Investigation of the Font Composition in Billboard Design in Ilorin Metropolis

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Abstract
Availability of design equipment/design software has afforded designers the ability to create and design with unprecedented speed and ease. Researches conducted in the area of graphic design software application and effective campaign materials have shown that design packages are often abused by untrained persons who produce billboard and other forms of graphic designs that do not communicate adequately. The paper examined the effective use of typographic in billboard with reference to the principles of typography usage; investigated the category of graphic designers of the billboard identified with typography problems in Ilorin metropolis; re-encoded the typography of the identified billboard for comparison and evaluated the efficacy of the identified and re-encoded billboard in term of its message delivery to the target audience. Survey research design was adopted for the study and the findings revealed that most of the billboards found with typographic problem were not designed by professional graphic designers; recommendations on encoding standard of typography were made.
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Introduction
The advent of movable types of cast lead in the 15th century transformed the visual construct of the print media; outdoor advert witnessed an unprecedented advancement and adaption. The invention of the lithographic process in the 17th century by Alois Senefeilder and the cast iron/automated press in 1803 allowed for a larger printing area and greater press pressure, both of which are necessary for effective reproduction of images. The design of adverts became more enhanced, visual communication design took on a new face, and full color design could be mass produced with the new technique.

The full automation of the print industry in the early 19th century further enhanced the quality of prints and manufacturers now had strong conviction in outdoor advertisement as full color images of products was guaranteed. Until recently, in developing countries like Africa, multiple prints (sheets of prints) join together to make a billboard, hand-made boards, and sign boards served as the outdoor media through which advertisers reach out to prospective consumers. The print industry in the late 19th and early 20th centuries witnessed high level advancement in the area of machinery, Germany, China, and Europe, made tremendous achievements in print equipment manufacturing which made printing more cost effective, time saving, better quality, and more profiting.

The 21st century is techno-driven, the print process is highly digitized which ushered in new materials and techniques. Nigerian printers and print enthusiasts are often exposed to new print equipment during print trade fairs such as the International Print Expo (IPEX), Nigeria International Print Expo (NIPEX), All in Print- China International Exhibition for All Printing Technology & Equipment. The Nigerian print industry is not left behind in terms of keeping abreast with modern print technology in other to provide print-buyers with quality services. Technology has today necessitated the segmentation of printing outfits into three units to accommodate modern facilities and to enhance the workflow, the units are; Pre-Press, Press, and Post Press.

Nigeria is a developing nation greatly influenced by modern technology such as easy accessibility to information, digital devices, new materials, equipment, and techniques. Resulting in the springing up of information communication technology (ICT) and graphic design based industries. The introduction of desktop publishing facilities has added a dramatic dimension to graphic design. Thomonth, (2007) opines that, with the new approach to the use of computers, the electronic page makeup system has brought the possibilities of generating both type and illustrations in black and white and full colour with ease. Like a recap to the 15th century techniques this new technology is more than just another typesetting method, McDonald, (1999) states that the early 15th century printer was the typesetter and often the type designer himself.

Before the advent of computers, every aspect of graphic design was manned by different specialists. Now, visuals, layout, typesetting, and even other details like planning of the headline and text are done by only one man, the graphic designer (using all sorts of software. Illustrators have not only begun to draft designs but have,

also, been producing diagrams, fashioning sketches, and doing retouches.

Design equipment/software available today has afforded designers the ability to create and design with unprecedented speed and ease. The advent of computers has made many Nigerians to go into the business of design which gives rise to the emergence of a new phenomenon known as "non-professionals". This category of designers must have acquired some level of proficiency in their creative abilities through frequent use of design packages or through apprenticeship; however, they cannot be referred to as professionals in the true sense of it. Although, they might be good in manipulating certain special effects found in some design software. They lack the fundamentals of the rhetoric of design, a professional backup that no trained designer can afford to lack, which is only acquired in design institutions worldwide. The knowledge of the theory of design enhances the quality of designs produce by trained professionals. Hence, their designs are not comparable to those made by their counterparts (non-professionals). A true professional conducts a pre-design research study (analysis and syntheses) of the design task at hand before embarking on ideation and conceptualization of design solution to design and production problems.

