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STRATEGIES FOR THE MAINTENANCE MANAGEMENT OF HOSTEL BUILDINGS IN NIGERIA

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ABSTRACT; *A directive was given in 2004 by the Federal Ministry of Education that federally-owned tertiary institutions should hands off hostel management. Consequent on the directive, Nigerian tertiary institutions now have both institutional and non-institutional hostels serving tertiary institutions. This no doubt has a lot of implications on the nature of management and maintenance of hostels in Nigeria.This paper assessed maintenance management strategies adopted in the maintenance of hostel buildings in Nigeria and formulated guidelines for the maintenance of the hostels using the field data collected from the Federal Polytechnic Oko for the case-study. In order to achieve the objective of the study, opinions of hostellers, school management, maintenance heads and private developers were sampled through structured questionnaires. The data collected were quantitatively analysed and the result of the analysis indicated the following as the problems of maintenance; non-availability of funds, indiscipline and lack of functional operational frame work and regulatory body, climatic conditions, lack of good maintenance culture, lack of skilled maintenance personnel, use of foreign building materials and unethical behaviours as some of the key factors responsible for poor maintenance work and management of hostels in tertiary institutions. Effective strategies that should include a stipulated guide overseen by a body of professionals to enforce maintenance in hostels to avoid complacency, the adoption of a maintenance manual to be strictly monitored and the use of a computerised management system that will ensure proper maintenance records were recommended.*

KEYWORDS*:* computerised maintenance management system, hostel buildings, maintenance management, Nigeria, strategies, tertiary institutions.

INTRODUCTION

Existing hostel buildings in most Nigerian tertiary institutions lack adequate maintenance attention, and this has jeopardised the functionality and durability of most school hostels in Nigeria. The greater part of this maintenance problem is more on public or government hostels where maintenance of hostels is treated with great levity. Consequent upon this fact over 75% of public hostel buildings from research are in very poor and deplorable conditions of structural and decorative state due to neglect. Most of which are consequences of either lack of maintenance or poor maintenance management. Ofide et al. (2015) buttressed this fact when they asserted that higher education institutions face immediate pressure to preserve existing building facilities within the campuses and enhance the capacity of their higher education system to address growing

demands of an increasing influx of students and academic activities. There is no doubt that dilapidated and unhealthy buildings in a decaying environment depresses the quality of life and contributes in some measure to antisocial behaviours. The buildings of higher education institutions in Nigeria only receive top management attention when there is a problem.

The problem of maintenance and repair in the developing countries has many dimensions such as technological, institutional and educational (UNCHS, 1996). Thus, the United Nations Industrial Development Organization (UNIDO) campaign for maintenance and repair in developing countries has to be conducted at many levels. As far as UNIDO is concerned, its direct action takes the form of technical assistance under United Nations Development Programme to countries in the field of repair and maintenance. It also serves as focal point of national and international action through stimulation, provision of information and coordination of efforts. Maintenance programme in Nigeria according to Ahmed (2000) and Odediran et al. (2012) has not received much attention in the past as the emphasis is on the development of new properties. This is also in line with the statement of Kunya et al. (2007) who observed that there is apparent lack of maintenance culture in Nigeria, and that emphasis is placed on the construction of new buildings for public sector and neglecting the aspect of maintenance which commences immediately the builder leaves the site. This is also corroborated by Olagunju (2012) who opined that there is lack of maintenance set up in Nigeria that can sustain the current inadequate housing provision in the country. Olagunju (2012) further stated that lack of appropriate tool for predictive maintenance of the existing buildings can have a detrimental effect on future housing development. Zubairu (2001) stated that the country does not have a maintenance policy which resulted in the persistent problems of building maintenance. Execution for maintenance work is mostly left for the maintenance department to handle on direct labour basis or contract. Jobs of higher amounts according to Kunya et al. 2007) are given out in form of maintenance contracts to mostly unqualified maintenance contractors. Abiodun (1996) also observed that lucrative building maintenance contracts are awarded without due process which also contributes to poor maintenance of buildings. Adejimi (2005) attributed the array of abandoned and epileptically functioning facilities in Nigeria due to poor or lack of maintenance.

