

Development of Fashion Accessory by Recycling Leftover and Waste Resources
- Collaboration between a start-up program and Mokpo's 'Zero Waste' project -

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1. Background and Purpose

A recent global issue is the pursuit of sustainable products. Most countries are looking for various ways to reduce waste or disposables and make eco-friendly products. The fashion industry is also actively participating in these movements in various ways, such as textile recycling and renewable design. 'Zero waste' is drawing attention, and recycling and upcycling are expanding as ways to ideally realize it.

Mokpo is one of the four major marine tourism cities in South Korea and is famous for marine foods along with various abundant seafood resources, and the number of tourists who want to enjoy them continues to increase. Recently, as disposal of leftover fish bones and shells has also emerged as a big problem, a Zero Waste Project in the city was launched and various idea projects are underway.

The start-up program at Mokpo National University, named 'Blue Stone DI (Design Innovation)', is a project focusing on the development of marine culture products. Blue Stone DI has been collaborating with the support of Mokpo's Zero Waste Project, focusing on recycling marine resources and developing upcycled marine cultural products. The ultimate purpose of this collaboration is to reduce waste through recycling and improve the surrounding marine environment as much as possible to maintain Mokpo as a bright and clean marine city, while developing fashion and cultural products with marine image.

2. Collaboration Outline

The point of the project is the development of ocean image cultural products by recycling leftover and waste resources. 14~15 undergraduate students from the start-up club Bluestone DI in the Fashion and Clothing Department at Mokpo National University have been participating in the project. The project, which has been operating for almost four years, consists of technical experiments to research, design, manufacturing, and commercialization. The products developed by the start-up are promoted and sold as local cultural tourism products in Mokpo.

3. Design Contents

1) Image and Inspiration

All fashion accessories are inspired by something related with the ocean, such as fish, coral reefs, sea waves, etc. They are made into colorful three-dimensional forms with overflowing rhythm and vitality.

2) Accessory Items

Fashion accessories using cuttlefish bones are developed in the following three products.

- A. Fashion necklace: Made by directly using refined and dyed cuttlefish bones as jewelry materials
- B. Fashion bag: Designed with a focal point made of colors and shapes of cuttlefish bones of various sizes
- C. Scarf-Necklace: Designed by connecting the leftover fabric pieces and small pieces of refined and dyed cuttlefish bones

4. Procedure

1) Cuttlefish Bone Processing

The following steps are done to process cuttlefish bones.

- Wash cuttlefish bones to remove odors. (Mix alcohol and soak for more than two hours.)
- After drying, remove the thick outer shell and cut into various sizes.
(Cut with a cutter, and trim edges with sandpaper.)
- Make one to three holes for use as an accessory.
- Dye in various colors using acid dyes.
- After dyeing, apply an enamel coating agent to the surface to polish. (Repeat two-three times.)



2) Reborn as Fashion Accessories

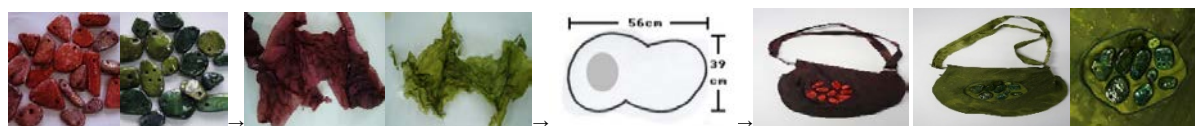
A. Fashion Necklaces

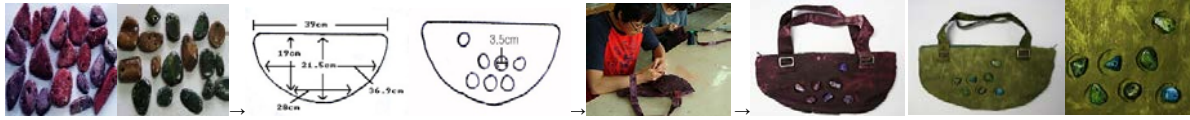
- Fashion necklaces are made by directly using refined and dyed cuttlefish bones of various sizes.
- The necklaces are completed by combining jewelry strings, beads, stones, etc.



B. Fashion bags

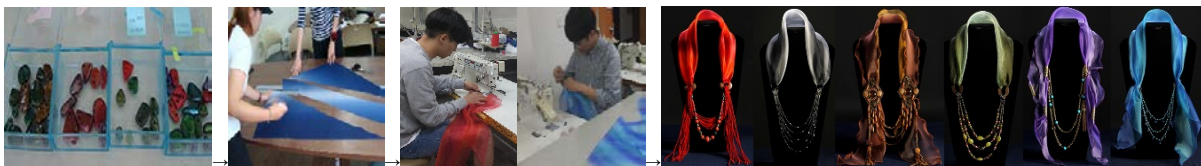
- Fashion bags are designed with a focal point made of colors and shapes of cuttlefish bones with various sizes.
- The bag shape is completed with two layers of organza that dyed first with crinkle effect. A hole is cut in the middle of the outside surface, and decorated with cuttlefish bones.





C. Scarf-Necklaces

- Scarf-necklaces are made by connecting leftover organza fabric pieces with small refined and dyed cuttlefish bones.
- The top part, which looks like a scarf, is worn around the neck while the bottom part is made into a necklace. The top part consists of leftover pieces of organza fabric, and the bottom part is made up of a mixture of dyed little cuttlefish bones and various kinds of beads.



5. Results and Anticipated Effects

The developed fashion accessories are very unique, colorful, light and inexpensive because they recycled cuttlefish bones, which is perfect as a marine cultural tourism product with ocean image. The collaboration between the university's start-up program and Mokpo's Zero Waste Project was successful. The results of this collaboration became a good example of industry-academia cooperation. The developed prototypes have been commercialized as products that represent marine cultural products in Mokpo. Through this, local governments can produce and sell promotional cultural products of marine areas as a set or series, which is expected to revitalize the local economy. In addition, the expertise of the students who participated in this project has helped the community, and students are expected to find jobs and start businesses in related fields.

6. References

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