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Assessment of vehicle fleet management in a public university in Ghana; The case of College of Technology Education, Kumasi, Ghana

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Abstract

The main objective of the study was to examine the effectiveness of fleet management in the University of Education, Winneba (Kumasi-Campus). This assessment was done in a bid to analyze how the University is able to derive value for money in the operations of the Transport Department of the institution. The study adopted the quantitative research methodology to assess the problem. That notwithstanding, using the purposive sampling technique a total of 161 respondents were used for the study which comprised 60 and 101 senior and junior members of the University respectively. Administering questionnaires as the main instrument of data collection, the results show that a significant number of the respondents agreed that the procurement of new vehicles for the University should be under the auspices of the Transport Section. Additionally, the respondents accepted that the Transport Section should be in charge of vehicle repairs and maintenance as well as authorize the fuelling of official vehicles of the University. Also, the study revealed that for effective vehicle management official vehicles should be insured and that there should be strict regulation on access to the keys of official vehicles. The Transport Section of the University is challenged by frequent vehicular breakdowns, accidents as well as poor vehicular scheduling. It was thus recommended that the University should compel all staff to comply with the fleet management policies of the University and penalties be appended to staff who go against the policies. Regular training programmes must be organized for staff to ensure they are kept up-to-date with new trends in transport issues..

Key words: Fleet Management, Fleet Control, Public University, Vehicles

Introduction

The 21st Century has brought with it a new workplace, one in which every employee must adapt to a rapidly changing society with constantly shifting demands and opportunities. This has called for organizations to adopt strategic methods in managing some aspects of work. This is to say, organizations are able to achieve their overall goals and meet the changing demands of business environment if they are able to manage effectively the various sections of the organizations. The fleet (vehicle) section of an organization is one of the areas which contribute greatly to the achievement of organizational goals. This is because the fleet section is responsible for the movement of both people and goods of the organization. This helps to speed up business operations and processes. In other words, the pressure to deliver faster and cheaper has made vehicle utilization an important aspect of fleet management (Jonsson, 2008; Waters, 2009). The pivotal role played by the fleet section has prompted organizations to embrace fleet management. Fleet (vehicle) management can include a range of fleet management functions such as vehicle financing, vehicle maintenance, vehicle telemetric (tracking and

diagnostics), driver management, fuel management, and health and safety management (Choudhary, 2013). Martinez, Stapleton and van Wassenhove (2011, p.404) define field vehicle fleet management as: "decision-making on repositioning and load assignment for groups of transportation means operating in job locations remote from regular facilities, offices, etc. to optimize performance".

Fleet management is a function which allows companies to rely on transportation in their business to remove or minimize the risks associated with vehicle investment, improving efficiency, productivity and reducing their overall transportation costs, providing 100% compliance with government legislation (Duty of Care) and many, many more (Choudhary, 2013). Ratcliffe (1987) talks about five main fleet management activities which are: routing and scheduling, fuel management, vehicle acquisition, vehicle maintenance, driver briefing and debriefing. These activities are supervised by the fleet managers and primarily, a policy is formulated so as to serve as a guide for these activities. These activities help in achieving effective and efficient fleet (vehicle) management. Better vehicle utilization lowers operating cost though better planning. Implementing decent fleet management has proven to reduce fleet size and operating costs, while increasing speed of vehicle delivery to national offices (Martinez, Stapleton, & Van Wassenhove, 2011).

The College of Technology Education, Kumasi is one of the four satellite Colleges of the University of Education, Winneba in Ghana, established from Kumasi Technical Institute in 1952. The College came as a full-fledged College in September 1992 under the PNDC Law 322. It was then the University College of Education of Winneba. On 14th May 2004, when the University of Education Act, 2004 (Act 672), was enacted to upgrade the status of the University College of Education, Winneba to the status of a full University and the Kumasi Campus became College of Technology Education, Kumasi. Currently the University has four campuses, namely: Winneba Campus, Kumasi Campus, Mampong-Ashanti Campus and Ajumako Campus. However, since the inception of the College with the mandate of teaching, research and community service, no study has been undertaken in the area in fleet management. Also, there had neither been empirical study to assess vehicle fleet management in a public university in Ghana, challenges of vehicle fleet management and control in the public university, considering the wider use of vehicles and movements involving staff, materials and equipment. This is without prejudice to the fact that the campus-wide nature requires interplay and use of many vehicles and how it affects the general management of resources. It is against this background that the outcome of this study could be necessary and important for industry, academia and commerce. The findings could also serve as a guide to policy formulation in the University and contribute to knowledge in vehicle fleet management in public institutions.