Therefore, this paper has its focus on the assessment of maintenance management strategies adopted in the maintenance of hostel buildings in Nigeria using the field data collected from the Federal Polytechnic Oko for the case-study.

BUILDING MAINTENANCE AND MANAGEMENT

Building maintenance is an important programme for the sustainability of infrastructural development. It plays an important role among other activities in the building operations, (Zulkarnain et al., 2011). Maintenance according to BS 3811 (1984) is the combination of all technical and associated actions intended to retain an item or restore it to a state in which it can perform its required function. Work carried out in anticipation of failure is referred to as preventive maintenance and those carried out for restoring after failure is referred to as corrective maintenance. It is a well-known fact that the primary objective of building maintenance is to

preserve buildings in their initial functional, structural and aesthetic states (Adejimi, 2005). This is to ensure that such facility continue to remain in such state and retain their investment value over a long period of existence. Buildings are generally required to provide safe and conducive environment for the performance of various human activities. Odediran et al. (2012) stated that the ability of a building to provide the required environment for a particular activity is a measure of its functionality. Therefore as the components of a building begins to deteriorate, it becomes necessary to take measures to ensure that the desired characteristics of that facility which provides safety and convenience are retained.

BS3811 (1984) subdivides maintenance into planned and unplanned. Planned Maintenance includes preventive maintenance,corrective maintenance, predictable maintenance, schedule maintenance, while Unplanned Maintenance includes unpredictable maintenance, avoidable maintenance and emergency maintenance. According to the British Standard Institution (1993), the nature of building maintenance encompasses many aspects of work depending on the condition of maintenance. It may be divided into four categories namely servicing , rectification work, replacement, renovation or modernization.

The primary aim or purpose of carrying out maintenance work on buildings according to Al-Zabaidi (1997) is to preserve the building in its initial state as far as practicable in order to effectively serve its desired purpose. He went further to identify some of the main purpose of maintaining building as follows:

(i) To preserve a building in its initial state as long as practicable so that it serves effectively the purpose for which it is built.
(ii) To maintain an acceptable quality standard in term of structural stability to meet the current taste and demand.
(ii) To attract higher rental value whenever such buildings are to be placed on commercial use.
(iii) To assist in the minimization of production cost
(iv) To keep down time and maintenance costs themselves to a minimum.
(v) To maintain and retain aesthetic value
(vii) To improve the general condition of such buildings.

However, it must also be stressed that in as much as it is hardly feasible to produce building that are maintenance free, the amount of necessary building maintenance work could still be kept to a minimum through improved method of design, specification and construction as well as feedback of maintenance data to the designer (Akingbohungbe, 2002).

