ABSTRACT

3D PRINTING TECHNIQUE PROCESSING WITH FILAMENTS POLYLACTIC ACID AS AN ALTERNATIVE MATERIAL PRINTING PLATE ON BLOCK PRINTING TECHNIQUE

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In the era of rapid technological advancement, 3D Printing has emerged as a promising innovation in various industrial sectors. The fields of design and fashion have also experienced the benefits of this technology. However, the primary use of 3D Printing has been focused on printing final products according to desired designs, rather than creating tools for fashion production, such as alternative block printing plates. Previous research utilizing Polylactic Acid (PLA) filament in 3D Printing for block printing plates showed line characteristics in the fabric prints and faced challenges in applying different colors in a single plate print. This situation presents an opportunity to develop optimal block printing plate designs. Through this research, the aim is to create block printing plates using 3D Printing that offer enhanced precision, detail, and complexity while improving the efficiency of time and energy required in the printing process. The research methodology employed is qualitative and involves several data collection techniques. These techniques include conducting a literature review using books and journals to obtain the fundamental theories related to the research topic, performing observations and interviews to acquire knowledge about the technical aspects and advancements in 3D Printing technology, and conducting experiments on block printing plates using 3D Printing techniques to discover optimal print results on textile materials. The resulting prints using 3D-printed plates on textile materials will then be applied in the fashion product design process.

Keywords: 3D Printing, Block Printing, Printing Plates, Fashion Products.