

Платформа 4

*Актуальні питання підготовки фахівців для індустрії
моди*

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**MODERN METHODS FOR TRAINING ABOUT
SUSTAINABLE FASHION AND TEXTILES**

Purpose. *Development of advanced and attractive training methods for students about sustainability in the field of fashion and textile sector through virtual reality' based laboratories with interactive elements.*

Keywords: *sustainability, fashion, textile, virtual reality, training.*

Introduction. It is well known that fashion and textile industry take a significant part in the overall European manufacturing sector, features worldwide supply chains, as well as is related with a high number of people working in this sector (according to the 2021 data, 1.3 million people were employed in the sector in EU countries) [1]. However, it is well known too, that fashion and textile sector is one of the most polluting manufacturing sectors and requires continuous improvement in sustainable solutions, methods and tools [2,3]. One of important aspects on how to implement circular economy and sustainable solutions in the industry is education of HEI students and employees of industrial companies.

Objective. To support awareness raising about the environmental challenges in the fashion and textile industry by developing and implementing modern digital methods through virtual laboratories for training students and all persons interested in fashion and textile sustainability and circularity.

Methodology. In line with the digitization of industry and everyday life, modern digital teaching methods like e-learning are becoming more and more attractive to today's students. One of such methods is virtual reality (VR) employed in the training/learning activities.

Research results. There is a growing demand for innovation and entrepreneurship skills among students in the field of eco-design in fashion and textiles. This demand reflects a broader trend of consumers becoming more environmentally conscious and seeking out sustainable fashion options.

E-learning makes the learning process more flexible, taking into account the different pace and capabilities of learners, and expands the technical and expert capabilities of the educational institution. Within the framework of the project “Supporting entrepreneurship in eco-design“ (Fashion.ED), implemented by partners from Spain, Lithuania, Greece, Romania, and The Netherlands, a virtual laboratory on eco-design in fashion and textiles with interactive VR experiments is being developed. The project incorporates innovative learning and teaching methods such as VR experiments, case studies, and real-world company visits to provide students with practical skills and knowledge. Real experiments inside a virtual laboratory are implemented by using 3D representation of machines and access to the laboratory by using VR glasses and/or mobile devices. Developed virtual representations of experiments allow students to simulate and test sustainable solutions for the fashion and textiles industry, without wasting neither materials nor energy. Additionally, a library of interactive experiments is created and can be used to support teaching and learning process and improve learners’ knowledge. It gives the opportunity to learners to conduct practical experiments, even if they are not present in an actual laboratory or in the case when laboratories are not equipped with the appropriate machines to conduct experiments related to sustainability, eco-design, and circularity. Initial testing explored that such virtual experiments are very attractive to students.

Conclusion. VR technologies in modern training helps to enhance the knowledge and skills of students and professionals about sustainable practices, eco-design, and circular economy as well as makes the learning process more attractive. It also expands the technical capabilities of educational institutions.

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