 | much acceptable |
| 6 | 3.27 | Acceptable |
| 7 | 3.5 | much acceptable |
| 8 | 4.27 | very much acceptable |
| 9 | 4.5 | very much acceptable |
| 10 | 4.2 | very much acceptable |
| 11 | 4.1 | much acceptable |

Table 5. Cost and return analysis of the accentuated pre-loved dress

| Dresses | Price before | Price after | Production cost | | Total production input | Net | ROI |
|---------|--------------|-------------|-------------------------|-------|------------------------|-----|----------|
| | | | Accent (Apayao textile) | Labor | | | |
| 1 | 100 | 450 | 100 | 50 | 250 | 200 | 80 |
| 2 | 200 | 700 | 150 | 50 | 400 | 300 | 75 |
| 3 | 150 | 450 | 125 | 50 | 325 | 125 | 38.46154 |
| 4 | 100 | 400 | 50 | 30 | 180 | 220 | 122.2222 |
| 5 | 100 | 800 | 150 | 75 | 325 | 475 | 146.1538 |
| 6 | 100 | 550 | 150 | 50 | 300 | 250 | 83.33333 |
| 7 | 100 | 400 | 50 | 50 | 200 | 200 | 100 |
| 8 | 150 | 600 | 75 | 50 | 275 | 325 | 118.1818 |
| 9 | 150 | 850 | 150 | 75 | 375 | 475 | 126.6667 |
| 10 | 100 | 600 | 75 | 50 | 225 | 375 | 166.6667 |
| 11 | 100 | 700 | 100 | 75 | 275 | 425 | 154.5455 |

Cost of textile: 300/ yard (direct from supplier)
 Labour: 400/ day

All the accentuated textile fabrics yielded a positive return of investment. In terms of net profit dress number 5 and 9 have the highest with P475.00. Dress number 10 has the highest return of investment having 166.6 percent ROI. This is followed by dress number 11, 5, 9 and 7 with ROI as 154.54%, 146.15%, 126.67% and 118.18% respectively. Dress number 2 has the lowest return of investment.

4. CONCLUSIONS

Based on the findings, the following conclusions are drawn:

1. There are 11 improved pre-loved dresses through accentuation of Apayao woven textiles.
2. Majority of the improved pre-loved dresses were rated very satisfactory and excellent. In terms of marketability, most of them are very much acceptable.
3. All the 11 accentuated pre-loved dresses yielded a positive return on Investment (ROI).

5. RECOMMENDATIONS

In the light of the findings and conclusion, the following are forwarded as recommendations:

1. Utilize Apayao hand woven textiles for the enhancement/ improvement of pre-loved clothing.
2. Apply for industrial design registration of the Intellectual property office (IPO) the designs used for accentuating the pre-loved dresses.
4. A fashion show should be conducted to promote the accentuated pre-loved dresses.
5. Conduct training to women and sectoral group to disseminate results of this study.
6. Forward the result of this study to the provincial office and other offices for the promotion, adoption and marketing to boost the loom weaving industry of the province.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Flemming S. This infographic shows CO₂ emissions all around the world; 2019. Available: <https://www.weforum.org/agenda/2019/09/global-carbon-dioxide-emissions-chart-of-day/>

2. Turunen LLM, Leipämaa-Leskinen H. Pre-loved luxury: identifying the meanings of second-hand luxury possessions. *Journal of Product & Brand Management*; 2015.
3. Almeida CADS. Factors driving to the propensity to purchase luxury second-hand fashion and apparel (Doctoral dissertation); 2019.
4. Elias MDS. How to succeed in the second-hand luxury market: the case of Portugal (Doctoral dissertation); 2020.
5. Binti Shaharuddin FZ. Factors affecting pre-loved items purchase intention among Malaysian youth consumers (Master's thesis, Kuala Lumpur: International Islamic University Malaysia, 2019); 2019.
6. Veerman N. Luxurizing Pre-loved Clothes: A Material and Emotional Future of Luxury. *Searching for the New Luxury?*. 2019;46.
7. Williams I, Shaw P. Reuse: fashion or future?. *Waste Management*. 2017;60:1-2.
8. Edan, Begay. Cultural Implications of Apayao Cultural Symbols. *Apayao State College RDE Journal*. 2011;1:8-9.
9. American Institute in Taiwan. AIT Taiwan Country Commercial Guide FY2001; 2000. Retrieved May 31, 2001. Available: <http://www.usatrade.gov/website/ccg.nsf/ShowCCG?OpenForm&Country=T AIWAN>
10. Bureau of Labor Statistics. Selected age of reference person: Average annual expenditures and characteristics, Consumer Expenditure Survey; 2000. Retrieved May 31, 2001. Available: <http://www.bls.gov/csxstnd.htm%231999>
11. Cassill NL, Drake MF. Apparel selection criteria related to female consumers' lifestyle. *Clothing and Textiles Research Journal*. 1987;6(1):20-28.
12. Davis LL. Consumer use of label information in ratings of clothing quality and clothing fashionability. *Clothing and Textiles Research Journal*. 1987;6(1);8-14.
13. How much do our wardrobes cost to the environments; 2019. Available: <https://www.worldbank.org/en/news/feature/2019/09/23/costo-moda-medio-ambiente>
14. Morris Z. Why buying pre-loved clothing is more important than ever; 2021. Available: <https://literallydarling.com/blog/2020/06/17/5-benefits-buying-preloved-clothing/>

PICTORIALS





© 2022 Ocampo et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/88143>