Statement of problem

Paradoxically, the establishment of effective vehicle fleet management and control programmes in public institutions could have positive impact on the cost effectiveness and efficiency in fleet operation. It is believed that the role played by fleet management in the management and delivery of services in the College of Technology, Kumasi could have a repercussion on its limited resources. Vehicle fleet management is very important and requires effective and efficient management for optimum utilization in the area of fuel use, spare parts, and other vehicle consumables. In recent times**,** it appears the University has been experiencing some challenges in its vehicle management and administration. The policies and regulations on vehicle use, management and control for effective and efficient running of activities with the view of ensuring value for money have become a challenge. Recent report indicates increasing cost in vehicle running and maintenance. This study intends to assess the extent to which existing policies and regulations are enforced to ensure effective vehicle utilization in the University. In other words, the current study intends to assess the effectiveness of fleet management and control in University.

Considering the problem and objectives of the study, the following research questions were formulated to guide the study.

- What are the existing vehicle management policies in the College of Technology Education, Kumasi; and how effective have such policies been ensuring value for money in the College?

Review of related literature

Concept of fleet management

Management is the co-ordination of resources through the process of planning, organizing, directing and controlling in order to attain set organizational objectives (Gbadegesin and Ojo, 2011). With the diverse nature of management, it has become a universal concept that requires of every manager to perform identical functions (Gbadegesin and Ojo, 2011), in any formal organization whether profit-making or non-profit-making (Robins et al., 2002). Wyrick and Storhaug (2003) believe that fleet management comprises all actions needed to maintain and operate pieces of equipment throughout its life from the beginning stages of equipment acquisition to the final stages of asset disposal. Such areas include: maintenance and repair, inventory control, training, and safety issues. The above definitions throw light on two main objectives of fleet management: Firstly, to guarantee availability and cost-efficiency by effective procurement and sales (Wu, Hartman and Wilson, 2005), maintenance (Haghani and Shafahi, 2002), safety and vehicle drivers management (Mejza, Barnard, Corsi and Keane, 2003), and secondly, to find the optimal vehicle routes through a set of loads, subject to capacity (Powell and Carvalho, 1998) and time constraints (Powell, Carvalho, Godfrey and Simao, 1995).

Ratcliffe (1987) stated that there are five main fleet management activities. These are: routing and scheduling, fuel management, vehicle acquisition, vehicle maintenance, driver briefing and debriefing. These activities are supervised by the fleet managers and primarily, a policy is formulated so as to serve as a guide for those activities. Ratcliffe's (1987) assertion affirms to the fact that the University of Education, Winneba has encapsulated all the above fleet management activities into what is known as Vehicle Management Policy. The provisions of this policy provide practical and constructive guidelines for the regulation of vehicle transport operations in the University.

Control on fleet management

The road safety organisation in Ghana has provided guidelines through its National Road Safety Strategy III (2011-2020) to improve road and fleet safety in the country. According to the strategy, the National Road Safety Commission (NRSC) has developed strategic framework aimed at halting the increasing trends of fatalities and injuries by 2015 and reducing same by 50% by the year 2020.

Recruiting and selecting staff with the correct attitudinal and behavioural characteristics is vital to every organisation. Recruitment is the process of generating a pool of capable people to apply to an organisation for employment, and selection is the process by which managers and others use specific instruments to choose from a pool of applicants, the person(s) most likely to succeed in the job(s), given management goals and legal requirements (Bratton and Gold, 2007). An organization's ability to select competent employees will determine how successful the organisation will become (Tandu, Abeki and Nnaa, 2008). Selection tools must be utilized in the selection process to acquire the right employees needed for a job.

One of the most rigorously evaluated studies of the safety effects of driver training within the corporate environment was undertaken by the Swedish Road and Traffic Research Institute (Gregersen, Brehmer and Moren, 1996). In a large survey of company car drivers in Great Britain, Lynne and Lockwood (1998) found that 11% of the drivers had taken a course of car driver training since first passing their driving test. Drivers who had received such training had an accident rate that was 8% lower than those who had not, though the difference was not statistically significant. However, Lynne and Lockwood (1998) indicate that it is possible that the selection of drivers for training may have been non-random. Drivers may have been selected for training because they had a poor accident record or, conversely, drivers who were more safety conscious may have volunteered for training.

Employee's performance appraisal is a tool for ensuring that an employee's performance is contributing to the achievement of business goals. Performance appraisal creates an opportunity for superiors (managers) to help employees to understand how their personal objectives link to the overall business strategy (Williams, 2002). Reward refers to all of the monetary, non-monetary and psychological payments that an organisation provides

for its employees in exchange for the work they perform (Bratton & Gold, 2007). Effective reward systems tap into the values and issues that are important to people. Theoretically, the most effective incentive programmes (Hagenzieker, 1988; Wilde, 1988, both cited in Janssen, 1991):

- Provide an incentive that is proportional to the actual reduction in accident rates achieved,
- Provide incentives that are based on group rather than individual contingency,
- Provide a large incentive to a small number of eligible drivers selected on random basis, rather than a small incentive to all eligible drivers.

Employee relation is concerned with the relationships between the policies and practices of the organisation and its staff, and the behaviour of work groups (Mullins, 2005). Organizations are able to achieve success when they involve their employees in the activities of the organisation. University vehicles are a property of University Council. In the public sector, vehicles are acquired through: direct purchase by funds from Government or internally/locally generated funds, donations, and projects. Apart from private universities not receiving funds from the government for the procurement of vehicles, private universities also acquire vehicles through the various means of the public university.

