

Integrating Technology for Apparel Mass Customization

Muditha Senanayake, Trevor Little, Berkeley College and NC State University, USA

Over time, with the change of the market expectations, the manufacturing interests have changed. The apparel industry is undergoing a shift from traditional “push” system to consumer “pull” system where consumer has the command of the product. No longer is the focus on standardized apparel products manufactured for a homogeneous market, but creating variety and customization through flexibility and quick responsiveness. This requirement to manufacture apparel products based on individual consumer needs have caused the apparel industry to undergo a fundamental shift from mass production (MP) to mass customization (MC). New technologies such as digital technology have played a major role in assisting the practice of apparel MC. However, the challenge is to identify how to effectively utilize the new technologies to accomplish the goal of apparel MC.

The existing apparel MC systems, extent and points of customization are critically reviewed. The new technologies and their evolution are investigated. An apparel industry survey, case studies and industry expert interviews were conducted to identify the existing industry practice of apparel MC, the technology usage and importance of integration of technologies to the MC apparel manufacturing process.

MC of apparel has not yet reached a critical mass in the apparel industry. There are very few benchmark companies who practice this strategy efficiently. Other MP companies who attempted this have only experimented but have not extended the principles to their entire line of apparel products. However, based on the survey results, it is apparent that companies have potential to accomplish the goals demanded by MC using new technologies. Also, it is apparent that companies are seeking to use new digital technologies to transfer information in addition to management strategies such as partnerships with courier companies to cut down the lead time to supply the customized product to the customer more efficiently.