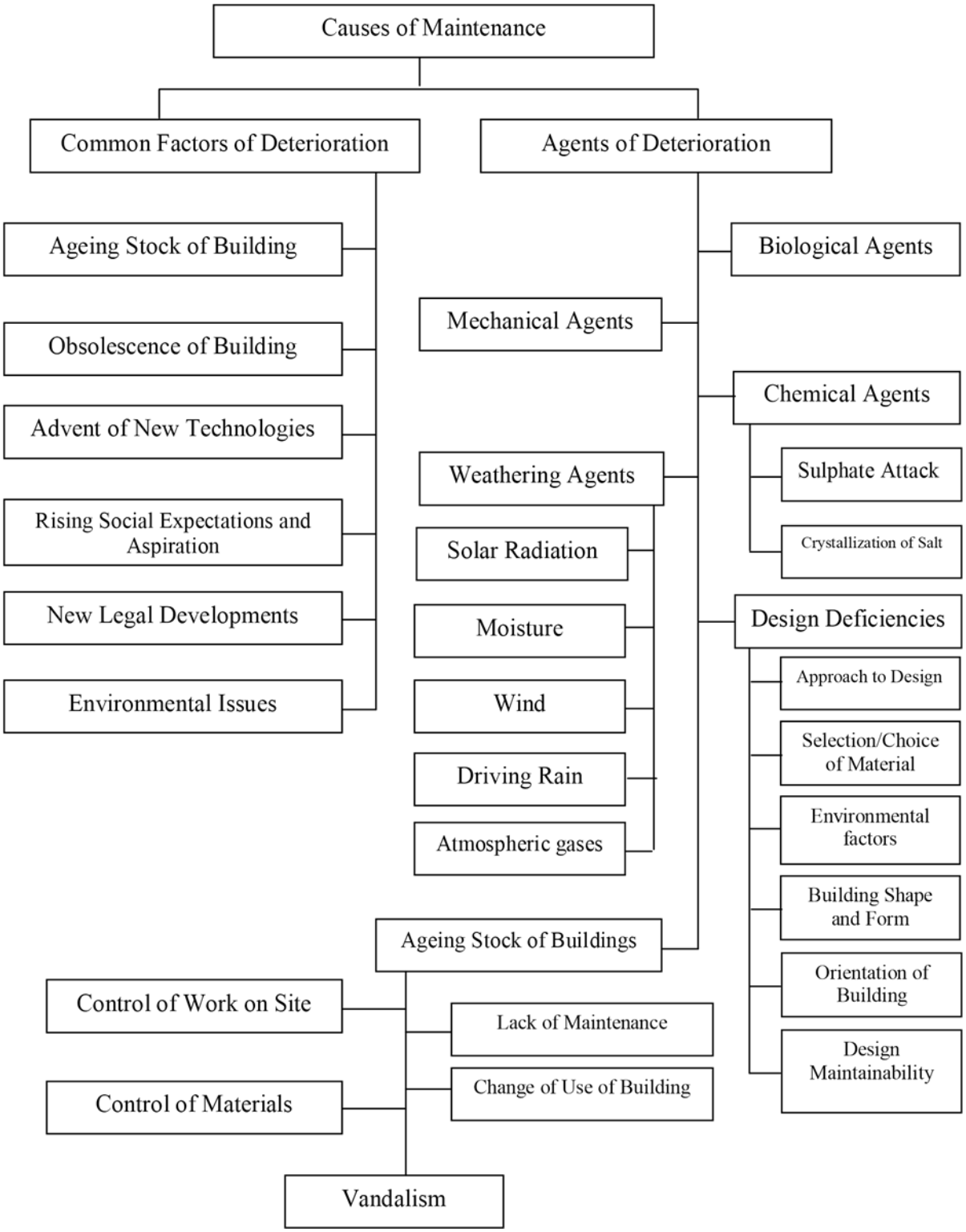
Causes of Maintenance

Maintenance work is engendered by a whole array of factors as revealed in Figure 1. The podiums of maintenance of building can be drawn from the factors described in Figure 1 below. However, there is need for proper understanding of the causes and agents of deterioration in buildings so as to moderate the incidence of defects in buildings (Usman et al., 2012).

The maintenance of hostel and hostel facilities is no doubt an integral part of hostel management, and as this research work captures, it is the nucleus that forms the reason for this research work. Hostel maintenance therefore, is the combination of all technical and associated administrative actions intended to retain hostel or restore hostel to a state in which it can perform its required function. To this extent therefore maintenance can be broadly divided into two kinds, namely: planned and unplanned maintenance (Seeley, 1981). In planned hostel maintenance, work is said to be carried out on the hostel in an organized way and executed with the fore thought, control and the use of records in accordance with a predetermined plan. Seeley (1981) identified three types of planned maintenance to include:

Preventative running maintenance work; under this practice work is done while the facility is still in service. This is the type of maintenance culture that has in view the sustenance and retention of the facility values as long as possible through adequate care.
Preventative or Corrective shut-down maintenance; in this case work is done only when a facility is or is taken out of service.

Corrective breakdown maintenance; in which work is carried out after a failure but which advance provision has been made in the form of spares, materials, labour and equipment.
In unplanned hostel maintenance, work is done as a result of unforeseen breakdown or damages. Most hostels in Nigerian tertiary institutions basically lack maintenance culture, and where it exists, it is generally, unplanned and not regular.