In some institutions, all pool vehicles and dedicated vehicles are procured by the Fleet Management Office. The Fleet Management Office provides information and advice as necessary in the preparation of business cases to justify the acquisition of dedicated vehicles by departments (Massey University Policy Guide, 2008). Properly prepared purchase orders are processed through the Purchasing Office. New vehicles are received and processed by Fleet Management Services. Concerning vehicle maintenance, university vehicle repairs are controlled, monitored and overseen by the Director of Estates and Works Department, assisted by the Transport Officer. Before the vehicle is serviced or repaired, the end-users seek authority from the office of the Director of Estates & Works Department. The Estates Director, through the Transport Officer inspects each vehicle due for service/repair to establish the need. To establish this, the date of last service/repair and mileage is checked (ULVFMP, 2011). In some Universities, fuel is allocated through Fuel Advantage Cards or other system approved by University Council from time to time (Makerere University Transport Management Policy Guidelines [MUTMPG], 2011). Universities may also have an emergency fuel tank for critical services. Other systems of the procurement can be used in areas where fuel advantage cards are not used, which are the case for most of the pool vehicles – i.e., vehicles not attached to a particular University officer or project.

University Vehicle Registration books are under the custody of the Director of Estates and Works Department to ensure proper monitoring and accountability for the usage of all University vehicles. Drivers use movement Logbooks for every journey made. The Transport Officer and/or the vested supervisory control office determines the following criteria are met before releasing a university vehicle to an employee or authorizing an employee to use a private or personal vehicle on official University or State business:

- The person requesting vehicle use is, in fact, a university employee in active service.
- Written approval of the use has been given by an individual authorized by the Transport Officer to grant such approval.
- The person has satisfactorily completed a University approved defensive driving course and maintains a good driving record.
- The person has a valid driver's licence in his/her possession. The driver's licence is of the correct class for the type of vehicle he/she is driving (MUTMPG, 2011).

It is the responsibility of the University Estates Manager, through the Transport Officer to control and regulate misuse of university vehicles. When misuse is discovered, it is the responsibility of the Transport Officer to determine the cost and send notification to the Vice Chancellor/Chief Financial Officer, the University Secretary and the Head/Director of Human Resources. Recovery of the cost of misuse is not to be considered a disciplinary action. In case of failure to recover the cost of misuse, the Transport Officer will determine the kind of disciplinary action to be taken (MUTMPG, 2011).

Fleet management policy of UEW

A summary of policy document available in the University under study and the national regulation pertaining to the disposal of vehicles which generally apply include the following:

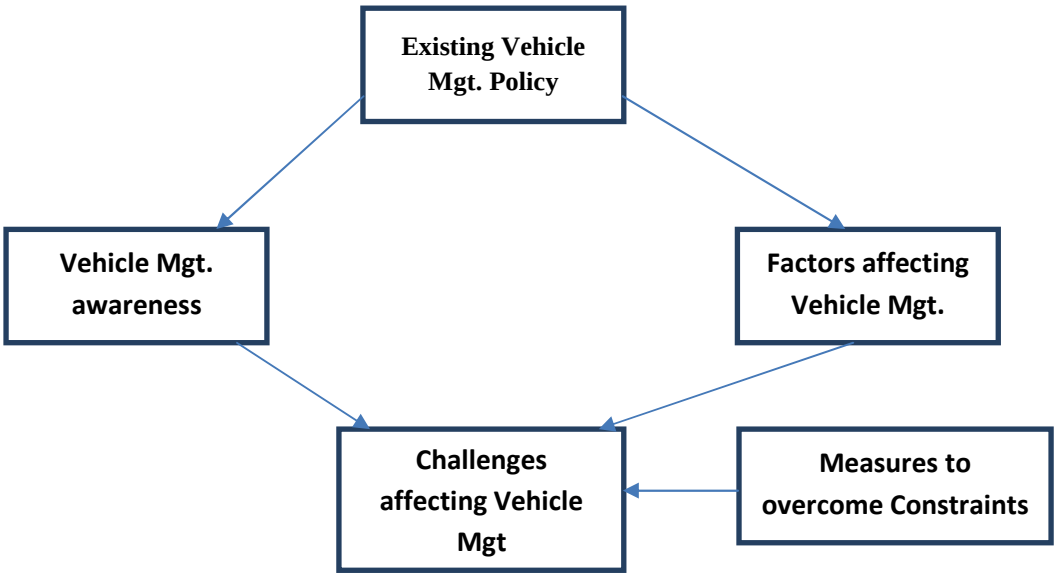
- The University vehicles may be allocated or re-allocated by the Vice Chancellor to a faculty/institute/department/unit/section upon a recommendation of the Transport Management Committee.
- Where a vehicle has been donated to a faculty/ institute/ department/ unit/ section for a specific project, the Vice Chancellor shall upon the recommendation of the Transport Management Committee, have the authority to reallocate the vehicle for official purposes on completion of the project.
- The Dean/Director/ Head of Department concerned shall be responsible for vehicles assigned to his/her Faculty/Institute/Directorate/Department/Unit or Section.
- The Transport Management Committee will from time to time review regulations for the efficient administration of University vehicles.
- The Registrar will from time to time review regulations for the efficient administration of University vehicles.
- To assist in the efficient management and operation of University vehicles, the appropriate log books and requisition form(s) should be utilized in all instances except in an emergency to ensure accountability in vehicle management; and assess driver performance.

