

INTERACTIVE ELECTRONIC BILLBOARD AS A TOOL FOR ADVERTISING IN THE MODERN-DAY NIGERIAN SOCIETY

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Abstract

Advertising is constantly evolving; right from the use of the primary traditionally-recognised tools such as pamphlets, handbills, and other numerous platforms to the very sophisticated ones like the internet and social media or even television, the story is one passing with time. The use of billboard for same purpose has also evolved from the static-placed-and-displayed ones to the digital electronic types that rely on LED displays to project goods/products, ideas and services to the audience in motion pictures. In Nigeria, the use of billboard continues to attract companies and institutions (herein considered as advertisers). Innovativeness in the sector is on a continuous basis and one of such is the adoption and utilisation of interactive electronic billboards that allow interaction with the billboards via the use of digital mobile devices. Therefore, this study looks at the interactive electronic billboards as a tool for advertising in the modern-day Nigeria. Consequently, the study focuses on some of the benefits offered by the innovation in advertising media technology. Anchored on uses and gratifications theory and that of media richness, the study explains the benefits of interactive electronic media and reasons behind its continuous use. It concludes that billboards as media of advertising are of great benefits to the industry.

Keywords: Advertising; billboards; digital; electronic; modern

Introduction

Persuasive communication has numerous aspects and advertising is one of such. The core of advertising is to create awareness towards stimulating interest of the audience to a particular product. The foregoing has been corroborated with the assertion that advertising's core objective is to raise awareness, create a deeper interest, and in the process encourage consumers to take action which often culminates in making a purchase (Osei-Hwere & Osei-Hwere, 2021). Traditionally, advertising is based on the action of the seller; targeted at the potential buyer of a product, service or an idea. Primarily, the action by the seller is to persuade the consumers to react, and by such reaction, purchase the product.

Aside the purpose of persuasion for advertising, it also aims to inform and remind the consumers (Osei-Hwere & Osei-Hwere, 2021). In respect of the informative purpose of advertising, the goal is to create awareness products, brands, ideas and services, in addition to providing the required announcement to new programmes and products in offering. Relatedly, reminder advertising as one of the purposes of advertising is there to remind people on reasons they may need to make timely purchase decisions. It further

elucidates the benefits so that the product/service/idea becomes appealing to the consumers who may find interest on the basis of the information revealed to them in the piece of advertisement. However, all these are seen as peripheral; as the central, primary, and main aim/purpose of advertising in our world is that of persuasion. Hence, the concept of persuasive communication in advertising is the foremost focus of advertisers and agencies.

It suffices to restate that a pertinent issue of note in respect of any advertising campaign in the world is that persuasion is a central factor. It is so because the primary goal is to convince potential consumers to make a move. Accordingly, persuasive advertising is an aspect of advertising that is activated to entice the consumers towards purchasing goods and services (Ogah & Abutu, 2021). Aside attempts to entice, the idea of persuasion centres on series of action intended to convince and persuade through different mediums. A number of media, tools, categories, and strategies are used for advertising in modern times. According to Asemah (2011) advertising media can be categorised into print media, electronic, digital interactive, out of home, and direct mail.

Among these media categories through which advertising can be taken to the consumer, out of home (OOH) offers the advertisers the best and most convenient opportunity and platforms to advertise outside. Accessibility is not a challenge because the tools are displayed publicly for all to see.

Advertising done out of the home of the consumers is also one that is effective (Asemah, 2011). Consequently, Asemah notes that the media for outdoor advertising could be postal panels, posters, electronic signs, mobile billboard, display panels, public phones, and parking meters, and so much more. There are other prominent types of outdoor platforms; of which the commonest tools include billboards, the bridge, lamp post, inflatables, and point of sales display advertising (Malakar, n.d.). From the simplest ones such as the billboards to the complex and modern ones such as interactive electronic billboards, the Internet, cell phones and many more, advertising is sure continuously evolving with the latest trends in technology. These technological innovations only make things more visible than they used to be in previous eras of the evolution of advertising.

