

# An overview on Online Advertising Effects on the User Experience

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**ABSTRACT:** This article examines empirical studies from the past decade on how internet display advertising impacts the accessibility and quality of a website's user experience. The following is addressed as a result of an in-depth examination of research topics, methodology, and results of the evaluated studies: (a) Which theoretical and conceptual background knowledge, based on psychological explanations of consumer cognition, affection, and actions, can best facilitate the design and investigation of internet ads, and (b) which specific ad features and properties are key to understanding and favoring certain types of user effects. Web researchers and specialists are urged to contact internet ads from a deeper perspective, which would be focused on characteristics of online interplay that go beyond of mostly factors, by leveraging this reference knowledge on the benefits of advertisements and their hidden costs. Many of the ideas and models established for advertising effectiveness, as well as the factors used to evaluate it, may and should be used to evaluating the quality of the customer experience while using websites in general, whether or not they include advertisements.

**KEYWORDS:** Advertising, Hidden Costs, Knowledge, Management, Online Research.

## INTRODUCTION

Browsing is a common activity on a website, whether it's a news website, a blog, or a social media platform; as common is user exposure to online advertising, which really is likely to be the site's most significant income source. Advertisement, on the other hand, is an element that disrupts visitors' surfing processes.[1] From the perspective of the user, advertisements can both provide additional channels for satisfying information - based or emotional needs (57 percent of Europeans prefer getting product information via the Internet, and 27 percent said that advertisements aided them in having to decide what goods to buy, according to the Online Publisher Association, and make things more difficult for users, for example, cited instances of advertising-related usability issues on news websites, such as "having caused the viewer to lose his place and interpret the text below the ad as a completely different story" or users struggle to locate the "close" button to dismiss a pop-up advertisement. Advertising's negative impacts include a broad variety of negative repercussions for the website's user experience:

1. Reading, scanning, and surfing activities may suffer from poor usability.
2. Information-gathering activities may not be successful.
3. Users may get confused and fatigued, and their cognitive burden may rise.
4. Users may be frustrated, irritated, or acquire bad affect, feelings, or moods as a result of advertisements.
5. Users may acquire unfavorable feelings about the websites that contain the advertisements, resulting in shorter visits, fewer visits, less referral opportunities, and more bad word-of-mouth.[2]

In the long run, these consequences on websites that rely significantly on advertising, such as online newspapers, would've been devastating. The goal of this article is to provide an overview of experimental research on the impacts of internet advertising on the customer experience that have been conducted in the past decade. We provide, in more detail: 1. A summary of important research topics, results, and interpretations addressed by prior empirical investigations. 2. A taxonomy of various characteristics of advertisements, as well as the impacts which have been determined empirically on user experience in terms of the host website and consumer reaction to advertisements. A conceptual foundation of person's mental ideas (tried or alluded to by reviewed research) about a variety of cognitive processes that may explain a portion of user behavior. An explanation of how and why these ideas and results may be useful to web developers and usability testers in areas other than online advertising. We think that practitioners engaged in the creation and allocation of ads, as well as owners and administrators of websites hosting advertisements, may learn how to improve ad allocation and prevent negative consequences from marketing spreading on hosted websites. Researchers interested in investigating these events will also be able to discover examples of study issues and techniques that may be applicable to their own studies.[3]

## DISCUSSION

### 1. *Web browsing and online advertising:*

Browsing is a continual activity of examining and evaluating material via quick and frequent relevance judgements. Browsing can be directed (or surfing) when the search target is clearly defined and also the procedure is very systematic; semi directed (or surfing) when the search goal is not properly delineated and the procedure is less systematic; as well as undirected (or surfing) if there is no specific goal and the procedure is less systematic. Effects of online advertising Examined there isn't a lot of emphasis here. In motivation (extrinsic vs. intrinsic), participation (situational vs. enduring), advantages (utilitarian vs. hedonic), essence (cognitive and work vs. affective and fun), and type of shopping, distinguish main objective browsing (i.e., directed and semidirected) from undirected browsing (planned purchases vs. compulsive or impulse shopping). Undirected browsing is frequently motivated by opportunity, curiosity, and amusement, but one reason individuals participate in it is to satisfy emotional needs. People who use the internet for information purposes, on the other hand, engage in guided or semidirected surfing. Information seeking is defined as "a process in which people participate in order to alter their current level of knowledge". Users are looking for particular answers or searching for known things in order to address gaps in their knowledge, make sense of inadequate and incorrect information, and find direct answers or search for known goods. Marchionini identified many drawbacks to browsing: It has a high selective attention requirement on individuals, (b) users must deal with information overload, (c) it provides plenty of possibilities for diversionary tactic through data that is tangential to one's goal, and (d) users may experience the effects of "cognitive inertia," or the tendency to follow available evidence paths rather than investigating alternate solution or contrary directions. Focus scarcity is a significant problem while surfing the web as a result of these restrictions.[4]