Source: Researchers Archive

Fig.1. Causes of Maintenance

Hostel Regulations

To ensure a deep sense of maintenance for a healthy and conducive environment for learning among hostellers the place of hostel regulation cannot be neglected, for it is meant to enforce sanity, order, sustain discipline, guarantee to a large extent hygiene and guide the behaviour of the students and their use and maintenance of hostel facilities. That is why among the many hostels investigated it was discovered that days of taking care of the environment and the facilities are scheduled among occupants for proper and equal participation as a regulation. This is most specific of private owned hostels, though not all private hostels as some of the private hostels have maintenance staff responsible for any type of maintenance just as evident in the school hostels. However the nature and details of the rules and regulations in Nigeria are most significantly influenced among other factors, by environmental sentiments, the location, socio-cultural sentiments, religious sentiments, political sentiments, and economic environment of the institution. For instance, the Federal University of Technology, Minna, located in the northern part of Nigeria has strict forbearance on male/female relationship in line with Sharia law; females are not allowed to visit male hostels for any reason and vice versa. However the Federal Polytechnic Oko located in Christian Southern Nigeria may permit such visits but with some restrictions and stipulated times . A breach of the rules and regulations usually attracts sanctions that vary from verbal caution to ejection of the offending students from the hostels. So, these help greatly to comportment and regulate behaviour towards maintenance.

MATERIAL AND METHODS

Distribution and Recovery of Questionnaire

A survey was undertaken and three hundred and forty-five copies of the questionnaire were distributed to Maintenance Heads, Students, School Managements and Private Developers while two hundred and seventy-five were retrieved for the research.

Table 1: Questionnaire Administration and Retrieval.

Category	Number Administered	Number Retrieved	Rate of Response in Percentage
Maintenance Heads	25	25	9.09%
Students	200	155	56.36%
School Management	08	08	2.91%
Private Developers	112	87	31.64%
Total	345	275	100%

Table 1 above statistically demonstrated that a total of 9.09% of the respondents are Maintenance Heads, 56.36% represent the proportion of responses from Students, 2.91% of the respondents are from School Management and 31.64% represent percentage of responses from Private Developers. An indication that the percentage of responses from Students is more compared to other respondents.

Maintenance Culture in Oko Town

Hostel maintenance practices in Oko were found to be actually inadequate. Maintenance practice and culture have not been as vivacious, pulsating and animating as expected with the change in the status of the town and influx of population from different parts of the country into the city. Table 2 below shows that 5.45% of the respondents answered that the development activities were adequate, 82.55% answered inadequate while 12% were indifferent.

Table 2: Opinions on Hostel Maintenance in Federal Polytechnic Oko.

Option	No of Respondents				Total	Rate of Response in Percentage
	Maintenance Heads	Students	School Management	Private Developers		
Adequate	-	15	-	-	15	5.45%
Inadequate	25	107	08	87	227	82.55%
Indifferent	-	33	-	-	33	12%
Total	25	155	08	87	275	100%

From the analysis above, we can deduce that the present situation of hostel maintenance in Federal Polytechnic Oko is greatly inadequate given the marginal differences of respondents relative to effective hostel maintenance plans, programmes and approvals yearly and the skyrocketing demands and expectations of the people sequel to the fee paid for maintenance.

Table 3: Reactions of respondents on government neglect in the area of hostel maintenance in Federal Polytechnic Oko.

Option	No of Respondents				Total	Rate of Response in Percentage
	Maintenance Staff	Students	School Management	Private Developers		
Strongly Agree	25	132	08	85	250	90.91%
Agree	-	10	-	02	12	4.36%
Disagree	-	08	-	-	8	2.91%
Strongly Disagree	-	05	-	-	5	1.82%
Total	**25**	**155**	**08**	**87**	**275**	**100%**

In the Table 3 above, 90.91% strongly agree with the researchers' question, 4.36% agree, 2.91% Disagree and 1.82% strongly disagree. From the analysis above it shows that there has been neglect by government in the area of hostel maintenance in Federal Polytechnic Oko.

Table 4: Respondents views on the constraints and solutions to hostel maintenance problems in Federal Polytechnic Oko.

