



EVALUATION OF CHILDREN'S CLOTHING DESIGN EDUCATION USING THE MOBILE APP-BASED APPROACH

 Marzie Hatef Jalil^{1,2,3*},  Musdi Shanat²

¹Faculty of Applied and Creative Arts, University Malaysia Sarawak, Malaysia

²Institute of Creative and Technology, University Malaysia Sarawak, Malaysia

³Institute of Sustainable and Renewable Energy, University Malaysia Sarawak, Malaysia

Abstract. To propel the environmentally conscious movement forwards, recent technological developments must transition to sustainability in children's clothing production. Hence, this study aimed to investigate and evaluate a newly developed mobile application for clothing patternmaking, *EcoChildCLO* with a focus on the training aspect of customized children's clothing. Two techniques were applied for collecting data: first, interviews with six respondents involved in the children's clothing industry to verify the mobile application and, second, a focus group containing 19 fashion students to evaluate the mobile app's function. Workshop participants were invited to download the application, customize and print a pattern, and then explore their creativity in the children's clothing design process. This application had two main benefits: children's patterns could be made by those without previous knowledge; and making out-of-shape or waste children's clothing could be avoided, thus supporting sustainable pre-production systems. The outcomes reveal that the use of the mobile application developed effectively through the practical training system, while relevant knowledge became available to new users, whether or not they were experienced in children's pattern-making and clothing design. The results of the research show that basic pattern-making is not a major challenge in today's fashion education system; creativity is the most powerful factor in this domain. Over half of the students liked the children's clothing training via the mobile app. Through these findings, this work contributes to academic studies of pattern-cutting and children's apparel design instruction. The article concludes by discussing the future of children's clothing education and industry.

Keywords: *Children's clothing, digital pattern making, fashion creativity, clothing mobile application, training pattern making.*

***Corresponding Author:** Marzie Hatef Jalil, University Malaysia Sarawak, Malaysia,
Tel.: +6082581346, e-mail: hjmarzie@unimas.my

Received: 21 March 2023;

Accepted: 4 July 2023;

Published: December 2023.

1. Introduction

The clothes a child wears have a significant bearing on their health and growth (Zakaria, 2016). Clothes are indicators of growth and reveal the child's growth progression over time (Hennigs *et al.*, 2012). Due to the lack of a standard size chart, sizing children's clothes has always been a concern, and clothing could arguably accommodate a larger population of consumers without causing fit issues. Hence, with the demand for children's products that offer various features - from traditional practicality and esthetics to flexibility, safety, and environmental protection - researchers and enterprises have introduced creativity into the sustainable design concepts of their products. Sustainable design is a natural, ecological, and expandable design approach

How to cite (APA):

Jalil, M.H., Shanat, M. (2023). Evaluation of children's clothing design education using the mobile app-based approach. *New Design Ideas*, 7(3), .

under the influence of fashion and clothing content, especially in regard to children's products (Zhang, 2018). The ability to use digital technology to improve sustainability is known as sustainable digitalization. Digitalization grants access to a unified network of untapped big data that could positively affect society and the natural world. The United Nations Sustainable Development Goals (SDGs) are a set of targets to be met by 2030 to guarantee a just, environmentally sustainable, and healthy society. The evolution of fashion and clothing design systems could create novel opportunities to strategically address existing problems. Digitalization introduces a new set of tools that must be properly balanced to ensure their intelligent application and environmentally friendly nature. SDGs can be attained through the innovative development of digital tools to generate, utilize, communicate, or source electronic data for organizational activities. Digital sustainability refers to efforts to create and use smart technologies to ensure long-term economic growth while considering and integrating the SDGs. This study proposes the use of a children's pattern-making mobile application for training purposes that was designed based on sustainable thinking, customization, and preventing children's clothing from going to waste. The app could be utilized to teach clothing design making to users who have never learned pattern-making but have the creativity to create new designs. Moreover, it could help to prevent out-of-shape and waste children's clothing from being made, as well as support sustainable pre-production systems due to the customized measurement options. This type of mobile app does not approach the process of producing patterns or even the structures of the patterns themselves; rather, it approaches a style of thinking that is both environmentally responsible and creatively original. Research into pattern-making techniques is vital to the successful operation of assembly lines in the garment industry. Pattern-making is one of the primary methods used in this age-old procedure to ensure finished goods are of the highest possible standard, so if the calculation and basic structure are not considered appropriate, the outcome is not practical and waste is created. Thus, pattern-making professionals need specific training and extensive practice to work in the textile manufacturing production chain. Beduschi and Italiano (2013) mentioned the serious lack of training at the academic and industry level. If the abilities of children's clothing pattern-makers do not match the industry's needs, the children's clothing industry and production are affected. The authors also stated that children's clothing waste occurs due to not only the outdated designs in the market but also the lack of suitable plans in the pre-production system and the need to improve the strategies applies. Moreover, fresh university graduates appear to lack creativity in relation to children's clothing, while the increase in children's clothing waste is another issue. Hence, training and education may help to resolve these issues. Sometimes creativity is lost because of limitations, but no attention is paid to this problem. Not having engaged in basic discussions of topics such as pattern-making in children's clothing design should not discourage students or anyone untrained in this field from actually designing in this field. The current research focuses mainly on using experts' perspectives to evaluate a mobile application for children's clothing design training to promote sustainability, as well as make it practical for junior learners. A sequential exploratory method, semi-structured interviews, and a focus group study were used to achieve research goals.