Unfortunately, the number of non-professional graphic designers increase by the day as technology keeps simplifying the graphic design and production processes. However, they are only patronized by clients whose visual literacy could be said to be inadequate; thus, they cannot distinguish between a good and poor graphic design. The intrusion of non-professionals graphic designers into the business of graphic design, one is exposed to all manner of poster, billboard, handbill, etc designs as one walks down the street. A critical look at most of these graphic designs shows evidence of lack of in-depth knowledge of graphic design production. Prominent among the problems is poor use of typography which is the central focus of this study.

The advent of computers and graphic design soft-ware, and typography has become increasingly experimental; design concepts are based on the creative instincts of individuals, rather than guided by acceptable standard rules. Kunz, (2008) stresses the roles of design standards by noting that the criteria for constructing good design should never be compromised. He went on to say, that it is not surprising therefore, that the volume of billboard design being turned out by self-taught graphic designers are enormous. Most times little or no emphasis or attention is given to proper use of typography. This development has created a new area of discuss on the relevance of proper use of typography in billboard design for effective encoding and decoding of visual messages by target audience. The study focused attention on the standard use of typography, comparing designs of business center (non-professionals) designers and professionals.

Objective
The main objective of the study is to assess the proper use of typography which is an essential component of visual communication. The specific objectives are to:
1. investigate the category of graphic designers of the billboard identified with typography problems in Ilorin metropolis;
2. examine the effective use of typographic in billboard with reference to the principles of typography usage
3. re-encode the typography of the identified billboard for comparison;
4. evaluate the efficacy of the identified and re-encoded billboard in term of its message delivery to the target audience.

Questions
The study addressed the following research questions:
1. Who are the graphic designers of billboard identified with typography problems in Ilorin metropolis?
2. Are the encoded typography of the identified billboard effective for visual communication?
3. What procedures can guide the effective encoding of typography in billboard?
4. What manifestation would lend credence to the efficacy (success) of the redesign billboard in term of delivering its message to target audience?

The scope
The scope of the study is restricted to billboard designed in Ilorin, the Kwara State capital of Nigeria, where art schools that produce trained graphic designers exists to facilitate data collection. To conduct a credible study that will have both internal and external validity, the study is delimited to some selected billboard in which ineffective use of typography was prominent, as the study is particularly concerned with the appraisal of typographic usage in relation to proper encoding and delivery of visual messages to target audience.

Significance
The significance of the study lays in enhancing the skills of graphic designers, create awareness, and improve the knowledge of self-taught designers in the areas of typography, and the proper use of the principles of typography

in design.

Fundamental principles of typography

In graphic design product communication, the readers' reading habits are conditioned behaviors. If the designer's goal is to make the experience of reading as compatible as possible, the fundamental principle of typographic variables must be considered. The creation of effective typography that readers can comprehend and understand is based on certain fundamental principles without which, typography cannot communicate just as language cannot communicate without grammar, vocabulary and possibly syntax. So all good typography whether in books, packaging or billboard is based on these principles as long as letters, words and sentences are employed to transmit information. Dair in Berry, (2003) identifies a typographer as someone who designs with types, not just a fancy typesetter but as someone who makes use of types in all its variations in accordance with its principles. Martins, (2007) identifies such key principles of billboard design as-

- Organize: because they provide the user with clear and consistent visual structure
- Economize: because they do the most with the least amount of cues
- Communicate: because they offer a strong capabilities to users to decode messages without referent confusion or hindrance

Therefore, to organize, economize and communicate means simplicity, clarity, distinctiveness, and emphasis. Elements which are most important for communication should not be obtrusive, ambiguous but should be easily distinguishable. Supporting this view, MacDonald, (1999) postulates that "the whole duty of a typographer is to communicate to the understanding and imagination of the target audience without loss by the way"

Aesthetic use of typography

Aesthetics in design means beauty and its opposite is ugliness. It has often been defined as the science of prettiness which is concerned with the general and theoretical studies of beauty. In billboard, beautiful typographic font styles catch the eyes and draw attention to the materials. In selecting types for billboard, the graphic designer must choose typefaces that have capacity to appeal to the understanding of the target audience. Futura may appeal to one designer and Dynamo to another, the final selection of typographic font styles should be done after conducting a pre-test to ascertain the legibility and readability of the type. This is what makes the difference between a true professional and a self- taught designer. Martins, (2007) states that all that visible language used in communicating the message include selection of typefaces to convey information and pictorial reality.

