ASSESSMENT OF COMMERCIAL DRIVERS' PERCEPTION OF ROAD SAFETY EDUCATION ON COMPLIANCE TO ROAD TRAFFIC RULES AND REGULATIONS IN DELTA STATE

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Abstract

The Global strategic plan to reduce worldwide deaths from traffic injuries recognizes the driver as the key element in its approach. Hence drivers' education has been accorded the highest priority in Nigeria by the Federal Road Safety Commission (FRSC). Thus, this study seeks to assess the perception of commercial drivers' on Federal Road Safety Commission (FRSC) education on compliance on road traffic rules and regulations in Delta state. The descriptive survey research design was adopted for the study. The population of the study comprised all commercial drivers in Delta State. A sample size of 320 respondents was selected for the study using stratified and simple random sampling techniques. Two research hypotheses were tested at 0.05 level of significance. The Drivers' Compliance on Road Traffic Rules and Regulations Questionnaire (DCRTRRQ) was used to collect relevant data. The data were analysed using Two-way Analysis of Variance Statistics. It was found out that ...

Road traffic safety education programme influenced drivers' compliance to road traffic rules and regulations. Drivers' experience was observed to affect their level of compliance to road traffic rules and regulations.

Keywords: Driver Education, Perception, Federal Road Safety Commission, Compliance.

Introduction

In other for individual, firms, small and large organisations and even government agencies to carry out their day to day activities, all types of vehicles are on the roads and highways. Commuters using their private or commercial vehicles all get busy on our highways and if they are not well regulated this will always lead to road crashes causing serious injuries and in some cases even loss of lives. The federal Road Safety Commission (FRSC) established in 1988 has the responsibility to ensure safety on Nigerian roads and highways. FRSC intrinsically revolves round three major factors: the road, the vehicle and the driver. The Global strategic plan to reduce worldwide deaths from traffic injuries recognizes the driver as a key element in its approach. Hence driver education and safety programmes are accorded highest priority in Nigeria by the FRSC. Adequate education for drivers would in no mean measure forestall eventualities or accident that can happen behind the wheel in a split second. Okafor, Odeyemi, Dolapo, Ilika and Omosun (2014) reported that millions of injuries and deaths are reported world-wide as a result of road traffic injuries (RTI). The World Health Organisation (2018) reported that more than 1.25million people die each year as a result of road traffic crashes which is a leading cause of death among people of ages between 15 and 29 years. Also 90% of the world's fatalities on the road occur in low- and middle income countries, even though these countries have approximately 54% of the world's vehicles.

In Nigeria, Audu (2012) observed that road safety activities commenced as soon as motor vehicles were introduced in the Nigerian roads in the 19th century. The researcher reported that after independence, the number of vehicle users nearly doubled with the resultant effect of sharp increase in the number of people

involved in road traffic crashes. Sumaila (2013) reported that Nigeria ranked as the country with the second largest road network in Africa in 2011, with population density which translates to a population-road ratio of 860 persons per square kilometres indicating intense traffic pressure on the available road network.

Jonah (2007) identified many aspects of education programmes that should be evaluated periodically such as educational preparation, educational intervention, driver education, curriculum, instructional materials, teaching performance of the teachers, the supplies, equipment and the layout of the department in terms of the learners to be accommodated.

Thus, the concept of road safety education has been found to be an important construct in driver education intervention (Carcary, Power, & Murray, 2001). Drivers' education programme is not only about teaching drivers how to drive but also aimed at developing appropriate behaviour, attitudes and decision making skills to enable them manage road traffic situation in a responsible and safe way to reduce road accident (Administrative Guidelines for Traffic Safety Education Department of Education, 2007).