Option	**No of Respondents**				**Total**	**Rate of Response in Percentage**
	Maintenance Staff	**Students**	**School Management**	**Private Developers**		
The need for the review of the decision of the Federal ministry of Education in 2004.	-	16	-	-	16	5.82%
Government provision of infrastructural facilities	-	42	-	-	42	15.27%
Provision of subsidies by government	-	2	-	-	2	0.73%
More government participation	-	-	-	11	11	4%
All of the above	26	101	08	69	204	74.18%
Total	26	161	08	80	275	100%

In the Table 4 above, the questionnaire administered shows that 5.82% preferred the review of the decision of the Federal Ministry of Education on the provision of Hostels left to private developers in 2004, while 15.27% opted for the provision of infrastructural facilities, 0.73% for the provision of subsidies by government, 4% calls for more government participation and 74.18% went for all the options as solutions to the problems of hostel maintenance. It is therefore obvious from the analysis above that a greater percentage said all the options are solution to low rate of hostel maintenance in Federal Polytechnic Oko.

Table 5: Respondents views on the roles of government and private sectors roles in hostel maintenance.

Option	No of Respondents				Total	Rate of Response in Percentage
	Maintenance Staff	Students	School Management	Private Developers		
Yes	25	148	08	87	268	97.46%
No	-	7	-	-	7	2.54%
Total	25	155	08	87	275	100%

From the Table 5 above, 97.46% answered yes and 2.54% answered no. The analysis above shows that government and private sectors have roles to play in solving the problems of hostel Maintenance in Federal Polytechnic Oko.

CHALLENGES OF HOSTEL MAINTAINANCE MANANAGEMENT

The research findings revealed the following challenges posed to hostel maintenance management to be militating factors hampering effective hostel maintenance:

Overpopulation

The sudden boom of students' population and the unattended response to accommodation need led to overpopulation and congestion of students in a small hostel apartment technically meant for a given number of students. Also the exorbitant random fee, made students who cannot afford such payments to look for partners as much as possible to help them reduce the burden of payment. This situation does not consider the capacity of the building; also the tendency of keeping maintenance culture is low, while the rate of facility damage is high. This situation often leads to much pressure exerted on buildings that has been overpopulated beyond the required content. In this case the level of maintenance should be higher considering the performance of the building. But in a society like ours where maintenance is seen as a loss or not necessary it becomes a difficult task to keep such hostels running. However most significantly and fundamental among the problems of population boom in the school and in the provision of hostel is the high pressures it exerts on designers. These designers in most cases embraced imported westernized designs meant for temperate climate but not suitable to the Nigerian environment. Such design cloning according to Mahmoud (1997) not only comes with its attendant maintenance problems but when urgency is also attached to their production; draws on system and materials without having enough time to test their relevance and suitability. Works on construction sites being handicapped by the lack of an experienced workforce; construction methods, harsh climatic conditions, presence of chlorides, and sulphates are some of the factors generating need; a well-planned system which reflect adequate maintenance and keeping of the hostel building and its fabric in functional state of performance. The problem

of overpopulation in the maintenance of hostels can be curtailed by increment in the provision of hostel accommodation, reduction of rental fee, and intensive maintenance care.

Lack of Adequate Funding

For an average enlightened mind, tertiary institution is presumed to be the key to technology productivity, and the other ingredients of international competitiveness and economic growth. Therefore it should be well funded and adequately managed. Tertiary institution also shapes and preserves the value that defines culture. And it is believed to be a major engine of social justice, equal opportunity, and democracy. To this end, tertiary institution faces immediate pressure to preserve existing honour and reputation of its campuses and enhance the capacity of its higher education system to address growing demands. In order to serve the current population of students, tertiary institution must maintain, renovate, and expand their building where necessary and keep equipment, facilities and technology current to meet changing hostel needs. With this demand fund is necessarily needed. Unfortunately, for higher institutions, like Federal Polytechnic Oko, the money for maintenance comes from the government as part of their annual budget. This poses some difficulties for the institution's maintenance programme because expenditure from the government budget is not only inadequate and tied to strict financial regulations and payment control system but also irregular. According to Osuagwu, et al. (2021), there are so many problems associated with the maintenance of buildings and infrastructural.

