

Adopting Billboard Advertising as a Strategy for Solid Waste Management in Nigeria

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Abstract

One of the environmental challenges facing developing countries like Nigeria is unhealthy disposal of solid waste. Poor attitude towards waste management has been shown to be the major cause of solid waste problems in Nigerian cities. There are many ways to enlighten people on how to manage waste. Billboard advertising is one of many strategies. Billboard is one of the most effective out-door advertising that has the features to catch one eyes and attention because of the striking colours, magnificent images and giant sizes. This study examined billboard advertising as a strategy for enlightenment campaigns on solid waste management in the south-south geo-political zone in Nigeria. Two research instruments were used to collect data for the study. These were observation of billboards in state capitals in the south-south states of Nigeria, and the administration of 1,279 copies of questionnaire to respondents in these states. The study showed that billboards are effective enlightenment campaigns strategy for waste management but billboards advertising have not been adopted in these states as strategy for enlightenment campaigns on solid waste management. Poor enlightenment campaigns have been shown to be one of the causes of poor attitude to waste management. However, there is need for consistent enlightenment campaigns on solid waste management through billboards advertising.

Keywords: Advertising, attitude, billboards, solid waste management, enlightenment campaigns.

INTRODUCTION

Of all the media of advertising, outdoor or out-of-home as in the case of billboard, seems to attract much attention. This is because, it is one of many ways of securing the attention of the public (Olaghere, 1997). It is also the most visible medium as structures carrying advertising messages can be seen everywhere that cuts across literary barriers which make it easily understood by both the literate and illiterate, and it is free as viewers do not have to pay to gain access to it (Osang, 2012). Billboard advertisements or hoardings are designed to catch a person's attention and create a memorable impression very quickly, leaving the reader thinking about the advertisement after they have driven past it. They are usually only a few words, in large print, and a humorous or arresting image in brilliant colour. Olaghere (1997) argued that of all forms of outdoor advertising, billboards have in common the purpose of catching the eyes of passerby and impressing on them a concise but powerful sales message at the time they are passing by. This implies that, as Benson-Eluwa (2005) puts it, billboard advertising gives extra attention as a result of its size and location or site; colour advantages; lighted signs and mass appeal. This means that billboards are the most public means of advertising.

Billboards advertising is a valuable medium of communication to drivers and pedestrians because the posters stands alone and makes its presence felt in a different way from any other form of advertising. In Nigeria, billboards advertising are used to convey different messages on health/pharmaceuticals, beverage and food, beauty and cosmetics, soft drinks, beers and other alcoholic drinks, telecommunication services and all sorts of information including political advertising. However, one area that may not have appeared on billboards advertising is solid waste management. In Nigeria, the Outdoor Advertising Association of Nigeria (OAAN) is the body that is responsible for regulating and controlling outdoor advertising. OAAN has been accused of multiple and uncertainty in regulation of outdoor advertising thereby creating chaotic situation and defacing the beauty and aesthetics of the environment.

Idiagbe (2012), Chijide (2012) and Ladipo (2012) studies have shown that billboards as outdoor advertising contributes to economic growth. Chijide (2012) argued that billboard has become a key positive influence in Nigerian marketing environment. To him, billboard advertising is the second biggest contributor to objective-driven media engagement worldwide, and it is the most enduring and effective among advertising media options. Invariably, it is the vehicle advertising that is active at all times, for the reason that it is ubiquitous and it reinforces brand availability. The application of marketing principles and techniques to promote a social cause, idea or behaviour has been effectively used in many areas such as health, cigarette smoking, infant and maternal mortality and so on. Billboard strategy, as (Conchita, 2006) observed, has been found to significantly contributed to the attainment of specific programme objectives and goals. In a study, Conchita applied marketing principles and techniques on solid waste management and found that billboard is a good strategy for solid waste management. There were no studies connecting billboard advertising for solid waste management campaigns

within the time of this study.