The setting and content of drivers' education programme involves attitudinal behaviour of drivers towards road signs, driving rules and management of road accident free environment which starts and ends in classrooms. According to Federal Road Safety Commission (FRSC) (2007), some of the issues identified as the major epidemic of road traffic crashes(RTCs) are: under-age driving, lack of data and driving history for Nigerian drivers, incompetent and unqualified drivers, disregards for traffic rules and regulations and virtually no regulations for driving schools. The continuous increase in the trend of road accidents on Nigerian roads and highways led to the establishment of the Federal Road Safety Commission (FRSC) in 2010 to establish the Driving School Standardized Programme (DSSP), The driving school standardized programme is an intervention strategy by the FRSC towards the actualization of its statutory function to educate all road users on proper use of the highways. The DSSP in 2010 created uniformity in driver education and training by driving schools for drivers who have significant role to play in ensuring safety on the roads. To achieve this objective, several strategies have been used and are still being used by the FRSC public education officers to educate road users in general and commercial drivers in particular on the rules guiding road usage and the consequences of flagrant disobedience of traffic rules and regulations. These strategies include: organization of workshop/seminars/lectures and drivers" improvement courses, organizing rallies at motor parks, literacy campaigns inculcating in the road users the knowledge of the highway traffic code, playing of jingles on radios and televisions among others (Sani, 2005).

According to Adekoya, Adekoya, Adepoju and Owoeye (2011), Nigerian roads are dominated by abundant combination of inexperienced, drunk and overconfident drivers who are unconcerned about the lives of other road users as well as theirs. Thus, many commercial vehicle drivers may not know more than the rudiments of moving vehicles and sounding their horns ostensibly to attract the attention of passengers thereby engaging in noise pollution. Onuka and Adeyemi (2012) corroborated this view when they states that most Nigerian drivers have no regards for road signs, driving rules and regulations.

In most cases drivers hardly observe speed limit and road signs on highways. Many drivers overtake anywhere and anyhow on roads and highways, while some park their vehicles carelessly on the roadsides with no thought for other road users. The traffic situation then was described as chaotic and unpredictable as public interest in road safety matters was minimal and there was no concrete and sustained policy action to address road safety questions (FRSC, 2007). Hence, there was record of high rate of road traffic accident and

fatalities due to non-observation of road signs and non-compliance to driving rules and regulations (FRSC, 2007).

Despite the establishment of FRSC, researchers (Adekoya, Adekoya, Adepoju and Owoeye 2011; Oyeyemi, 2003; Maduagwu, 2008) revealed that there is an absence of good driving culture by the motorists on most Nigerian roads and Highways. It can be observed in the Table 1 that between 2008 and 2017, a total of 154,483 accident cases were reported in Nigeria, leaving 74,874 dead and 156,357 injured.

Observed	Reported Cases				Persons Involved		
Years	Fatal	Serious	Minor	Total	Killed	Injured	Total
2008	3,024	5,671	2,646	11,341	6,661	27,980	34,671
2009	7,206	8,411	6,778	22,395	9,240	22,970	32,210
2010	5,401	7,432	4,373	17,206	7,697	16,171	23,868
2011	6,362	8,509	4,740	19,611	8,161	20,925	29,086
2012	6,132	7,849	4,678	18,659	8,980	16,888	25,868
2013	5,806	8,052	4,804	18,663	9,131	19,200	28,331
2014	5,789	7,223	4,785	17,797	9,390	17,413	26,803
2015	2,854	6,039	841	9,734	5440	30478	35,918
2016	2,638	5,633	1,423	9,694	5,053	30,105	35,158
2017	2,587	5,456	1,340	9,383	5,121	31,098	36,219

 Table 1: Summary of Road Accidents in Nigeria Showing Number of Reported Cases and Persons

 Involved, 2008-2017

Chidoka (2009) observed that the Federal Road Safety Commission has conceptualized, designed and implemented various public education programmes which cut across languages, cultural and religious barriers. Since the introduction of the public education programme, it is seen as an innovation that will improve drivers' behaviour on roads and highways. This educational programme may be effective in improving the driving culture of drivers, predrivers in general and that of the commercial vehicle drivers in particular on Nigeria roads and highways.

