Advert saliency distracts children's visual attention during task-oriented internet use

# Details

## Year

2014

## DOI

10.3389/fpsyg.2014.00051

## Issued

2014

## Language

English

## Volume

5

## Issue

Article 51

## Authors

Holmberg N.;Sandberg H.;Holmqvist K.

## Type

Journal article

## Journal

Frontiers in Psychology

## Publisher

Frontiers Media SA

## Topics

* Internet usage, practices and engagement
* Content-related issues
* Other
* Risks and harms

## Sample

Nine-year-olds (n = 19) and 12-year-olds (n = 26) from 1 elementary school in the south of Sweden, girls (n = 23) and boys (n = 22).

## Implications For Policy Makers About

* Stepping up awareness and empowerment
* Creating a safe environment for children online
* Other

## Other PolicyMaker Implication

Restrict ads directed to children

## Implications For Stakeholders About

Researchers

# Abstract

The general research question of the present study was to assess the impact of visually salient online adverts on children's task-oriented internet use. In order to answer this question as reliably as possible, an experimental study was constructed in which 9-year-old and 12-year-old Swedish children were asked to solve a number of tasks while interacting with a mockup website. In each trial, web adverts in low-level and high-level visual saliency conditions were presented. By both measuring children's task accuracy, as well as the visual processing involved in solving these tasks, this study allows us to infer how two types of visual saliency affect children's attentional behavior, and whether such behavioral effects also impacts their task performance. Analyses show that low-level and high-level saliency in online adverts have different effects on performance measures and process measures respectively. Whereas task performance is stable with regard to several advert saliency conditions, a marked effect is seen on children's gaze behavior. On the other hand, task performance is shown to be more sensitive to individual differences such as age, gender and level of gaze control. The results provide evidence about cognitive and behavioral distraction effects in children's task-oriented internet use caused by visual saliency in online adverts. The experiment suggests that children to some extent are able to compensate for behavioral effects caused by distracting visual stimuli when solving prospective memory tasks, and thus discusses a possible decoupling between task performance and task processing. Suggestions are given for further research into the interdiciplinary area between media research and cognitive science.

# Outcome

"The main findings on children's task-oriented internet use are as follows: (1) Individual factors such as age, gender and level of gaze control have clear effects on both performance measures as well as distraction measures associated with solving the tasks; (2) Advert onset speed and advert task relevance only have a marginal effect on task performance, but have a clear effect on task distraction. A possible interpretation of these results is that children between 9 and 12 years of age are sensitive to advert saliency conditions on a behavioral level, but are still able to compensate for (or cope with) this distraction on a higher cognitive level, and consistently produce accurate responses during task-oriented internet use." (Authors, in Section 4. Discussion)