Environmental Education of Young People in Carrying out Design Projects on the Basis of Literary and Musical Folklore

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Abstract: The article deals with the problem of environmental education of future teachers in carrying out educational design projects on the creation of fashion collections of clothing. The project has been carried out using the patchwork technique based on literary and musical folklore. In the process of working on the project, students have been prompted to adhere to the principles of ethical design and consumption of clothing, commonly named as sustainable fashion: made-to-order clothing production; use of environmental materials; high quality of products; observance of the rights of employees of the fashion industry and ethical standards in communication with them, protection of animals; repair and processing of clothing; rental of clothing; wearing second-hand clothes. The study uses a method of ecological ritualization that makes it possible to appeal to ethnic traditions. The experimental group of participants of the pedagogical experiment has been tasked to create a collection of clothing on the project theme “Responsible fashion – trends of the future”. The purpose of the project is the creative recycling of used clothing, remnants of fabric, yarn and creating of modern and comfortable clothes. The project has been carried out in such stages: 1) research or search; 2) draft; 3) project and 4) technological. To carry out the design project using recycling technologies, a combination of patchwork techniques, “Crazy Quilt” and “Crazy Wool” from waste fabrics and yarns was chosen. The participants of the control group made a creative collection of clothes based on the self-selected creative source. As a result, the largest changes in the number of students with high readiness to follow the principles of responsible fashion have occurred in the experimental group. A pedagogical experiment with a level of significance $\alpha = 0.05$ has confirmed the effectiveness of design using recycling techniques (patchwork, “Crazy Quilt”, “Crazy Wool”) for the formation of youth willingness to follow the principles of sustainable fashion.

Keywords: *Education; environmental education; design project; literary and musical folklore; sustainable fashion; patchwork; textiles.*

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1. Introduction

Active development of science and technology, growth of industrial and textile production, dynamic human interference in natural processes, efforts to maximize the use of natural resources to meet human needs have led to the global ecological crisis on the Earth. Around the world, there is a disharmony between the external culture of civilized human, which is manifested in the ability to create outstanding works of art in painting, architecture, fashion modeling, and the internal culture, the absence of which is observed in the indifferent attitude to nature and pollution of the environment. The general deterioration of the environmental situation in the world and Ukraine, in particular, is associated with human production activities and therefore requires immediate development of measures to increase human responsibility for the consequences of their work activities and education of the younger generation of the environmental culture. The environmental education of young people should be carried out in accordance with the modern understanding of the problem of reducing the polluting impact on the environment, as well as relevant scientific developments and regulatory international documents.

Textiles play an important role in everyday life and textile manufacturing is one of the oldest industries. The textile industry is characterized by significant losses through the surplus of production on the one hand, and the destruction of products - on the other one. This situation predetermines the need for the processing of textile materials. As demonstrated in the study (Filho, Ellams, Han, Tyler, Boiten, Paco, Moora & Balogun, 2019), reusing and recycling textile products may have environmental, economic and social benefits. The authors of the study analyze the current trends in the recycling of textile materials and emphasize the benefits of the transition to a circular economy. As mentioned in the article (Dahlbo, Aalto, Eskelinen & Salmenperä, 2017), "Increased circulation of textiles had potential to decrease environmental impacts". The study (Avagyan, Luongo, Thorsén & Östman, 2015) has proved that harmful chemical elements that are part of textiles, can adversely affect humans in contact with the skin, as well as can be a potential source of environmental pollution due to laundering and discharge into the domestic wastewater.

In connection with the aforementioned problems, there is the interest of regulatory bodies to extend reusing and recycling textile materials that will lead to further improvement of the processing of textile waste in accordance with the directive of the European Commission "On Waste and Resource Management" (European Union, 2014).

Reuse of textiles, as noted in the article (Belk, 2014), is a mean of extending the life of textiles by transferring them to new owners with or without previous modification. Consumer waste of textile production is processed into textile or non-textile products by a mechanical, chemical, thermal method or a combination thereof, as demonstrated in the study (Sandin & Peters, 2018). The interest in the wider reusing and recycling of textile materials is consistent with the increased focus on the circular economy concept in the EU's international and national policies, as reflected in the report of the European Commission of 4 March 2019 (European Commission, 2019). The Ellen MacArthur Foundation actively supports the circular economy. The diagram of the circular economics (Ellen MacArthur Foundation, 2019) presented by the foundation illustrates the continuous flow of technical and biological materials through the “value circle”.