A number of reasons for the ineffectiveness of driver compliance to traffic education have been offered. For example, it has been proposed that Nigeria Highway Code courses are too short a duration to offer much prospect of having an impact (Okafor, Odeyemi, Dolapo, Ilika & Omosun, 2014). A related point is that any safety message communicated may be swamped by the influence of parents, peers, and other personality and social influences that shape driver behaviour. The introduction of public education programme for drivers with particular reference to commercial motorists by FRSC is expected to improve drivers' behaviour and attitude in compliance to road traffic rules and regulations on the highway. This study seeks to evaluate the assessment of commercial drivers' perception of road safety education and compliance to road traffic rules and regulations in Delta State, Nigeria.

Statement of the Problem

Prior to the intervention of the Federal Road Safety Commission (FRSC), Nigeria has largely unregulated driving culture which was identified as the major cause for the epidemic of Road Traffic Crashes RTCs). Nearly half of those dying on the world's roads are "vulnerable road users (i.e. pedestrians, cyclists and

motorcyclists). Road traffic crashes cost most countries 3% of their gross domestic product. Without sustained action, road traffic crashes are predicted to become the seventh leading cause of death by 2030 (WHO, 2018). Federal Road Safety Commission (FRSC) has implemented several safety measures in in reducing the numerous road traffic crashes on our high ways and also the numbers of deaths caused by road crashes. Among many of the safety intervention by the FRSC is the Driving School Standardization Programmes (DSSP). The DSSP is an intervention strategy of the FRSC towards the actualization of its statutory function to educate all road users, most especially commercial drivers on the proper use of the highways. The main objective of the DSSP of the Federal Road Safety Commission is to create uniformity in drivers education training provided by driving schools for drivers who have significant role to play in ensuring safety on the roads

The main approach adopted in most states is a very high level of enforcement that is supported by intensive publicity campaigns, particularly television advertising campaigns. The most well-known among these campaigns in Nigeria is the Nigeria Highway Code campaign that was designed to support the intensive antidrunk driving and anti-speeding enforcement campaigns. Since their implementation, the Nigeria Highway Code campaigns have not been extensively evaluated over time.

When an accident occurs, it affects one member of the family and atimes the bread winner of that family and this usually has traumatic and economic effect on other members of the family. Hence, considerable attention and effort must be given to reducing the number of young people killed or seriously injured in road traffic crashes. FRSC, having existed for 30 years, the question then is; has it been able to make road users, most especially commercial drivers comply with road traffic rules and regulations with the view of reducing the rate of accidents on our highways? The answer to such question, calls for investigation to ascertain the assessment of commercial drivers' perception of road safety education on compliance to road traffic rules and regulations in Delta state. Thus, this study investigated the assessment of commercial drivers' perception of road traffic rules and regulations in Delta state. Nigeria.

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance in the study:

- 1. Perception of road safety education programme does not significantly influence compliance to road traffic codes and regulations due to drivers' driving experience.
- 2. There is no significant influence of drivers' perception of road traffic safety education on compliance on road traffic rules and regulations due to age.

Methodology

A descriptive survey research design was adopted for the study. This enabled the researchers to select a sample from the population and generalize the findings to the population. The population for this study comprised of all drivers driving all commercial mini bus and luxurious vehicle drivers operating in all registered motor parks in Delta State, Nigeria.

A sample size was 320 drivers in motor parks selected from eight motor parks in Delta State. The sampling techniques employed in the selection of participants were the stratified, simple random and purposive sampling. First, the sampling procedure started with stratified sampling by dividing Delta State into four strata to ensure adequate representation of motor parks across Delta State. A stratum has an average of six Local Government Areas since there are 25 Local Government Areas in Delta State. Second, simple random

sampling, hat and draw method was used to select two motor parks in each of the stratum. As a result, eight motor parks were selected. Thereafter, purposive sampling was used to select minibus and luxurious bus drivers. Thus, a total sample size of 320 commercial vehicle drivers was selected for the study. The sample size consisted of 257 minibus drivers and 63 luxurious bus drivers.

