

Stakeholders Evaluation of the Computerized Drivers Testing System in Ghana

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Abstract: The role of transportation in the socio-economic developments of a country cannot be underestimated. Despite the importance of transportation to socioeconomic development, driving regulations are frequently flouted by especially commercial drivers leading to high incidents of accidents and the concomitant loss of lives and properties. To improve safety on our roads, the government of Ghana in 2013 introduced a computerized driver testing system (CDTS). This study sought to assess the stakeholders' evaluation of the system on the extent to which it is achieving its purpose and examine the challenges associated with it. A sequential exploratory mixed method was employed to first engage key informants in an interview and use the results to design questionnaires, which was used to collect data from 90 respondents comprising DVLA officials, drivers and driver schools. The descriptive statistics analysis revealed that adequate consultations were not conducted prior to introducing the new computerized driver testing system and the system is discriminatory as experienced professional drivers with limited academic and computer literacy knowledge are unable to renew their licenses because they cannot pass the exams. After almost four years of implementation, little results have been achieved in terms of reducing road accidents. A holistic re-evaluation of the implementation structure of the program to provide alternatives for those with limited or educational background is necessary. The implementation structure of the program needs to be re-evaluated.

Keywords: Computerized Driver Testing System, road safety, accident, transportation

Date of Submission: 12-10-2017

Date of acceptance: 25-10-2017

I. Introduction

The role of transportation in the socio-economic developments of a country cannot be underestimated. Transportation facilitates the exchange of goods and services within and between countries (Hollensen, 2010). In the opinion of Daft (2006), transportation nurtures the social fiber of a nation through movement of people from one place to other either by driving their own vehicles or boarding commercial means of transport. Driving has therefore become not only a profession through which people earn their living but also societal acceptable symbol of some level of achievements. Society associates people who drive their own vehicles with affluence and for that matter young person would like to drive at the slightest opportunity. It is therefore not surprising that agencies responsible for licensing vehicle drivers are always overwhelmed by the quantum of application for drivers licenses.

In most developing economies, driving provides lots of jobs for people especially those from deprived communities who are unable to acquire higher education to qualify them for white collar jobs (Boyce & Geller, 2002). Such 'semi-illiterate' drivers often flout driving regulations leading to high incidents of accidents and the concomitant loss of lives and properties. Certainly, responsible governments cannot look unconcerned for vehicle accidents to destroy lives and for that matter various policies have been handed down to instill some sort of discipline into the vehicle driving trainee framework.

Some of these policy directives, according to Fuller and Bonny (2004), have been informed by findings from studies commissioned to investigate road accidents and other calamities. Some other directives according to Lonero (2008) involve cautious learner training packages such as taking written examinations on road signs and being abreast with current development in the motor driving industry. It is however worrisome that despite all these structures put in place to minimize vehicular accidents, the incidence of road accidents still continues unabated.

In Ghana for instance, statistics from Motor Traffic and Transport Unit (2015) of the police service show that the menace of road traffic accidents is high in Ghana. Given that prevalence is high among those within the working age category (35 – 44 years) have serious negative implication on the nation's socioeconomic development (Siaw et al, 2013). Some of the factors which contribute to such road fatalities include over-speeding, over-loading as well as disregard for road signs and regulations. Police accident reports

according to Lonero (2008) often identify driver's behavior such as negligence and indiscipline as the major causes of road accidents and this has triggered the need to intensify road safety campaigns and also strengthen the procedures for granting license to future drivers. As a strategy to reduce the number of illiterate drivers who can hardly read road signs in Ghana, the government introduced a computerized driver learner testing regime which is expected to help improve road safety in the year 2013. The main goal underlying the policy is to reduce the high incidence of road accidents thereby minimizing the spate of loss of life on the roads. However, over nearly three years now, not much has been achieved in terms of curtailing road accidents. For instance, by the end of 2016, the number of people who lost their lives through road accidents shot up by 5.64 percent as the 2015 figures.¹

This study therefore attempts to assess stakeholders' (particularly the implementing agency, Driver and Vehicle Licensing Authority (DVLA)) evaluation of the new computerized driver testing policy on the extent to which it is achieving its main goals or otherwise. It also examines the challenges confronting DVLA in implementing the new computerized driver testing system on one hand and the challenges drivers face in utilizing the new computerized driver testing system.

