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## Interactive Digital Displays for Outdoor Advertising

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### Abstract

As we live in a period called the 'Information Age', new communication technologies are enabling newer possible ways for advertisers to interact differently with customers. High-technology televisions, the Internet, touch screens and such technologies are changing the media environment. Therefore, it changes the ways of communication. Nowadays, interactive digital displays are more commonly used for outdoor advertisements such as shop displays, billboards and on public transport. This research explores the impacts of interactive digital displays for outdoor advertising and how efficiently they engage with customers. Advertising media is evolving into a whole new level with upcoming developments. However, it still needs a full adaptation by customers. While relatively young customers adapt more easily with the interactive displays, certain kinds of customers still prefer traditional media. This research seeks to find how effective interactive display use for advertising is, while comparing customer adaptation of new media technologies with traditional media.

Keywords: Interactive displays, outdoor advertising, digital signage.

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## 1. Introduction

For over two hundred years, streets have served also as a display for ways to inform, announce and advertise. Since mass production made multiple copies to be printed and distributed in large formats possible, the modern poster has become a valued media and has been decorating our cities and urban spaces ever since. Although it may seem that the allure of the poster in cities declined after the First World War, challenged by newer media technologies such as television, radio and others, the form of the poster being a medium of advertising, in time the poster became fashionable again as a traditional and nostalgic medium mostly to be used to decorate cities aesthetically. As in today, the poster is not the only medium that decorates cities and informs and announces. The number of messages and data to be delivered is too high.

Therefore, along with the increase in media platforms, advertising is improving their fans every day through television, radio, social media and urban spaces. Outdoor advertisements, which are one of the mediums, are often preferred due to their ability to address large masses. Interactive displays, digital billboards, street furniture and kiosks can be counted among outdoor ad campaign mediums. Outdoor advertisements are positioned in public places such as bus stations, bus stations, airport, moving on the car, in cinemas, city centres, shopping centres, pedestrian crossings and in front of almost every urban area.

According to The Guardian newspaper, an average passenger on a 45-minute journey in London is exposed to over 130 adverts containing more than 80 products. Half of this information has no effect on the passenger. Therefore, it can be calculated that a person will see an average of 3,500 marketing ads in a day. In this study, a recording eyeglass was used to record the journey of the passenger and advertisements that were showed up during the journey were recorded and then deciphered (Owen, 2005). Visual culture theorist Nicholas Mirzoeff (2009) argues number of advertisements seen per day range from hundreds to 3,000.

'In today's world of fragmented media and advertising-avoidance technology, outdoor advertising plays an important role in allowing advertisers to reach the increasingly elusive and mobile consumer' (Wilson & Till, 2011, p. 909). The success and development of outdoor advertising can be attributed to its ability to address large masses. Today, open-air advertising plays an important role in attracting consumers. According to a survey conducted in 2007, outdoor advertising has grown by 7% and continues to grow rapidly (Wilson & Till, 2011 ). Examples of places where digital displays are most commonly used outdoors are New York Times Square Square, London Piccadilly Circus Square, and Tokyo Shibuya Square (see Figure 1).



Figure 1. Amerika – New York Times Square

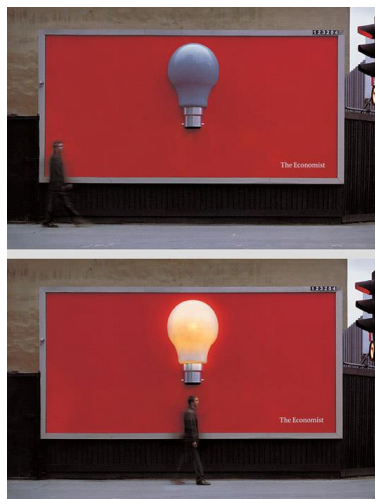
These city centres are used countless times by passers-by every day. Huge amounts of information and visuals cause such visual confusion. Therefore, companies are looking for ways to make a difference in order to achieve awareness and attractiveness to differentiate themselves among many. To achieve this, new technologies and digital interactive displays are becoming more preferable. These newer technological mediums are often easily adopted by the young generation as they are already born into technology and can easily adapt in ways other generations cannot. They are not only watching and using the technology but also actively taking part in the digital age and actually forming it.

## **2. Digital Displays and External Factors of Their Success**

Although there is a high level of exposure to outdoor advertising per day, it still is coincidental and generally consumers do not give their full attention to these ads. Compared to television and other print media, outdoor advertising remains a more passive channel, says Wilson and Till (2011). And that is where digital displays come into prominence. Therefore, in order to receive more attention from passers-by, outdoor ads should be striking, eye-catching and include a creative approach while giving the message. According to Milton Glaser, in order to consider an outdoor advertisement successful, it should include approaches that are as follows: should bring product features to the forefront, inform the viewer or awaken interest and also should be witty, creative, memorable and a remarkable item (Becer, 1999).