Typography exists to compliment visual content of print information materials, the design environment offer hundreds of thousands of font choices that should be utilized by designers to effectively communicate with varied audiences Riggs, (2007) is of the view that what separate beauty from ugly in typography lies in the expertise of the graphic designer to select the appropriate type face(s) for specific projects and consumers. The status of aesthetics in design is complementary to function rather than pure aesthetics in itself.

In billboard, the use of font styles that conform to the understanding of the target audience, topic, and the product should be considered. Experts in visual communication design converged on the fact that typefaces have personalities and will probably appeal to different readers and convey different mood. Although the understanding of the target audience is important, professionals are advised not to look from the standpoint of a novice, because the layman's "untrained eyes" only see letter forms and not typography. Graphic designers are implored to see the audience as "Blind readers" who's Braille need to be perfected for the sensational feelings of the fingers and for this reason, the age of the audience must also be considered.

In addition to appropriate selection of typeface for poster design, James, (1992) states that the length of the copy is a factor, he is of the view that an appropriate typeface for caption may not be a practical choice for lengthy copy and vice versa. Typography simply requires someone who is skillful enough to make the right choice of fonts that will deliver the message with much ease and not serving as mere eye catching tool.

Legibility and readability of typography

The typeface which designers use should be legible and readable, that is, the reader should be able to read it without strain. Sometimes the legibility is simply a matter of type size. Bronkhuete.(1980) views readability as the ability or ease of reading a printed page, that legibility can be measured in the speed with which each letter word can be recognized.

Readability and legibility of typography depends upon several factors that must be considered when selecting a typeface. These include texture and finish of paper color, typeface, and size of type such as length, spacing and other factors.

Alexander, (2008) notes that the main typographic points of a poster or signage should be easily readable from a distance of three meters away that it may also have a more dense text to enhance the readability. The

significance of typography does not only lay in its legibility, it should be read and read well. Plate 1, 3 and 5 are examples of poor use of typography.

Color and typography

Color is one of the attention catching elements that optimizes typography. Its qualities are too important to be ignored. It helps to invite the reader into the design better than black and white. Though color could be expensive, it adds extra attention value to any poster design. It improves realism, believability and effects. Color is also a communicator, meaning that "it talks".

Man uses color in very many ways to express his inner feelings, emotions and experience. Intelligent use of color in typography can arouse attention or create feelings. If billboard is to show excitement then some colors are better used for it e.g. the warm colors like yellow, yellow-orange, red-orange and yellow-green. Bolen, (1981) noted that "visual communication that talks about the purity of the product, white will help to convey this idea. Color can be used to increase sales; whether illustrative or decorative. If color is well handled, it will create a pleasing effect on the audience and draw their attention to the message. Brighter colors are best used on types against darker background, and darker color on types against brighter background. However, it is noted that some colors can potentially cause visual discomfort and may contribute to negative association through cross-disciplinary and cross cultural association.

Methodology

The research design adopted for this study was survey type, because, it studied typographic usage in billboards, and conducted a statistical study on a sample population to form opinion about the topic. The method was found suitable, as it allows for a complicated network of trade-offs such as financial considerations, reach, etc, which must be weighed during the strategy formulation stage. Importantly too, the method was employed by several investigators who conducted studies similar areas as this, for example, studies conducted by Kayode, (2011) on Inter-relationship of Visual Design Concepts, Consumers, and Project Advertisement on Out-door Billboard in Lagos, Nigeria and Shagaya, (2021) Contextual analysis in Yoruba font styles in Yoruba graphic design came up with findings that were found reliable.

Population of this study and sample size

The population of this study consisted of fifty-two (52) billboard design and erected within Ilorin metropolis. Convenient sampling technique was used to obtain the required sample size. Only billboard whose typographic visual contents were adjudged as capable of misleading the target audience were conveniently selected for the study. (Field observation, 2022)

On the part of graphic designers, forty (40) graphic designers constituted the population as obtained from the hub of design and printing activities: Opo-malu area in Ilorin, Kwara State, Nigeria. Another Forty (40) professional graphic designers like lectures of visual arts, graphic design, graphic design students and formally trained graphic designers (Field observation, 2022)

On the part of the audience, forty (40) consumers/audience constituted the population as obtained from the (Field observation, 2022). The study used the entire members of the population. This is called census population; the entire members of the population were used as the sample because the population was small and also to avoid under coverage of the population (Stat, 2016). Bernard (2012) opines that if the population of the study in research is less than two hundred (200), the entire members of that population can be used.

