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A Textile Development Using Off-cut Fabric Waste to Create Wearables

Abstract – Off-cut fabrics are generated in the cutting departments of the apparel manufacturing industry, which mostly end up in landfills. This off-cut fabric pieces have the potential of turning into a piece of art or something meaningful to fashion industry. This research has conducted to explore the potential of off-cut fabric pieces and fabric constructing methods with an approach of mixed method in which both qualitative and quantitative data gathered through literature and interviews. With gathered data and with the limitations, fabric constructions have done using hand-loom weaving technique with off-cut denim fabrics which can be constructed into wearables to show the difference which can be made with a waste of a fabric piece. After experimenting with different fabric construction methods in the loom, five fabric developments have been discovered and five wearable options have done with the fabric developments to show the potential in real scale. Feasibility tests have done to each fabric development before converting them into wearables. After analyzing the behaviour of the fabric developments, wearable silhouettes have created with less cuts and moreover the fabric waste accumulation in the process of constructing the wearable with the new fabric development has considered. A shuttle has developed to ease the process of the fabric development and to focus on the mass market of this fabric developments with off cut fabric strips in the handloom machine. Here the main focus comes into Sri Lanka's apparel manufacturing industry and into fabric waste accumulation of local apparel industry. BAM Holdings which is a leading apparel exporter specialized in baby clothing has been selected to conduct interviews and collect data for the research and proposing them a fabric waste management department which end up as local high end fashion brand is the end goal of this research. Fabric developments and wearables will be proposed to them to show the market potential of a little fabric waste piece.

Keywords: fabric waste accumulation, off-cut fabric waste, fabric construction, wearables, apparel industry