



## THE IMPACT OF COMMUNICATION ON ROAD USERS' RULES CONFORMITY, REINFORCEMENT AND BEHAVIOUR EXCHANGE

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### *Abstract*

*This study examines the extent to which communication as a social marketing tool can help bring about road users' rules conformity, reinforcement and behavioural exchange. From a population of 11,760,871, a sample of 420 was derived using Krejcie and Morgan sample table. The theoretical framework was anchored on communication theory, behavioural learning theory and exchange theory. The stated hypotheses were tested using Multiple Regression and from the findings, we realized that all the hypotheses tested had a significant coefficient and associated p-values. For these reasons, the stated null hypotheses were rejected. The study further recommends that government and policy makers on matters of road usership and safety should use social marketing efforts, applying measures such as communication in influencing and modifying the behaviour of the road users to conform to the rules on usage of the road, to reinforce better behaviour on the road and to ensure road users let go undesirable behaviour for better behaviour on the road.*

**Keywords:** *Communication, rules conformity, reinforcement, behavioural exchange, road users*

## Introduction

Behaviour is a critical component of human activities in all spheres of lives. A lot of major problems in life are the outcome or are concerned with behaviour. In human endeavours, behavior helps to define success, provides clear pointer to the direction in which the result person's effort is heading to. Behaviour is a component of personality and it is exhibited at different places such as in the home, place of worship, schools and offices and even on the road. As people make use of the roads or while in transit, they display various sorts of behaviour, some of which are not in conformity with the desirability of the society. Road users as part of the society, are of different personalities. As the road users interact in the process of using the road, they exhibit diverse behaviour.

Behaviour modification according to Whitman (1975) is "the use of learning theory principles to teach adaptive behaviour or alter maladaptive behaviour". Behaviour modification is generally concerned with the systematic use of learning principles to evaluate and improve behaviour so as to make the behaviour better for harmonious societal integration. Behaviour among people in the use of public facilities such as roads vary, with non-compliance to rules being very conspicuous, dominating road usership behaviour and creating some unsafe conditions on the roads. It is however understandably that human beings are heterogeneous in nature and their incompatibility have meaningful effect on their experiences (Buell, Campbell & Frei, 2018), particularly in the use of road infrastructure.

In the process of interacting and interfacing with other people, with infrastructure and facilities, the road users gain some experiences and such experiences could help them to shape their behaviour. Beside the experiences, the difference in personality, background, education, exposure and culture are some of the likely reasons people who use the road exhibit some undesirable behaviour, which could be modified to align in conformity with the standard rules, value and norms of the society. Looking at this potential of modification of behaviour, this work therefore was to establish an understanding and unravel the application of social marketing in modifying behaviour of road users.

In road usership, undesirable behaviour is commonly noticed among the drivers of commercial vehicles; ranging from motor cycles, tricycles, cars to trucks or trailers. The non-compliance to road regulations, by drivers of these vehicles has caused the society a lot of damages and losses. It is therefore important that efforts need to be made to avert such damages and losses to continue. This then creates the need for behaviours of the drivers to be modified so as to align to the desired behaviour of the society and at the same time mitigate the damages and losses experienced on our roads. This issue of road non-compliance behaviour is prevalent in the Nigerian society, mainly in cities such as Abuja, Lagos and Port Harcourt. In Port Harcourt, drivers' behaviour has gotten out of control but the proposition of this work was to use the social marketing approach for the modification of drivers' behaviour on the roads.

## Statement of Problem

The behaviour of the road users particularly the commercial motor drivers has been a source of concern because their behaviour has been detrimental to the smooth and safe usage of the road in Nigeria. This concern has caused the government to establish an agency, which is the Federal Road Safety Commission (FRSC), to instill behaviour change among the drivers through reprimanding, guidance, education and communications with the road users from time to time (Oyeyemi, 2018). This government agency carries out its functions with the aim

of ensuring that the road users modify or adjust their road usership behaviour to what is desirable by the society.

