Chapter 13

Where are We Looking?
A Practical Approach to Managing Knowledge Captured from Eye-Tracking Experiments: The Experience of Gulf Air

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ABSTRACT

This chapter contributes to organizational innovation theory and provides a practical approach to promote companies and create relationships with their customers. This research study investigates the primary visual attention of customers in online flight booking and uses interviews, think-aloud protocols, and eye-tracking tools to collect data. Findings show that the visual structure of the webpage strongly influences the overall effectiveness of the booking process and that participants ignore peripheral information when it does not appear relevant or associated with the main task. It is also found that the effective segmentation of different elements of the webpage helps direct attention and guides participants to the relevant section. Implications from these findings are discussed, and a general framework to help practitioners to manage knowledge collected from their customers is presented.

INTRODUCTION

“Everything should be made as simple as possible, but not simpler” -Attributed to Albert Einstein

Research in organizational innovation highlights how important external relations are to organizational efficiency, and to e-commerce services; knowing how to manage relations with the customers is crucial. In the airline industry, competition is knowledge-driven, and the capacity to offer effective e-commerce services to meet the preferences of the customers leads to a competitive advantage. Although several studies have focused on the technical aspects of e-commerce services (Chaudhury & Kuilboer, 2001; Li et al., 2007), research has not shown how to manage customers’ requirements to add value to the organization and foster innovation, which has been defined as...
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“the application of knowledge to produce new knowledge” (Drucker, 1993).

Gulf Air, a Middle East airline company, has employed a user experiment to investigate the primary visual attention of customers in online flight booking to improve the usability of its website and manage relations with their customers productively. For companies that sell products online, this technique can be implemented to determine the effectiveness of their website design to best manage customers’ preferences, reduce cost and time to market, and improve productivity and quality through process innovation (OECD, 2005).

BACKGROUND

In recent years, the commercial sector has increased its interest in eye-tracking technologies as a means to understand customers’ attitudes and preferences (Lukander, 2006). A sample of customers is selected and a target stimulus is presented, for example, websites, commercials, magazines, prints ads, ATMs, and software, while an eye-tracker is used to record eye movements. Eye-tracking technologies enable the collection of useful information about the visual attention, for example the visibility of a logo, or the visual behavior such as, how packaging, in terms of distinctiveness and attractiveness, might influence the selection of a product on a shelf.

A prominent application field of eye-tracking technologies is web usability (Cooke, 2005; Bojko, 2006; Bednarik & Tukiainen, 2007). The increased amount of customers who shop online has lead to a point where the capacity to offer effective e-commerce services to meet customers’ preferences and requirements is a source of organizational success. To achieve this result, it is essential to develop an engaging website where issues connected to design, structure, search efficiency, and navigation usability are highlighted and opportunely corrected. Eye-tracking provides insights to organizations as a technique to analyze scanning patterns, reading, examination, and user interactions and it is a valuable source of information to determine which features of a website may cause confusion or might be ignored, as well as which features may be the most attractive ones.

About the Research

This research was conducted in the United Kingdom from July to November 2007.

Nine participants took part in the user experiment; four of them were female and they were all based in and around London. The average age was 39.4 years.

The selected sample was ideal for this study as all of the participants used online booking systems to reserve their flights and visited the Middle East at least three times per year. Most frequently used airlines included five competitors of Gulf Air.

The project was conducted in collaboration with OgilvyOne Bahrain and Bunnyfoot® Consultancy Company.

Web pages were displayed on a 17” monitor with screen resolution set to 1024 X 768 pixels to gather eye-tracking and interview data. Data analysis was pursued to understand the primary visual attention of customers in online flight booking.

Details of the participants are summarized in Table 1.

How to Improve the Usability of a Webpage: The Use of Eye-Tracking Techniques

In this section we discuss the use of eye-tracking techniques and how to organize a testing session. The purpose of this section is to investigate how knowledge can be gathered from participants and analyzed to improve the usability of a webpage. This section provides a means to those who work on redesigning a company website or to test a
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