facilities in the country. One of the serious problems is finance; government financing as regards to maintenance of buildings (both public and private) is minimal. The grant towards maintenance of infrastructural facilities is at its lowest ebb. Most buildings and infrastructures have been neglected by subsequent tenures of government while the private sectors; the individual property owners have little or nothing to contribute towards effective maintenance of their buildings. Most often, the Federal government disbursement of maintenance budget for the year might run contrary to the institution's maintenance programme, for instance in Federal Polytechnic Oko if the fund comes late in March anything that has to do with repairs such as roof, painting, plastering, mending of walls may definitely be suspended to avoid waste because of rain. At times some of these funds are channelled towards other projects, while the needed maintenance keep waiting and the building keep degenerating.

The problem of fund also deters the possibility of the school engaging in the construction and development of capital projects. So, in an institution such as Federal Polytechnic Oko, it becomes the Polytechnic's administration priority; to embark on the construction of new buildings and designs such as hostels, classrooms or facility buildings every year while little or nothing is allowed for maintenance of the once already built and are in use. Also, research has shown those times without numbers, when school programme are distorted and becomes irregular due to finance, hence making maintenance programme in the school difficult. Academic environment sometimes becomes volatile consequent upon unattended request and concern of student, this makes facilities in the institution a high risk insurance property; there are incidence of complete destruction and wilful damage, these are common occurrence this differentiate the school environment from normal environment. In view of these numerous problems there is need for

constant repair and maintenance to keep the school hostel fit and durable and as such adequate fund and management is proposed.

Also, the apparent effect of inadequacy of maintenance staff, lack of prompt, management decisions on the maintenance management of institutions hostel buildings can be linked to lack of adequate fund, though it is not always be the case. At times it is discovered to be the problem of strategy and application of the available fund and priority as it is observed in the school under study. The problem of fund availability for maintenance was studied by (Oladapo, 2004) where he highlighted the issue of under-funding and went further to recommend that 10% of cost of constructions of the building should be set aside for effective maintenance.

Lack of Proactive Maintenance Regulatory Body

Due to the multiple forms and types of hostel management in practice in Federal Polytechnic Oko, it has also generated different systems of maintenance practices. It is therefore, complex to think of a formidable and proactive regulatory body on hostel maintenance practice in the school. The reason is not farfetched. It must be noted that the primary priority of private developers of hostels is profit oriented, and this they do not compromise. So, if intensive maintenance policy is proposed by the school and it works in the school it perhaps will scarcely work outside the school because private individuals may not subject themselves to the maintenance policy of the school that is not targeted at profit making or wrongly viewed as not having immediate benefit. Unfortunately, since the school lack the tool to render the service of accommodation to her students that mandate to maintain order is to an extent lost. So it is as if it has no option than to allow arbitrary practice. Except on school own building can the decisions to effect repairs in a building or facility be made with mandate. It is therefore suggested that the school involve major stakeholders in hostel buildings to form members of the maintenance board of the school in order to ensure harmony and effectiveness. Also students should be educated to know their rights and obligation towards ensuring good maintenance culture and as such insist on what is the ideal.

Lack of Seasoned Regulation

There is as a matter of fact at this demanding moment no standard regulation or policy on hostel maintenance in the tertiary institutions in Nigeria by the Federal Ministry of Education, nor is the Federal Polytechnic Oko having one that regulates maintenance conduct workable in the school hostel and outside the school hostel. The question of lack of seasoned hostel maintenance regulation becomes more obvious when the management is faced with certain factors to consider before finally giving their consent and approval for the repair works to be carried out. These factors are identified as environmental which includes building location, age, political factors which are management decisions, users status, fund availability, revenue generating status of building, willingness of users to foot bill for refund, proximity to defect generating factors like erosion, flood etc. Both in the school and outside often times the external part of hostel buildings are attended to than the internal, especially those in strategic zones. If there is a seasoned regulation that is operational, the issue of first come first serve and willingness of users to foot their bill would have least influence. It would have been expected that users who had the fund be accorded priorities to salvage time but such approval; might be construed to be inefficiency and might be

used to rate the management performance. These are indications pointing to the fact of the absence of unseasoned regulation. For if it does exist it will discourage arbitrary decisions of management and guide them in their decisions.