II. Literature Review

2.1 Theoretical Review

In the information system literature, one of the most popular theories that has been accepted in connection with technology adoption and use is the Technology Acceptance Model (TAM) postulated by Davis (1989) which is a modification of Theory of Reasoned Action (TRA) put forward by Ajzen and Fishbein (1980). TAM points out that the intention of a person to use a new technology is informed by his or her belief in the system. Davis (1989) Technology Acceptance Model (TAM) postulated perceived ease of use and perceived usefulness of the new technology as the major driver of technology adoption. Black (2003) further admits that perceived ease of use and perceived usefulness might not sufficiently indicate the behavioral intentions of potential adopters of the new technology and for that matter further study ought to be conducted to fully establish or search for additional factors which could prompt people to accept new Technology or not.

Applying to the computerized driver testing policy, it will not be wrong to state that the introduction of the policy in Ghana was perceived to be a useful means of reducing road accident but the question that most people are worried about, especially the commercial drivers is the ease of use. The high illiteracy rate among Ghanaian commercial drivers makes it very difficult, if not impossible for them to easily use the service. Even in terms of the usefulness, the question that arises is if we can consider the policy as useful to reducing road accidents in Ghana.

2.2 Empirical Reviews

Driving Education

Driving constitutes a huge complex task which becomes even more complex when attempting to describe it and the requisite skills to conduct the act despite the fact that knowledge of controlling a vehicle and maneuvering it represents the basic of driving (Lee et al, 2006). Driver education has the purpose of mainly helping the young drivers to drive safely and show more responsibility in their driving endeavors (Manzie et al, 2007). Having gone through driver education properly, the driver, not only acquires skills for living but also goals for life (Kenney & Curry, 2001). In achieving these, personality factors notably self-control, social background, gender, age, attitude, group affiliation are all important ingredients (Coelho et al, 2005).

These factors have a lot to do with culture and society within which the driver lives (NRC Handelsblad, 2005). Studies by Geenhuizen et al (2006) have shown that lifestyle factors and values play an important role in the way people drive. A highly car-oriented lifestyle presents serious problems. Studies by Levy (1990) indicate in no uncertain terms that when personal motives are realized while driving in traffic there is high possibility of creating risk. According to NRC Handelsblad (2005), the social context of driving is an especially important factor when young persons are concerned. Social pressure has a considerable impact on driver behaviour, as a driver is never alone on the road but in continuous relations with other persons, groups, social institutions and with society as a whole.

The skills with which a driver maneuvers a vehicle demonstrate to a large extent the kind of driver education one has received. According to Boase and Tasca (1998), any motivation to show off through driving, or knowledge of traffic rules make no sense if a person does not know how to start a car engine in the first place. Emphasis is on skills that have to do with vehicle control and handling. This, in the view of Lee et al (2006) includes not only basic skills such as knowledge of controls, driving off, braking, gear changing, etc., but also more complex knowledge such as keeping the car under control, evasive manoeuvring, understanding the concept of traction, the impact of seat-belts, use of rear-view mirrors, etc. These factors among others makes it

¹ Inferred from Ghanaweb <https://www.ghanaweb.com/GhanaHomePage/regional/Road-accidents-killed-2-198-in-2016-501732>

very necessary for driver education curriculum to indicate lesson on minimizing personal desires or motives while in traffic in order to minimize road accident (Black, 2003).

Effect of Driver Training in reducing Accidents

The cardinal objective of any serious driver education framework according to Marchau et al (2005) stems from the fact that road accidents and related fatalities will be reduced drastically. It is from this background that most governments spend some portions of national budgets in improving facilities for educating drivers. In Ghana for instance, the police motto traffic transport department commits serious man hours patrolling the high ways to ensure that careless driving and other road offenses are reduced drastically. The fact that transportation adds value to goods and services presupposes that government agencies must be alive to their duties and ensure that all stakeholders stick to the rules involving high way driving code.