Rolfe (2012) identified solid waste reduction through billboards advertising. Rolfe believes that billboards advertising on solid waste helped to instill environmental health awareness and action among the citizens and ensure the protection of public health and the environment. But this has not been the case in Nigeria. While the federal or state Ministry of Health and pharmaceutical companies have billboards on health related issues, perhaps, the Ministry of Environment at the state's level does not have billboards on solid waste management (SWM) within the south-south geo-political zone of Nigeria.

As urbanization continues to take place, the management of solid waste is becoming a major public health and environmental concern in Nigeria. The concern is serious, particularly in the capital cities, which are often gateways to the countries for foreign diplomats, businessmen, and tourists. Ogawa (2008) believes that poor visual appearance of these cities will have negative impacts on official and tourist visits and foreign investment. A typical solid waste management system in Nigeria displays an array of problems, including low collection coverage and irregular collection services, crude open dumping and burning without air and water pollution control, the breeding of flies and vermin, and the handling and control of informal waste picking or scavenging activities. These public health, environmental, and management problems are caused by various human factors which constrain the development of effective solid waste management systems.

Insufficient enlightenment campaigns on solid waste management through billboards and other mass media still remains one of the reasons why malaria is a killer illness in Africa. These disturbing reasons formed the basis for this study.

Objectives of the study

The objectives of this research are to:

- (i) To find out if billboard advertising has been used as enlightenment campaigns for solid waste management in the south-south geo-political zone of Nigeria.
- (ii) To determine the effectiveness of billboards advertising on solid waste management.

Scope of the study

The study was limited to the south-south states and their capitals such as Uyo in Akwa-Ibom; Yenogoa in Bayelsa; Calabar in Cross Rivers; Asaba in Delta; Benin City in Edo and Port-Harcourt in Rivers. These capitals were purposively chosen since solid waste and billboards are mostly found in the cities. In all, there were six cities.

Theoretical framework

The study adopted the Attention, Interest, Desire and Action (AIDA) approach of advertising. The term and approach are commonly attributed to American advertising and sales pioneer, E Elmo Lewis. In one of his publications on advertising, Lewis postulated at least three principles to which an advertisement should conform:

The mission of an advertisement is to attract a reader, so that he will look at the advertisement and start to read it; then to interest him, so that he will continue to read it; then to convince him, so that when he has read it he will believe it. If an advertisement contains these three qualities of success, it is a successful advertisement (Elmo, 1902 in www.wikipedia.com, 2012).

The use of powerful words or a picture that will catch the reader's eye and make them stop and read what you have to say next is very important for billboard advertising, and this leads to interest. This means helping them to pick out the messages that are relevant to them quickly by appealing to their personal needs and wants, for example, behaviour change towards solid waste management would promote a healthy environment. Also adopting a positive or responsible attitude and behaviour towards solid waste management is action itself.

In other words, a good advertising copy should attract attention, awaken interest, and create conviction. Later versions of the theory have edited the AIDA steps. New phases such as satisfaction (AIDAS) and confidence (AIDCAS) have been added (Barry and Howard, 1990).

- S - Satisfaction - satisfy the customer so they become a repeat customer and give referrals to a product.

One significant modification of the model was its reduction to three steps (CAB)

- Cognition (Awareness or learning)
- Affect (Feeling, interest or desire)
- Behavior (Action).

Additionally, as experts have examined this theory more defined practices and theories have been developed including the T.I.R.E.A. scale that focuses on breaking down the decision making process into more defined components (Ferrell and Hartline, 2005). Each step focuses on a progressive journey through the decision making process.

- T - Thought
- I - Interest (Desire)

- R - Risk (Evaluation)
- E - Engagement
- A - Action

The Thought portion of the decision making process can occur randomly and be stimulated by a variety of stimuli but generates little or no attention by an individual. It simply creates an awareness of something but generate little or no interest. Interest occurs when one wants or needs something - hunger is an example. The level of interest (or desire) increases as hunger and or the wants and desires increase. Risk and its evaluation occur as interest increases. One may desire steak but withhold obtaining it due to cost, or other reasons (such as health related issues, etc.). Engagement - An emotional response when Interest and Desires exceed Risks. Action - A physical response to obtain what one wants and desires and is willing to assume the risks and/or costs in obtaining it.