The advertising space is one with different innovativeness; from the crafting of messages to the very modes or tools used to position the adverts, there have been a series of progress made in the world of advertising in recent times. A significant area of importance where this progress was recorded is billboard advertising. As a critical element of outdoor advertising campaigns, billboards have continued to evolve with new advances that prove to be effective in several ways (Kosolap & Podolkova, 2011). Among the different innovations in the method of advertising is the use of digital screens on movable vehicles and digital electronic static boards mounted in high traffic areas. Put in another way, places with high footfalls are where billboards have been elevated to iconic outdoor marketing opportunities.

When commuters and passersby are on the move, billboards become unavoidable; and this is against this backdrop that they are considered as powerful outdoor tools for advertising. It is one with a considerable amount of effects on people. According to Decker (2023) a commuter using the bus, train or car may want to see the world and in the process come across billboard advertising. This is chiefly because they are placed conspicuously along high traffic areas for all to see. Billboards are made to be conspicuous not just on the basis of

their placement but also in respect of the use of colours; possessing the steam to draw people's attention (Wermer, 2016). In essence, they are designed to elicit that reaction from the potential consumers due to the aesthetics and the strategic places they are found.

Billboards outdoor advertising tools are seen as everyday travel background noise (Kaur, 2022). It is on this basis that they can be seen by commuters anywhere they turn while commuting. In modern-day advertising, the use of giant outdoor digital billboard is gaining popularity (Heyden, 2014). This is also in addition to the rise of innovative interactive billboard advertising. These billboards are large sized and not only provide visibility but also enable advertisers to customise contents in creative ways by virtue of embellishments and extensions (Evans et al., 2020). This is perhaps another point of interest for advertisers that intend to project their products, services, and ideas to the highly mobile populace; since the chances of coming across a billboard are high.

As seen elsewhere in the world, billboards are also in high use in Nigeria. They are in high demand. In fact, marketing that involves the use of billboard is considered as one of Nigeria's most prominent advertising means (The Push, n.d.). In Africa, the country boasts of the largest advertising markets. For instance, in 2018, outdoor advertising was only second to television adverts with 28% of total media advert spending during the year (GeoPoll, n.d.). This implies that advertising is a serious business in the country. Among the different popular outdoor advertising methods in the country is electronic billboard. According to The Push, interactive billboard advertising is one area of emerging trends in billboard advertising in the country. This study therefore looks at interactive electronic billboard as a tool for advertising in Nigeria. Primarily, it is to get a clear picture in respect of the impact of the interactive electronic billboard in the industry in the country especially in the digital era.

Conceptual Review

The concepts of advertising and that of interactive electronic billboards are reviewed under this section for emphasis.

Advertising

Advertising is one of the numerous complex concepts in communication chiefly because of its

unique position and length of use in the field. However, a number of scholars have provided meaningful explanations in respect of what the concepts stands for within the context of its use in communication. Accordingly, Asemah (2011) defines advertising as "any communication that is paid for, identified by a sponsor, directed at a target audience, through the various mass media like radio, television, bill boards, newspaper and magazine, with the aim of creating awareness about goods and services" (p. 2). The foregoing implies that advertising is a type of communication; but one with the intention of telling people about a product or service rendered by the sponsor of the advert; otherwise known as the advertiser.

The definition captured in the foregoing paragraph is similar to that offered earlier by Bovee (1992) quoted in Taflinger (1996) which sees advertising as a non-personal communication of information that usually attracts a fee from the advertiser (who in this case is the sponsor) and is by nature persuasive but focused on products, services, or ideas through various media that are available. The unique thing is that advertising has a nature; which is that it is of the persuasive class of communication. People are deliberately exposed to messages contained in a piece of advertisement so as to persuade them to act towards the ideas, products, and services offered by a company that is usually responsible for the advert in respect of sponsorship.

Another approach to the understanding of the concept of advertising is that it is a marketing strategy used to package messages about products and services that get delivered to the audience via a multiplicity of media which include the radio and television, newspapers and magazines, the billboard, and online platforms like the social media; which include YouTube, Facebook, X (formerly Twitter), LinkedIn and many more (McNair & Hawks, 2023). The use of advertisement is primarily to create an avenue for providing information about a product, idea or service to an audience such that they become aware of what the advertiser has in offering for them.

