

Application of fuzzy Delphi method (FDM) and fuzzy analytic hierarchy process (FAHP) to criteria weights for fashion design scheme evaluation

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International Journal of Clothing Science and Technology

ISSN: 0955-6222

Publication date: 31 May 2013

Abstract

Purpose

The purpose of this research is to determinate the criteria weight in a fashion design scheme evaluation system.

Design/methodology/approach

The first stage is to use the fuzzy Delphi method (FDM) by fashion design experts of academia and industries for fashion design evaluation criteria. The second stage is based on the use of a fuzzy analytic hierarchy process (FAHP) to find the criteria weight. Finally, an empirical example is used to illustrate the procedure of obtaining the criteria weights for the evaluation of a fashion design scheme.

Findings

The result shows that there are eight evaluation criteria to be obtained for fashion design scheme selection. The evaluation characteristic weights of theme and innovation score almost 90 percent (88.93 percent), the criteria weights of the first five, fashion forecast theme story, best-seller modification, new idea and product position, score almost 80 percent (79.96 percent) and the criteria weights of the first two, fashion forecast and theme story, score almost 40 percent (39.93 percent) when selecting a design scheme in the fashion design process.

Originality/value

This paper proposes the vital characteristic and criteria for the selection of the fashion design scheme. In selecting fashion design scheme, this study uncovers that the marketing is less important than theme and innovation characteristics. Additionally, the results of this study, indicate the important five criteria, offered designer a set of useful indicators in preparing fashion design scheme and improving the quality of fashion design decision.

Keywords

Fashion design scheme Criteria weights FDM FAHP Garments industry Fashion design Analytical hierarchy process

Citation

Lin, C. (2013), "Application of fuzzy Delphi method (FDM) and fuzzy analytic hierarchy process (FAHP) to criteria weights for fashion design scheme evaluation", *International Journal of Clothing Science and Technology*, Vol. 25 No. 3, pp. 171-183. <https://doi.org/10.1108/09556221311300192>

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In this research FUZZY DELPHI METHOD (FDM) was used to obtain the critical factors of the sustainable tourism by seeking opinion of tourism experts to establish a new model for sustainable tourism. (Figure 2). Figure 2: New Sustainable tourism model Source: Developed by researcher. The Research Methods The study is to establish the key parameters for evaluation of the sustainable tourism analyzing, and use. FDM by consulting and employing twenty Tourism experts in the ministry of tourism, New Delhi and academician in jamia milliaai slamia and Delhi University formed the population. Applications of the fuzzy Delphi method can be observed (among others), for example in: choosing a player [23], fashion styles [24], evaluation of hydrogen production [25], lubricant regenerative technology selection [6], teaching methods [26], or in the creation of teaching applications [27]. A variant of the fuzzy Delphi method is described in [28]. Lin, C. Application of fuzzy Delphi method (FDM) and fuzzy analytic hierarchy process (FAHP) to criteria weights for fashion design scheme evaluation. Int. J. Cloth. At first, the fuzzy method of AHP is used to determine weights of such criteria and sub-criteria. Next, the fuzzy method of TOPSIS is used to classify contractors in different grades to call three contractors with most points to bid during the second step of a tender. It should be noted that we have taken into account the existing regulations and by-laws to develop procedures applicable to tenders with estimation prices exceeding 20 times the limit of medium range transactions.