

Enhancing the process of prototype development in the Egyptian apparel industry

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Abstract:

The purpose of this research is to develop a new and improved system for prototype development within the Egyptian industry, the suggested system supposed to shorten the times required for the prototyping process, in addition to improving the appearance, and fit goodness of the prototypes results in final products improvements and better market advantage for Egyptian manufactories.

For the development of this research, a number of five Egyptian small and medium apparel manufactories were investigated for their current prototype development methods, initial field observations were made within each factory, with participation of the corresponding prototype employee in each factory. A model of the current prototypes developing method in the Egyptian factories was illustrated after investigation, this model was then analysed. A new suggested model for prototype development was developed.

A number of two prototypes were made using the current methods, then another two prototypes were developed using suggested system, observations were collected of times required for the four prototypes development before and after applying the new system, the fit goodness of the four prototypes were evaluated as well.

Data were analysed using the f-distribution test followed by t-test, both of the testes indicated a significant difference between the observations before and after applying the new system, the new prototype development system helped shortening the times required for the process, in addition to improving the fit goodness of the process results.

Using the suggested system, the apparel industry can enjoy cost-cutting effects by using this suggested system. A company does not have to spend money and time repeating the prototyping process to apply too many fixes, moreover, applying this suggested system supposed to help them acquiring competition advantages for their improved fit, as well as the ability to apply a wider variety of fashion features into their garments.

Keywords:

- Prototype,
- pattern cutting,
- Egyptian apparel Industry
- sample making,
- garment
- prototype development

Paper received 19th July 2014, Accepted 2nd September 2014 Published 1st of January 2015
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