Attention shortage is exacerbated by online advertising. First, by offering alternative exploration routes that may be helpful or intriguing, particularly while surfing without a purpose. Second, by interfering with goal-directed activities with irrelevant distractions, the chance of the information searching process failing rises.[5] Another important notion is flow, which is defined as "the condition in which individuals are so absorbed in an activity that nothing appears to matter; the experience is so pleasurable that humans will do it even if it costs them a lot of money just to do it". Several advantages of flow were listed by Sicilia and Ruiz, including greater learning, more adventurous and positive behavior, pleasant subjective experience, and favorable impact on purchase and return intentions. The capacity to elaborate information presented to the user (elaboration is defined as the quantity, complexity, and breadth of activity produced by a stimulus) is linked to the flow state: According to one hypothesis, the individual is so engrossed in the conversation that knowledge is not expanded upon; instead, the majority of the focus is dedicated to preserving site orientation. Another idea proposes that being in a flow state allows you to pay more attention to the job at hand, resulting in increased concentration and engagement.[6]

Novak et al. discovered that flow happens in both goal-directed and undirected browsing, despite the fact that individuals who are goal-directed are more likely to remember real instances when flow happened to them (i.e., their perception of flow state improves). Sicilia and Ruiz's observational study shows that flow is linked with improved attitudes about the website, that it improves the capacity to digest task-relevant information, but that it has no effect on favorable views about brands/products featured in web pages. Sparse information and clear descriptions are not optimum, implying that intense flow situations are more likely to promote positive information processing. In reality, diverse or unnecessary information may cause disruptions and diversions, making it difficult to achieve a state of flow. The risk of internet advertising is as follows: It may divert the user's attention away from the job, decreasing the probability of creating the flow state and, as a result, the user's capacity to process information; one reason why training and growth may suffer.[7]

### 2. *Online display advertising:*

A business pays for internet advertising for two reasons: branding and direct sales. A direct sale advertisement attempts to encourage the consumer to act quickly, either by clicking the advertisement, making a phone call, or performing other actions. The exposure theory presupposes that advertisers pay each time a user interacts with or clicks the commercial, and advertisements are valued according the cost-per-thousand (cost-per-mille) or a flat rate for a given time period; the interaction-based model suggests that consumers pay each time the user interacts with or click - through the advert, and adverts are priced according to the click-through rate; and the interaction-based model assumes that advertisers pay each time a user interacts with or Although the ultimate aim of direct sales campaigns is to achieve a certain result, this approach has two significant flaws: It ignores

any branding objective, and it fails to recognize that publisher earnings are equally down to the quality of the advertisement, a matter over which they have no influence.[8]

This holds true for the interaction-based approach as well. Ads now in use have a wide variety of characteristics, many of which have significant impact on ad effectiveness and user performance on the publishing website. Some characteristics of advertisements are intrinsic, meaning they can be inferred from the advertisement regardless of where it is shown or how it shows during the interaction; others are relational, meaning they are reliant on the environment in which the advertisement is displayed. Rodgers identified five main types of advertisement content: brand, public service notice, social problem, corporate, and political. Advertisements may be single-medium (text, static, or moving pictures) or multimedia (text and/or images and/or sound, frequently time-dependent) depending on the media utilized. Preroll video ads are displayed as teasers at the start of a contents video, whereas postroll video ads are shown at the conclusion of the main video. After the appropriate overlay advertisements are rejected, postroll films are sometimes automatically launched. Rich media refers to advertisements that include motion, music, video, and interactive elements.[9]