Designers or advertisers often choose appropriate places for the content of the product, idea or message to be advertised. It is difficult to ignore the effects of outdoor advertising on the consumer, but the location or area where the advertisement is located can be also very influential in some cases. Wilson and Till (2011) ask, 'Does location matter? Does the environment the outdoor ad appears in affect responses to the brand?' (p. 910). According to the results of their initial test, it was seen that the subjects who were exposed to the advertisements in positive settings show a positive attitude about the brand or product and in negative environments had negative attitudes about the brand. 'The digital display in the swimming hall lobby had 47 times more touches than an identical hotspot in the lobby of a municipal service centre. Patrons in the swimming hall are generally relaxed and unhurried, with the user population being mostly children and teens keen to play games. This environment proved more beneficial for hotspot use than the business-like, almost clinical municipal service centre' (Ojala et al., 2012).

The success of an ad banner is also often measured by the use of paper or graphic elements on the screen that includes a message, creative ideas and crates awareness (Becer, 1999, p. 202). Thus, using newer media and technology can help creativeness of the idea and hence can be more eye-catching and can differentiate from others. The United Kingdom-based design agency Abbott Mead Vickers BBDO, designed an interactive poster with a 'less is more' approach by using an electronic movement sensor for The Economist magazine. The advertisement's design is simple with almost nothing but a light bulb and the logo of the magazine visible on the right bottom corner. When a pedestrian walks under the light bulb it alights, thus giving a message that the magazine gives its readers new ideas and new insights while it inspires them (see Figure 2).



**Figure 2. BBDO design agency –The Economist magazine interactive billboard**

Is outdoor advertising capable of creating awareness and preserving this awareness of the message being advertised? Is it inevitable to forget these ads even though we have often encountered them outside? As King and Tinkham (1989) have quoted from Hirschman and Wallendorf, 'Novelty seeking is an integral construct for understanding the acquisition of marketing information, because it is believed to provide the primary motivation for the acquisition of knowledge generally', consumers which exposed to new information, are more inclined to adopt the new idea even if they do not need it at the time being. According to Muller, Schmidt, and Michelis (2010):

'In order to stimulate curiosity and to influence motivation, the interaction shouldn't be designed in a way that is either too complex or too trivial. Interactive elements should be novel and surprising, but not incomprehensible'.

Ojala discusses the effects of the position of the display and which social context it is more likely to attract interest and shares results of their research; 'hotspots are not appropriate in crowded events, since users standing in front of the display are likely to block the coming and going of others or get jostled in their attempts to use the display, both of which are annoying. These observations strongly imply that people use the hotspots when they have extra time, which is less likely to occur during structured special events' (Ojala et al., 2012).

King and Tinkham quoted from Maloney that advertising messages that inspired curiosity on people show a more positive and possessive attitude towards the consumer in the consumer. Thus, as a result, new messages which arouse curiosity feelings are usually retained longer in memory (King & Tinkham, 1989, sec. 50). As an example to one of the curiosity arousing messages, Alice BBDO Istanbul Ad Agency designed an interactive display for crisps 'Ruffles Hot' which is new in the market (see Figure 3). Build with a smoke machine, the interactive display produced smoke to be seen as if coming from the mouth and ears from the man on the advertisement, giving the message that it is indeed hot. This advertisement was shown only in Istanbul, Zincirlikuyu neighbourhood to raise awareness about the launch of the new product of the brand (Yıldız, 2009).



**Figure 3. Ruffles Acılı Afisi, BBDO Reklam Ajansı (2009)**

According to King and Tinkham, the message given on outdoor advertisements should be catchy and easy to remember and the challenge is to achieve that. It may be important to note that, the longer time consumers exposed to an advertisement and their novelty messages, the more the novelty message is learned, remembered and adopted. However, if the advertisement is on display for a short period of time, it is unlikely that the brand or the product will be remembered by the consumer as they are already exposed too many visual messages every day (King & Tinkham, 1989, sec. 51).