Highway safety is a much broader field now than it used to be. According to Frith & Perkins (1992), the focus has broadened from trying to prevent accidents by educating people to change their behavior. Learner drivers are particular targets for driver training efforts of various types especially during the pre-license training programs stage. Various organizations or groups, according to Manzie et al (2007) operate special driver training programs for learners and pre-learners. These programs usually aim to encourage the development of safe driving techniques, and can involve road law knowledge tuition and some in-car components, either on an off-road track or circuit, or on-road under supervision. Coelho et al (2005) suggest that, beyond imparting basic car control and road law knowledge skills, these courses contribute little to post-license reductions in casualty crashes or traffic violations.

According to Marsden et al (2001), vehicle and road safety programs are based largely on research and engineering. But when it comes to changing the behavior of drivers and others on the road, research findings often are ignored. Ericsson et al (2006) explains further that, many programs are based on wishful thinking instead of science. This status report, according to Marsden et al (2001) summarizes what the research literature tells us works and what does not influence driver behavior for the better motor vehicle crash involvement rates for young drivers.”

After reviewing motorcycle rider education and training programs in three countries, Begg et al (2000) found that in Canada, there is “no compelling evidence that rider training is associated with reductions in collisions.” Nor does a study of a bicycle education program in Australia show any evidence that participation “led to a reduced risk of bicycle related injury in subsequent years.” The Australia “biked” program according to Kenney & Curry (2001) might even have made things worse by inadvertently leading children “to undertake a level of risky activity that they would not have attempted without the ‘license’ provided by having completed the program”.

On the other hand, greater levels of supervised real-world experience during the learner period have been shown to reduce post-license crash involvement. Comparisons of the post-license crash experience of learners who were trained exclusively by professional driving instructors and those trained exclusively by parents, relatives or friends, is much the same. However, research shows that encouraging cooperation between driving schools and parents in teaching learners how to drive may be beneficial in increasing the quality of instruction, and the quantity of learner driver experience (Geenhuizen et al, 2006). Research studies suggest that the best learning environment for the beginning driver is the real road system under the supervision of an experienced driver or instructor. Learner drivers under supervision on-road have a low risk of crash involvement, probably the lowest of all driver groups. The accumulation of an on-road driving “experience bank” is perhaps the major potential contributor to reduced crash risk in solo driving for novice drivers (Chatterjee & McDonald 2004).

III. Methods

The study was conducted in nation’s capital, Accra, where the head offices of the major driving stakeholders are located. This study adopted a sequential exploratory mixed method approach to gather data. According to Gilbert (2010), mixed methods general embeds, merge or connect data. Connection usually arises from sequential approach, where one form of data collection approach (either qualitative or quantitative) is used to gather data, which further leads to the collection of another data using a different approach, following the analysis of the earlier data collected. In this study, because the research is more exploratory in nature, the researchers first used a qualitative approach to gather information from some key informants and this data informed the design of the questionnaire. First, in-depth interviews were held with two officials each of the DVLA and three Drivers Association (GPRTU, PROTOA and Concerned Drivers Union). Managers of two driving schools were also interviewed. One focus group discussion was also held with 8 conveniently selected drivers. The data that were collected were transcribed and coded into themes. These themes were used to further develop the survey instruments, which were administered to the respondents to gather information from a relatively large segment of the population. Using this approach, the researchers were able to have a better understanding of the stakeholders’ assessment of the new computerized system and its associated challenges.

The total sample for the survey was 90 comprising 25 DVLA officials, 55 drivers (i.e.22 drivers under GPRTU, 18 under PROTOA and 15 under Concerned Drivers Associations), and 10 licensed driving schools. Structured questionnaires were administered to all of them. The questionnaire was designed using likert scale questions. Convenience sample was used in selecting the respondents. Descriptive statistical tools, using tables and percentages was used in presenting the results.

IV. Results And Discussions

4.1 Characteristics of Respondents

Majority of the drivers (59%) had no education. Only 22% and 19% had basic/primary and secondary education respectively. This shows that many commercial drivers have little or no education. The fact that a good number of drivers have low academic background suggest that any new driver enhancement project should be carried out in such way as to take cognizance of the sensitivities and sensibilities of the drivers. Foss & Godwin (2003) also reported in his study that developing economies have high levels illiterate drivers and for that matter road signs, driving codes and other capacity building packages should be done in such a way that this unlettered group will not be sidelined or disadvantaged.

