- **Design factors influence consumers' gazing behaviour and decision time in an eye-tracking test: A study on food images**

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  Abstract:
  The eye-tracking method has been increasingly used for studying consumer behaviour over the last few years. Understanding factors influencing consumersxxx gazing behaviour in an eye-tracking test will contribute to a better organisation and a more valid application of the method. The aim of this work is to study how test design influences gazing behaviour and decision time of food consumers in an eye-tracking test. Three factors of the test design were investigated; (1) Number of images in one testing picture (two, three, four, five, and six images/picture); (2) content of question (tastiness, healthiness, price, convenience, and familiarity); and (3) type of evaluation (maximum choice, minimum choice, ranking, rating, and grouping). Two experiments were conducted. In the first experiment, performed with 100 participants, the influence of individual factors was studied. In the second experiment, performed with 64 participants, the joint effects (interactions) of the tested factors were investigated. The results showed that gazing behaviour and decision time are strongly influenced by the type of evaluation and the number of images, but not by the content of question. No joint effect of influencing factors (number of images and type of evaluation) was found. Findings are discussed in considering the relationship between eye-movements, cognitive goals, and tasks. This study highlights the importance of understanding factors influencing gazing behaviour and decision time in an eye-tracking test.

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