

Full Length Research Paper

Education for maintenance culture in Nigeria: Implications for community development

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Infrastructural development is the bedrock of any development in the modern world. However, without a strong maintenance culture, efforts at infrastructural development will amount to nothing. This study looked into the issue of maintenance as practiced by Nigerians. Two null hypotheses were formulated and tested at 0.05 level of significance. The survey design used for the study are sample of 120 men and women at various governmental levels which were randomly selected from Oyo State Ministry of Agriculture, Department of Works and Services Ibadan North Local Government and the Ministry of Commerce and Industry. A 12-item questionnaire called Maintenance Culture for Development scale was constructed on a four-point Likert-type scale and used for data collection. The data was analyzed using chi-square statistical tool. The result indicated that there was a significant relationship between maintenance of facility and development and that education has a significant impact on maintenance culture. Based on the result, it was recommended that people should be educated and encouraged to adequately and properly maintain facilities in their care so as to facilitate rapid process of development.

Key words: Maintenance, culture, infrastructural facilities, development, community.

INTRODUCTION

Infrastructural development is the basis and bedrock of any development effort in the world today. It is important to stress that, it is not enough for facilities of development to be put in place; it is more than enough for these facilities to be adequately and properly maintained so that the purpose for which they are meant would be accomplished.

However, the attitude of people towards public facilities is that of government property that do not belong to anybody (Adeleye, 2009). To this extent facilities that were meant to benefit the masses are just rotting away, being wasted without being put to any good use as people are not interested in making such facilities sustainable. The result therefore, is that public facilities do not last long due to lack of maintenance. This shows that without a strong maintenance culture, infrastructural development will amount to nothing. To Ajibola (2009) "On personal levels, we must imbibe maintenance culture in order to enjoy the best value for our money, ... for us to enjoy the best of life, for how well we use and enjoy our buildings, machines, cars, household equipment, furniture and all other personal and public physical assets

and indeed our bodies is dependent on how well we have imbibed the culture of maintenance".

Olatunde (2009) is of the view that understanding the importance of project sustainability will mean incorporating long term facility management agreements in all major projects. He went further that Nigeria was littered with laudable but failed projects due to lack of maintenance culture.

The phrase maintenance culture could therefore be seen as an important one that should be defined to have a proper understanding of what it stands for in the process of sustainable development.

Ajibola (2009) defines culture as "The shared belief and values of a group; the beliefs, customs, practices and social behaviour of a particular nation or people". He defined maintenance as "The work that is done regularly to keep a machine, building or a piece of equipment in good conditions". He expatiated further that maintenance is a combination of actions carried out to retain an item in or to restore the item to an acceptable condition. Adeleye (2009) sees maintenance as involving keeping equipment and mechanized infrastructure in operational conditions

for continual use. The word maintenance to Eti et al. (2006) means preserving and keeping in good order as near as possible in their original state. By implication, maintenance means keeping in good order and shape all projects of development that are of benefit to the people. Maintenance as defined by Federal Ministry of Works and Housing (FMW&H in the Central Bank of Nigeria document, 2003) is a means of correcting deficiencies that have developed as a result of age and use.

Infrastructure is a generic term for basic structures and facilities that are essential for development and subsequently for economic growth. Infrastructure as a generic term refers to overhead capital such as education, water supply, sewage systems, energy, post and telecommunication services, transport systems and roads (Morakinyo, 2009).

The implication of the above is that when sites and facilities have maintenance practices that encourage the provision of breakdown, repairs and replacements then facilities have longer life-span and are put to better use for the benefit of the people (Fen et al., 2009).

Development in this paper is used to mean the extent to which facilities are put to good use in order to improve the economic, social and cultural conditions of the people of a particular community (Adedokun, 1998). Maintenance culture is therefore necessary for development and this is why the lesson of maintenance should be sunk down every individual in the Nigerian communities so as to bring about better living conditions.