The utter and total location of the adverts on the page (e.g., in the page header, footer, central area, left/right column), and the geographical position of the advertising in relation to the group on the page (e.g., an advert at the end of an article, below a navigation bar, or adjoining to other competitors' adverts) are all relational properties. The commercial can be expandable (e.g., when the mouse is rolled over, the commercial expands, momentarily trying to cover other elements on the page), a pop-up window (when a temporary screen is opened in the foreground), a pop-under opening (when a temporary window is started opening in the background, and is normally noticed once the user leaves all other windows), or a pop-under glass (when a temporary screen is opened, but in the background, and is usually noticed only). Finally, the advertisement can be related to user actions, tasks, and goals; it can be an interstitial advertisement, also known as a main page, if it would seem as a new section after an user; it can be constantly exposed during execution of tasks; it can be tilted with other advertisements; it can be context sensitive if its text is pertinent to the page's topic (which is usually the case with textbased adverts).[10]

### 3. *Experimental studies:*

We performed a literature search and find experimental research that looked at the impact of banners, and also their features, on online user behavior and attitudes, during the past decade. Between 1998 and 2008, the search was restricted to English-language literature and includes research published in journals and conferences. Search engines (such as Google Scholar) and other scientific papers databases were used to perform electronic Internet searches. The most relevant to our study subjects and those offering scientific evidence to support results were chosen after a qualitative analysis depending on the descriptions of the articles obtained. Our search yielded papers that matched our criteria for inclusion. They were compared based on the following criteria: study topics addressed, investigation techniques used, and major findings

### 4. *Main Limitations of the Studies:*

Considered A variety of potential confounding variables that may influence the experimental findings presented in this study must be considered. We think it is particularly essential to perform experimental research using actual websites rather than improvised ones. This should improve the biological validity of the data gathered and give a more accurate picture of the user's online advertising experience. Similarly, in these types of studies, the kind of advertisements picked should be among the most frequently utilized on the Internet. Instead of creating artificial ones that may suit the particular objectives of a research but lead to poor study validity, Brajnik and Gabrielli developed natural ones.[11]

## CONCLUSION

This review addressed various psychological theories, detailed a number of research issues, and emphasized the major empirically verified findings regarding the impacts of display advertising. We observed that the usability implications of advertisements may be attributed to issues with user attention: taking it away from execution of tasks and failing to pay attention to ads and other user interface elements; some of these issues are more severe when jobs are more demanding. Other quality concerns include the intrusiveness of advertisements and the loss of control by users; the degree of these risks varies depending on the job type. When it comes to the impact of advertisements on the word or business that they represent, animation is a contentious feature: It seems to be successful up to a point, but once saturation is reached, it is harmful not just to the hosting website, but also to the commercial content. Intrusiveness has a negative impact as well. Interactivity of the advertisement, on the other hand, seems to be successful, as does its frequent exposure. The relevance of the advertisement content to

the user objective or content has not been shown to be successful; instead, repeated exposures seem to be a superior option. Stakeholders associated with websites that show advertising ought to be aware of these findings in order to make trade-off decisions when developing web pages, advertisements, and assigning them to pages.

There are numerous variables related to advertising effectiveness that could be applied to other page components, including the ability to recognise site elements, attention and alertness levels, perception and attitude towards the website, likelihood to explain page elements, ability to recall and recognize page components, intentions to return to the website and refer it to friends, and irritation due to inability to notice page components. We think that, in addition to more conventional usability measures such as effectiveness, efficiency, and satisfaction, all of these components should be considered when evaluating the quality of a website. Focusing quality evaluations on all of these dimensions gives evaluators a broader variety of variables to consider, allowing them to better monitor and identify quality concerns that may impair browsing's cognitive and emotional impacts. Some characteristics of advertisements, such as interactivity, may be essential to examine as well. Interactive advertisements have been shown to enhance perception, attitude, understanding, and persuasion. We believe that this is true of other site elements as well, not only advertisements: Interactive features that are well-designed (i.e., beautiful and useful) may enhance the user experience. One of the reasons why online programs like Fb are so popular is because of their high degree of interaction, which makes using them more difficult, new, and changed over time. Interconnectivity may also be important in facilitating the emergence of the middle of the action in more appealing interfaces (such as games), with all of the associated advantages. Effective advertisements are critical to the survival and success of online newspaper websites, but designers must be cautious not to compromise usability or other anticipated benefits. End consumers may be more likely to interact with emotionally appealing and gratifying content if advertisements are well-designed and positioned.

We think that additional study in this area is feasible and desirable if we start with existing findings on ad effects, the tremendous influence and speed that Internet advertising has, and the accompanying diversity of accepted solutions. This may help to verify existing information and provide greater assistance to all parties involved in the development, placement, assessment, and publishing of environmentally friendly online advertising.

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