In our world, and even in modern societies, advertising is one of unique opportunities that offer the seller of products and services the platform, medium and podium to create awareness and make lasting impression on the consumers. This has been corroborated with the assertion that advertising enables companies to bring their services and

products in front of the public (McNair & Hawks, 2023). Put in another way, through the advertising mechanism, companies are able to showcase their products and services to members of the larger society. Once these products and services are presented to them, they are expected to make purchase decision; which is a determinant of whether or not the advert was effective. This concept is related to this study because billboards are part of the media of advertising.

Interactive Electronic Billboard

Traditionally, billboards are used for outdoor advertising; and are therefore part of the tools used for public display. In respect of the foregoing, billboards have been described as "advert messages strategically located in unique places of towns and cities. They are not to beautify the towns, but to attract attention to products and services. There is also pasted billed electric illuminated sign board or billboards" (Asemah, 2011, p. 80). Over time, the billboards have continued to evolve and across different technology eras. In modern times, different digital ones are in use; including the interactive electronic billboards.

The interactive electronic billboard is both a device and a system employed in outdoor advertising. It refers to a data processing device that has a display function and an interface of a short-range wireless communication like the Bluetooth which enables the device to establish communication with mobile devices such as the mobile phone (Liu et al., 2004). The unique features offered by this technology is one that allows product display and advertisement with the capacity for mobile devices not-so-far-away to interact with the billboard through the use of wireless communication interface.

In the global billboard usage landscape and Nigeria in particular, a number of billboards are made of fibre structures and complex steel that come in uniquely diverse shapes accompanied with digital and electronic displays. Most often, the most common are those that fall within the steel monopole or unipole structures. However, they are said to be posing new challenges to billboard valuation in terms of cost estimation and standardisation (Oni et al., 2019). Unique structures of billboards that are popular across the globe include the monopole/unipole that is two, three or even four-sided, the gantry advertising steel billboard, four-sided outdoor billboard,

creative slant column billboard, double-sided advertising unipole, trihedon unipole, and the v-shape unipole. These variants are created to provide a kind of display to the point that different road users taking certain directions would not miss a piece of useful information intended by the advertisers.

In terms of sizes, scholars and authors are split as to the standard sizes available for billboards. While some say the categorisations are three (Gadek, 2020; Inman, 2023), others say there are four standard sizes (Oni et al., 2019). However, for the purpose of this study, four-standard sizes are considered. According to Oni et al., these include juniors, the 30-sheet poster panels, the painted bulletins, and the spectaculars. Whereas, the juniors come with a standard panel size of 1.83 by 3.66 metres, the 30-sheet poster panels measures 3.66 metres high by 7.62 metres wide and has a face area of approximately 28 square metres. In addition, the painted bulletins are also known as rotaries and measures 3.05 by 12.20 metres, 3.20 by 11.00 metres, 4.27 by 14.63 metres and 6.10 by 18.29 metres. The spectaculars refer to another size; designed to be larger than bulletins, and come in unique shapes accompanied by unique features. They have enhancements such as special lighting or features that attract attention (Oni et al., 2019).

Another critical mode of identification of billboard is through the display which according to Oni et al. (2019) includes digital display, trivision, paper, and vinyl. The ones recognised as digital billboards are said to be the most advanced due to their use of the latest technology in lighting coupled with high definition picture displays (Watchfire, as cited in Oni et al., 2019). LEDs as they are popularly known create good lighting and crisp images for the billboard and are seen as critical components of billboards in the digital world. In modern times, the use of modern facilities including the Internet characterises the typical billboard corner; especially the electronic/digital ones. Ease of editing, updating, and posting of advert messages is one advantage of modern billboard facilities. Under this category of innovativeness in billboards markets is the volumetric billboard which according to (Decaudin & Neyret, as cited in Oni et al., 2019), is an image-based representation which gives access for the actual rendering of visually complex and semi-transparent objects that are usually distributed in 3D random scenes.