The researchers' developed Drivers' Compliance on Road Traffic Rules and Regulations Questionnaire (DCRTRRQ) was used to collect relevant data. The instrument, which is aimed at gathering drivers level of compliance to road traffic rules and regulations has two sections, which are A and B. The Section A gathered data about the demographic profile of the respondents with respect to drivers' age, driving experience and educational background, duration of learning road safety education, and number of days per week the drivers drive on the roads. Section B has two subsections namely: Perception of Road Safety and Compliance to traffic of rules and regulations. The response format for the instrument was a rating scale with five options of Very Often, Often, Sometimes, Rather Seldom and Very seldom. Table 2 is a sample of some items of the Drivers' Compliance to Road Traffic Rules and Regulation Questionnaire (DCRTRRQ).

 Table 2: Sample of Items in the Drivers' Compliance to Road Traffic Rules and Regulation

 Questionnaire (DCRTRRQ)

S/N	Statement	VO	0	S	RS	VS
1	Deliberately disregard the speed limit to stay					
	with the traffic flow					
2	Overtake when the bus in front is slowing down					
	approaching an area with a lower speed limit					
3	Fail to notice a green arrow at a traffic light					
	allowing you to turn					

The face and content validity were used to ascertain the validity of the DCRTRRQ. This involved showing the instrument to FRSC officials involved in the training of drivers and Psychometricians. The corrections made by these resource persons were effected before the pilot study was conducted. A pilot study was carried out by the researcher to determine the psychometric properties of the instruments before the main study. The participants in the pilot study were 40 drivers who were drawn from a motor park in a local Government that was not part of the main study. Test-retest reliability was used to determine the stability of the instruments. The reliability coefficients are presented in Table 3.

Variable	No of Items	Test position	Mean	SD	Γtt	Reliability Coefficient
Demonstrian of Edua	16	1 st	53.26	4.97	0.7	
Perception of Educ.	10	2 nd	51.91	6.3	0.7	0.7
Compliance to traffic of	9	1 st	23.17	8.3	0.68	0.7
rules and regulations		2 nd	2.85	6.78	0.08	

Table 3: Test Retest Reliability estimate of DCRTRRQ (n = 40)

The reliability coefficient of 0.70 was derived for DCRTRRQ respectively. In order to facilitate the success of the questionnaire administration, the researcher ensured that he secured the cooperation of the eight intercity motor parks used for the study. In the first instance, a letter of introduction from the Department of Educational Foundations, was taken and delivered to the elected Chairmen stationed in the eight inter-city motor parks selected for the study. The Chairmen were briefed and persuaded about the essence and

importance of carrying out the study in their motor parks. As a result, the Chairmen gave verbal consent and handed the researcher with the four research assistants to the elected Public Relation Officials in the eight inter-city motor parks in selected areas of Delta states. The Public Relation Officials were equally informed of the confidentiality of the information that would be provided by them as well as the commercial vehicle drivers who participated in the study.

Consequently, a total of 320 copies of the questionnaires each were originally designed for the administration. However, the researcher with the help of research assistants was able to retrieve 314 copies of questionnaires from the participants. The others were either not well completed or could not be used. Some questionnaires were returned immediately while in some instances, the researcher had to wait till the following day before he could retrieve the completed questionnaires. Most importantly, the questionnaires' administration exercise was a success because the study recorded 98.1% return rate. Data collected for the study were grouped into High, moderate and low categories. The data were analysed using analysis of variance (ANOVA). Both hypotheses were tested at 0.05 level of significance.

Results of Tested Hypotheses

Hypothesis one states that the perception of road safety education programme does not significantly influence compliance to road traffic codes and regulations due to drivers' driving experience. The hypothesis was tested using two-way analysis of variance statistics. The result of the analysis is presented in Table 4.