Thanks to newly developed technologies, interactive experiences (such as in urban spaces or on social media) are becoming more dominant in marketing. Outdoor advertising is also changing the urban environment. Koeck and Warnaby argue that current digital technological developments lead to significant changes in outdoor advertising in urban areas. They now argue that the term ‘advertising’ is too narrow to explain the experimental marketing activities that might be used in urban areas, and that the scope of this term may expand in the future. Ten years ago, Moor (2003), exploring the scope of ‘new marketing’, predicted that there would be a change in the perception and implementation of space in marketing, and called that ‘ambient marketing’. Marketing communication has become more competitive in urban spaces. Degen, DeSilvey, and Rose argue that environmental design trends will be based on ‘producing a city of surfaces, calculated for a primarily visual effect’ (Koeck & Warnaby, 2014, sec. 1403). The Out-of-Home sector continues to grow day by day. The presence of digital screens enables more creative freedom in this sector. However, on another note, Bezjian-Avery, Calder, and Iacobucci argues based on their findings that ‘traditional linear advertising format of conventional ads is actually better than interactive advertising for certain kinds of consumers and for certain kinds of ads’ (Bezjian-Avery, 1998).

### **3. 21st Century Outdoor Advertising and Interactive Digital Displays**

The production of art and design has changed depending on late technological developments and new means of expressions have emerged (Ertan & Sansarcı, 2016). Every technological change depends on other developments and innovations. The media is constantly renewing itself, adding new concepts to its definition. This process is an inseparable part of a whole. The media needs other media to function as media (Crowley, 2016).

Interactive signage, screens and displays attract more attention from viewers than stationary ones. Interactive ads have started to have a significant place in brands’ marketing investments. It has been shown that the non-touch, interactive control panels are more quickly accepted by users than other controls, because they add more excitement to the user experience. Interactive screen interfaces with motion sensors are believed to be more hygienic and have less risk of deterioration than touch



screens (Gesturetek, 2014). However, based on an interview conducted by Ojala and other research, people are ‘hesitant to use technology in public’, pointing out that they might break the system or their operation, so most interviewees find public displays as intimidating.

Today, interactive displays with motion and movement capture sensors are getting more common. Perfect Fools advertising agency commissioned by Swedish pharmacy chain Apotek, designed an interactive experience for consumers for Apotek’s new shampoo launch commercial. The ultrasonic sensors attached to the screens located near the trains on the Swedish underground station, which enables the woman’s hair ruffles with the air current when the train approaches (see Figures 4 and 5). At the end of the video footage, the logo of the brand and the pharmacist were shown along with the slogan of the new product, which is ‘makes your hair come alive’. The interactive digital display appears to have been designed with basic design principles almost like a poster. The display, which looks like a stationary digital poster before it moves, has been well-planned in terms of compatibility with the slogan used to make the poster come alive when the train approaches (Solomon, 2014).



Figure 4. Apotek shampoo digital interactive signage, before the train approaches



Figure 5. Apotek shampoo digital interactive signage, after the train approaches

#### 4. Findings, Discussions and Further Research

The main goal in an interactive digital signage is to give a message to a customer and ensure that the message is retained by the consumer and then move them into action to use the signage. According to Burke (2009), the impact of the power of the message will be much greater in an interactive display rather than on a traditional medium. Dennis *et al.*, have similar thoughts on the subject and they argue that digital public displays can create a modern image, increase enjoyment and provide useful information. Dennis's study shows that: Digital Display advertisement stimulates pleasure on users and evokes affective experience. And that can be used as an experience provider for customers in a real commercial setting (Dennis, Josko Brakus, & Alamanos, 2013).

'Passers by are curious about something on the screen, either because it is new or simply because they have never noticed it before. Curiosity motivates them to touch the display at least once to observe its response' (Ojala et al., 2012). Today, digital signage and displays have become one of the most effective and remarkable communication environments, especially in the field of marketing. Digital technology has been quickly adopted by end-users and firm owners.

The findings of a research are as follows:

- 82% of shoppers – thinks that digital advertising has gained brand status.
- 72% of shoppers – brand advertisers perceive digital advertisers as better quality and pay more for these brands.
- 61% of shoppers – He finds brands in digital advertising more dynamic.

(Vboard Dijital Acık Hava Raket Reklam, n.d.).

According to Muller et al., interactive displays should be designed and articulated carefully not to annoy people not interested while attracting attention from interested people. Interactive public displays also need to motivate people and arousing their curiosity while making them collaborate and interact by giving them choices about how to reach information (Muller et al., 2010). Eagle (1994) quotes from Martin 'Good communication means getting the right message in front of the right person at the right time'. An interactive digital platform makes it easy to do that.

Interactive digital displays support the 21st century communication platforms along with smart phones and tablets, and arguably will soon appear in every aspect of life in augmented reality, virtual reality, simulation and more. In this paper, we have mentioned and presented the findings of previously conducted research for digital displays in both retail and as a means of advertising and how increasingly they become available in every aspect of life. Additional research should explore their impact on the users and how effective they can be on consumers need to be assessed in greater depth. Furthermore, another potential avenue for future research is to examine possible placements of the digital display both indoors and outdoors, if location and spaces are an important contributing cause to the success of digital signage and which other issues to consider when designing interactive digital displays.

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