In a unique way, billboards are erected to trespass on the field of vision of humans (Oetting, 2018). Therefore, electronic billboards of interactive orientation are put in place to market products, ideas, and services in a unique way where the consumers are engaged through some level of distraction often created by the very aesthetics in which they are created. Interactive billboards are a creative way through which a business can engage consumers as they feature artwork in digital formats, and also contain some curated from tweets by users, also extending to touch-screen games (Makmanee, 2013). The technology that powers these capacities of billboards in 21st century is embraced in large-scale chiefly because of the ease-of-access and use by people.

In a world where social media and related digital technology are gaining the attention of marketers, one need not wonder why there is wide acceptance of interactive electronic billboards (Makmanee, 2013). With the use of modern display technology, interactive electronic billboards are used to showcase graphics, images, videos, and other related digital content that are programmed to change every minute (Lan, n.d.). Multiple advertisements in rotation, real time update, increase retention rates, and ease-of-customers attraction are some of the benefits of digital billboard advertising. The relevance of this concept to this study is that it is the central focus as it dissects its use as a tool for advertising in modern-day Nigerian society.

Literature Review

Advertising is a broad sub-field of communication and it has been around for a long time. Middlebrook (2022) lends credence that advertising has been in existence in one or multiple forms as long as mankind has communicated trading in goods and services. The beginning of advertising has even been traced to the time of ancient Egyptians, and the era of steel carvings that dominated the period (Gallegos, 2016). However, the concept and the practice have continued to evolve through different eras with technology being a major (if not the most significant) factor over time.

The concept of advertising is one that has been described as a method of promotional communication that markets can access through funding (Middlebrook, 2022). By promotional, advertising is seen as having the capacity to

promote goods and services for an organisation or individual who has the wherewithal (i.e. is form of funds) to execute it in all its form. In other words, it means that advertising is not free as one needs to pay for the services of the advertising agency to access the offerings. For instance, the media of advertising usually charge different levels of fees that a company must pay to have the advert message run on their medium; be it radio or television or any media type.

It is usually structured and is about nonpersonal persuasive communication that involves information dissemination about ideas, products and services, and paid for by identifiable sponsors through a number of media outlets (Arens, 2008; Asemah, 2008; Taflinger, 1996). As a tool used in the world or product information dissemination, advertising is powerful as it can help sellers of products and services attract customers by providing information to them as required (Garcia et al., 2022). The implication of this is that advertising comes as a tool for sellers to interface with the buyers with specific goals of informing and persuading.

It is true that advertising is about communication and information dissemination to the consumers. However, such communication takes place through a number of channels herein referred to as the media of advertising. According to Williams and Lombardo (2023) "advertising media" is applied as an umbrella term used to refer to a mix of all media types that may include television, radio, magazines and newspapers, billboards, and the internet (especially in modern times). Through these media types, sellers are able persuade consumers and get them to buy a product or service (Osei-Hwere & Osei-Hwere, 2021; Sama, 2019). They include all media types that can be used for the promotion of concept, idea, and product through advertisement.

Often times, deciding on the media type to use for disseminating messages and information on specific ideas, products and services becomes a challenge for the business organisation/advertiser. Gebreselassie and Bougie (2018) aver that this is about media strategies as it involves reaching a decision on the communication channel that will be used to deliver the advert to the potential consumer. Accordingly, Reid and King (1997) quoted in Gebreselassie and Bougie note that the frequency, reach, and desired impact are some of the factors of consideration in taking the decision as per the type of media strategy to be adopted for this purpose.

Print and electronic advertising media have stood the test of time in the sense that they have been around and are still being used in modern times. Radio and television have also been advertisers' choice for several reasons ranging from reach, effectiveness, and impact (NFI Solutions, 2022; Kokemuller, 2019; Watts & Hendricks, 2023). However, one of the advertising mediums of note that has also evolved over time is the billboard (Garcia et al., 2022; Gebreselassie & Bougie, 2018; Wroblewski, 2018). A billboard refers to a huge board usually displayed on the side of the road and contains advertisement (Alvarez, 2023). Billboards are popular advertising media that are usually located out-of-the-home and could be placed near the highway (Johnson, n.d.), conspicuously placed to the glaring views of commuters.