With all the operational and marketing efforts put in place by the FRSC to ensure safe and better road usership, road fatality has still not reduced in number but rather it is still going on. Education, enlightenment and enforcement have been the leading strategy in ensuring safety on the roads (Oyeyemi, 2018). There are some marketing and educational efforts put together by the FRSC to delight the road users who invariably are their customers. Jobber (2004) points out that the marketing efforts of the organisation are to delight and satisfy the consumers and this is the core of marketing for all organisations. These activities such as communication, education, reprimanding, advocacy and collaborations are some essential dimensions of social marketing (Andreasen, 2002).

It is also pertinent to note that the World Bank has also carried out some intervention programmes which could energize behaviour modification of the drivers for enhancing road safety in Nigeria (Oyeyemi, 2018). Such intervention programmes are approaches that are targeted at modifying the behaviour of the FRSC's customers for better road usership. The intervention could also go a long way in helping the FRSC to achieve its objectives of safer road usership. Despite of all these efforts by the donor agencies and the FRSC, the trends of poor road usership still persist and fatality in the roads has not reduced. Thus, the motivation for the study.

## Research Hypotheses

The following were posited as the hypotheses for this study:

- H<sub>01</sub>:** There is no significant relationship between communications and rules conformity among road users in Port Harcourt, Nigeria.
- H<sub>02</sub>:** There is no significant relationship between communications and reinforcement among road users in Port Harcourt, Nigeria.
- H<sub>03</sub>:** There is no significant relationship between communications and behaviour exchange among road users in Port Harcourt, Nigeria.

## Theoretical Foundation

### Communication Theory

The need for communication has been with mankind from creation and it has been an essential part of human existence. There have been different views in respect to the definition of communication. Rueben (1984) sees communication as information related behaviour. Another scholar, Dale (1969) with a different opinion points out that "communication is the sharing of ideas and feelings in a mood of mutuality". Eadie and Goret (2016) consider communication to be a phenomenon that has to deal with shaping of public opinion, as language use, as information transmission, a tool developing and strengthening relationships and an element for conveying, defining, interpreting, and critic of culture. For social marketing, which is concerned about change in behaviour, what is of paramount interest is the use of communication in the transmission of information and shaping opinion. The core or the heart of communication is the transmission information. It is in the light of this that Sapru (2013) points out that communication as "the process of exchanging information.

Communication, involves people, sharing ideas and meaning, and symbols”. However, the various definitions of communication are influenced by the aspect of human behavior of greatest interest (Croft, 2004).

Despite the field of interest or background of the various scholars, it is obvious that the core subject of communication which is the message is shared and does not reside with the originator or sender. To corroborate the position of sharing in communication, Theodorson and Theodorson (1969): in their own definition assert that it is “the transmission of information, ideas, attitudes, or emotion from one person or group to another...primarily through symbols.”

As an act of sharing or passing on information or idea, it includes the transference and the understanding of the meaning, otherwise it is of no use. The bottom-line for this process to be successful, the meaning must be imparted and understood. Franzoi (2000) corroborates this approach of communication as he asserts that in communication, “first we have to pay attention to the message, second, we must comprehend the message, and third, we must accept the message.” Understanding the message received by paying attention is paramount in the process. It is this understanding that can give rise to acceptance or rejection. Social marketing communication need to have the concept of attention, understanding and acceptance as part of the communication development so that the message deployed could be effective.

Communication process generally follows a simple path of the message being sent or transmitted from the sender, the message is encoded and passed on to the channel which moves it ahead through the decoding, and on to the receiver (Sapru, 2013; Kotler, 2003). A feedback path usually follows, just to transmit back to the sender the response to the original message sent. What the theory of communication basically focuses on is simply; who says what, by what means and to whom and why or for what purpose? (Franzoi, 2000).

