

Development of Upcycling Fashion Education Program Applied by Design Thinking Process

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It has become a trend to upcycle waste, beyond simply recycling it. As the industrial revolution that began in the 18th century enabled mass production, consumption economy rapidly developed. This resulted in reckless production and consumption which accelerated the destruction of the environment. The problems followed by such conflict led to the emergence of a social issue called 'sustainable growth' in the 20th century. Upcycling, one of sustainable designs, is an evolutionary form by adding the concept of design to the vocabulary *recycle*, which recycles goods. Meanwhile, Korean upcycling industries are unlike highly-activated international upcycling industries. In Korea, upcycling industries began to be introduced in design by some designers from 2007 and appeared in earnest from 2013 (Korea upcycle design association, 2021). Recently, Korean upcycling brands also have achieved quantitative growth. However, there are more small-scale brands compared to rapid growth, and are focused on social contribution to promote upcycling fashion rather than pursuing corporate profits. In addition, each brand accompanies an upcycling design project or education program to help the lack of social awareness and understanding of sustainable and upcycling fashion. Despite the fact, most of these education programs are temporary or event-oriented, and they are targeted towards the unprofessional. Therefore, this research aims to develop upcycling fashion education programs that can be systematically applied from elementary school students to adults, by analysing current programs of Korean upcycling program centers and utilizing the design thinking processes.

This study first examined the concept of upcycling fashion, the program operation status of upcycling centers and design thinking process in Korea, and then developed and proposed an 3 stages upcycling fashion education program by age group using the design thinking process. For upcycling centers, this study limited the centers opened in Seoul, Gyeonggi, Incheon, Daegu, Cheongju, and Suncheon – which seek co-prosperity with each region through upcycling – in order to identify the current status of educational programs. For research data, it was based on prior research, newspaper and magazine articles, and the official websites of each upcycling center.

As a result of analyzing the status of upcycling centers in Korea, a total number of seven upcycle centers in six regions were in operation. After the opening of Gwangmyeong Upcycle Art Center in 2015, Incheon Upcycle Eco Center (2015), Korea Upcycle Center (2016), and Seoul Upcycling Plaza (2017) have opened sequentially. After the enforcement of the Framework Act on Resource Circulation in 2018, promoting mutual growth with local residents and practicing environmental

movements activated. With this influence, Gyeonggi Upcycle Plaza and Suncheon Upcycle Center The Saerom, and Cheongju Upcycling Civic Center opened in 2019. The main purpose of the upcycle centers is to maintain resource circulation, to coexist with local residents, and to raise awareness of upcycling. In order to fulfill the purpose, upcycling-related programs were being operated at each center. Viewing the current status of education programs at each center, upcycling experience education (Seoul Upcycling Plaza), regular experience course education (Gwangmyeong Upcycle Art Center), operation of start-up education programs by age (Gyeonggi-do Upcycle Plaza), general citizens, career education program operation (Upcycle Eco Center), regular, in-depth, customized classes (Korea Upcycle Center), resource purification education program (Recycling Civic Center), regular education program (Upcycle Center The Saerom) are in operation. Nonetheless, due to COVID-19, most of the upcycle center programs have been converted to one-time classes where online education could be paralleled. Accordingly, this research has developed a program that can be applied from elementary school students to adults by implementing a design-thinking process that could continuously enhance creativity and promote co-prosperity with local people.

Designs proceed from creative ideas, and creativity improvement in design education could be developed through creative thinking education and systematic training(Choi&Shon, 2020). Fashion design education also requires new ideas in designing process for improvement in creativity, and a practical problem-solving process through creative thinking skills. The Design Thinking Process is a type of design process that solves problems based on the communication of convergent teams and a deep empathy for humans used to produce end-products in the design process(Lim&Kim, 2021). This research applied the Design Thinking Process to upcycling fashion education program which embodies to five steps — Empathize, Define, Ideate, Prototype, and Test – presented by the most representative D-school at Stanford University.

This research focused on the concept of upcycling, upcycling brand status, brand purpose, environmental protection, and rediscovery of upcycling materials in Design Thinking Process. In designing education programs, we designed three stages: basic, advanced, and start-up. Each stage was differentiated by setting different main training targets. First of all, under the theme of ‘Hello, upcycling? Nice to meet you materials’, we designed a two-hour, four-week basic course upcycling fashion education program for local elementary school students, in order to let them realize what upcycling is, and how we can recycle materials. The basic program developed for elementary school students, in particular, was designed to approach the concept and material of upcycling in children’s perspective. The direction of this program was to design upcycling fashion materials so that children could learn upcycling naturally.

Second of all, under the theme of “Upcycling: Rediscovering Everyday Life” which developed upcycling items and materials in daily lives and applied the design thinking process, we designed a two-hour, eight-week in-depth upcycling fashion education program for the general public.

While the program for elementary school students contained basic course contents, this advanced course consists of more upcycling experiences in daily lives. We specifically designed this course for the public to discover and apply materials that can be recycled in our daily lives. For parents as target audiences, we developed a program that could be used with children at home.

Lastly, a two-hour, eight-week upcycling fashion education program for young job applicants and career-interrupted women was launched, in order to develop upcycling items and materials, apply the design thinking process, and support employment and start-ups. It was developed under the theme of “The New Normal of Upcycling”. The employment and start-up was expanded from basic and advanced processes – into Orientation & Empathize, Start-up items and market research, Define, Benchmarking and business planning, Ideate, Prototype, Test/Create a business plan. This is concentrated on improving creativity so that the participants could implement a high-quality design by giving them consistent feedback, and proceeded with items that can be successful when actually starting a business. The contents of the program included the submission of a business plan so that the target of education could be start-up, not only design development.

This research developed a differentiated upcycling education program which can be applied from elementary school students to adults with the design thinking process, by the results of education programs of regional upcycle centers. Recently, ‘sustainable fashion’ and ‘upcycling’ are becoming issues across all industries. Sustainability is now an essential tool for survival. Hence, step-by-step upcycling fashion education that anyone from elementary school students to adults can learn will be able to inculcate ethical fashion and value consumption consciousness that can be practiced in real life. Also, this research is essential in that it may provide employment opportunities for career-interrupted women and young applicants by directly utilizing upcycling materials that are reality available to them. We hope this study will assist in developing continuous upcycling fashion design methodologies and improve creative thinking in the future.

References

Choi, H.·Shon, Y(2020). Development of Creative Fashion Design Process for Foster Creativity-Based on the Design Thinking Process-. *Journal of Brand Design Association of Korea*, 18(4), 247-258.

Lim, J.·Kim, M(2021). A study on the design thinking process for university classes. *Journal of Communication Design*, 75, 171-180.

Park, S.·Chung, J (2019). A proposal of craft design process applying design thinking methodology. *Journal of Industrial Design*, 13(1), 45-56.

Korea Upcycle Design Association(2021). <https://kud.kr/aboutupcycle>