Ukrainian and foreign teachers devoted their scientific researches to the problems of environmental education of young people. In particular, in the article (Stapp, 1969) there are the definition and major objectives of environmental education. The study (Mannion, 2019) suggests methods of environmental education for more sustainable ways of life. In the article (Avagyan, Luongo, Thorsén & Östman, 2015) there are long-term goals of environmental education taking into account the opinion of practitioners of the industry. In the chapter (Tilbury D. 2004) it substantiates a statement that “Environmental Education for Sustainability is an innovative and interdisciplinary process”. This idea is confirmed by the thought “environmental education has to be considered not as a disparate discipline, but integrated and run throughout the other disciplines and everyday life” contained in the article (Öllerer, 2015). The study (Deniz, 2016) emphasizes the importance of eco-friendly design education for sustainable development. As stated in the article (Yezhova, Pashkevich, & Manoilenko, 2018), the modern curriculum of the leading institutions of fashion education is split into different directions, including ecology. Besides, in the article, there is a theme of the environmental component in design education (Muller & Flohr, 2016). The publication (Glukhaniuk & Korol, 2015) outlines the theoretical and methodological foundations of environmental education. The article (Hluckhaniuk, 2017) defines the purpose, stages, tasks, forms, technologies, and methods of ecological preparation of teachers of vocational training. The article (Zandvliet, 2019) examines a model of teacher's environmental education at the intersection of culture and environment.

Thus, a review of scientific publications has confirmed the relevance of the problem of environmental education of young people. At the same

time, practical ways of implementing environmental education in the performing of design projects by future teachers require further development.

The purpose of the article is to substantiate the methodology of environmental education of future teachers in the execution of a design project based on literary and musical folklore.

2. Methods

2.1. Theoretical principles

According to the Environmental Education Concept in Ukraine N13/6-19 of 20.12.2001 (Environmental education concept in Ukraine, 2001) educational institutions are given a leading role in the environmental education and upbringing of young people. The main tasks of the environmental education system are educational, training, and developmental.

In the context of this study, environmental education and upbringing are considered as a process of assimilation of a certain system of environmental knowledge and skills, the development of value orientations of individuals, as well as the willingness and ability to take personal responsibility for their own well-being and for the public.

The result for environmental education is a formed environmental human culture characterized by a comprehensive knowledge about the environment (natural and social); the presence of ideological values in relation to nature; the ecological way of thinking and responsible attitude towards the environment and health; the acquisition of skills and experience in solving environmental problems (especially at the local level); direct involvement in conservation work; a prediction of possible long-term consequences of human nature-transformative activity.

Scientists refer to the basics of forming an ecologically competent personality by environmental education, which can be carried out with the help of modern pedagogical technologies: trainings, creative projects, self-examination programs, group discussions etc. It is obviously that environmental competence is at the heart of the environmental culture.

For the formation of youth environmental competence there can be used the methods described in (Deryabo, & Yasvin, 1996): environmental labilization; environmental associations; artistic representation; environmental identification; environmental expectation; environmental empathy; environmental reflection; environmental ritualization; environmental care.

For our study, the most interesting thing was the method of environmental ritualization that makes it possible to appeal to ethnic traditions and provides an opportunity for a non-traditional understanding of the canonical values and attributes of different peoples of the world, recorded in literary and musical works, in particular, in folklore. The actualization of the ethnic dimension on a global scale is due to the fact that ethnic groups united by the common culture are trying to counter the threat of dissolution in the unified world. Increasingly, authors of new clothing collections take into account the local ethnic factor. Fashion innovations of the beginning of the XXI century are characterized by a gradual return to ethnic origins.

2.2. The technique of forming readiness to follow the principles of sustainable fashion, executing a patchwork design project

The students of the Volodymyr Vynnychenko Central Ukrainian State Pedagogical University has taken part in this experiment. All project participants were combined into an experimental EG group (26 people) and a control CG one (23 people).

The experimental group has been tasked to create a collection of clothing on the project theme “Responsible fashion – trends of the future”. The purpose of the project is the creative recycling of used clothing, remnants of fabric, yarn and creating of modern and comfortable clothes.