The licenses issued to drivers are classified and these classifications indicate the type of vehicle a license holder is supposed to drive. From the analysis a large proportion of the drivers(41.8%) hold license C and D (29.1%) while the remaining hold license B and F. Most of the drivers have been driving for more than 10 years. This goes to buttress the point of Palmer (1995) that over two-thirds of Ghanaian drivers have considerable experience on the road and that the road safety commission should not have much difficulties in achieving its core mandate of advocating for the proper and safe use of the road.

The results further showed that 4 out of the 10 driver schools have operated for a period between 6 to 10 years. Also 3 have also operated for more 10 years and the remaining 3 have also operated for a period between 1 to 5 years. 64% of the DVLA staff were male while 36% respondents were females. 40% of the officers have General Certificate of Education (GCE), Ordinary and Advanced levels as their highest Academic qualifications. 24% had degrees as their highest educational levels while 20% had Diploma and HND. The remaining had other forms of educational attainment. A large proportion of them (40%) have been working with the DVLA for between 6 to10 years while 28% have been working for more than 10 years. The rest have been working at DVLA for at most 5 years.

4.2 Perception of Stakeholders about the CDTS

Perception of GPRTU/PROTOA/Concern Drivers on CDTS

Generally, the drivers consider driver education programs are key to reducing the risks of accidents in the country. However, under the new system, the major drivers had with the policy is not mainly with the entire system but rather the component of the system that requires them to take exams using computers. Majority of the drivers (84%) noted that they did not get the privilege to go to school and therefore cannot even operate a computer. Therefore, asking them to take a test that demands the use of computers is indirectly an avenue to render them jobless since there is no way they can pass the test. Majority of them consider the CDTS to be too stringent for them. To them, for university students, who know how to use computers and have good memories to even fail the test on several occasions is a clear indication that the system is a deliberate attempt to kick them out of their employment.

The consider the system to be unfamiliar to them since they were not taken through any system of education, but were expected to go and sit in a classroom to be taught. It is for all these reasons that they suggested that older illiterate drivers, who have been driving for several years should have been exempted from taking the test.

Table 1: Perception of GPRTU/PROTOA/Concern Drivers on CDTS

Perception of GPRTU on CDTS	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Driver education is key to reducing the risks of accidents	4	5	7	53	31
The CDTS is a strategy to render us unemployed because of low education	4	5	7	60	24
The CDTS is an unfamiliar system.	5	4	9	53	29
The older illiterate drivers should have been excused from the new testing system.	4	6	5	47	38
The CDTS is so stringent that even university graduate learner drivers fail the test	4	5	5	55	31
Generally, DVLA - GPRTU collaboration should help build the necessary trust	4	5	4	51	36

Perception of Driver Schools on CDTS

The DVLA in implementing the CDTS partnered with private driver schools. The private driver schools are mandated to tutor learner drivers and prepare them to go through the CDTS and obtain license. After a person has gone through the training successfully, a code is given to the person as prove that he/she has been successfully educated in all the modules. It is this code that this person sends to DVLA before he/she gets the opportunity to take a computerized test, which requires him/her to get a minimum of 21 out of the 30 questions to pass to the next stage. This makes the private driver schools a key stakeholder in the CDTS chain.

Expectedly, all the schools agreed that the concept of CDTS is laudable. This is not surprising because the CDTS has boost their businesses. However, they adequate publicity should have been conducted prior to introducing it. They were also of the view that instead centralizing the policy where there is a particular center for drivers to take the exams, the system should be properly coordinated such the test could even be taken in the premises of the recognized driving schools with the results being administered by DVLA. The lack of effective supervision would mean that anyone could easily take the exam for another person (even at a fee).