In all these approaches, the most important element is attention. Advertisements on billboards are capable of capturing the attention of both pedestrians and drivers or passengers on vehicle because of the elements of pictures or images, size, colours and catchy words. Billboards made inhabitants to be aware of information on how to promote, manage and sustain our environment especially if the information is on solid waste management.

MATERIALS AND METHODS

Both primary and secondary sources of materials were obtained and used.

Observation

Observation was a primary source of data. Twelve (12) research assistants were used to obtain data from these 6 capitals. The 12 research assistants were in the final year in Western Delta University (W.D.U), 2 each were from these states. The research assistants were expected within two months (during their long vacation though) to obtain data in these following areas: solid waste content on billboards (BBC) in their state capital; billboard location (BBL); the nature of the content (NC); billboard size (BBS) and number of billboards (NB). The research assistants were also given the questionnaire to administer in these capitals.

Billboard content (BBC): The research assistants were to find out if there content or information on billboards as regards solid waste management.

The nature of the content (NC): If any, the research assistants were to identify and describe the nature of the content. The content or message could be direct such as 'do not dump refuse here'; 'do not throw waste from your car'; 'keep Nigeria clean' and others.

Billboard location (BBL): Location(s) of the billboard is to be stated only when required content or expected billboard was found.

Billboard size (BBS): The size of the billboard with expected information must be stated. The specific sizes were 3'4" x 5' (4 sheet double crown); 6'8" x 10' (16 sheet double crown); 6'8" x 25' (40 sheet double crown) and other sizes.

Number of billboards (NB): If any, were to be stated.


Population and sampling design


Since the scope of the study is limited to six capitals in the south-south geo-political zone. Only population of the capitals in these six states was used. As at 2006 National Census Population, the population of Uyo in Akwa-Ibom was 309,573; Yenogoa in Bayelsa was 352,285; Calabar municipality in Cross Rivers was 183,681; Asaba in Delta was 150,032; Benin City in Edo was 374,515 and Port-Harcourt in Rivers was 538,558 (www.population.gov.ng and from www.nigerianstat.gov.ng). The total population was 1,908,644.


Sample size



In calculating the sample size for this study, the Australian Calculator as provided by the National Statistical Service (NSS) was employed. The sample size calculator allows you to calculate the required responding sample size, standard error, RSE, and a confidence interval (95% or 99%) for a proportion estimate, using just one of these criteria as an input. The estimated variance proportion was 0.5 (5%), the confidence interval was set at 0.05 (5%) and the total population from these six states was 1,908,644.

Determine Sample Size

Confidence Level: 



Population Size: 



Proportion: 

 Confidence Interval: 

Upper

Lower

 Standard Error 

 Relative Standard Error 



 Sample Size: 

Figure 1. The Australian Calculator

By this calculation, 385 becomes the basic sample size. To calculate for the oversampling procedure as a result of the large population, a response rate estimate of 30% was adopted. The calculation is presented:

$$n_2 = \frac{\text{Minimum sample size}}{\text{Anticipated response rate}}$$

Where anticipated return rate = 30% (0.30)

Where n2 = sample size adjusted for response rate.