The Use and Control of Vehicles

- University vehicles are to be used by the faculty/institute/department/unit/section assigned for official assignments authorized by the head or the deputy of faculty/institute/department/unit/section only. Pool vehicle(s) use should be authorized by the Registrar or a designated official, acting on his/her behalf.
- All vehicles shall be used for only official business of the University.
- A vehicle allocated to a particular faculty/ institute/ department/ unit/ section shall be under the control of the Dean/Director/Head who shall ensure that the vehicle is in a roadworthy condition.
- Each faculty/ institute/ department/ unit/ section vehicle must be assigned a driver who may be transferred by the Registrar on the recommendation of the Chief Transport Officer periodically as may be deemed necessary. No unauthorized officer of the University shall be permitted to drive such vehicles without the express approval of the Registrar.
- The Transport Section shall periodically inspect the condition of all vehicles in the faculty/ institute/ department/ unit/ section at the end of every academic year and submit reports on their condition to the Transport Management Committee.
- Subject to the exigencies of the work of a faculty/ institute/ department/ unit/ section, the Chief Transport Officer after consultation with the Dean/Director/Head may authorize the use of the vehicle of a faculty/ institute/ department/ unit/ section for an official business of the University.
- Staff may hire University vehicles for private use at approved rates. However, approval for such use of university vehicles by staff rest with the Registrar or Vice Chancellor.
- Trucks and buses of the University should not be hired out to the public.
- Deans of Faculty/Heads of Department may apply on behalf of Faculties/Department on the use of University vehicles for field trips/excursions. The cost of such trips shall be charged to the faculty/departments account.
- The approval of the Registrar or Vice Chancellor must be sought before the release any University vehicle to a government institution or any local authority.
- All University vehicles, other than those allocated to the faculty/ institute/ department/ unit/ section shall be placed under the day-to-day control of the Chief Transport Officer. That will constitute the pool vehicles.
- As much as possible, University officials travelling to common destinations for official business shall strive to use the same faculty vehicle or vehicle from the transport pool to ensure judicious use of resources.

Other important areas summarised on the policy document available in the University and also for the national regulation pertaining to the disposal of vehicles which generally apply to the study include:

- Storage/Parking
- Repairs/ Servicing and Maintenance
- Cost of Repairs/Servicing and Maintenance
- Procurement/ Donation of Spare Parts
- Insurance of Vehicles
- Accident
- Drivers/ Operators of University Vehicle Responsibility
- Sanctions against Drivers/ Operators of University Vehicle
- Training of Transport Section Staff
- Fuelling of Vehicles
- Vehicle Replacement
- Disposal of Vehicles



Source: Authors Field Work, (2017)

Conceptual Framework of Vehicle Fleet Management

Achieving value for money points to the utilisation of public resources in a way that creates and maximises public value. Hence, from the conceptual framework above, the researcher seeks to maintain that to derive maximum utilization of University resources there is the need for strong vehicle management policy control on the usage of vehicles belonging to the University. It is understood that the vehicle management policy will provide a framework for creating effective vehicle management environment and for effective utilisation of vehicles in the University. The framework further proposes that an existing effective vehicle management policy will also provide effective strategies to deal with challenges that emerge out of the vehicle policy implementation in the University. The interrelated parts of the conceptual framework could point out clear path on effectiveness and challenges of vehicle fleet management in the University when all parts are well coordinated.

Research methodology

The study made use of quantitative research methods. A purposive sampling technique was used to select the one hundred and sixty-one (161) respondents for the study which comprise sixty (60) senior members and one hundred and one (101) senior and junior staff. It is expected that the sample size would be adequate to serve as a representation for generalizing the results for the whole population.

The study population was the entire work force of the University of Education, Winneba-Kumasi Campus. The staff strength of the College is 270. Out of this number, one hundred and thirty (130) are teaching and non-teaching senior members and one hundred and forty (140) are senior and junior staff in the College (HR, UEW-K, 2015).

In determining the sample size, an assumption of 95 per cent confidence level was used, thus, this provided 0.05 as the margin of error. In substituting a 95% confidence level with a population of 270 into the Slovin's formula, the sample size of 161 was obtained. The sources of data for the study were both from primary and secondary sources. Secondary data were obtained from internet resources, journals, articles, publications, other documents available to the University and books. Through the administration of questionnaire too, the primary data were obtained for the study. The researcher made as many copies as possible and distributed the instruments himself, from office to office at random and made the needed follow ups till all the one hundred and sixty-one (161) were obtained.