Mapaderun (2009) Director National Orientation Agency, (NOA) Oyo State in his welcome address on sensitization campaign on Maintenance culture laments that earthmovers, tractors, pail loaders, graders, school building (dilapidating), government houses overgrown with weeds, which ought to have been repaired with token of money are in disuse. Instead of using a little amount of money for their repairs, a huge amount of money is being expended to procure new ones which would also end in disuse. He said "The case is simply that we lack maintenance culture and what we neglect tells a lot of stories about us... children still studying in dilapidated school classrooms..." He stressed further "we even lack personal maintenance culture; not taking care of our personal health, hence, you see a 40 year old person looking as aged as a 60 year old person".

Also corroborating (To corroborate) the view of the Director, the Chairman of the occasion, Chief Bayo Oyero said that within the period of 2000 and 2004 when he was a council member at the University of Ibadan, that the Works and Maintenance Department of the University of Ibadan was full of junks, old machines, vehicles and equipment not properly maintained.

In The Daily Trust of 27 April, 2008, Nahimah (2008) made a report about poor aircraft maintenance. The report states that aviation industry encounters great problems when it comes to carrying out major checks on the aircraft. Godwin (2008) in the same report

expressed that "acquiring a new aircraft is not a relief to the industry as good maintenance of the existing ones, adding that a well maintained ageing aircraft is as good as a poorly maintained new aircraft" This represents the view of another Nigerian on maintenance culture.

"I remember when I was young; I used to visit Ikoyi and Victoria Islands. The houses were grand and a beauty to behold. Over the years, a lot of the houses are looking rather older than they actually are. Reason? A lack of proper maintenance, Nigerians lack maintenance culture, we drive cars until they break down, we live in houses until they become hazardous to live in and we use our roads till they break up. Even in our factories, I have heard of engine parts used till they cease up, causing an entire production line to come to a grinding halt" (Folu Abatan www.allafrica.com/stories/20090480048).

This lady believes that "we need to change our perspective about our maintenance culture". The more regularly we maintain what we have, the longer we will be able to get some long life usage out of it.

Talking along line this mindset, Godwin Haruna in "This Day" of 27 April, 2009, expresses his views about this issue; that "Nigerians are used to grandiose projects which are abandoned almost immediately on completion". He states further that "A look at some deteriorating public facilities in the country reveals this stark fact (This Day, 2009). He backed up his statement citing the example of the National Arts Theatre, Iganmu Lagos, that:

"The National Arts Theatre, Iganmu, Lagos which was built in the run up to Nigeria's hosting FESTAC in 1977 is an architectural masterpiece... Today, the erstwhile pride of the nation is a shadow of itself: leaking roofs, dropping ceilings, malfunctioning air conditioning systems, broken furniture and overgrown weeds in the hitherto well maintained lawns..."

The emphasis is that the National Theatre lost its beauty and pride to nothing other than to lack of maintenance. Similarly, going through a publication of Central Bank of Nigeria (2003) titled "Highway Maintenance in Nigeria, lessons from other countries", revealed the state of Nigerian roads as very disheartening. The document indicated, "Most of the roads were in very poor condition and require complete rehabilitation". The document revealed that the story is the same all over the country about the poor conditions of Nigeria roads "some roads constructed over 30 years ago have not been rehabilitated for once, resulting in major cracks, depression, broken down bridges and numerous potholes that make road transport slow and unsafe".

A cursory look at the health sector also reveals lack of maintenance culture. This is disheartening because quality health services are indispensable in any society, because it is only a healthy country with healthy citizens that could boast of sustainable development. John (2008) in his report of 2 June, 2008 in 'Leadership' (Abuja)

revealed that the health services had recorded little or no project since 2007 and that because of lack of proper health care maintenance, the ordinary masses have no access to proper health care in the country and this lack of health maintenance has led to the death of many Nigerians even of curable diseases. Edewor et al. (2003) also states that people still suffer in area of adequate health services. To him, people must be given good education to ensure improvement in their health condition so as to enhance their economic empowerment to help them in decision making that will liberate them from traditional roles that predispose them to health hazards and which debar them from being active in matters related to their development.