In terms of the implementation of the concept of CDTS, the driver schools' perceptions were in the negative direction. They indicated that as trainers, they should have been given enough time to introduce the technique in their curriculum prior to rolling out the policy. Just like the drivers associations, the driver schools also believe that the system seems to cut out completely the illiterate and potential illiterate drivers. Foss & Godwin (2003) reported in his study that developing economies have high levels of illiterate drivers and as such the CDTS should have been developed with the large proportion illiterate drivers in Ghana in mind. Further, due to the large proportion of illiterate drivers in the system, the driver schools strongly believe that if the CDTS have been gradually introduced in phases, it would have been better welcomed option

Table 2: Perception of driver schools on CDTS

Perception of Driver Schools on CDTS	Agree	Strongly Agree
The concept itself is laudable however adequate publicity should have been conducted prior to introducing it	60	40
As trainers we should have been allowed enough time to introduce the technique in our curriculum prior to rolling out the policy	70	30
When properly conducted the test could even take in the premises of the recognized driving schools with the results being administering DVLA	60	40
The system seems to cut out completely the illiterate and potential illiterate drivers	40	60
A gradual introduction of the system in phases would also have better a welcome option.	30	70

Perception of DVLA staff on CDTS

Majority of the DVLA official (92%) acknowledged that the reducing road accidents does not solely lie in using a computerized system to test drivers, some of which are very experienced. They felt that adequate consultations were not made prior to introducing the new driver testing system and they did not open a window of opportunity for the existing illiterate drivers as an alternative path for career development. The new system should have been introduced gradually for new driver while the old drivers were allowed a comfortable period to cross over. They noted that the fierce resistance put forward against by introduction of the new system was expected since some bread winner professional drivers are likely to lose their jobs. Similar to the views of the Drivers and driver schools, the staffs of the DVLA perceived the processes involved in the CDTS stringent that even most university graduate have to re-take the test several times. In addition, the DVLA staff perceived that Private driving schools have not been assisted to restructure their system to accommodate the new testing regime.

Table 3: Perception of DVLA staff on CDTS

Statement on Perceptions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Extensive consultations were not done prior to introducing the CDTS	-	-	8	24	68
DVLA ought to have opened a window of opportunity to accommodate existing drivers who can hardly read and write	-	8	8	16	68
The new system should have been introduced gradually for only new drivers but not for both new and old	-	12	12	32	44
The fierce resistance that characterized the introduction was expected	8	12	12	40	28

Reducing accidents did not lie solely in removing illiterate experienced drivers from the road	-	-	8	24	68
The new computerized system is so stringent that even university graduate learner drivers fail the test	8	-	-	32	60

4.3 Extent to which CDTS is achieving its purpose

Among the objectives of CDTS were to reduce road accidents considerably, streamline licensing, reduce poor driving, reduce queuing for licenses, maintain security on the roads and in the end, improve Ghana's image on driver administration. The assessment of the stakeholders on these are presented below.

Drivers Assessment

The analysis generally believed that the purpose of the CDTS has not been achieved. Observed from the table, the analysis indicated that the majority of the drivers (above 80% in each case) disagreed or strongly disagreed that CDTS has achieved its purpose of: reducing road accidents considerable; streamlining and making licensing procedures easy; reducing poor driving habits on the roads; reducing the number of police MTU personnel on the roads to keep order; and reducing considerably the long queues for acquiring driving license at the DVLA premises. The view expressed by the drivers that the CDTS has not achieved its purpose of streamlining the licensing procedure was also confirmed by Lonero (2008) who indicated that the new driver testing system is only worsening the plight of drivers especially, the majority of the professional drivers, who are either complete illiterates or half literates.

Table 4.4: Drivers Assessment of CDTS Achieving its Purpose

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Road accidents have been reduced considerably.	72.7	12.7	14.5	-	-
Licensing procedure has been streamlined and made easy.	72.7	14.5	12.7	-	-
Poor driving habits on the roads have reduced considerably	63.6	12.7	14.5	-	-
Police MTU do not need to keep more personnel on the roads to keep order	65.5	21.8	9.1	1.8	1.8
Long queues for acquiring driving license have reduced	72.7	12.7	5.5	3.6	5.5
All new drivers now pass through recognized driving school prior to acquiring license	60	3.6	10.9	25.5	-
Other road users have better security on the roads than previously	63.6	14.5	10.8	5.5	5.5
Ghana's international image on driver administration has improved	36.4	21.8	14.5	21.8	5.5

