

ABSTRACT

APPLICATION OF 3D PRINTING TECHNOLOGY USING POLYLACTIC ACID FILAMEN ON TEXTILE SURFACES

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3D printing is a printing technology that was originally known as additive manufacturing which refers to a process of printing 3D objects through layer by layer until the object unified. 3D printing machine and filament which are used for the research is Fused Deposition Modelling technology along with Polylactic Acid filament because of this technology and filament are more generally suitable for the application in experiments. Over time, creative industries such as fashion also apply 3D printing in the creation of designs, one of which is printing directly on textile surfaces. The method used for this research is qualitative by collecting data from literature studies which are used as the basis of research using books and journals, direct observation, interview to obtain data about 3D printing from the process to the finished product. Exploration of 3D printing on several different textile fabric to determine the optimal result, explorations are being done in several stages from understanding the material characteristic to develop the 3D printing pattern. The printing process is done by printing a thin layer and then placing it on top and continuing the printing process, so that the fabric is placed between the layers of filaments. Furthermore, textile fabric with selected 3D printing exploration will be applied fashion sketches alternative. Then the selected sketches is being produced with applied exploration on apparel product.

Keywords: 3D printing technology, Textile, Fashion