Since the first billboards were leased in the 1860s, they continue to grow in popularity and usage regardless of how long they have been utilised for advertising (Hatter, 2018). According to Mishra (2023) billboard advertising is one traditional marketing method that has remained an important part of the range of strategies used to reach a diverse range of audiences over time. Mishra notes that a billboard is also known in the United Kingdom as "hoarding". In contemporary society, billboards are now created to have unique functionalities, and that places them in vantage positions for marketers and audience to access and utilise as both dissemination and consumption platforms.

Some of the unique features added to billboards are computerised graphics that can be imposed on recyclable vinyl, and the special effects which include 3-D digital graphics useful to the digital world of advertising in modern-day (Hatter, 2018). Another angle to the effectiveness of billboard advertising is that a lot of people see it every day just as they make up the most cost-effective methods created to address big audiences across a large or limited geographic location (Tahsin, 2023). Consequently, billboards offer consumers increased visibility, brand awareness, anytime visibility, design creativity, clear and specific communication, measurable impact, environmental accountability, emotional engagement, audience segmentation and many others (Jhamb, 2023).

One of the numerous innovations in billboard advertising is the use of digital means to project ideas, goods and services. This brilliant

idea birthed interactive electronic billboard which allows customer interaction in the projection of a piece of advertisement. An interactive billboard has been described as one that requires active participation from the audience; and could be subject to change upon such interaction (The Push, n.d.). In line with the foregoing, it has been noted that once a customer is exposed to a piece of advertisement, such an individual may have intention and can actually initiate a request from a personal mobile device commencing an interactive communication process with this electronic billboard (Liu et al., 2004).

Furthermore, Liu et al. (2004) recount on what may take place aftermath of the initiation of a wireless communication protocol between the customer's handheld device and the interactive billboard. Accordingly, the authors note that once the connection is in place, there could be transmission of content to the customer's device and a predefined user-interface configuration before that takes place. It was also observed that "operating on this specialised user interface function, the customer may then query, select, transmit secured data (e.g., credit card information), retrieve information and complete transactions (Liu et al., 2004, p. 554). The scholars likened the experience of the interactive process to the use of wireless communication technology to browse the web. In essence, the interactive electronic billboards also use the web technology just as seen in other mobile devices.

The technology that enables interactive electronic billboards goes beyond the interface with mobile devices such as cell phones to include the deployment of touchscreen for ease-of-use among clients (Côté, 2022). With moving images, colours, lights and other aesthetics, digital/electronic billboards are able to grab the attention of the audience; and it is also in a unique able to project products, ideas, and services of numerous brands (Bruce, 2019). This is in contrast with the static non-digital traditional billboard that can only cater for a specific brand within a particular period in time. The implication is that brands are able to share flexible timing as per display of their messages as they push to create awareness for their products and services through the use of electronic billboards

These interactive electronic billboards are also widely in use in sub-Saharan Africa including Nigeria (Swallehe & Mwilongo, 2022). In a study conducted by GeoPoll in conjunction with the

Outdoor Advertising Association of Nigeria to assess the effectiveness of outdoor in the country, it was found that outdoor advert is the most effective in Nigeria after radio (Liakahat, 2021). Due to the large size, fine colours (Ngwoke, 2016; Orji, 2002), and even the appeal (Benson-Eluwa, 2005), billboards catch the attention of urban dwellers in Nigeria. Consequently, findings of some studies revealed that the use of billboards as tools for advertisements in Nigeria as seen to the economic growth of the country chiefly because the sector was positively impacted (Chijide, 2012; Idigbe, 2012). It implies that there has been significant growth in the use of billboards for advertising in this part of the world.