The data gathered from respondents were coded and analysed using the statistical package for social sciences (SPSS 16.0 version) software. The analysis of the data was tabulated to make it simple for anyone to analyse and be converted into percentages to make it more meaningful for interpretation and then presented through diagrams, bar charts and tables to depict trends and allow for comparison of findings. These enhanced the understanding of findings and made it more relevant for the purpose of the study.

Results and discussions

Data has been analysed in respect to the objectives of the study.

Existing Vehicle Management Policies

Table 1: Awareness of a codified transport management policy

Response	**Frequency**	**Percent**
Yes	117	72.7
No	44	27.3
Total	161	100.0

Source: Fieldwork (2017)

In Table 1 the researcher sought respondent's view regarding their awareness of the availability of a codified transport management policy. Out of 161 respondents, more than two-thirds (72.7%) indicated being aware of the existence of a codified transport management policy whiles 44 respondents representing 27.3% were not aware of the policy. From the responses, it could be inferred that the University has in place a codified transport management policy for effective fleet management in the institution that is known to its employees.

Table 2: Extent of respondents' knowledge of specific on vehicle management policies

Fleet Management Policy Areas	**Mean**	**Rank**
Vehicle acquisition	3.25	1st
Driver briefing and debriefing	3.24	2nd
Vehicle routing and scheduling	2.94	3rd
Vehicle repairs and maintenance	2.82	4th
Fuel management	2.75	5th

Kendall's W^a=.046, $\chi 2$=29.403, df=4, Sig=.001
Source: Fieldwork (2017)

Fleet management comprises all actions needed to maintain and operate pieces of equipment throughout its life from the beginning stages of equipment acquisition to the final stages of asset disposal to ensure that all activities are cost effective. This section of the study presents a discussion of the results as analysed above. From Table 1, 72.7% of respondents affirmed their awareness of the codified transport management policy of the University. Most of the drivers had knowledge on vehicle acquisition and driver briefing and debriefing as shown in Table 2. According to Norton (2011), a strategic approach to fleet management is one in which the interrelationships among, and between, the many vehicle management and business management functions that organisation must perform to optimize fleet performance and costs is both understood and managed to which the University is no exception.

Table 2 shows the descriptive statistics of respondents view on vehicle management policies they know. With a mean score of 3.25, most respondents had knowledge on vehicle acquisition, followed closely by driver briefing and debriefing (mean=3.24), vehicle routing and scheduling (mean=2.94), vehicle repairs and maintenance (mean=2.82) and fuel management (mean=2.75). The Kendall's W^a (coefficient of concordance) of 0.046 implies that the respondents generally did not agree to know the various vehicle management policies in the institution. The result indicates that fleet management policies in the University place significant emphasis on vehicle acquisition.

The literature recognised the existence of fleet management policies at the University of Education, and respondents duly affirmed its existence. Ratcliffe (1987) outlined the relevance of fleet management to organisations as being: Vehicle Acquisition, Vehicle Selection, Fuel Management, Vehicle Routing and Scheduling, Vehicle Maintenance, Driver Testing, Briefing, and Debriefing. The fact that the University had in place policies for fleet management meant they could function effectively with respect to Ratcliffe (1987) claims.

Effectiveness of Vehicle Management Policies to Ensure Value for Money

Table 3: Efficiency of vehicle management policies in ensuring value for money

Response Scale	**Frequency (*n*)**	**Percentage %**
Operational (Junior level Management)	59	38.8
Tactical	24	15.8
Strategic	18	11.8
Not aware	51	33.6
No response	9	5.6
Total	161	100.0

Source: Fieldwork (2017)

From Table 3, out of 152 respondents, 59 representing 38.8% concur that vehicle management policies in the University have been useful at the operational (junior level management) level, 51 respondents representing 33.6% said they were not aware of the usefulness of the vehicle management policies, 24 respondents

representing 15.8% asserted vehicle management policies have been useful at the tactical level in ensuring value for money with 18 respondents representing 11.8% agreeing that vehicle management policies has been useful at the strategic level in ensuring value for money. From the responses, it can be concluded that vehicle management policies in the University have been useful in ensuring value for money by far at the operational level. From Table 3, approximately 39% of the respondents asserted that the vehicle management policies of the University were effective at the operational level (junior level management) in ensuring value for money. That notwithstanding, 36.6% of the respondents were unaware of the effectiveness of the vehicle management policies.

Table 4: Transport Section should be given the authority to initiate the procurement fuel

Response Scale	**Frequency *(n)***	**Percentage %**
Yes	71	44.1
No	90	55.9
Total	161	100.0

Source: Fieldwork (2017)

Table 4 shows respondents' responses on whether the Transport Section should be given authority to initiate the procurement of fuel to run the University's vehicles. From the responses, it can be observed that more than half of its respondents (n=90) representing 55.9% said 'No' to the fact that the Transport Section should be given authority to procure fuel whereas the remaining 71 respondents representing 44.1% said 'Yes'. From the trend of responses, it can thus be concluded that there could be efficiency in the procurement of fuel should the section be authorised to handle the process as affirmed by Ratcliffe (1987).