Communication theory provides a platform and model on which the target audience could be reached with the appropriate message to achieve the desired objectives. Though various scholars have posited various models based on their background, focus and objectives. Some of the very known models include: Harold Lasswell Model of 1948, Sharon and Weaver Model of 1949, Theodore Newcomb Model of 1953, Wilbur Schramm and Osgood Model of 1954, George Gerbner of 1956 Westley and Maclean Model of 1957, David Berlo Model of 1960, Dance Helix Model of 1967, Davito’s Interactive Model of 2003 and Davis Foulger of 2004 (Amudavalli, 2005).

### **Behavioural Learning Theory**

Behavioural Learning Theory (Bickel & Vuchinich 2000; Rothschild 1999) “which emphasizes the manipulation of rewards and punishments in the environment surrounding desirable and undesirable behaviours” (Andreasen, 2002). Learning is something that happens with experience over time. It involves change in the way of doing things. Santrock (2000) states that learning is “a relatively permanent change in behaviour that occurs through experience”. Learning actually will trigger certain changes in behaviour. It involves acquiring a new ability to do what has not been done before. Learning in behaviour would mean a lasting change in behaviour that occurs as a result of practices and past experience (Engle & Snellgrove, 1989).

The more prominent theories of learning are the classical conditioning and operant conditioning theories (Santrock, 2000). However, Turner and Helms (1991) are of the view that learning does not include behavioural changes from injury sustained, fatigue or maturation but it is dependent on maturation to occur because certain cells of the body system will have to develop to the level of processing the change. Skinner (1953), states that, “the term ‘learning’ may profitably be saved in its traditional sense to describe the re-assortment of responses in a complex situation”. Learning of behaviour will invariably require some stimulus and reinforcement. There is the stimulus - reinforcement – response which is classical conditioning learning and the stimulus – response -reinforcement which is the operant conditioning learning in behaviour (Engle & Snellgrove, 1989). This is the understanding of how behaviour modification in the usership of road facilities or infrastructure should be approached. Certain road users with obstinate behaviour on the road could be approached easily with the understanding of the behavioural learning theory.

### **Exchange Theory**

The Exchange Theory (Housten & Gassenheimer, 1987) explains that individuals are need-directed with the natural tendency to try and improve their wellbeing. Whatever the individual has and cherishes he or she will not let go when there is no (at least) commensurate or more benefits to replace that thing that is being given away. Hastings and Saren (2010) argue “that in order to improve consumers’ readiness to change, they have to be provided with something more beneficial for the exchange”. Transfers from both parties involves in the exchange have to happen, whether it is physical or intangible items are involved. Bagozzi (1979) points out that two or more social actors involved in exchange will transfer tangible or intangible items among themselves. Exchange theory according to Stark (1989) is a common form of interaction that emphasizes the manner in which parties reward themselves.

Exchange in social marketing is majorly intangible items, which in most cases are the undesirable behaviour in the society swapped for desirable behaviour that will be beneficial to the person and the society at large. Human beings seek rewards from one another whenever there is some exchange happening. They also attempt to influence one another and getting some benefits from each other whether physical or unobservable things such as behaviour. However, it is clear that exchange occur between two or more actors. Kotler (2003) indicates some basic criteria for exchange to happen which are; that there has to be two parties, each party will have something of value to each other, each of the party can communicate and deliver what it has in the exchange, each party is free to accept or reject the exchange offer and that each party believes that it is appropriate to deal with each other. These conditions are fundamental to especially in social marketing circumstance since it involves the individual and behaviour. The exchange theory therefore provides the understanding that the individual will have to voluntarily partake in the exchange process.

### **Methodology**

For purpose of clarity the target population of this study is the group of people to whom the variables of this study were applied to. In this circumstance therefore, we expected that the results of our study would be applied to all road users in Nigeria; hence this remained our target population for this study. The study population on the other hand is the usership of vehicles on the road who are customers to FRSC in Port Harcourt, Nigeria. This definition

implies that our population for the study was all the drivers of motor vehicles on the road in Port Harcourt, Nigeria.