Perception	Experience	n	\overline{X}	SD	
High	0 – 5yrs	18	26.74	7.65	
	6 – 10yrs	29	28.96	5.82	
	11 + yrs	24	28.67	8.31	
Moderate	0 – 5yrs	32	22.43	10.57	
	6 – 10yrs	45	24.86	7.96	
	11 + yrs	41	25.73	8.39	
Low	0 – 5yrs	38	20.59	11.32	
	6 – 10yrs	44	22.69	9.57	
	11 + yrs	23	23.95	6.79	
Source of variation	Sum of square	Sum of square	Degrees o	of Mean	of
			freedom	square	
Perception of Edu.	276.48	2	138.24	3.53*	
Experience	243.94	2	121.97	3.11*	
Edu/experience	120.42	1	120.42	3.07	
Witten groups	12079.76	308	39.22		
Total	12720.60	313			

Table 4: Two-way ANOVA on influence of driving experience and perception of education programme
on compliance to road traffic rules and regulations

*Significant at 0.05; df = 1, 2 and 313; critical F = 3.85 and 3.05 respectively

Table 4 shows that a calculated F-value of 3.53 resulted as the influence of drivers' perception of road traffic safety education programme on their compliance to road traffic rules and regulations. This calculated F-value is significant since it is higher than the critical F-value of 3.05 given 2 and 308 degrees of freedom at 0.05 level of significance. The null hypothesis was consequently rejected.

Table 4 also show that a calculated F-value of 3.11 resulted as the influence of drivers experience on their level of compliance to road traffic rules and regulations. This calculated F-value of 3.11 is significant since it is greater than the critical F-value of 3.05 given 2 and 308 degrees of freedom at 0.05 level of significance. The null hypothesis was consequently rejected.

On the other hand, Table 4 show that a calculated F-value of 3.07 resulted as the interaction effect between drivers experience and perception of road traffic safety education programme on their compliance to road traffic rules and regulations. This calculated F-value of 3.07 is not significant since it is less than the critical F-value of 3.85 given 1 and 308 degrees of freedom at 0.05 level of significant. Consequently, the null hypothesis was retained. Based on the significant F-value obtained with respect to driving experience, further analysis of data was done using Fisher's protected t-test technique, whereby a pair-wise comparison of group means (\overline{X}) and the determine which driving experiencies are different from the other and the significant formula to the determine which driving experiencies are different from the other and the significant formula to the determine of the driving experience of the significant formula to the significant for

means (\overline{X}) was done to determine which driving experiential groups differ from the other on rate of compliance to road traffic rules and regulations and the trend of the difference. The analysis show that drivers with high driving experience (16 + yrs) do not significantly have higher level of compliance to road traffic rules and regulations than those with moderate driving experience (t = 1.40; df = 204; critical t = 1.98, P > 0.05). However drivers with high driving years of experience significantly have higher level of compliance to road traffic rules and regulations than those with low (0 – 5yrs) years of experience (t = 3.91; df = 194; critical t = 1.98; P < 0.05). Similarly, drivers with moderate years of experience (11-15years) significantly have higher level of compliance to road traffic rules and regulations than those with moderate years of experience (11-15years) significantly have higher level of compliance to road traffic rules and regulations than those with moderate years of experience (11-15years) significantly have higher level of compliance to road traffic rules and regulations than those with moderate years of experience (t = 2.66; df = 224, critical t = 1.98; P < 0.05).

Hypothesis two states that drivers age difference in perception of road traffic safety education programme will not significantly influence their compliance to road traffic rules and regulations. The hypothesis was tested using two way analysis of variance statistics. The result of the analysis is presented in Table 5.

Education	Age	N	\overline{X}	SD
Programme			Λ	
High	Below 20yrs	24	25.62	6.94
	21 – 35yrs	31	26.38	7.61
	36 + yrs	6	27.15	9.36
Moderate	Below 20yrs	35	24.86	10.73
	21-35yrs	37	23.22	5.38
	36 + yrs	46	24.18	7.43
Low	Below 20yrs	47	23.59	6.39
	21 – 35yrs	40	22.71	5.44
	36 + yrs	38	22.69	7.26
Source of variation	Sum of squares	Degree of	Means of	F - ratio
		freedom	squares	
Main effect	807.47	6	134.58	3.68*
Edu. Program.	237.71	2	118.85	3.25*
Age	216.49	2	108.25	2.96
Edu/Age	90.3	1	90.33	2.47
Witten groups	11263.56	308	36.57	
Total	1245.56	313		

 Table 5: Two way ANOVA on influence of age and perception of road safety education Programme on compliance to road traffic rules and regulations

* Significant at 0.05; df = 1, 1, 2 & 308; critical F = 3.85, 3.05

Table 5 show that a calculated F – value of 3.25 resulted as the influence of drivers perception of road traffic safety education programme on compliance to road traffic rules and regulations.