Table 5: Transport Section should be given the authority to initiate the procurement of new vehicles

Response Scale	**Frequency *(n)***	**Percentage %**
Yes	88	54.7
No	70	43.5
No Response	3	1.9
Total	161	100.0

Source: Fieldwork (2017)

Furthermore, concerning the procurement of new vehicles, Table 6 presents respondents' views on whether the Transport Section should be given the authority to initiate the procurement of new vehicles. From the responses it could be observed that the majority (n=88, 54.7%) said 'Yes' to the idea that the Transport Section should be given authority to initiate the procurement of new vehicles for the University whereas 70 respondents representing 43.5% stated 'No'. It is thus concluded from the results that the procurement of new vehicles for the use of the University should be at the initiation of the Transport Department of the University.

Majority of the respondents (55.9%) said 'no' to the fact that the Transport Section should be given authority to initiate the procurement of fuel in the University as shown in Table 4. However, 55.9% of respondents affirmed that the Transport Section should be given the authority to initiate the procurement of new vehicles (Table 5). This was similar to the procurement of spare parts, 64% (Table 6) and responsible of repair and maintenance activities, 55.3% (Table 7).

Table 6: Transport Section should be in charge of procurement of spare parts

Response Scale	**Frequency *(n)***	**Percentage %**
Yes	103	64.0
No	58	36.0
Total	161	100.0

Source: Fieldwork (2017)

Again, concerning the procurement of spare parts for the maintenance of the University vehicles, the respondents were asked to indicate whether the Transport Section should be in charge of that process. The results as presented in Table 6 suggest that more than half (n=103, 64%) of the respondents responded 'Yes' to the idea that the Transport Section should be given the authority to initiate the procurement of spare parts; however, 58 (36%) of the respondents indicated otherwise. The results imply that the procurement of spare parts for vehicle maintenance in the University could be efficiently managed by the Transport Section of the University.

Table 7: Transport Section should be in charge of Vehicle Repair and Maintenance

Response scale	**Frequency (*n*)**	**Percentage %**
Yes	89	55.3
No	72	44.7
Total	161	100.0

Source: Fieldwork (2017)

In Table 7 respondents were asked to indicate whether vehicle repair and maintenance activities should be the responsibility of the Transport Department of the University. The responses showed that more than half (n=89, 55.3%) of the respondents responded 'Yes' showing an agreement with the proposition that the Transport Section of the University should be in charge of vehicle repair and maintenance. However, 77 representing approximately 45% of the respondents on the other hand were opposed to the Transport Section being in charge of vehicle repair and maintenance in the University. From the responses it can be concluded that vehicle repairs and maintenance activities and related issues are best left in the charge of the Transport Department of the University.

Table 8: Source of Authorization for fuelling of official vehicles in the University

Authorities	**Frequency *(n)***	**Percentage %**
Transport Officer	70	43.3
Senior Assistant Registrar	12	7.6
College Registrar	41	25.6
HOD/Dean	6	3.6
Internal Auditor	30	18.9
No Response	2	1.2
Total	161	100.0

Source: Fieldwork (2017)

Table 8 shows the responses of respondents on who authorizes the request for the fuelling of official vehicles in the University. Seventy (70) respondents representing 43.3% indicated that the Transport Officer does the authorization for fuelling requests, 41 respondents representing 25.6% said the College Registrar does the authorization, 30 respondents representing 18.9% stated the Internal Auditor does the authorization, 12 respondents representing 7.6% indicated the Senior Assistant Registrar does the authorization whiles the remaining 6 respondents representing 3.6% said authorization was done by the HOD/Dean. From the results, it can be concluded that it is the Transport Officer who authorizes fuelling of University vehicles.

The foregoing findings go contrary to the reviewed literature where vehicle maintenance and university vehicle repairs are controlled, monitored and overseen by the Director of Estates and Works Department, assisted by the Transport Officer. The Transport Officers were in charge of the approval for the requests of fuel and the use of official vehicles as buttressed by ULVFMP (2011). Even though respondents did not differ much in their responses to the effectiveness of vehicle management, $\chi^2(16, N=161) = 266.869$, $p>0.001$ (Table 12), insurance of official vehicles and existence of strict regulation on access to keys of official vehicles were seen as being effective in the University.

Table 9: Approval for request of University vehicles

Response Scale	Frequency (*n*)	Percent (%)
Transport Officer	93	58.9
Senior Assistant Registrar	13	8.2
College Registrar	52	32.9
No Response	3	1.9
Total	161	100.0

Source: Fieldwork (2017)

In Table 9, the respondents were asked to indicate who approves the request for use of the University vehicles. The results point out that more than half (n=93, 58.9%) of the respondents reported the Transport Officer authorises the requests for use of University vehicles. In addition, 52 respondents representing approximately 33% of the respondents stated it is the College Registrar who authorizes the use of University vehicles. That notwithstanding, 13 (8.2%) of the respondents pointed to the Senior Assistant Registrar as the one who approves requests for the use of University vehicles. The results imply that Transport Officer approves requests concerning the use of University vehicles.