The population from which the sample was drawn from is a finite one, which is the drivers of motor vehicles in Port Harcourt, Nigeria, and the information on it was obtained from the National Bureau of Statistics. A finite population is simply, a population where specific and accurate figure are applicable (Nwankwo, 2016). For this study, the sampling frame was the population of vehicles which are driven in Nigeria. The National Bureau of Statistics (NBS, 2018) provides the human population figure of 198,000,000 persons with a 0.06 vehicle per population and stating clearly the motor vehicle population to be 11,760,871. This is the official figure of the numbers of vehicles on the Nigerian roads as at Quarter 2, 2018. The split of these vehicles on the road is as follows:

Commercial vehicles	–	57.7%.
Private vehicles	–	40.98%
Government/Diplomatic vehicles	–	1.32%.

Drilling down into the number of people who patronize or are customers of the FRSC, we considered the number of Drivers' Licenses produced for issuance. Taking into consideration that our geographical scope for this study is the Port Harcourt, Nigeria, the NBS latest data indicates that for Port Harcourt, Rivers State, for Quarter 2, 2018, the customers of FRSC are 11,862 going by the number of Licenses issued. This is our study population.

The Krejcie and Morgan (1960) Sample Determination Table gives us 375 and the researcher decided to boost the sample by 10% (37.5). That is 375 + 38 will give us 413. Therefore, this research was on sampled 420 practicing drivers who are owners of valid FRSC Driver's License who we have defined as customers of the FRSC.

### Data Analyses and Findings

<b>H<sub>n</sub></b>	<b>Statement of Hypotheses</b>	<b>Results(rho)</b>	<b>p- Value</b>	<b>Decision</b>
<b>H<sub>01</sub></b>	There is no significant relationship between communications and rules conformity	0.384	0.000	Reject
<b>H<sub>02</sub></b>	There is no significant relationship between communications and reinforcement	0.425	0.000	Reject
<b>H<sub>03</sub></b>	There is no significant relationship between communications and behaviour exchange	0.365	0.000	Reject



## Conclusion

The outcome of this correlation study has established in very clear terms that social marketing influences behaviour modification of road users. In all the measures of social marketing there are high regression coefficient values when put side by side with the dimensions of the behaviour modification. All the hypotheses recorded same p-values of 0.000 thus allowing all the null hypotheses to be rejected.

The first, second and third hypotheses which examined the relationship between communication as a measure of social marketing and rules conformity, reinforcement and behaviour exchange which are dimensions of behaviour modification revealed coefficients of 0.384, 0.425 and 0.365. All the three had same p-values of 0.000 which are all less than alpha of 0.05 which is the benchmark. These outputs established reasons for the first three null hypotheses stated at the beginning of this study to be rejected, thereby allowing for acceptance of the alternates which indicate the existence of relationships amongst those variables. The results also show that the predictor variable which is communication influenced the criterion variables which are rules conformity, reinforcement and behaviour the value of adjusted  $R^2$  which are 14.6%, 17.9% and 13.1% respectively. In line with the theoretical standpoint, communication has significant relationship and it influences rules conformity, reinforcement and behaviour exchange of the road users in Port Harcourt, Nigeria.

## Recommendations

1. The government and policy makers on matters of road usership and safety should use social marketing efforts, applying measures such as communication, advocacy and education in influencing and modifying the behaviour of the road users to conform to the rules on usage of the road, to reinforce better behaviour on the road and to ensure road users let go undesirable behaviour for better behaviour on the road.
2. The results of this study have provided veritable and handy guide for the establishment of policies and legislations that are applicable to road usership and safety of the road; the FRSC and Legislative arm of government should make use of the outcome of this work.
3. The road traffic and safety managers should use the outcome of this work in their efforts in modifying the behaviour of road users so that there could be sanity on the road.

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