Driving Schools Assessment

The trend of views expressed by the driver schools is similar to that of the drivers. One of the purposes of the CDTS was to help reduce drastically road accidents on the roads as vehicle drivers are taken through rigorous driving training before licenses are issued to them. This perceived idea on the CDTS was largely refuted by the driver schools. The driver schools indicated that the new system will not guarantee the drastic reduction of accident on our roads. Rather more education by road safety committee to all stakeholders will be more beneficial. In each case, about 80% or more of the driver schools either strongly disagreed and disagreed to the statements of the CDTS achieving its purpose.

Black and Geenhuizen (2006) argues that it could have a positive effect on the country's image because all advanced countries have this kind of arrangements in place for qualifying drivers. This argument contrasts the view of majority of the driver schools who disagreed that the CDTS has improved Ghana's international image on driver administration.

Table 4.5: Driving Schools Assessment of CDTS Achieving its Purpose

Extent CDTS achieved its purpose	Strongly Disagree	Disagree	Neutral	Agree
Road accidents have been reduced considerably.	30	70	-	-
Licensing procedure has been streamlined and made easy.	30	40	-	30
Poor driving habits on the roads have reduced considerably	40	40	10	10

Police MTU do not need to keep more personnel on the roads to keep order	50	40	10	-
Long queues for acquiring driving license have reduced considerable at the DVLA premises	50	40	10	-
All new drivers now pass through recognized driving school prior to acquiring license	30	20	-	50
Other road users have better security on the roads than previously	40	30	-	20
Ghana's international image on driver administration has improved	-	50	10	40

DVLA Staff Assessment

The view of DVLA staff on the extent of the CDTS achieving its purpose was not so much different from views expressed by both the driver and the driver schools. The DVLA staff also accepted that most of the purposes for which the CDTS was implemented have not been achieved. Majority of them staff strongly disagreed and disagreed to statements such as; road accidents have been reduced considerably; licensing procedure has been streamlined and made easy; poor driving habits on the roads have reduced considerably; police MTU do not need to keep more personnel on the roads to keep order; long queues for acquiring driving license have reduced considerable at the DVLA premises; and other road users have better security on the roads than previously. In each case for the statement, the percentage of staff that strongly disagreed and agreed was more than 65%.

With the implementation of the CDTS, all new drivers were expected to acquire license after going through a recognized driving school but the story on the ground is different. From the analysis, majority (52%) of the DVLA staff disagreed and another 12% strongly disagreed that all new drivers pass through recognized driving school before license are issued to them. The implication here is that the CDTS, which was purposed to standardize driving in the country is compromised. As such, the argument by Black and Geenhuizen (2006) that CDTS could have a positive effect on the country's image because all advanced countries have this kind of arrangements in place for qualifying drivers may not hold true. Even though, the staff agreed (56%) and strongly agreed (12%) that the CDTS has improved Ghana's international image on driver administration, the CDTS may only be theoretical to meet international standards but in practice, the standard of driving in the country may still be challenged as a result of the compromised system.

Table 6: DVLA staff Assessment of CDTS Achieving its Purpose

Extent CDTS achieved its purpose	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Road accidents have been reduced considerably.	40	28	20	12	
The country now has better reduced drastically on the roads.	52	24	16	8	
Licensing procedure has been streamlined and made easy.	56	20	-	24	-
Poor driving habits on the roads have reduced considerably	40	28	20	12	-
Police MTU do not need to keep more personnel on the roads to keep order	48	52	-	-	-
Long queues for acquiring driving license have reduced considerable at the DVLA premises	68	20	12	-	-
All new drivers now pass through recognized driving school prior to acquiring license	12	52	4	28	4
Other road users have better security on the roads than previously	8	52	16	20	4
Ghana's international image on driver administration has improved		16	16	56	12

Challenge Drivers Face in Utilizing Computerized Driver Testing System

As noted earlier, most of the drivers are illiterate with very little knowledge of computer and for that matter, the CDTS has become a challenge in the renewing of their licenses. Many of the drivers noted that youth from underprivileged families with spurious educational background who wish to take driving as profession will have the tall task of having to learn computer just to be able to go through the test. This is seen as challenge in sense that driving may be less attractive to younger generation who do have the opportunity of being educated. Thus, the driving profession may in the near future lack personnel.