In the education sector the situation is not different. People are used to seeing dilapidated school buildings here and there which, are still occupied by students. It is not uncommon to see school buildings collapse while students are in under leaking roofs, which, disturb lessons when rain falls, roofs without ceiling that make learning environment very unsuitable especially in hot seasons are all familiar features of our classrooms. These all point to the fact that education as a social service is not adequately maintained.

Industrial maintenance is not an exception in this discussion. Eti et al. (2006) opined that a developing society needs to adapt to change and foster creativity. To them in the pursuit of continual improvement, implementing wise maintenance schedule is essential for contemporary years. They further revealed that the fact concerning Nigerian industries is that of low availability of materials and low productivity which have eventually resulted in the closure of many industries and as such triggered off a realization of the need for strategic challenges in maintenance management.

In the Daily Trust of 27 April, 2008, it was revealed that poor aircraft maintenance hinders aviation safety. In this report, Jibowu attributed flaws in the Nigerian Aviation Sector to lack of maintenance culture and the training of professional engineers. He further explained that:

“Acquiring aircraft is not as relevant to the industry as good maintenance of the existing ones, adding that a well maintained aging aircraft is as good as a poorly maintained new aircraft”.

He therefore notes that unless the country puts up a National hanger as was done in the past, operators will continue to face the problem of maintenance and that if nothing is done to train more engineers; aviation in Nigeria will totally collapse. All these views show that education is needed for every Nigerian to be adequately armed with maintenance culture.

Purpose of the study

The study purposed to look into the issue of education for

maintenance culture as it could lead to the development of our communities. This purpose culminated into asking the question; will maintenance culture have any effect on community development?

Hypotheses

There is no significant relationship between maintenance culture and community development.

There is no significant relationship between education and maintenance culture.

METHODOLOGY

The survey research design was used for this study. The population consisted of workers from the various ministries of Oyo State Secretariat, and the Local Government Areas of Oyo State. The sample consisted of 120 men and women from the various departments in the Ministry of Agriculture, Department of Works and Maintenance, Ibadan North Local Government and the Ministry of Commerce and Industries. Forty (40) persons were randomly selected from each of these Ministries and the department of works in Ibadan North Local Government area of Oyo State.

Instrumentation

A twelve item questionnaire called Maintenance Culture for Community Development (MCCD) was used for data collection. The instrument consisted of 12 items on issues relating to maintenance culture and community development.

Validity

Test experts in the Faculty of Education, University of Ibadan, validated the instrument.

Reliability

A split-half reliability estimate was calculated using 20 women who were not part of the study samples and a reliability coefficient of 0.72 was obtained. This made the instrument to be considered appropriate for the study.

Data analysis

The data collected were analyzed using chi-square statistical tools at 0.05 level of significance.

RESULTS

The result obtained from the study is as presented below:

Research Hypothesis 1: There is no significant relationship between maintenance culture and community development.

As shown in Table 1, $X^2_{cal} = 108.351 > X^2_{tab} = 24.996$

Table 1. Relationship between maintenance culture and community development.

Items	Observed (O)	Expected (E)	X^2 cal	df	X^2 tab	P
1.	100	15	3	2	30	108.351
2.	85	15	15	5	30	15
3.	101	19	-	-	30	24.996
4.	90	20	03	7	30	0.000
5.	104	10	6	-	30	
6.	103	15	2	-	30	

Table 2. Relationship between education and maintenance culture.

Items	Observed (O)	Expected (E)	X^2 cal	df	X^2 tab	P
7.	98	17	3	2	30	204.578
8.	90	20	10	-	30	15
9.	105	15	-	-	30	24.996
10.	89	11	-	20	30	0.000
11.	92	10	5	3	30	
12.	102	6	4	8	30	

at 0.05 level of is greater than X^2 tab. Therefore, the null hypothesis that there is no significant relationship between maintenance culture and community development is rejected while the alternative hypothesis that there is significant relationship between maintenance culture and community development is accepted. Hence, maintenance culture influences community development.