Theoretical Framework

The relevant theories that provide the base for this study are the uses and gratifications theory and media richness theory. The uses and gratifications theory is usually traced to the 1940s, an era that saw attempts by scholars in the field of communication to study reasons specific contents in the media and the media themselves appeal to certain members of the audience (Vinney, 2022). Its main proposition is that people make choice of certain kinds of media on the basis of what they anticipate such will give them. Put in another way, it is about specific gratifications derivable from the select media or contents (as the case may be). This theory applies to this study because it provides the explanation as to the continuous use of billboards advertising in modern-day Nigeria; the benefits or derivable.

The second theoretical base for this study is the media richness theory. Richard Daft and Robert Lengel in 1986 proposed the media richness theory and it is based on the proposition that how a task is performed can be enhanced by the kind of medium used to convey specific information or message (Smith & Aparicio, 2023). The theory's postulation implies that a task is best performed when matched to a medium of communication that best convey the intended message. Accordingly, Smith and Aparicio aver that this theory can be applied to the evaluation of new forms of media. The theory is about making the most of a medium for effective message delivery. It is relevant to this study because its focus is on the use of interactive electronic billboards as means of advertisement in modern-day Nigeria. If billboard advertising was not an effective means to get products and service information to the people, there will be no continuation in use in modern times.

Discussion

The use of billboard for advertising in Nigeria is as important as the main intention of the product sellers because it has been found to be effective in so many ways. For instance, the findings of a study conducted by Culture Intelligence from RED, 81.8% persons that took part in the survey took the position that as means of advertisement in Nigeria, billboards are effective (Babatunde, 2021). In the study, it was also revealed that a memorable billboard advertisement is created only if there are clever creative, powerful graphics, and made to be readable. In reality, advertising with the billboard will not maintain its place in the advert schemes if not for the innovations that accompany it over time. A number of companies across the world; and in Nigeria continue to be interested in ensuring that technology is deployed to improve the audience experience as it concerns billboard advertising.

According to Babatunde (2021) the Culture Intelligence study further revealed that, of the respondents that took the survey, 12% do not pay attention to billboard advertisement at all, 33% pay close attention while 42%, which makes up the majority of respondents said they will not engage in getting a product on the basis that they saw it being promoted on the billboard. The questions that one would asked are whether it implies that billboards are not effective or whether their effect is limited. However, these only set the tone for discourse under this section as the main focus is to discuss the use of interactive electronic billboard for advertising in modern-day Nigeria.

Outdoor advertising in Nigeria is a huge market, and the use of billboards dominates that market for the most part. This explains why a company like Google which had interest in the market share of the country also explored the use of billboard platform to advertise. In fact, the company was reportedly doing an aggressive run of visual billboard advertisements across Nigeria (Ekwealor, 2016). The use of digital forms of advertising especially that of electronic billboard has continued to generate attention and interest on the basis of some of the benefits derived both from the angle of the audience and the advertisers alike. And in a globalised and digital world, advertisers are quick to identify the most effective platform and avenues to get across to the public and often explore such without hesitation; and interactive electronic billboard is one of the platforms.

In addition to the above, the technology that powers electronic billboard also makes up the

reason behind their continuous use. The screen of an electronic billboard or smart board is built with Light-Emitting Diodes (LED) technology that produces a vibrant, crystal-clear picture. The billboards are made in such a way that they contain thousands of LED lights that are composed of yellow, red or green (Versa Creative, 2022). Since outdoor displays require a lot of lighting to get the attention of the audience, this technology is just the perfect fit. In our digital world, these electronic billboards are computer-powered electronic displays with abilities that take Out-of-Home advertising to a whole new level.

One cannot wonder why there is increasing popularity of billboard use in Nigeria and elsewhere in the world especially with the knowledge of their functionalities. A unique note is that the interactive electronic billboard is built with the capacity to stream posts from social media and respond to local weather conditions, traffic, and more. Its display pattern allows for sections that project different information at the same time in a way that the audience can focus on a particular section and still get useful information aside the primary focus. It is on this note that electronic billboard displays are commonly shared among several advertisers. The creative board rotates in a looping slideshow, with each advertisement showing for 8 to 10 seconds before the next is displayed.