Some of the drivers revealed many driving schools that collaborate with DVLA do not have computer appreciation component in their curriculum and this means that potential drivers have to find extra funds to go through computer literacy courses. The manual system of the DVLA was faced with long queues where patrons spend hours and days to get tested. The new CDTS has not been able to totally overcome this challenge. The long queues according to majority of the drivers are still seen in various officers of DVLA and this leads to loss of productive time. In developing countries, newly implemented systems are most likely to be centered in the urban areas and in most cases, pose challenge to the rural folks. With the CDTS, majority of the drivers noted that the urban concentration of the CDTS facilities in the urban centers might pose a challenge for their brethren in the rural areas.

Challenges facing the Driver Schools

The driving schools admitted that they do not have enough testing equipment (such as cars) to attend to a large segment of the population and as such are they are only able to serve few people. Some of the driver schools agreed that private driving schools do not wield adequate trained personnel to man the computerized system in the regions and districts. Some of the schools complained that some of the people they teach, though are good with the practical lessons, find it difficult passing the computerized test because of the low computer literacy.

Challenges Confronting DVLA in implementing CDTS

The officers of DVLA largely agreed that the DVLA does not have enough testing equipment to properly decentralize the system. This therefore implies that the system in essence is centralized. It has been found that over-centralization of systems induces bribery and corruption (Robert & Kwan, 2004). Robert & Kwan (2004) also indicated further that government should have solicited enough funds to procure more test equipment for at least all the regional offices of DVLA rather than serving a few metropolises on the country. According to Levy (1990) this should prompt the relevant authority to readily decentralize all such essential services.

Further, the officers of DVLA indicated that DVLA does not wield adequate trained personnel to man the computerized system in the regions and districts and this is a challenge to the implementation of the system. The lamentation of the officers of DVLA has also been emphasized by Christy (2002). She also lamented over the poor preparation towards the launching of the new driver testing system and pointed out that it is not only reprehensible but also totally unacceptable for government agency to launch a project without building the capacity of employees and its logistical base.

They also indicated that they did not conduct adequate consultation with especially the professional drivers' association prior to implementing the new system. This also supports Fuller & Bony (2004) study on the subject in which they seriously lashed out DVLA for imposing the new system on stakeholders. They explained that a wider consultation would have adequately prepared fertile grounds for the new testing regime. Armstrong (2006) and Daft (2006) all stressed the importance of wider consultations in introducing a new system. Just as there was inadequate consultation before the implementation of the system, the officers of DVLA accepted that proper feasibility studies were not conducted prior to rolling out the programs and public education on the new system was woefully inadequate. It is therefore not surprising that the CDTS is facing challenges. Thompson & Strickland (2007) indicated that faulty feasibility studies often result in faulty commencement of projects.

V. Conclusion

Increasing rates of road accidents is indeed a threat to Ghana's socioeconomic development. Painstaking policies are therefore needed to address the issue, and using driving institutions to impart driving knowledge to drivers is a step in the right direction. Taking cognizance of the multitude of challenges confronting the new computerized driver testing system after three years of implementation, it is only logical for the administrative structures to be thoroughly reviewed. Instead of making all existing and potential drivers to take the same computerized exams, which is very discriminatory for those with lower or no education, alternative structures should be provided for those in the latter category. This is necessary to ensure that no socio-economic crises are created. Overall, the assessment made by the various stakeholders clearly shows a lot of policy and implementation gaps that should engineer a thorough re-evaluation of the entire program, with the aim of addressing stakeholders' concerns and re-aligning the program to suit the socioeconomic characteristics of the country.

Acknowledgement

We appreciate the support of the DVLA officials, the various Drivers Schools in the Accra Metropolis and the officers of DVLA who took time off their busy schedule to respond to the questionnaires.

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International Journal of Humanities and Social Science Invention (IJHSSI) is UGC approved Journal with Sl. No. 4593, Journal no. 47449.