Research Hypothesis 2: There is no significant relationship between education and maintenance culture.

As in Table 2, $X^2_{cal} = 204.578 > X^2_{tab} = 29.996$ at 0.05 level of significance. Therefore, the null hypothesis that there is no significant relationship between education and maintenance culture is rejected while the alternative hypothesis that there is significant relationship between education and maintenance culture is accepted. Hence, education influences maintenance culture.

DISCUSSION

The result revealed that there was a significant positive relationship between maintenance culture and community development. The study revealed that education is necessary for maintenance culture for the development of our communities. Maintaining infrastructural facilities implies encouraging development. In the same vein, development means bringing about possible changes to the community.

The study discovered that when people are carried along in projects of development and are educated as to the aims and objectives of such, people's morale is very

high and there is tendency for them to sustain such. This view of people imbibing maintenance culture is supported by Anyanwu (1994) that people should no longer slump back in precarious lethargy waiting for professionals to help them to survive. Instead, they must develop to realize the powers they need to improve their level of responsiveness and the quality of life in their community. When people are educated, they imbibe the culture of maintenance.

It is revealed that though provision of infrastructural facilities is the bedrock of development, if such facilities are not sustained, there could be no development. It is revealed that facilities that could lead to development are not usually maintained because "the government from the top to the last tier has always been de-emphasising the importance of project sustainability and has not always been incorporating long term facility management in all its major projects (Olatunde, 2009).

It is also revealed that training members of the community who are the beneficiaries of these facilities is "an extremely important integral part of building capacity to ensure that end-users are brought up-to date on the use and care of equipment" (Olatunde, 2009).

It is also revealed that when government vision is driven by the provision of infrastructure but not by the real impact on its citizen, the government is not really concerned with maintenance of such infrastructural facilities.

When people are properly educated as to the importance of maintenance culture, they will thus be encouraged to maintain facilities that would bring positive changes to their living standards.

It is discovered that when people are mobilized and

they are made aware of the roles they need to play in maintaining projects of development; they will be committed to the course of change (Adedokun, 1998).

The study made it clear that lack of continuity in government policies is a major cause for lack of maintaining facilities of development. In responding to the questionnaire items, people attested to the fact that at the expiration of the term of a particular government, the already finished projects are left unmaintained as focus would have shifted to the new government and its programmes.

It is discovered that there is little commitment to monitoring projects of development. The study showed that due to lack of proper maintenance, Nigerians suffer in silence in all fields of human endeavour and death is on the increase due to bad roads and poor health care.

Conclusion

The study looked into maintenance culture with the aim of examining its implication on community development. It was discovered that provision of infrastructural facilities would lead to development of communities but that this development would be sustained only if efforts are made to embark on routine preventive, recurrent and periodic maintenance when facilities are put in place. They study also emphasized the need for educating the populace so that maintenance culture would not be alien to any Nigerian.

RECOMMENDATIONS

Based on the above revelations, the following recommendations were made:

- For maintenance culture to be imbibed; people must be adequately educated because education stresses the need for people to realize that they can and must play a part in the determination and direction of their lives. Education should be given to empower not only the employee that are concerned with maintenance but also every member of the community so as to awaken and sustain in them maintenance culture. In giving such education, media houses should continue to play their roles.

- It is recommended that workers' participation must be highly valued and intrinsic motivation sought for everybody involved in maintenance of facilities.

- People should be made to understand the importance of infrastructural sustainability to as to encourage people to pay their taxes promptly.

- Intensive training and seminars must be organized for all cadres of staff of various establishments. Users of

facilities should also be brought up to date in the use and care of equipment.

- All the necessary personnel, equipment, consumable and routine spare parts needed for efficient and proper maintenance of facilities should be put in place by necessary operators of these facilities.

- People must be adequately mobilized and carried along in all government activities since they are the ultimate beneficiaries of the projects/facilities being maintained.

- The three tiers of government should organize seminars and conferences meant to sensitize people on maintenance culture from time to time.

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