Interactive Electronic Billboard Advertising in Modern-Day Nigeria

In modern-day Nigeria, advertising is an important factor in respect of marketing of products, services and ideas. From posters, handbills, billboards, the radio, television, and Internet, there is a booming industry of advertising in the country. The use of billboards in Nigeria is largely tied to the population and high rate of footfall in specific areas and locations. For instance, Lagos is considered as the commercial nerve centre of Nigeria (BrandVoice Partner, 2021; Olakitan, 2023) with its economy ranked as the fifth largest in Africa (Ugwuanyi, 2016). In fact, Lagos has assumed the position of becoming Africa's Silicon Valley (Adeoye, 2021) due to its economic boom. The implication of this is that business activities are high in the city. With an estimated 15 million people (Sasu, 2022), the city is indeed a high population dense one.

Lagos city and the country at large are not new to advertising and the specific use of billboard

because these tools have in use for tens of decades. Billboards as media of advertising are popular among Nigerians and Lagos; as people see products and services advertised across the platforms on a daily basis. The idea behind adopting and activating a billboard for advertising in Lagos Nigeria is tied to the possibility of reaching a higher number of upwardly mobile persons and other commuters who ply the road on a daily basis. In addition, advertising through the billboard; whether electronic or static is said to be reasonably affordable when compared to other advert media such as television, radio, newspaper, and even magazine. In other words, the use of billboards to advertise is relatively cost-effective.

Interactive electronic billboard with digital configuration and flexibility-of-use best suits major Nigeria cities especially Lagos. The city of Lagos assumes special status chiefly because it is considered as the model for business and economic development in the country and the West African sub-region. Nothing strikes good economic vibes like a place with the market needed to sell goods, products and ideas with ease; and in this case, Lagos with its dynamic companies and high population density is a perfect fit. The city boasts of dynamic companies and industries such as real estate, tech startups, fashion, banks, manufacturing, retail, media and so much more. In recent times, the city overtook Nairobi and other competitors; Johannesburg and Cape Town as the city with the attractiveness for startups (Jaiyeola, 2021; Okafor, 2021; Zandt, 2022). This implies that the market booms for investors. Therefore, the use of electronic billboard as affordable means of advertising becomes a choice for most companies and individuals who desire to advertise their products and services to the public. This explains some of the reasons behind the growing use of interactive electronic billboards in a typical modern-day Nigerian city.

In spite of the general acceptance and use of interactive electronic billboards, there are several downsides that have bedeviled their use in modern-day Nigeria. Some of these issues are weather conditions, high costs for brief exposure, visibility issue, time insensitive, stationary mode of advertising, limited information, short term advertising tool among many others. Some of these issues are further discussed hereunder:

1. Epileptic power supply is one of the several problems bedeviling the use of LED-dispersing electronic billboards. The issue of inadequate power supply forces companies to seek alternative source of power which makes maintaining the locations a little expensive in recent times.

However, some organisations are exploring the use of solar-powered billboards as alternatives.

2. The challenge of limited internet infrastructure and access is another one. Compared to the population of the country, Nigeria still grapples with the challenge of access to internet despite the number of persons connected to the web in the country. This poses a challenge to interactive electronic billboards because on one hand, the uncovered areas may not be perfect zones to set up such billboards. And then on the other hand, interaction may be low due to access problems.

3. Inability to accurately target a specific market is also a major challenge. Since billboards are put in high-traffic areas for all to see, it becomes almost impossible to target a specific segment of the population with a specially-tailored piece of message.

4. Limited information is another challenge with billboard advertising. Since display is image-to-image movement in most cases and the fact that visuals are prioritised over audio, it is difficult for content creators to capture the information needed in one piece. This may negatively impact on the audience receptiveness and reception of the message.