Instrument for data collection

Questionnaire and Interview guide were the instruments used for gathering data. Likert scaling for data gathering was employed; the techniques assigned a five scale value to each item on the structured Consumers' and Designers' Questionnaire to indicate respondents' judgment for the value of each item as follows: SA: Strongly Agreed (Score- Five), A: Agreed (Score- Four), U: Undecided (Score- Three). D: Disagreed (Score- Four) SD: Strongly Disagreed (Score- One). Based on decision rule that a statement is considered positive if the calculated mean is equal or and above 3. That is any response with a mean of 3.00 or above (+ or = 3.00) would be regard as agreed, while below 3.00 would be regard as disagreed. Microsoft excel soft was used to calculate the statistical dispersion from the mean.

Validity and reliability of instrument

The instrument was subjected to content, construct, and consensual validation while reliability was tested through a pilot study by checking the structured questionnaire items in tandem with the objectives of the study and the research questions. In order to closely study some of the billboards noted to have some problems, the researcher visited Ilorin metropolis and took photographs of such billboards, through phone numbers on the posters, the locations of their producers were identified like the graphic/arts studios, printing presses and

computer business centers. Consumers that make up the target audience to whom the billboards were directed with a view to validating the instrument were also contacted. Some of the questionnaires given to consumers were not completely and properly answered due ambiguity in the terminologies used which were restructured in the language they can easily understand.

Designers' questionnaire

The graphic designers' questionnaire on the identified billboards addressed research question two (2) with close-ended statements (in items 1-5) which focused on a particular area of typographic defects as follows. Information on the appropriate encoding of font styles; effective use of colour on font styles; Readability and legibility of typography; Aesthetic quality of typography used; Layout and arrangement of typographic messages use of space in the advertising billboard. The information obtained enabled the paper solve the research question three (3)

Interview guide

The interview guide addressed research question one (1) contained personal data of the respondents; it was structured for the graphic designers of the billboard identified with typography problems to sought information on source and types of training that qualified them to be graphic designers. This is to provide information on the category of graphic designers of the billboard identified with typography problems

Consumers' questionnaires

The second set of the questionnaire which was for the general public (consumers) on comparison billboard (A) and billboard (B). It addressed research question four (4) with close-ended statements (in items 1-7) on information such as font readability; colour application; effective way to communicate; skilled designer; guide and encouragement for effective encoding of typographic font style Understanding messages or captions of the billboard as well as awareness about the professional graphic designers. The professional terminologies in designers' questionnaire such as fonts, typography were change to writing, alphabet, respectfully for easy understating by the consumers.

The research question three (3) was responded to by the researcher as it dealt with the guiding procedures adopted in re-encoding re-encode the typography of the identified billboard for comparison with reference to pertinent literature on typography usage

Procedures

The study adopted two part research procedures which were studio and fieldwork as described below:

Fieldwork

This was conducted twice; the first was to collect to the identified billboard with typography problems for analysis and identified the locations of professional graphic such as visual art and graphic design lecturers, students, etcetera, as well as the general audiences/consumers of the billboards such as were contacted around the area where the billboards were erected for effective distribution of questionnaire and interview guide for appraisals and responses. The second was to evaluate the efficacy of the re-encoded typography of the identified billboard in term of its message delivery to the target audience.

The researcher shared two types of questionnaire forms titled: Professional graphic designers' questionnaire on the identified billboard with typography problems and the consumers' questionnaire on the identified/collected billboard and the re-encoded billboard. This is because the second set of the questionnaire forms required comparison between the old and the re-designed billboard titled billboard A and billboard B.

The aim of appraising the identified billboard was to ascertain the claim that the typography as an encoding element of graphic design is not effectively used. While the second set of the questionnaire forms enabled the study to evaluate the efficacy of the re-designed billboard in term of its message delivery to the target audience.