Where minimum sample size = 385

Therefore:

$$n_2 = \frac{\text{Minimum sample size}}{\text{Anticipated response rate}} = \frac{385}{30\%}$$

$$n_2 = \frac{385}{0.30} = 1,283$$

The sample size for the survey aspect of study was 1,283 respondents

However, to determine the distribution of the questionnaire according to the population sizes, the working was thus:

$$\frac{\text{population of state capital} \times \text{sample size}}{\text{Total population of all the capitals}}$$

Asaba in Delta state: $\frac{150,032 \times 1283}{1,908,644} = 101$

Benin city in Edo state: $\frac{374,515 \times 1283}{1,908,644} = 252$

Calabar in Cross River state: $\frac{183,681 \times 1283}{1,908,644} = 123$

Port-Harcourt in Rivers state: $\frac{538,558 \times 1283}{1,908,644} = 362$

Uyo in Akwa-Ibom state: $\frac{309,573 \times 1283}{1,908,644} = 208$

Yenogoa in Bayelsa state: $\frac{352,285 \times 1283}{1,908,644} = 237$

Total 1,283

The working showed how the copies of the questionnaire were administered to each capital.

The reliability and validity of the instrument was measured through a test and re-test approach. A pre-test questionnaire of 20 copies were designed and administered to postgraduate students of the University of Benin (UNIBEN). After four weeks intervals, the same pre-test copies of questionnaire were administered to the same respondents. The essence was to elicit observations, views and perhaps criticisms about the questionnaire before being administered to the public. The Guttman scale of coefficient of reproducibility was adopted to measure the reliability of the instrument. A total of 2 errors were observed. The working was:

$$1 - \frac{\text{Total error}}{\text{Total responses}}$$

$$1 - \frac{2}{1-20}$$

$$2 \div 20 = 0.10$$

$$1 - 0.10 = 0.90 \text{ (90\%)}$$

The instrument yielded reliability coefficient value of 90%, an indication of internal consistency and validity. Simple percentages and mean were used to analyze the data collected.

RESULTS

The sample size returned (1,279) consisted of 779 (60.9%) males and 500 (39.1%) females. In the age ranges, ages between 18-24 were 91 (38.3%) respondents, between 25-34 were 396 (31%), those between 35-44 were 204 (16%) respondents, and those from 45 above were 188 (14.6%) respondents. There were 554 respondents representing 43.3% that were singles and 344 representing 26.8% that were married, 252 representing 19.7% were widows and 129 representing 10.1% were either divorced or separated. The data also revealed that there were 405 (32%) students, civil/public servants were 101 (7.8%) respondents, businessmen and women were 300 (23.4%). There were 96 (7.5%) cab drivers, 50 (3.9%) of the respondents were lecturers, 67 (5.2%) were school teachers, there were 148 (11.5%) skill labourers such as welders, auto-mechanics, carpenters and plumbers. There were also 112 (8.7%) health workers such medical practitioners and nurses. On educational level, there were 38 representing 30.0% had secondary school education while 895 representing 70% had higher education.

Table 1. Billboard advertising and solid waste awareness level

S/N	Items	Options				Total
6	Do you read information on billboards on the roads often?	Very often 254 (19.8%)	Often 390 (30.4%)	Not often 381 (30.7%)	Not at all 254 (19.8%)	1,279 (100%)
7	Have you seen billboard with illustration showing how to dispose or manage solid waste in the state capital?	Very Certain 0	Certain 18 (1.4%)	Uncertain 871 (68.1%)	Not at all 390 (30.4%)	1,279 (100%)
8	Do you see billboard as better strategy for campaigns on SWM?	Very Sure 249 (19.5%)	Sure 635 (49.6%)	Not Sure 132 (10.3%)	Not at all 263 (20.5%)	1,279 (100%)
9	How do you perceive the use of billboards for SWM?	Very good 251 (19.6%)	Good 765 (59.8%)	Poor 136 (10.6%)	Very poor 127 (9.9%)	1,279 (100%)
10	Rate by indicating the extent to which billboards advertising are effective for SWM?	0 – 49 231 (18.1%)	50 – 69 644 (50.4%)	70 – 89 358 (27.9%)	90 – 100 46 (3.5%)	1,279 (100%)

Table 1 showed that there were billboards on solid waste management but only 1.4% of the respondents have seen such advertisements. This was poor, an indication of inadequate billboards on SWM in the south-south of Nigeria. Also, 19.5% of the respondents were very sure and 49.6% sure respectively see billboards as a better strategy for SWM. By indicating the extent to which billboards advertising were effective for SWM, 50.4% of the respondents rated it between 50 – 69. This implies that billboards advertising were good and effective for solid waste management. This result corresponds with items 8 and 9 (Table 1).