Benefits of the Adoption of Electronic Billboards as Tool for Advertising

In Nigeria and elsewhere in the world, billboards are still being used or even gaining comparative advantage over other tools/strategies of advertising primarily due to certain factors including the affordability and the audience. Several authors and scholars have come up with similar yet uniquely different points in respect of the merits, advantages, benefits of billboards in modern times that continued to endear advertisers and the audience to them. However, for the purpose of this study, some of the benefits/advantages are discussed hereunder:

1. **High visibility:** This is one of the selling points of digital electronic billboards. Since billboards come with high visibility, they are able to create brand awareness for the organisation. Therefore, any organisation with the intention to purchase space or electronic billboard airtime considers its benefit in respect of heightened visibility over time.

2. **Easy to edit:** Electronic billboards are ideal for the advertiser who often wants to change their messages during a campaign. State-of-the-art dynamic content makes electronic billboards even more effective. In essence, the ability for the contents to be changed or edited places billboard in a vantage position in modern-day advertising in Nigeria.

3. **Quick turnaround:** Basically, interactive electronic billboard show efficiency in that they can be designed to meet the requirements of the customer; and in this case the advertiser within record time. A piece of advertising can go "live" once designed in a matter of seconds and this provide advertisers with good vibes as per patronage and use of the type of billboards.

4. **Cost effective:** Traditional media has been described as one of the most expensive forms of advertising in modern-day and time. Astronomical costs often go into printing and publishing of newspapers and magazines coloured content as well. Same also applies to the production cost for videos in television. In the midst of all of these are interactive electronic billboards that can project contents remotely allowing more eyes to see the advert at a relatively low cost.

5. **High quality:** Highly pixelated LED lights are displayed in interactive electronic billboards and this enables them to produce a captivating and vibrant video or image that can grab the audience member's attention. Alternatively, the advertiser who designs his/her own content and produce high-resolution files will get the best outcome on the interactive digital/electronic billboard as used for advertising in modern-day Nigeria.

6. **Multiple messages:** Interactive electronic billboards allow businesses and owners to juggle many hats simultaneously. Put in another way, it is possible for companies and businesses to take on multiple events without the fear of not projecting one – all made possible through digital technologies that allow multiple messages on the interactive electronic billboards as used in present-day Nigeria.

7. **Space for creativity:** On a general note, interactive electronic billboards offer versatility to the advertisers and the audience as they allow different media formats; including motion pictures, videos and graphics.

8. **Interactivity:** This is a major unique benefit of the interactive electronic billboards. It is unique because of its position as a technology that allows personalised advertising. According to Versa Creative (2022) *selfie* is one of the measures used in this regard as consumers are allowed to interact with the piece of advertisement on the billboards after which their *selfies* are displayed on board for a specific amount of time. It is a great advertising strategy that works in most cases.

9. **Capacity to project time-sensitive information:** This is possible for companies that may have bi-annual or semi-annual sales or events that take place once a year. Interactive electronic billboards make use of the latest technology to project the messages for such events or sales.

10. **Illumination:** Perhaps this is another important benefit of interactive electronic billboards. The night sky may contrast with beautiful colour palette of the brand creating an extreme impact on the large billboard. This serves the aesthetics needs of advertisement for a brand.

The billboards used in modern-day Nigeria for advertising offer a whole lot for advertisers and ensure that the public gets the best out of the products and services they desire. Projecting the goods/products, services and ideas in the most beautiful way can be made possible with interactive electronic billboards that are powered to give out LED-display patterns and visuals in the most possible way.

Conclusion

This study concludes that the use of billboards for advertising goods/products, services and ideas by companies in Nigeria has continued to gain attention for varied reasons including that of innovativeness. However, one (of the principal innovations) that has placed digital billboards in spotlight is their use of LED light and other technologies like the Internet that enables web connection to both clients and the advertising agency. In addition, passersby are able to interact with the digital billboard; affording them the chance to determine what they want to see and how they want to see that which they intend to see.

It is also part of the conclusion of this study that there are a number of benefits from the use of interactive electronic billboards. Despite the benefits, this study concludes that there are areas of disadvantages for the tools as epileptic power supply is said to be a major issue for advertising companies who are burdened to seek alternative power supply means to power the billboards.

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