Studio work

This consisted practical computer based studio work which included solving the problems of ineffective typographic usage found in the samples of billboard by applying the rules suggested by various researchers and authorities in the field of billboard design was carried out. Plate 2, 4 and 6 are examples of several studio experiments carried out.

Procedure for data collection

The pretest was carried out using ten (10) numbers of A3 size images of billboard titled 'billboard (A)' which is 20% of 52 samples collected as test materials. Forty (40) questionnaire forms were distributed lectures of visual arts, graphic design, graphic design students and formally trained graphic designers for appraisal. The result of

the pretest was analyzed and the researcher discovered there were problems in typographic usage for effective encoding and decoding of the desired messages in the identified billboards. The ten (10) identified billboards used for the pre test were redesigned by eliminating the defects observed that hindered the effectiveness.

Forty (40) computer operators, informally artists/graphic designers and printers were provided with structured interview guide on their source graphic design training.

Another forty (40) questionnaire forms were distributed along with the initial identified and the re-encoded A3 size images of billboard among the consumers such as civil servants, business persons and students for post test appraisal. All the questionnaires and interview guides were returned, because the researcher consulted them personally one after the other.

The result of both the pre test and the post test were analyzed and discussed as below.

Summary of data analysis
Research question one:
Who are the graphic designers of the advertizing billboard identified with typography problems in Ilorin metropolis?

The research question sought information on the category of designer of the identified billboard; it was addressed by the designers of the collected sample billboard, where imprint was not available, the clients, such as the political campaign offices, ministries and schools were contacted to locate the designers of the billboard for conducting the interview. A copy of an A3 printed copy of billboard was presented for discussion on their graphic design training background. Formal training centre such as college of education, polytechnic and university or computer business centre.

Designers' Interview Response
Table 1 Analysis of Interview response: Professional and Self Trained (N=40)

Designer's category	Nos	%
Professional Artist/ graphic Designer	14	35%
Computer Operators	26	65%
Total	**40**	**100%**

Source: Field work, 2022

The result in table 1 shows fourteen 14; 35% of the designers of the identified billboard were professional graphic designer and twenty-six 26 (65%) were computer operators operating in business centre.

Research question two:
Are the encoded typography of the identified advertising billboard effective for visual communication?

In order to answer this research question, an A3 printed image copy of billboard identified with typography problems with a set of statement contained in the questionnaire form were given to lecturers, students and professional graphic designers to tick appropriately their level of acceptability.

Information on the appropriate encoding of font styles; effective use of colour on font styles; Readability and legibility of typography; Aesthetic quality of typography used; Layout and arrangement of typographic messages use of space in the advertising billboard.

Table 2 presented the statements, data collected and the observed mean scores (N=40)

S/N	ITEMS	SA	A	U	D	SD	MEAN	REMARK
1	The encoded typographic font style is legible for easy decoding by audience in moving vehicles	22	8	0	3	7	3.87	Accepted
2	Colour application on the encoded typographic font style does not enhance readability according to principle of typographic usage	22	7	0	5	6	3.85	Accepted
3	Arrangement and layout of encoded typography in relation to space is in accordance with principle of typographic usage	7	5	0	20	8	2.57	Rejected
4	The encoded typographic font style can attract and hold the attention of the audience in term of aesthetic	20	10	0	6	4	3.90	Accepted
5	The encoded typographic font style is not appropriate for reading and understanding of the readers around the place where the billboard was erected	24	14	0	2	0	4.50	Accepted
	Grand Total						**3.74**	**Accepted**

Source: Field work 2023

Table 2 shows the respondents' opinions on the effectiveness of encoded typography the identified billboard. From the table, four items from questionnaire were accepted while one other item was rejected. From the mean rating scores recorded on the items that were accepted, shows that: the encoded typographic font style is legible for easy decoding by audience in moving vehicles with a mean score of 3.87, colour application on the encoded typographic font style does not enhance readability according to principle of typographic usage with a mean score of 3.85, arrangement and layout of encoded typography in relation to space is in accordance with principle of typographic usage with a mean score of2.57, the encoded typographic font style can attract and hold the attention of the audience in term of aesthetic with a mean score of 3.90 the encoded typographic font style is not appropriate for reading and understanding of the readers around the place where the billboard was erected with a mean score of 4.50.