Table 2. Personal responses to items on practice

S/N	Items	Options		Total
		Yes	No	
11	I do not have time to read advert on billboard.	512 (40.0%)	767 (60%)	1,279 (100%)
12	I have participated in a monthly sanitation exercise.	883 (69.0%)	396 (30.9%)	1,279 (100%)
13	Billboards advertising are persuasive to me since the images are there for me to see.	1,016 (79.4%)	263 (20.5%)	1,279 (100%)
14	I have responded to waste management seen on billboards.	11 (0.8%)	1268 (99.1%)	1,279 (100%)
15	I prefer to see and read others advertisements on billboards to solid waste management.	873 (68.2%)	406 (31.7%)	1,279 (100%)

From Table 2, it can be seen that 60% of the respondents do not have time to read billboards even if they notice it and even if the message on the billboard was persuasive. Billboard advertising illustrating how to dispose solid waste may be persuasive, however, only 0.8% of the respondents had responded to waste management as seen on billboards campaigns.

No. 16. Table 3. Worries about solid waste and billboard advertising

How much are you worried about...?	Very worried	Worried	Not so worried	Not worried at all	No opinion	Total
Solid waste problem	408 (31.8%)	309 (24.1%)	276 (21.5%)	286 (22.4%)	-	1,279 (100%)
Too much billboards in our major roads	178 (13.9%)	263 (20.5%)	362 (28.3%)	296 (23.1%)	180 (14.1%)	1,279 (100%)
Flood caused by solid waste blocking water channels	770 (60.2%)	208 (16.3%)	132 (10.3%)	127 (9.9%)	42 (3.3%)	1,279 (100%)
Inadequate billboard advertisements on solid waste	192 (15.0%)	143 (11.2%)	508 (39.7%)	288 (22.5%)	148 (11.5%)	1,279 (100%)
Delayed in clearing solid waste from the waste bins by the local authorities.	701 (55%)	201 (15.7%)	181 (14.1%)	108 (8.4%)	88 (6.8%)	1,279 (100%)

As shown in Table 3 respondents were asked to indicate how much they were worried about solid waste problems. From the data obtained, 24% were very worried, 24.1% were worried, 21.5% were not worried, and 22.4% were not worried at all while 7.9% had no opinion. There were 13.9% and 20.5% that belonged to the categories of very worried and worried about too much billboards in the cities and 28.3% and 23.1% belonged to the categories of not so worried and not worried at all while 14.1% of the respondents had no opinion to the question asked. On flood caused by solid waste blocking water channels, 60.2 and 16.3% respectively, were very worried and worried while 10.3 and 9.9% were not so worried and not worried at all but 3.3% had no opinion. There were 15.0 and 11.2% that belonged to the categories of very worried and worried, 39.7 and 22.5% that belonged to the categories while 11.5% had no opinion to the question asked. Responses from delayed in clearing solid waste from waste bins by the local authorities showed that 55 and 15.7% respectively, were very worried and worried as well. However, 14.1 and 8.4% were not so worried and not worried at all; while 6.8% had no opinion.

Table 4. To ascertain attitude to waste management and billboards campaigns

S/N	Items	SA	A	UD	D	SD	Mean	Decision
17	Billboards are strong way of conveying advertising messages because of the images seen.	366	487	113	93	220	3.53	Accepted
18	Advertisements on billboards are too much on our streets; they deface the beauty of the environment.	277	347	126	202	327	3.03	Accepted
19	Billboard campaigns are not effective strategy for SWM. It is insignificant.	165	109	82	347	576	2.17	Rejected
20	The Ministry of Environment in this state has not made significant contribution on SWM through billboards campaigns.	609	311	12	50	297	3.69	Accepted
21	Solid waste problems in our cities are mainly due to poor attitude to waste management.	612	299	46	217	105	3.85	Accepted

Results, as shown in Table 4 revealed that a scale of 5-1 was adopted and mean was used to analyze the data collected. The benchmark or mean-point was 3.0. Any point that exceeds the mean-point was accepted while below the mean-point was rejected. By this, decision was made to every item or statement. As shown in the table, respondents agreed to statements in items 17, 18, 20 and 21 while in item 19, respondents disagreed to the question asked. This implies that billboards are strong way of conveying advertising messages because of the images seen.