Climatic Conditions

Federal Polytechnic Oko in Anambra, Nigeria is located in the rainforest belt of Nigeria with temperature ranging from 22 degree Celsius to 35 degree Celsius. In this region, there are extreme variations in humidity and radiation as the belts transits between rainy season of October to March and dry season of April to September. The school is located in the lowland of shallow belt characterized by usually heavy down pours, wind and flooding; rain water most times is accompanied with sulphates and chlorides which are agents of corrosion on metal products and could wear out paint and the body of buildings. In the heat of the raining season, maintenance work is often difficult and at times impossible. At this season of the year the cost of transportation of such commodities like cement, and sand is high because they are high risk products. All these contribute to make maintenance difficult or impossible. Also any construction work done at this time is at the mercy of rain and wind. The question of roofing maintenance work is practically impossible as the safety of man and property from inclement weather condition is uppermost. The ravaging effect of this is observed on the hostel buildings and properties located along the shallow line of Guis Benton street in Oko. Also the properties of Federal Polytechnic Oko like artefacts, classrooms, and office accommodations located down the slope, which opened them to the avarice of flood whether directly or indirectly, by the sulphates carrying rainwater from the upland discourages maintenance work. In the dry season, the absence of hills and thick forest to dampen the effect of the ravaging wind and allows it have a direct impacts on the properties. Such impacts sometimes increases aging process of the building while elements like roofs, window - panes, hand- railing are affected making repairs necessary and increasing the maintenance need of the hostel buildings. The problems highlighted here is a major factor.

At summer, the clear skyline with varying temperature however encourages radiation of heat from the sun to have a degrading effect on the roof of the hostels. The presence of iron in the rainwater is noticeable from the corroding corrugated iron sheet roof covering that corrodes shortly after installation and get discoloured. Mahmoud, (2000), in his study, confirmed that clear skies promote high level of radiation and that climate is an important factor of influence in maintenance needs. However it is more a militating factor than influencing.

Soil and Water

The environment for building within Oko immediacy is particularly very hostile because of chlorides and sulphates pressure in soil and water. According to Shamsideen (2004), the pressure of chlorides in soil promotes rising water level which results in rising damps. A survey carried out by lyagba (2005), revealed that most buildings along the coastline experiences rising damp their wall, which encourages algae growth that consequently leads to sick building syndrome. The salinity of the soil and water in the presence of high ground water levels, is noted to affect concrete in foundations and other parts of the building (Mahmoud, 2000).

Building Materials

Mahmoud (2000), outlined factors which influence choice of materials in a locality as availability, climate, economy and building techniques. However, this may not be the best combination factors that ought to determine the choice of materials. For instance hostel building that is constructed on the ground of the availability of materials irrespective of the standard is like a death trap. Therefore I think that what should determine choice of building materials whether hostel or residential should be quality, climate, building techniques, maintenance demand and the purpose of the building. It must be noted that wrong choice of building materials and lack of professionalism has in the last decades resulted to the collapse of many multipurpose buildings and claimed lives and property.
So it is strongly recommended, given the obvious weakness of our maintenance habit, that in the consideration and choice of building materials we do not go for building materials that demand intensive maintenance so as to reduce the level of risk that occupants may be exposed to. The growth in population, which resulted in increase of the age brackets that required higher education, had necessitated and increased the demand to build more hostel blocks in Federal Polytechnic Oko and hostel accommodations, is indeed ongoing. Also the displacement of persons in the Northern part of the country and the incessant attacks on schools has also generated upsurge of students in schools in the Eastern part of the country of which Federal Polytechnic Oko share greatly. This no doubt shoots up the population of students who are in need of accommodation in the area. To this end new hostel buildings are set up in fast pace not considering the maintenance demands.

Most evident of the problems associated with choice of building materials is the advancement in management techniques and the discovery of the fact that less duration of contract execution implies less cost. This pragmatically has appreciably influenced the choice of building materials and systems. The construction booms in the oil boom period; and increased construction works led to importation and use of various building materials of which substantial quantities are inferior and less study on their maintenance implications and weights carried out. This ignorance greatly militate against effective maintenance of hostel and buildings. About the question of standard, Mahmoud (2000) and Windapo (2004), remarked that, among the various tests carried out on building materials, selected building materials indicate that some do not meet the required standards while others are not actually suitable for our environment and maintenance culture.

