Information Quality in Web-Based eCatalogue

Ali Bassil Alsarhan

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By Ali Bassil Alsarhan

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ABSTRACT

Catalogues are important business strategy as they can provide customers with product descriptions and assist who have buying interest to not go through the floor areas and shelves, browsing aimlessly, trying to locate items that are of interest. Printed catalogue are cumbersome to use, require large storage areas, become dated soon after publication, and make search and comparison activities very difficult. The situation is further worsen when the quality of information provided is not regularly updated and is below customers’ expectations. eCatalogue has the potential to offer assistance to customer, and improve information quality. Therefore, an eCatalogue was developed in this study where 30 potential customers tried the proposed eCatalogue for a certain period. Nine information quality dimensions, which are Accuracy, Precision, Currency, Timeliness, Reliability, Completeness, Conciseness, Format, and Relevance, were used to measure the eCatalogue. Based on a three point scale (where 1= disagree and 3= agree), respondents agree that the information in the eCatalogue are somewhat current (mean =2.27), precise (2.20), accurate (2.17), reliable (2.17), and concise (2.17). However, they are not sure about the timely (2.00) and relevant (2.07) dimensions. Also they agree to some extent, the eCatalogue format is satisfying (2.20). Overall mean of quality measure is (2.15), which is indicates that the quality of information in the developed eCatalogue should be improved.
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CHAPTER ONE
INTRODUCTION

1.1 Introduction
This chapter provides a general idea about the background of the study, problem statement, objectives, expected contribution, scope of the study, research framework, and structure of thesis.

1.2 Background
Electronic catalogues (eCatalogues) are rapidly becoming an increasingly important part of electronic commerce (Georgantis et al, 2002) and is the means by which the user views and interacts with the supplier’s information (Baron et al., 2000).

eCatalogue, in simple terms provides an electronic equivalent of an empty paper catalogue that can then be populated with your own product details, allowing customers to make purchases on-line using a shopping basket (Opportunity Wales, 2001).

The BNet Business Dictionary defines eCatalogue as a listing of available products that can be viewed in an electronic format, for example, on a Web site, and can include information such as illustrations, prices, and product descriptions. eCatalogue is also about showcasing products or services online, via the web, through websites (BDigital, 2003). Even a company’s web page that provides a short list of its products is an eCatalogue. Also in eCatalogue web site there is a concentration on information
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References


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http://scholar.google.com/scholar?q=Meanwhile,+ecommerce+can+be+defined+as+a+subset+of+e-business&hl=en&um=1&ie=UTF-8&oi=scholart.

http://www.december.com/web/develop/overview.html