Table 5. Observed frequency from the states

S/N	State	Capital	Billboard Content (BBC)	Billboard Location (BBL)	Billboard Size (BBS)	Number of Billboards (NBB)
1	Akwa-Ibom	Uyo				
2.	Bayelsa	Yenogoa				
3.	Cross River	Calabar				
4.	Delta	Asaba				
5.	Edo	Benin city				
6.	Rivers	Port-Harcourt	Image of an individual illustrating "keep your environment clean".	1.Choba road; 2.Abaitor, east west road; 3. Dioubu, Mile 1,Port Harcourt.	3'4" x 5' 3'4" x 5' 3'4" x 5'	3
Total						3

From Table 5, data gathered showed that (within the period of this study), only three billboards containing information on how to manage or dispose of solid waste properly in the south-south geo-political zone of Nigeria were obtained. This implies that billboard advertising has not been adequately used in Nigeria for solid waste management campaigns. This is in the affirmative with our findings as shown in item 7 of Table 1 and item 20 of Table 4.

Discussion

It is obvious that billboards are strong way of conveying advertising messages because of the images seen. Without standing by to read billboards, they attract and catch our eyes and attention especially with the sizes, colours and images. It is difficult almost impossible to walk through the city without setting our eyes on some giant size billboards with attractive images. As obtained from the study, even when billboards campaigns on solid waste were accepted better strategies (69.1) for was management, and it was rated by 50.% by the respondents as effective for solid waste campaign, there were very few (1.4%) of billboards on solid waste management in the south-south states capitals in Nigeria. The inadequacy of billboards as strategy for solid waste management campaigns was blamed on the Ministry of Environment in these states. Also, that many (68.2%) preferred to see and read others advertisements on billboards to solid waste management could be taken as another reason for the insufficient billboards campaigns on waste management in cities and invariably, poor attitude to solid waste management.

Many indeed were worried of the poor management of solid waste in the cities by the appropriate authorities- the Ministry of Environment and Environmental Task Force. As obtained, 60% of the respondents were worried about. Also, 70% complained of delayed in clearing waste from the various bins or containers. Billboards were still far being used by the appropriate authorities for solid waste management campaigns. At a mean-point of 3.53, respondent agreed that billboards were not only a strong way of conveying advertising messages because of the images seen, but also effective strategy for campaigns on solid waste management. In all, respondents believe that solid waste problems in our cities were mainly due to poor attitude to waste management.

CONCLUSION AND RECOMMENDATIONS

The study has shown that, one of the environmental challenges facing developing countries like Nigeria is unhealthy disposal of solid waste. It revealed that poor attitude towards waste management has been the major cause of solid waste problems in cities in Nigeria. Poor enlightenment campaigns have been shown to be one of the causes of poor attitude to waste management. People can be made to manage their wastes through billboards campaigns. By striking colours, images and giant sizes, billboards attract and catch our eyes and attention. Adopting billboards advertising campaigns for solid waste management in the south-south states of Nigeria was the focal point of this study. The study also revealed that billboards have not been employed as effective strategy for solid waste management in many cities in Nigeria.

Based on the findings of the study, there is need for consistent campaigns on waste management through strategy such as billboards which are ubiquitous for everyone to see. Billboards illustrating how to dispose waste and educating people to recycle should be in strategic locations in cities where everyone can see. However, the billboards should not cause traffic jams on the roads.

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