The first stage of the project is research or search. At this stage, there was a search work of the group members that provided for individual performance of work. The participants of the experimental group searched for sources of inspiration for the conceptual design of the collection that can be primary and secondary. The primary sources include natural samples of creative sources, and the secondary ones are illustrations, photos, drawings on physical or electronic media. At this point, a collage is created or sketches of the inspiration sources are drawn.

The second stage of the project is a draft. This stage of the work consists of several parts: analytical one, when analyzing the characteristic features of the creative source, in particular, shape, silhouette, proportions, color and more; transformation of creative source according to associative image; transferring of associative images into silhouette forms; execution of sketches in a logical series.

The third stage of the implementation is project. At this stage, the study of information sources in order to find methods of designing clothes, manufacturing technology of garments and the selection of the most optimal options. Artistic and technical sketches of each garment are performed,

carrying detailed information about the technology of processing parts and components of the product.

In this case, the search work of the participants of the experimental group has been carried out by acquaintance with the concepts of “responsible fashion”, “recycling society” and others.

A positive appreciation of classic design products made of environmentally friendly materials, as well as waste, as emphasized in (Karell & Niinimäki, 2019) is important for youth environmental education.

At the end of the third stage of the work, it has been carried out a competitive selection of the clothing collection, which will be produced by the experimental group (Fig. 1).

The fourth stage of the project is the technological one. At this stage, the processing units and connecting parts are performed. To carry out the design project using recycling technologies, a combination of patchwork techniques, “Crazy Quilt” and “Crazy Wool” from waste fabrics and yarns was chosen.

Patchwork is a kind of decorative and applied art, which consists in creating canvases from scraps of fabric, sewn together on the principle of mosaic. Patchwork is primarily judged by visual perception, so a large role is played by the composition of this technique: combining materials by color, size, texture; selection of pieces of the same or different size by free method, geometric, block, in ornament, motif, plot, etc.

Fig. 1. Sketchy designing of clothes collection with the use of recycling technologies (Irina Kudrevich, 2019)

A detailed review of the patchwork technique is outlined in the article (Prykhodko-Kononenko, Kolosnichenko, Ostapenko, & Sindarova, 2018). For the manufacture of the patchwork scheme, there are used blocks - geometric and structural elements, which are composed according to the principles of creating ornaments. Patchwork blocks are created by the combination of identical or different shaped elements: stripes, triangles, quadrilaterals (rectangles, rhombuses, squares), polygons, rounded details, etc. The parts are interconnected or sewn onto another part (application technique) by machine, manual or mixed methods. "Crazy" can be attributed to the techniques of needlework that give the opportunity to create a variety of types of author's textiles of different densities, from thin air to thick dense of scraps of fabric, yarn, cords, ribbons and other things. "Crazy Patchwork" or "Crazy Quilt" is a technique that combines a wide variety of sewing and embroidery techniques into one. As stated in the manual (Brick, 2011), the result of "Crazy Quilt" technology is a two-layer material, a top layer of which is made of "irregular bits and pieces [of fabric] strewn in a seemingly disorganized fashion". A detailed spatial analysis of "Crazy quilts" is presented in the article (Westphal-Fitch & Fitch, 2013). In the manufacturing technology of "Crazy Wool", it is used auxiliary materials, for example, water-soluble stabilizer or interlining, spray adhesive, etc. They temporarily fix the materials, which are fastened together using machine stitches (the frame that will hold formed textile), and then the clamps are dissolved in water.

In the garments of the design project, which served as the experimental group, the use of patchwork has been implemented: 1) by making individual parts from shreds; 2) with inserts into the basic clothing details. Techniques of "Crazy Wool" and "Crazy Quilt" have been used in the creation of women's vests and leggings (Fig. 2).

Fig. 2. Study of recycling technologies for the use of sewing waste in the manufacture of original textiles

The participants of the control group made a creative collection of clothes based on the self-selected creative source. There was no need to adhere to the principles of responsible fashion.

Comparing the results of the experimental and control groups at the first and second stages (selection of creative sources and sketching of the clothing collection), there has been no significant differences between the sketches of the participants of the experiment. The designers of both groups tend mainly to the sources of inspiration of bioforms (fauna and flora), historical costume, literary and musical folklore, ethnic motives etc.