Research question three
What procedures can guide the effective encoding of typography in advertising billboard?
Description and re-designing of advertizing billboard identified with typography problems
In order to answer the research question three (3), there was the need to first describe the billboard identified with typography problems, analyzed the responses obtained from the identified professional graphic designers through pre-test questionnaire.

Having done the analysis on the billboard, the researcher therefore explored the available pertinent literature on the guiding principle of out-door billboard. (Berry, 2008; Martins, 2007; Kunz, 2008; Alexander 2008)

In plate 1, the typographic font style used in encoding the caption 'KWARA EDUCATION FUTURE SUMMIT' was characterized of multiple use of colour and insertion of picture in-between each word making the words read separately. The third word in the written sentence was in italic. The layout and positioning of other reading elements such as: 'SAVE THE DATE; 5TH AUGUST 2021; RESGITER TO ATTEND; WWW.KWARAEDUCATIONFUTURES.COM' were also in multiple colour background. The designer adopted centre justification or alignment with empty spaces in both right and left of the typography layout. In encoding text of billboard, noise' is recognized as the arbitrarily use graphic design elements such as multiple use of typographic font style, font size, colour application in relation to the contrast and other visual elements. The entire motioned variable could pose "noise" that could hinder effective decoding of the encoded text messages. Chris (2021) also agrees that noise occur during encoding and decoding process which can disrupt or cloud a message. The responses obtained during the pretest revealed deciphering problem, which informed the re-encoding of the plate 1 as shown in plate 2

Plate 1: Identified Billboard Sample by the Researcher

Source: Field work (2022)

The text messages in the plate 1 were re-encoded by re arranging typography element in full justification, removal and re positioning of the inserted pictures. The sentence 'KWARA EDUCATION FUTURE SUMMIT' was now written in a single font style and color to ease readability. Other reading elements such as: date and address were re arranged as shown in plate 2

Plate 2: Re-designed Billboard by the Researcher

Source: Studio work (2023)

The plate 3 was sample collected and a political campaign billboard; the back ground colour which was adopted from the colour of the political party's logo, the background colour was of the same intensity with the picture. The text element such as 'THE CREDIBLE' was written in black colour on dark-orange colour background. The post test revealed the word 'ALTERNATIVE' was not effectively deciphered due to the separation of the letter 'A' from the remaining letters of the word. The letter 'A' was separately given logo treatment with colour differs from the colour of the remaining letters of the word. The typography layout in term of justification or alignment was neither in the right nor centre.

Plate 3: Identified Billboard Sample by the Researcher

Source: Field work (2023)

The plate 3 was re-encoded by re arranging typography element in full justification; the sentence 'THE CREDIBLE ALTERNATIVE' was now encoded in black colour and a single font style was adopted to ease readability. The background colour was maintained but tinted to enhance contrast between the picture and the background; because, in designing billboard, effective use of contrast cannot be over emphasized, hence the variations of elements in design are the result of contrast. Beauty and meaning are given to design when element contrast is given appropriate attention. Daniel in Dakyes, (1995) observes that "numerous devices for getting attention are being used at the present which may be grouped together under the principle of contrast or novelty" that the low of contrast states that other things being equal, the duration and degree of attention depend upon the contrast of an object with other surrounding objects.
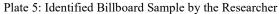
The first letter of the word 'ALTERNATIVE'-'A' was given emphasis and rendered like logo by the encoder. The billboard was re-designed for legibility as shown in plate 4. Danger, (1973) opines that emphasizing the most important elements should be easily perceived. Non critical element should be de-emphasized and cluster should be minimized so as not to hide critical information.

Plate 4: Re-designed Billboard by the Researcher

Source: Studio work (2023)

Messages of billboard in Plate 5 was posted in a public place to be viewed by audience in transit, it was characterized of multiple reading material and illustrations. Shapes and colour were used to show emphasis. Martin, (2008) explains that the main points of a visual or signage should be easily readable from about three metres away, that it may also have a more dense text suitable for viewers who come for a closer look. Armin (2008) asks that "what important and significance does typography have beyond the fact that it should be effectively read, and read well?" In addition, both the client and the graphic designer must agree on the amount of reading elements and location the product will be posted or erected, hence it is a large advert to passing pedestrians and drivers. *"A passing by driver on the road will only look at the billboard for a second or two, billboard should be a great design that is eye-catching, easy to read and understand quickly"* (https://www.m3 agency.com/outdoor) the reading and other visual elements were re-designed for effective visual communication as shown in plate 6