Effectiveness of Vehicle Management

Table 10: Descriptive Statistics on the effectiveness of vehicle management

Vehicle Management Practices	N	Min.	Max.	Mean	±SD
Insurance of official vehicles	156	1	5	4.14	0.876
Feedback from drivers whiles on duty	161	1	5	3.91	1.002
Administrative process in requesting for official vehicle	161	1	5	3.86	0.862
Strict regulation on access to keys of official vehicles	159	1	5	3.82	0.978
Quality of transport service delivery	155	2	5	3.76	0.926
Competent driver's mechanics	157	1	5	3.7	0.788
Punishment system for road safety violation	156	2	5	3.65	0.907
Repairs and maintenance on vehicle	154	2	5	3.59	0.813
Monitoring of drivers whiles on duty	158	1	5	3.48	0.894
Driver/mechanic discipline	152	1	5	3.47	0.898
Transport staff punishment system	158	1	5	3.35	1.064
Transport officer involved in the design of technical specification	161	1	5	3.31	1.158
Involvement of transport officer in the evaluation of supplier quotation for tender	156	1	5	3.28	1.185
Incentive/Accident free rewards	159	1	5	3.28	1.313
Periodic Training programmes for drivers	151	1	5	3.11	1.096
Periodic training programmes for mechanics	157	1	5	2.93	1.02
Adequate vehicle to meet high demand	155	1	5	2.91	0.914
Valid N (listwise)	112				

1=Poor, 2=Fair, 3=Satisfactory, 4=Good, 5=Excellent

Source: Fieldwork (2017)

Table 10 shows the descriptive statistics on the effectiveness of vehicle management. Most respondents agreed with the following vehicle management policies: quality of transport service delivery (x=3.76), repairs and maintenance on vehicle (x=3.59), competent driver's mechanics (3.70), administrative process in requesting for official vehicle (x=3.86), punishment system for road safety violation (x=3.65), insurance of official vehicles (x=4.14), feedback from diver's whiles on duty (x=3.91), strict regulation on access the keys of official vehicles (x=3.82) were good. The following aspects of the policies were, however, rated satisfactory: Transport staff

punishment system (x=3.35), monitoring of drivers whiles on duty (x=3.48), Transport Officer involved in the design of technical specification (x=3.31), involvement of Transport Officer in the evaluation of supplier quotation for tender (x=3.28), incentive/accident free rewards (x=3.28), adequate vehicles to meet high demand (x=2.91), periodic training programmes for drivers (x=3.11), periodic training programmes for mechanics (x=2.93) and driver/mechanic discipline (x=3.47).

Table 11: Kendall's Coefficient of Concordance effectiveness of vehicle management

Vehicle Management	**Mean**	**Rank**
Insurance of official vehicles	12.77	1st
Strict regulation on access to the keys of official vehicles	11.1	2nd
Administrative process in requesting for official vehicle	10.33	3rd
Competent driver's mechanics	9.86	4th
Feedback from drivers whiles on duty	9.83	5th
Punishment system for road safety violation	9.81	6th
Incentive/accident free rewards	9.35	7th
Transport officer involved in the design of technical specification	9.07	8th
Quality of transport service delivery	9.04	9th
Driver/mechanic discipline	9.02	10th
Monitoring of drivers whiles on duty	8.84	11th
Transport staff punishment system	8.67	12th
Repairs and maintenance on vehicle	8.58	13th
Involvement of Transport Officer in the evaluation of supplier quotation for tender	7.85	14th
Periodic training programmes for drivers	7.48	15th
Periodic training programmes for mechanics	6.15	16th
Adequate vehicle to meet high demand	5.25	17th

Kendall's W^a=.149, χ2=266.869, df=16, Sig=.001
Source: Fieldwork (2017)

Table 11 shows Kendall's Coefficient of Concordance on effectiveness of vehicle management at the University. Kendal coefficient was calculated on the means of the following as they apply to vehicle management; insurance of official vehicles, strict regulation and access to keys, administrative processes, feedback, incentives, repairs and maintenance, punishment, training programmes monitoring and quality of transport delivery. Respondents $\chi^2(16, N=161) = 266.869$, $p>0.001$ did not differ much in their responses to the effectiveness of vehicle management and a Kendal coefficient value (W^a=0.149) indicates a less unanimity among the various respondents in their responses. In effect, all respondents agreed that employment of competent drivers, reward system to retain staff at the Transport Section, periodic upgrade of skills and knowledge of drivers, compliance to vehicle management policies by staff, ensuring safety of University vehicle, immediately replacing unserviceable vehicles, regular maintenance of vehicles and involvement of staff in Transport Section in purchasing vehicles were measures that could be used to curtail the challenges to fleet management in the University. Tandu, Abeki and Nnaa (2008) stated that an organization's ability to select competent employees will determine how successful the organisation will become. Armstrong (2006) buttressed the view of retaining staff whereas Lynne and Lockwood (1998) supported the assertion of providing training for drivers. In Bratton and Gold (2007) view effective reward systems tap into the values and issues that are important to people with Mullins (2005) citing employee involvement and relations as being integral to organisational success.

