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Int. J. Human-Computer Studies 68 (2010) 423–431
International Journal of Human-Computer Studies
www.elsevier.com/locate/ijhcs

Designing product listing pages—Effects on sales and users' cognitive workload

P. Schmutz*, S.P. Roth, M. Seckler, K. Opwis

University of Basel, Faculty of Psychology, Department of Cognitive Psychology and Methodology, Switzerland

Received 16 February 2009; received in revised form 14 January 2010; accepted 7 February 2010
Communicated by D. Boehm-Davis
Available online 11 February 2010

Abstract

Product listing pages, where information on multiple products are displayed, represent a vital point of an E-commerce website on which consumer decisions are made. Prior research has shown that the design of product listing pages has an impact on users' performance and their recall of brand names. The aim of this study was to examine effects of presentation on cognitive load and consumer decisions. An online study was conducted comparing presentation type (matrix versus list presentation). List presentation was associated with lower cognitive load and more economic product selections. Eye-tracking data from an additional laboratory experiment suggest that list presentation triggers comparison processes which could account for the differences found.

Keywords: E-commerce; Cognitive load; Product listing pages; Category pages; Eye-tracking; Online shopping

1. Introduction

Within the past few years, the Internet has shifted from a supplementary contact point and information medium to an important sales channel for many traditional companies. Within the growing Internet market customers are courted by new competitors, thus improving the usability of an E-commerce website is crucial in order to improve customer satisfaction, boost sales and enlarge customer retention. One of the most interesting pages in the product search process is the product listing page. It usually contains a list of products giving information about the products' main features, e.g. brand name, price, availability and images. It is the page on which users compare different alternative products and make choices about which products to have a closer look at or to put in the basket. The design of product listing pages can have a variety of effects on decision-making and sales. These aspects have been seldom been considered in past research on product listing pages. The current study will compare different designs regarding experienced cognitive load, products that were chosen by the participants, and shopping cart value. Results based on these aspects will be of interest for usability engineers as well as for website owners.

2. Theoretical background

2.1. Existing research on presentation format

Several major factors are relevant for the design and usability of product listing pages, ranging from target group optimized wording to providing sorting and winnowing facilities as suggested by Nielsen et al. (2001). In this section we will only focus on the product listing presentation format.

Search results or product listings on category pages are displayed nowadays mainly using a list or a matrix presentation format. The list format consists of a table with one product per row (see Fig. 1). Columns may serve as separators for different pieces of information such as the thumbnail image, name, additional information, price, material, or stock availability. In a matrix presentation

*Corresponding author. Tel.: +41 788209195; fax: +41 612673526.
E-mail addresses: psylense@gmail.com, peter.schmutz@unibas.ch (P. Schmutz), sandra.roth@unibas.ch (S.P. Roth), mirjam.seckler@unibas.ch (M. Seckler), klaus.opwis@unibas.ch (K. Opwis).

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doi:10.1016/j.ijhcs.2010.02.001

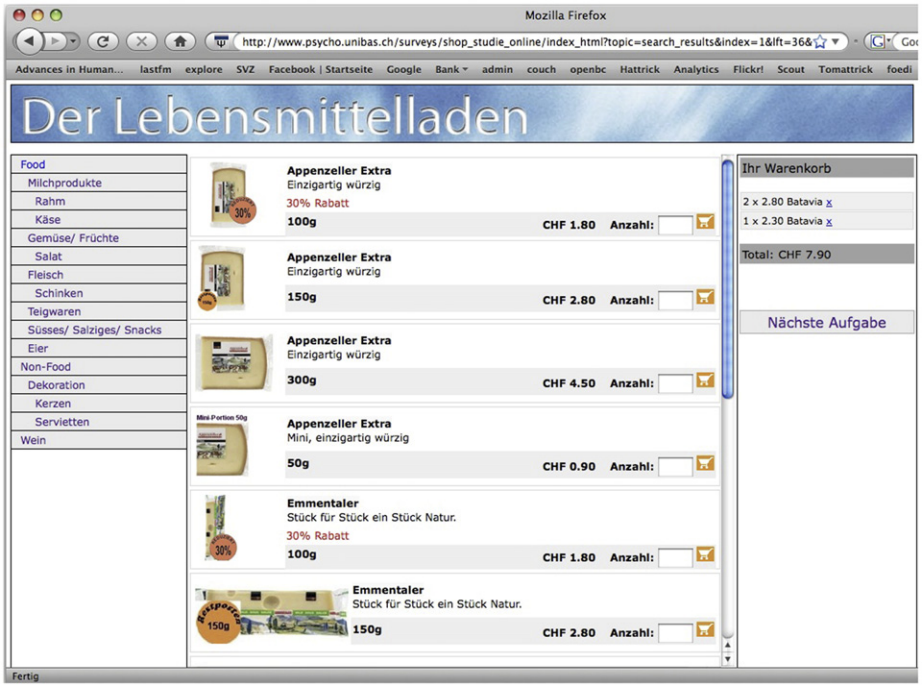

Fig. 1. Screenshot of the online store with the product listing page (list condition).

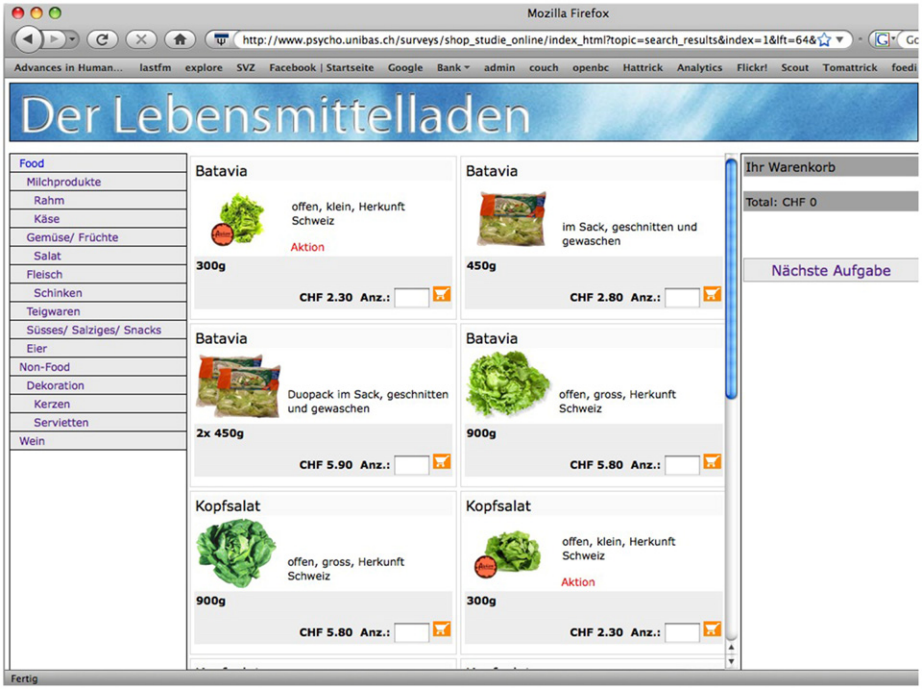

Fig. 2. Screenshot of the online store with the product listing page (matrix condition).

format, two or more products can be found in a single row (see Fig. 2). Here, columns serve as separators for different products in a row with all the relevant information pieces in a single table cell. Lists with one item per row and different attributes in the respective columns have three major advantages: (1) They support direct access to desired information due to their two-dimensional nature. (2) Key features can easily be compared because they share the same column. (3) Lists enable features to be sorted thus putting users in control. In turn, these aspects of the list format may become a disadvantage when users are involved in tasks in which comparing products is not