Plate 5: Identified Billboard Sample by the Researcher

Source: Field work (2023)

Bernard, (2002) emphasizes that since the crust of creating any visual is to clearly pass a message, the illustration should be appropriate and simple, unambiguous, well placed, easily deciphered and uncluttered. The researcher made simple the selection of typography by reducing the font style to a few and applied contrasting color scheme for effective readability. Danger, (1973) opines that much complexity of design elements such as colour, font styles, and illustrations, tends the viewers to close their eyes to reject something that is too difficult to understand, too much different color application on fonts font and font style that does not conform to the topic should also be avoided. In addition, the Institute for Out-door Advertisement (I O A) agrees that the number of design elements in an advertisement should be confined to three if possible two, or even one. Martin, (2008) observes that visual elements used in billboard should be reduced to ease visual enhance clarity and effectiveness**.** The plate 5 was worked on and presented in plate 6

Plate 4: Re-designed Billboard by the Researcher

Source: Studio work (2023)

Research question tree:
What manifestation would lend credence to the efficacy (success) of the redesign billboard in term of delivering its message to target audience?

The research question on the efficacy (success) of the re-encoded billboard, it required comparison, therefore, a copy of an old was titled billboard 'A' and a redesigned billboard titled billboard B alongside with questionnaire form for appraisal.

Table 2 presented the statements and the observed mean scores.

Table 2: the efficacy (success) of the re-encoded billboard (N=40)

S/N	ITEMS	SA	A	U	D	SD	MEAN	REMAK
1	The typographic font style used to encode or write messages in billboard (B) is more readable than the typographic font style used on the billboard (A)	15	19	0	2	4	3.97	Accepted
2	I can easily understand the messages or captions of the billboard despite the multiple application of colour on the used font styles in billboard (A) than in the billboard (B)	16	20	0	1	3	4.12	Accepted
3	The typographic font style used to encode captions of the billboard (B) is the effective way to communicate to audience than the font style used on the billboard (A)	23	7	0	6	4	3.97	Accepted
4	The designer of the billboard (B) is more skilled in graphic design than the designer of billboard (A)	25	5	0	5	5	4.00	Accepted
5	The techniques used in encoding typographic font style of the billboard (B) will be a guide for effective encoding of typographic font style to designers of the billboard (A)	27	7	0	3	3	4.30	Accepted
6	The typographic font style used to encode captions of the billboard (B) will encourage other graphic designers or media producers to encode messages effectively	11	19	0	5	5	3.65	Accepted
7	I am aware of professional graphic designers who could design as in the billboard (B) in Ilorin metropolis	5	9	0	15	11	2.55	Rejected
	Grand Total						**4.42**	

Source: Field work 2023

Table 3 shows the responses of the consumers on the efficacy (success) of the re-encoded billboard. From the table, six items from questionnaire were accepted and one item was rejected as follows: The typographic font style used to encode or write messages in billboard (B) is more readable than the typographic font style used on the billboard (A) with a mean score of 3.97, The designer of the billboard (B) is more skilled in graphic design than the designer of billboard (A) with a mean score of 4.12, The typographic font style used to encode captions of the billboard (B) is the effective way to communicate to audience than the font style used on the billboard (A) with a mean score of 3.97, The designer of the billboard (B) is more skilled in graphic design than the designer

of billboard (A) with a mean score of 4.00,

The other items were as followed: The techniques used in encoding typographic font style of the billboard (B) will be a guide for effective encoding of typographic font style to designers of the billboard (A) with a mean score of 4.30 and the typographic font style used to encode captions of the billboard (B) will encourage other graphic designers or media producers to encode messages effectively with a mean score of 3.65

The remaining statement was: I am aware of professional graphic designers who could design as in the billboard (B) in Ilorin metropolis with a mean score of 2.55

Findings
The following were the findings of the study based on the data collected and analyzed:
a. Based on the figure shown on Table 1, Most of the billboard designers of the identified billboard with typographic problem were not professional graphic designer; they were computer operators operating in business centre without adequate knowledge of principle of typographic usage.
b. The result on Table 2 shows the encoded typographic font styles of the identified billboard were not in conformity with the principle of typographic usage and there were readability challenges.
c. Typography can be effectively encoded in billboard with adequate knowledge of principle of typographic usage
d. The result on table 4 shows the redesigned made by the researchers made acceptable standards.
e. Another factor found to be responsible for the design problems was clients were in the habit of patronizing non professional designer because they are not aware of the existence of professional graphic designers.