Conclusion

Fleet management has become integral to the success of vehicle movement in institutions and must be a priority for organisations. Fleet management is often one of the neglected areas in our institutions. Huge investments are made on the acquisition of vehicles and there is the need to put in place measures and structures to manage this investment to achieve ultimate result. Transport staff must as always be aware of the basic rubrics that accompany vehicle management. It can be concluded from the summaries that there might exist fleet management policies but frantic efforts must be made to make staff aware of these policies. Moreover, regular maintenance must be conducted on vehicles, the skills of drivers must be upgraded on consistent basis to keep them abreast with road safety issues; as breakdowns were recognized to be the major challenge to fleet management in the study.

The following recommendations are made based on the conclusions on the study.

- To ensure discipline and effective work flow in the University, Management should put in place measures to ensure that all staff comply with the fleet management policies of the University and appropriate penalties be meted on staff who go against the policies.
- Regular training programmes should be organized for staff to ensure they are kept up-to-date with issues on road safety.
- Drivers' views should be considered when making arrangements to procure new vehicles for the University.
- The University could consider the usage of fuel coupons as means of relieve to staff who usually go through of stress of bureaucratic procedures to acquire fuel for official duties.
- For effective adherence to the policies, all drivers and transport staff be well-inform of the University's fleet management policy.

References

Bratton, J. & Gold, J. (2007). Human Resource Management (4th ed), Palgrave Macmillan, Mar 15, 2007 - Business & Economics - 720 pages.

Choudhary, V. & Vithayathil, J. (2013). The Impact of Cloud Computing: Should the IT Department be Organized as Cost Centre or a Profit Center? *Journal of Management Information Systems*, 30, 67-100.

Gbadegesin, A.S., Olorunfemi, F. B. & Raheem, U.A. (2011). Urban vulnerability to climate change and natural hazards in Nigeria. (Hexagon books series on human environmental security and peace, 5, 669-688).

Gergersen, N.P., Brehmer, B., Moren, B. (1996). "Road safety improvement in large companies" An experimental comparison of different measures", *Accident Analysis and Prevention, 28*(3), 297-306.

Haghani, A. & Shafahi, S. (2003). A dynamic vehicle routing problem with time-dependent travel times. *Computers & Operations Research*, 32(11): 2959–2986.

Hagenzieker, M.P. (1988). Second World Congress on Safety of Transportation, 18-20 February 1998 Proceedings: Imbalance between Growth and Safety? Gedrag, De psycholoog. September, 349-353.

Jonsson, P. (2008). *Logistics and supply chain management.* Berkshire: McGraw-Hill Education (UK).

Lynne, J. & Lockwood, M. (1998). *Mind, Brain and the Quantum; The Compound "I"* Oxford: Blackwell, Luhmann, Sociale systeme, Frankfurt am main: Suhrkamp.

Martinez, A. J. P., Stapleton, O. & Van Wassenhove, L.N. (2011). Field Vehicle Fleet Management in Humanitarian Operations: A case-based approach. *Journal of Operations Management* 29, 404-421.

Meija, M., Barnard, C.R., Corsi, T. & Keanne, T. (2003). Driver management practice of motor carriers with high compliance and safety performance. *Transportation Journal, Summer*, 2003.

Mullins, J. L. (2005). Management and Organizational Behaviour, (9th Ed.) Financial Times Prentice Hall, 2010.

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Powell, W.B., Carvalho, D., Godfrey, H., & Simao, G. (1995). Real-time optimization for truckload motor carriers. *OR/MS Today*. 18: 28–33

Ractoliffe, J. A. (1987). Quarterly. *Journal of the Royal Astronomical Society*, 29, (2), 281.

Robinson, J. B. (2002). Futures under glass: a recipe for people who hate to predict. *Futures, 22*(8), 820-842.

Tandu, E. O, Abeki, S. O & Nnaa, B. G. (2008). Techniques and tools for achieving effective human resource management: Their Constraints in *Africa Global Journal of Social Sciences, 17, 2*

Waters, D., Richmond, B. G., Parkes, J. & Wright, P.C. (2009). Future Trends in the supply chain management. In Waters, D. (Ed.), Global logistics (5th ed.). London: Kogan Page.

Wu, P., J. C. Hartman and G. R. Wilson, (2005). "An Integrated Model and Solution Approach for Fleet Sizing with Heterogeneous Assets," *Transportation Science, 39*(1):87-103,

Wyrick, D A; Storhaug, B J. (2003). Benchmarking fleet management Transportation Building, 395 John Ireland Boulevard St Paul, MN United States 55155.