

Analysis of Digital Fitting System Requirement in China

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Abstract: Digital fitting system is a virtual fitting system based on computer and internet technology. The aim of the research, described in this paper, is to share fundamental knowledge surrounding the development of digital fitting system. In addition, we present data, collected from 1050 questionnaires completed by both the consumers and managers in 10 cities of China, in order to analyze the requirements for digital fitting system in China. On this basis of this work, we conclude with some advice regarding the building of digital fitting systems.

Keywords: digital fitting systems, China's apparel markets, requirement analysis, questionnaire investigation, network consumption, website quality

1. Introduction

China Internet Network Information Centre (CNNIC)'s 19th statistical reports of internet network development in China Jan 23rd 2007, reported that till Dec 31st 2006, approximately 594, 000, 00 computer were connected to the Internet. For the first time in China, around 13, 700, 000, 000 Internet users were located, a number representing more than the 10 percent of total population [1]. At the same time there are about 30, 000, 000 people who shop on the Internet at present, which is almost 26 percent of total Internet users. These are very promising figures suggesting a potential for cultivating a new outlook towards shopping. In addition, according to hot spot investigation report of networks in China, issued by CNNIC in 2006, purchasing clothing online took the first place among all the merchandise or service purchased by online users (not including B to B website). Compared to traditional sales method, online sale is more convenient, quick and barely limited by time and location. Moreover, online sale of clothing can lower transaction cost directly and reduce inventory products. However, if compared with other kinds of products (book audio-visual product and computer and digital products), the pace of development of shopping for clothing online is much slower than expected in China [2]. No fitting condition makes willingness to purchase low. Hence,

to solve this problem, investigation and analysis of what factors affect consumers when purchasing clothing online and what the consumers need with regard to fitting system seem very important.

Digital fitting system refers to a virtual fitting system that is based on computer and network technology. In the literature on digital fitting system, the work undertaken by Prof. Susan Ashdown [3], who has engaged in investigating this area for years, has provided the theoretical background for the research reported in this paper.. Readers could also refer to the paper entitled, "Apparel retailers: website quality dimensions and satisfaction" by Soyoung Kima and Leslie Stoel [4], from which we have drawn on the methods for analyzing and organizing the questionnaire.

In this research we have investigated the characteristics of shopping for clothes and the need, of buyer and seller, for a digital fitting system. We have conducted a questionnaire survey of both consumers and managers in 10 cities of China. In total, 1050 copies of questionnaire were the source of data on the basis of these data, we present the basic requirement for analyzing and developing a digital fitting system.

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2. Research Methodologies

2.1 Surveying Objective

The survey aimed to gather the following information:

1. The time consumers spend on fitting;
2. Factors influencing consumers 'selecting -fitting – buying' process for clothing;
3. The outcome of the fitting process;
4. Deficiency of traditional fitting environment;
5. Consumer's and sellers' knowledge of digital fitting system.

2.2 Questionnaire Design

2.2.1 Questionnaire Contents

The questionnaire included items on the following categories:

1. Essential background information of individual consisting of consumer's gender, age, profession, and monthly income; seller's gender, age and working experience.
2. Perceptions of consumers and sellers regarding traditional fitting condition.
3. Knowledge of consumers and sellers pertaining to digital fitting systems.

Questionnaire for consumers contained six aspects: fitting time required for consumers, influence of fitting on purchasing clothing, factors guiding the selection of clothing, fitting-related expectations of consumers, deficiency of traditional fitting environment, consumers knowing about digital fitting system.

Questionnaire for sellers comprised three aspects namely sellers' perception of consumers' fitting condition, the inconvenience faced by sellers in terms of the fitting process, and sellers awareness of digital fitting systems.

2.2.2 Validity and Reliability of Questionnaire

The following methods validated the questionnaire:

1. Credit method (ask respondent to answer the same questionnaire within the same condition in two different sites) was applied to detect the validity of the questionnaire. Then we looked at the effectiveness of content, standard of effectiveness, structure of effectiveness. In the final test result we found that the credibility and effectiveness of the questionnaire is relatively high.
2. Establishing the reliability of the questionnaire by seeking experts' views about the questionnaire. We submitted the questionnaire to three experts who are in the fields of market survey and apparel CAD to check the effectiveness of items.
3. Piloting the questionnaire by asking 30 people to complete the items and directing them to fill out the questionnaire personally, comment on the common problems in the questionnaire.
4. Set up questionnaire. On the basis of the above pilot, we corrected the questionnaire constantly, and then decided on the final version of the questionnaire.

2.3 Surveying Administration

In this research, as mentioned above, we choose consumers and sellers in markets as the subjects. During vacations college students investigated the markets in their cities by administering the questionnaires then the questionnaires were returned and the survey for each market was documented. The test sites were Xi'an Guangzhou, Shenzhen, Tianjin, Changzhou, Yulin, Shangluo, Fujian, Jiujiang, and Changsha.

In this investigation we distributed 750 questionnaires to consumers and removed 72 incomplete questionnaires, and thus finally valid responses of 678 questionnaires were received, resulting in a response rate of 90.4 percent. As far as gender is concerned, there were 33.5 percent male consumers and 66.5 percent female. We distributed 300