In the design project the differences between the experimental and control groups are observed at the design and technological stages of development, when designers choose the methods of technological processing of parts and components of garments. The participants of the control group have used the most common methods of technological

processing of sewn products. The participants of the experimental group have searched for ways to solve a problem at the design stage: the use of the most optimal methods of modern design, which were the method of deconstruction and modular design. The choice of technology of processing of parts and components of garments with the selected modular design method has been chosen patchwork technique, which enables to combine the product modules (blocks patchwork) of the sewing waste (used clothes, knit waste of previously manufactured products, scraps of fabric and yarn) and creation of originate textiles in the technique of “Crazy Wool” and “Crazy Quilt” using small remains of textiles and yarn.

The source of the creative search in the making of the clothing collection was the clothing of ancient Slavs, as well as works of literary and musical folklore of Ukraine of the XII-XIX centuries. The monuments of the literature of that time (“The Tale of Igor's Campaign”, “The Kyiv Chronicle”, “The Hrabianka Chronicle”, “The Chronicle of Samuil Velichko” (Velichko, 1991), “Eneyida” by I. Kotliarevsky, the works of Lesya Ukrainka, the story M. Kotsiubynsky “Shadows of Forgotten Ancestors”, etc.) reflect not only historical events, participation in certain battles, but also life, customs, outfits, and methods of its manufacture (Shevchuk & Shuhai, 2009).

Musical folklore was considered a treasure trove of folk wisdom and creative spirit, influencing clothing style and design in some way. In the musical folklore, the human relationship with nature, personal relationships, feats of folk characters were described. The presence of these values was also in the style of clothing.

The Christian values were often intertwined with the remnants of the pagan past. The center of aesthetic education was the family, where folk art was passed down from generation to generation, and the style of clothing corresponded to the Christian and universal values.

For the centuries, youth served in the church, young men were singing in the church choirs with good voices. Reading religious books was associated with church worship. The style of clothing of the choirs corresponded to the canons of the Church, and was distinguished for modesty and convenience.

Singing in the church choir was compulsory for every young man. In addition to the church singing, young people were involved in the game of pipes, horns and psaltery, the tambourine was a percussion instrument. Musical accompaniment was used in learning and performing dances and games. The costumes of the performers were festive and comfortable for

dance moves, reproduction of the storyline of the composition. The mentality of the Christian thinking was reproduced in their ornament.

2.3. Methods of diagnostics of readiness to follow the principles of sustainable fashion.

In order to diagnose the willingness to follow the principles of sustainable fashion, the participants of the experimental and control groups have been interviewed before and after the pedagogical experiment. The questionnaire was compiled in accordance with the survey recommendations and contained the following elements: a test purpose message, respondent information, test questions, gratitude for participating in the questionnaire.

The first test questions covered knowledge of the “sustainable fashion” and “ecological materials” categories for clothes. Students needed to choose one correct answer from the 4 suggested ones. The levels of knowledge of sustainable fashion are established: high - correct answer from 68 to 100% of questions, medium - correct answer from 34 to 67% of questions, and low - correct answer from 0 to 33% of questions.

The following question related to personal experience of performing certain types of consumption, repair, renewal and processing of clothing: manufacturing of custom-made clothing; minor repair of clothing; complicated repair with replacement of clothing items; difficult repair changing style or size of clothes; processing with change of assortment; renting clothes, exchanging clothes; wearing second-hand clothes.

The answer to the last question identifies the extent to which the respondent is willing to commit each of the seven activities for conscious consumption of clothing: 1) manufacture of clothing for individual orders; 2) the use of environmentally friendly materials; 3) high quality products and classic design “out of time”; 4) honesty and ethics to the rights of workers in the fashion industry and animal rights; 5) repair of clothes, change of design and processing; 6) rental of clothing, exchange clothes; 7) wearing second-hand clothes. It was suggested to grade the degree of readiness in points from 1 to 5: 1 - not ready at all, 2 - probably I will introduce it, 3 - I will carry out it, 4 - I will carry out it within the next 6 months, 5 - I am already implementing it. The average score of each student is defined as the arithmetic mean of each of seven activities:

$$M = \frac{\sum_{i=1}^7 m_i}{7} \quad (1),$$

where m_i is an assessment of the student's readiness to carry out the first type of activity for conscious consumption of clothing.

The levels of readiness for conscious consumption of services are based on the calculation of the average score: low - 1...2.3; average - 2.4...3.7; high is 3.8...5.0 points.

3. Results

3.1. Sustainable fashion as a trend in clothing consumption and design

Sustainable fashion is first and foremost an approach to a fashion system designed to minimize the negative impact on the environment. This article supports the main goal of the development model of the sustainable fashion proclaimed in the handbook (Gardetti & Muthu, 2015), namely, improving the life quality of the population maximizing the productive potential of ecosystems.