This calculated F-value of 3.25 is significant since it is greater than the critical F-value of 3.05 given 2 and 308 degrees of freedom at 0.05 level of significance.

Table 5 also show that a calculated F-value of 2.96 resulted as the influence of drivers age on their level of compliance to the road traffic rules and regulations. This calculated F-value of 2.96 is not significant since it is less than the critical F-value of 3.05 given 2 and 308 degrees of freedom at 0.05 level of significant. Consequently, the null hypothesis was rejected.

Similarly, Table 5 shows that the interaction effect between drivers age and perception of road traffic safety education programme on their level of compliance to road traffic rules and regulation was not significant (F = 3.85; P > 0.05). Consequently the null hypothesis was retained.

Discussion of Findings

The finding in hypothesis one revealed that the perception of safety education programme do significantly influence compliance to road traffic codes and regulation due to drivers' driving experience. Drivers with over five years driving experience show compliance to road traffic codes and regulations than their counterpart with less than five years driving experience. Furthermore, the finding revealed that experience played significant roles in determining drivers' behaviour on roads. Drivers who have been driving for more than twenty years behaved better on the road, this could be due to the fact that most of them have the Highway Code booklets and most of them claimed to have attended various rallies and seminars organised by FRSC. This finding confirmed Page-Valin, Simpson, and Warren (2007), who opined that no clear proof has yet been produced showing that driver education, as presently constituted, has a significant favourable effect on driver performance. By the same token, the review also concluded that no clear proof has as yet been produced showing that driver education, as presently constituted, does not have a significant effect on driver performance. Also, Wynne-Jones & Hurst (2005) and Langford (2007) confirm that attributing increased crashes to driver education because it leads to earlier licensure is inappropriate, pointing out that by agreeing to license teens at a specific age, driver education is simply a means of achieving a socially accepted goal, and that any group of people who drive will have crashes.

The finding in hypothesis two revealed that age is not a significant factor when considering the influence of drivers' perception of road traffic safety education on compliance to road traffic rules and regulations. The finding agrees with MacCartt, Mayhew, Braitman, Ferguson and Simpson (2008) studied the effects of age and experience on young driver crashes. The researchers observed that age and experience where found to influence the length of licensure. These studies provide some insight into the ages when commercial vehicle drivers are most at risk of developing negative attitudes towards road safety. Also, Duke, Guest and Boggess (2010), observed that age-specific accident rates for heavy vehicles for the spectrum of driver age that includes driver younger than 27years and those over 60 years of age. Younger commercial vehicle drivers demonstrated less risky attitudes about being a passenger of a drinking driver, back seat-belt wearing, and speed considered safe in a 100 km zone. This study draws attention to shifts in traffic safety related attitudes, especially for males, over the high-school years.

Conclusion

The perception of safety education programme does significantly influence compliance to road traffic codes and regulation due to drivers' driving experience. Drivers with over five years driving experience show compliance to road traffic codes and regulations than their counterpart with less than five years driving experience. Age is not a significant factor when considering the influence of drivers' perception of road traffic safety education on compliance to road traffic rules and regulations

Recommendations

Based on the findings of this study, the following recommendations were made:

- a. There should be clear display of road signs and directions on Nigeria roads to make driving and travelling less stressful.
- b. The Federal Road Safety Commission (FRSC) should intensify her effort in enlightening road users most especially commercial drivers on the laws guiding road usage and a way of enforcing them. This will go a long way in making drivers comply to road signs and regulations.
- c. The states governments throughout the federation should also support the FRSC in making sure that drivers comprehend with the laws guiding road usage, and whoever disobey should be apprehended and given necessary punishment.
- d. The DSSP department of the FRSC should be encouraged to continue that good work of educating all would be drivers applying for drivers license.

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