

Analysis of Advertising Effectiveness with Eye Tracking

G. Theuner¹, K. Pischke², and T. Bley²

¹Department of Marketing, Ludwigshafen University of Applied Science, Ludwigshafen, Germany, theuner@fh-lu.de

²UsabilityAgent, Dresden, Germany, info@usabilityagent.de

Introduction

Global business organizations as well as medium and small sized companies use increasingly different kinds of outdoor and indoor advertising like posters and billboards. Analysis of advertising effectiveness has become a more and more important area of corporate communication. This also results from the fact that the existing methods have not proved to be as effective as anticipated. Eye Tracking for example is a well proven instrument to measure the perception of a print advertisement. But it cannot be used outdoor for motorists and cyclists.

Poster and billboards in particular have to put their message across to pedestrians in a few seconds, and for motorists and cyclists in a split second. [1]. Hence the design of the message is very compact, mostly in the form of pictures and a short claim. But often the question arises if the important elements and information will be noticed in the real everyday situation.

The main objective of the current research project was to develop an instrument what allows to measure the participants' perception and recall level in a virtually real traffic situation. This applies particularly to target groups like car drivers and pedestrians.

Experimental Design

The initial point of the research project was to create a standardizing body for an easily applicable, cost-effective pre and post test to determine the success of outdoor and indoor advertisement.

In the first step the participants are provided with a computer animated real traffic situation with advertisement on the left or right side of the street. The driver's speed is variable as well the poster/billboard position. This test instrument is called AdSpectator. The test is covered by a survey:

- pre questionnaire about attitude, interest and knowledge concerning the topic and the company
- post questionnaire (depends on advertiser objectives) about recognition and unaided/aided recall relating to the different design elements and to the message. (Figure 1) The results

are based on a questioning only (without observation). One advantage of the single test is the possibility for testing a group with one notebook and projector only.

In a second step eye tracking was combined with the so called AdSpectator-analysis (Figure 1). The combined test provides subjective results from the single test, and objective data about the actual perception per single participant.

Eye tracking is a method used to verify where a person is looking. The eye tracker provides objective and quantitative evidence of the user's visual process. Eye movements are generally recorded to determine a user's attention patterns concerning a given stimulus [2]. Eye tracking cameras can:

- Tell whether users are looking at the poster/billboard. Without an eye tracker, it is impossible to verify exactly where users are looking.
- Tell whether users are reading or scanning. It is easy to distinguish reading, a user's systematic fixation on word clusters, from scanning for particular words or phrases.
- Tell where the first view is directed at the poster [3, 4].
- Measure the relative intensity of a user's attention to different parts of a poster/billboard. By dividing the projection screen into areas of interest (AOI), such as the message or pictures, one can see when and how long a participant looks at each AOI.
- Compare scan patterns of all participants. By counting how long each participant looked at each area, and in what order, scan patterns of groups of participants can be compared.

It is important to remember that an eye tracking device can give an insight of a participant's actual perception, but only in conjunction with an adjacent questioning of participants. Just because the eye looks at something does not automatically mean that what it sees is consciously perceived by the brain. It is therefore necessary to question the participants in order to find out what the users remember seeing.

The software **AdSpector** is a new software for testing poster advertisement „in use“. AdSpector uses 3D graphics to simulate a car ride or a walk through a row of houses or inside a room. The poster which should be evaluated appears

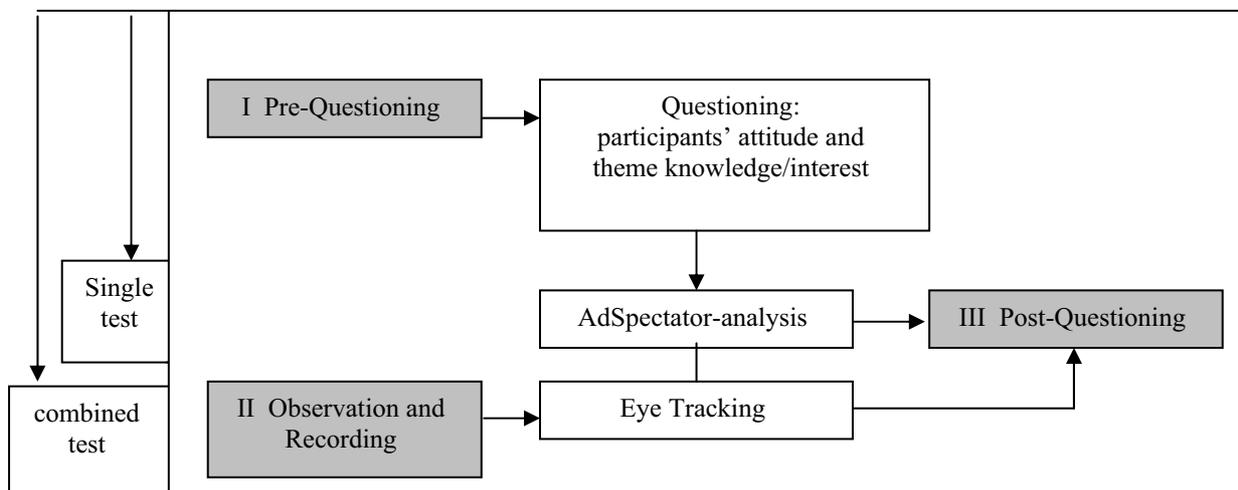


Figure 1. Experiment Procedure

on a billboard, a city light or an advertisement pillar which are integrated in the real scene. So by the help of AdSpector the test persons drive or walk past the poster in real time (projector screen). Afterwards they are asked which information they have seen, how they were emotionally involved. AdSpector simulates the fleeting period of observation which is typical for poster ads.



Figure 2. AdSpector combined with the Eye Tracking Path

Research Outlook

First tests have shown that the data deliver fundamental conclusions as how to improve the effectiveness of advertising. AdSpector application and the whole tests are flexible. They can easily be extended and adapted to special environmental conditions, company needs and objectives, and in every region. Advertising effectiveness stated by the samples of this test will be fine tuned by collecting and analyzing data on the following tests. The new samples will be involved to a larger extent in the interpretation of the results as this will reinforce the recommendations arrived at.

References

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