In the textile industry, reuse and recycling (in the form of a downward cycle) are already well established. For example, according to the study (Sandin & Peters, 2018) in Europe it collects about 15-20% of recycled textiles (the rest is dumped or incinerated), of which about 50% is recycled and 50% is reused, mainly through exports to developing countries. Therefore, there is great potential for increasing the recycling of textile materials.

The experience gained by mankind to solve the problem of textile processing on a global scale shows that any actions to protect the environment is only temporary and does not solve the problem itself. It is obvious that the origins of the environmental crisis lie in the structures of human existence that encompass worldview systems, common human values and norms, and culture in general. Therefore, in modern educational institutions now there is a need to green the thinking of young people and to educate the ecological culture of the population as a whole.

Investigating the issue of the environmental ethics in design and fashion, the author of the article (Nünimäki, 2015) notes the importance of changing the thinking system and values of producers and consumers towards reducing the harmful impact and stress on the ecosystem. The study (Tischner & Charter, 2001) establishes approaches to the sustainable design: approaches to sustainable design: repair, refine, redesign and rethink. These approaches have become the basis for the creation of a design project in the patchwork technique based on the literary and musical folklore, which has been performed in the experimental group in the framework of our research.

Besides, the article (Martindale & Lee, 2019) notes that conscious clothing consumption by students contributes to the formation of a minimal wardrobe, suitable for the transformation.

Acquaintance with the principles of sustainable fashion in educational institutions is oriented towards the formation of youth environmental competence, the study of approaches to develop new garments that will be multifunctional, capable of transformation, which will help to minimize the use of clothing; to extend the lifespan of the garments with the innovative design; to narrow down waste of the tissues in the manufacture of clothing; to use sewing waste processing technologies; to restrain deliberately from the purchase of fashion items without special need; to refrain from the influence of the strategies of merchandising and marketing the fashion industry; to use the luxury fashion when high-quality and expensive clothes can become base for a long time that contributes to the sustainability of fashion trends etc.

3.2. Design project using patchwork based on the folklore sources

The created clothing collection clearly demonstrates a possibility of preserving the environment through ecological processing of textile materials. In the manufacture of the clothing collection the old technology of sewing patchwork garments, combining different fabrics, weaving and the latest “Crazy Wool” technique with the use of water-soluble material has been used.

Combinatorial and modular clothing design techniques have been used in the project of the clothing collection. While sewing, there have been used 20 pieces of fabric of different properties, 50 neckties, 7 kinds of inter-medical waste from the manufacture of previous models of clothing, and pieces of yarn, besides there have been recycled used clothes - skirt, jacket, jumper, trousers, ties, etc.

The “Reincarnation” collection (Fig. 3) is developed in the ethnic style with elements of sports. Based on the cultural identity of peoples the ethnic style allows designers to move away from the standard patterns, to bring into fashion a new color and shape, materials, accessories, ornaments. Turned into an ethno-direction, the ethnic theme is actively developing in the field of official fashion. The value of this trend lies in the positioning of ethno-cultural specificity in the situation of globalization, the presentation of tradition not as a museum relic, but as a relevant part of the modern culture. Each model has an idea of unity of the style, they are similar in performance. The collection has an asymmetry, which is expressed in the form of contour lines of the skirt (plakhta), vests, decorative elements etc. According to the

classification given in the article (Pashkevich, Kolosnichenko, Yezhova, Kolosnichenko, & Ostapenko, 2018) the third tectonic type is selected like a form of clothing. This tectonic type of clothing is characterized with a preferred dynamic, medium and large three-dimensional form, a straight and extended silhouette, a rigid form of clothing. The composition center of each model focuses on the textured solutions of the costume details made using the patchwork techniques. The main garment fabrics are natural materials (linen, wool, semi-wool, corduroy etc.), insert materials - satin, silk, linen, viscose.

Fig. 3. Fashion Collection “Reincarnation”
(designer I. Kudrevich, 2019)

Men's clothing (Fig. 3, a) can serve as a visualization of Ivan's image from the novel “Tini zabutykh predkiv” by M. Kotsiubynsky.

Women's outfit of dresses, a vest and leggings (Fig. 3, b) is inspired by a seductive goddess Didona from a burlesque-travesty poem “Eneyida” by I. Kotliarevsky.