Recommendations
The following recommendations for improvement are necessary in view of the findings of the study. Having discovered the factors that were responsible for the design defects, the researchers hereby make the following suggestions with the hope that designers and those concerned will take note of them in order to optimize the quality of poster design in Ilorin metropolis.
1. Clients, Printers, computer operators and the general public should be enlightened and educated on the importance of principles and elements of design the fundamental principles of typography and how they can be used to optimize good standards in design.
2. Principles of design should be included in the primary and secondary school curriculum and should be made a compulsory subject to be taught in both primary and secondary schools, since most of the designers of the posters went through elementary and secondary education.
3. Periodical release of journals, workshops and semi formal training should be organized on the importance of principles of typography usage by professional designers, inviting printers, computers operators and general public to participate.

Summary and conclusions
This study was inspired by the important roles billboards play in the social-economic, political, spiritual and academic life of the people of any nation. (The problem of the study was therefore to appraise the typography usage in billboards design in Ilorin metropolis). The study provided evidence that arbitrary use of typography can lead to ineffective visual communication and recommendations were made for standard visual communication through a wide range of reviewed related literature, several field trips to some printers, designers, artists and consumers in Ilorin metropolis questionnaires and interview guide were administered in several places and the results were analyzed.

References

Alexander, (2008), Tips for effective poster design, https://www.birmingham.ac.uk 07/05/2022

Armin, G. (2008) Good Typography, http://www.underconsideration.com07/05/2022

Berry, D. J. (2008), Seven Principles of Typographic Contrast, http://www.creativepro.com/article/dot-font-seven-principle-of-typograph-contrast. 07/05/2022

Bolen, W. H. (1987), Advertising, John Willey and Sons New York, USA

Boulton, M. (2008), Five Steps to Better types, www.markboulton.co.uk/journal/comment.five-simple-steps.

Broekhuizen, R. J. (1980), Graphic Communication, Dimco Gray Company, U.S.A

Dakyes. S. U. (1995). An Analysis of Graphic design Problems found in some Bill Advertisement in Nigeria, unpublished M.A. Thesis: Department of Industrial Design, Ahmadu Bello University, Zaria, Nigeria.

Danger E. P. (1937). Colour in Promotional Design, Gower Technical Press Limited, England

James, C. (1992), Designing with Types: A Basic course in Typography B.D.I. Communication, Inc., New York, U.S.A

Kayode, O. F. (2011). Inter-relationship of Visual Design Concepts, Consumers, and Project Advertisement on Out-door Billboard in Lagos, Nigeria. Unpublished Ph.D Dissertation, Department of Industrial Design, Federal University of Technology, Akure, Nigeria.

Kunz, W. (2008). Typograhy: Macro and Macro aesthetics, www.youworkforthem.com/ product, accessed 05/02/2023.

MacDonald R. (1999) The Evolution of Typography, https://www.infoamerica.org accessed 07/02/2023.

Mark Boulton (2005), Five Simple Steps to Better Types, https://markboulton.co.uk/journal, accessed 07/05/2022.

Martin, S. (2008), Effective Visual Communication for Graphical User Interfaces, http://wed.cs.wpi.edu/mat/courses. accessed 05/01/2022.

Michael H. B. (1988), Pal Packet: A Graphic Art Production Handbook, International Paper Company, Memphis.

Riggs, T. (2008), Fonts, Print, Print-design & Layout features, http://www.creativepro.com/articles.

Shagaya, M. O. (2021) Shagaya, (2021) Contextual analysis of Mashood Olanrewaju Shagaya's Orthographic Yoruba font styles in Yoruba graphic design. Graspact Journal of Arts and Technology,1(4), 51-58

Stat, T. (2016). Bias in Survey Sampling: http://www.stattrek.com/surveyresearch/sampling-methods.aspxTutorial=AP. accessed 05/01/2019

Thomont T. (2008) Does your Font Size measure up? http://www.tomontheweb2.ca/cmx/1709.