Given these situations, apparent and regular in building management, the approach most plausible therefore, is to adopt the use of hostel or building maintenance crew to oversee the daily maintenance of the facilities. However this method also has its own problems which are: inadequate knowledge of specialized maintenance works, unmotivated civil servants, inadequate numbers of skilled maintenance workers to work with. But this can be restrained by training and retraining of maintenance staff.

CONCLUSION AND RECOMMENDATIONS

The study has thrown-up the problems of maintenance to include non-availability of funds, indiscipline and lack of functional operational frame work and regulatory body, climatic conditions, lack of good maintenance culture, lack of skilled maintenance personnel, use of foreign

building materials and unethical behaviours as some of the key factors responsible for poor maintenance work and management of hostels in tertiary institutions. It is also revealed that there no well articulated strategies being adopted in the management of hostel facilities in Nigeria.

In order to stem the tide a series of proactive actions and initiatives must be put in place. Since the economy of the country is not favourable to maintenance work due to high interest rate and stringent conditions before funds can be released; some of the respondents given these backgrounds, held that bad economy affects maintenance culture. If the aim of the on-going reforms in the Nigeria economy can be achieved, prices of quality building materials will fall and attention will be given to the local industries, to produce better products, which will enhance housing quality in Nigeria at large and reduce the rate of maintenance demand.

National slogans expressing government commitment, policy and goals of maintenance should be displayed and form part of learning curriculum since lack of maintenance culture is discovered to be one of the major factors affecting effective maintenance of hostels. This will also help to change or build on the attitude of the students and developers towards maintenance consciousness.
In order to reduce indiscipline, ignorance, lack of maintenance culture and encourage planned building maintenance, the government should as a matter of urgency direct the agencies in charge of hostels to include as a must, a maintenance manual for hostel developers when approval is given for construction of hostels of their choice. During construction, materials that can easily be maintained should be used. The infrastructural agencies such as Federal Ministry of Works, Housing and Environment etc. should make regular and stable allocations towards building maintenance in most government owned hostels. There is need for public awareness on the danger of lack of maintenance and the advantages of good maintenance. Laws enforcing every hosteller to carry out proper maintenance like sweeping, mopping and curb-webbing, of apartments should be enacted and agencies to enforce the law should be established. In order to avoid the use of sub-standard materials as an alternative to the high cost of good quality materials, there should be a research into how the government can help with the local building materials industries in the country to survive.

The budgetary allocation for maintenance of tertiary institutions by the Federal Ministry of Education is considered grossly inadequate. Therefore, it is suggested that the Ministry should mandatorily make a substantial budgetary allocation to the maintenance of the facilities and other infrastructures which should be reviewed from time to time to accommodate inflationary trends. Also the management of tertiary institutions should not always depend on the federal budget before embarking on maintenance work. There should be effort to generate fund internally for such emergency call for maintenance.

Adequate training should be encourage among staff of the works and services department to acquire the necessary skills for continual maintenance of the hostel facilities in the tertiary institutions. There should also be maintenance programme that brings both developers of private hostels and public hostel developers and their maintenance staff together for professional update

and enlightenment.Approval protocol should be made flexible in order to allow maintenance needs to be met immediately.

Maintenance strategy in general includes corrective, preventive or condition-based maintenance. Maintenance strategy is adopted in order to extend the life cycle of buildings and its fittings services.Planned preventive maintenance (PPM) is recommended as the best maintenance strategy as against the haphazard and adhoc approach being adoped by most tertiary institutions. Other effective strategies being recommended include a stipulated guide overseen by a body of professionals to enforce maintenance in hostels to avoid complacency, the adoption of a maintenance manual to be strictly monitored and the use of modern technology-driven computerised maintenance management system (CMMS) that will ensure proper maintenance records, improve building maintenance operation processes and ease building maintenance data information retrieval.

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