A set of delicate, almost weightless jumpers, skirts and leggings (Fig. 3, c) re-interprets outfits of Mavka from drama extravaganza “The Forest Song” by Lesya Ukrainka.

Men's set of a jacket and breeches (Fig. 3, e) reveals the author's vision of the generalized image of Cossack leaders from “The Chronicle of Samuil Velichko” (Velichko, 1991).

The design of dresses (Fig. 3, f, g) is inspired by the images of Yaroslavna from “The Tale of Igor's Campaign”, and Annushka from Lesya Ukrainka's dramatic poem “Boyarina”.

As a whole, the collection serves as a bridge between the past and the present, allowing the modern materials, design and technologies to sense the origins of the literary and musical talent of the Ukrainian nation.

3.3. Diagnostics of youth readiness to implement sustainable fashion principles

The results of interviewing students of the experimental and control groups before and after conducting the experiment are shown in Table 1 and presented the histogram (Fig. 4).

Table 1. The results of measuring students' readiness to implement sustainable fashion principles before and after the design experiment

Readiness level	Before experiment				After experiment			
	CG		EG		CG		EG	
	stud.	%	stud.	%	stud.	%	stud.	%
Low	10	43.5	10	38.5	8	34.8	2	7.7
Medium	8	34.8	9	34.6	9	39.1	10	38.5
High	5	21.7	7	26.9	6	26.1	14	53.8
Total	23	100	26	100	23	100	26	100
χ^2	0.21				6.69

Fig. 4. The ratio of students' readiness to implement sustainable fashion principles before and after the design experiment

As a result of comparing the results of the input and output control of the readiness to follow responsible fashion principles (Table 1), a decrease in the number of students with a low level of readiness was recorded: by 8.7% in the CG and by 30.8% in the EG. The number of students with an average level of readiness increased by 4.3% in the CG and by 3.8% in the EG. Instead, the number of students with a high level of readiness increased in both groups: by 4.3% in the CG and 26.9% in the EG. At the same time, the most significant changes in the number of students with a high level of readiness to follow responsible fashion principles occurred in the EG.

The method of inductive statistics according to the Pearson criterion χ^2 was used to capture the matches or differences of the results of the experimental and control groups through comparing the obtained indicator with the table value for the number of gradations 3 and the significance level $\alpha=0.05$: $\chi^2_{0.05}=5.99$. The uniformity of the characteristics of the control and experimental groups prior to the beginning of the experiment, as well as the difference between the results of the control and experimental groups after the end of the experiment, were proved.

Therefore, the results of the pedagogical experiment confirmed the effectiveness of the use of design projecting using the patchwork technique based on literary and musical folklore to form young people's readiness to follow the principles of sustainable fashion.

4. Conclusion

Environmental education of young people is an urgent problem, the solution of which will allow to form an ethical attitude of future specialists to consumption, processing, and utilization of resources.

One of the environmental aspects of the behavior of manufacturers and consumers is the implementation of sustainable fashion. The main areas of activity for ethical design and consumption of clothing are: 1) manufacturing of clothing by individual order; 2) use of environmental materials; 3) high-quality products and classic “timeless&” design; 4) honesty and ethical attitude to the rights of workers of the fashion industry and animal rights; 5) repair of clothes, change of design and processing; 6) clothes rental and exchanging; 7) wearing used second-hand clothes.

When performing a design project in accordance with the principles of sustainable fashion, a collection of clothes was developed using patchwork technology on the basis of the folklore creative source - the clothing of ancient Slavs, as well as the literary and musical folklore of the Ukrainian people.

A pedagogical experiment with a significance level of $\alpha = 0.05$ confirmed the effectiveness of design projecting using patchwork techniques to shape young people's readiness to follow the principles of sustainable fashion. There was a decrease in the number of students with a low level of readiness: by 8.7% in the CG and by 30.8% in the EG. The number of students with an average level of readiness increased by 4.3% in the CG and by 3.8% in the EG. Instead, the number of students with a high level of readiness increased in both groups: by 4.3% in the CG and 26.9% in the EG. At the same time, the most significant changes in the number of students with a high level of readiness to follow responsible fashion principles occurred in the EG.

Further research should focus on developing practical measures for the implementation of design projects that respect the ethical environment and resources, including the principles of sustainable fashion.

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