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# Developing an Effective Maintenance Culture for Some Monumental Public School Buildings in Ibadan, Oyo State Nigeria.

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Abstract: As part of effort to understand challenges faced with building maintenance practices in Nigeria an investigation of the maintenance culture in some of the oldest public schools in Ibadan, Oyo State Nigeria was carried out. A total of five schools located within Ibadan metropolis were selected based on their historical importance, year of establishment and viability of alumni. Site visits were carried out, during these visits, oral interviews accompanied with questionnaires was administered on the stake holders, the buildings were visually assessed to determine severity of degradation experienced by the buildings and the risk it poses to learning. Photographs of structures been assessed were also taken. Results shows that, the buildings have not been properly maintained over the years and can be attributed to the following: lack of funding for maintenance works, absence of guidelines for maintenance of school buildings by Government, lack of maintenance department in the schools visited and unplanned approach to implementation of maintenance work. As part of effort to salvage the situation, some recommendations were made, they are: the establishment of maintenance department in all schools with technical expertise and the formation of a School Buildings Maintenance Board (SBMB) by the state Government

**Keywords:** Building Maintenance, School Buildings, Maintenance Department, Implementation, Government

## I. Introduction

Education is important to every society, therefore the preservation of facilities that enhances the provision of quality education must be given prominence. School buildings, which have both cultural and historical importance to their immediate society should be conducive for the provision of quality education. Therefore, the maintenance of such buildings is important for the preservation of their set goals over a long period of time. The primary purpose of the teaching and learning process is to bring about in the learner desirable change in behaviour through critical thinking. This process does not take place in a

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Corresponding Author's email address: mailabiolaadebanjo@gmail.com vacuum but rather in a situation structured to facilitate learning. described [1] environment of an organization as all elements relevant to its operation and they include direct and indirect action elements. School facilities, constitute the major components of both direct and indirect action elements in the environment of learning. Several studies have shown that a close relationship exists between the physical environment and the academic performance of students. According to [2] and [3] the quality of education that children receive bears direct relevance to the availability or lack thereof of physical facilities and overall atmosphere in which learning takes place. The school facilities consist of all types of buildings for academic and non-academic activities, equipment for academic, non-academic activities, areas for sports, games, landscape, farms, gardens, roads and paths. Others include furniture and toilet facilities, lighting, acoustics, storage facilities, parking lot,

security, transportation, ICT, cleaning materials, food services and special facilities for the physically challenged persons.

There is a richness of design and construction that comes with the architecture of some of these old buildings which over the years has been lost to modern architecture, this richness in architecture and craftsmanship is what makes them iconic, these structures going by their appearance are well thought of and the materials and finishes used are of high quality which are becoming increasingly rare and very expensive to achieve in new construction. Hence, these qualities consequently make historic buildings such as old schools notable assets to their immediate environment. Therefore, the maintenance of these buildings should be given utmost consideration for the preservation of its heritage.

From the observations made by [4], it was reported that a very crucial aspect of school management that is generally overlooked is facilities maintenance. When new buildings are constructed and taken over by the appropriate authorities, practically no attention is paid to the maintenance of these buildings. Several school buildings that are over fifty years old have never undergone renovation or any form of modernization in spite of the changes in the educational system. Facility maintenance is an issue that concerns all levels of the educational system ranging from the pre-kindergarten to the tertiary levels. Some of these facilities are architecturally obsolete and therefore cannot contribute to functional education.

The absence of effective maintenance practices can increase the consequences of failure and reduce the life expectancy of any structure [5], it is therefore important for guidelines or policies to be put in place to implement necessary actions as at when due, one of such policies as suggested by [6] is corrective

maintenance whereby maintenance actions are carried out after the failure of a structure, one major shortfall of this approach is the loss incurred as a result of the breakdown of the system. In an effort to reduce the probability of failure, a more effective approach called preventive maintenance was reviewed by [7], the authors claimed that though the process of planning for a preventive maintenance may be complex but the results often obtained after the process does tend towards the objective of maintenance. Maintaining the new buildings, renovating and modernizing the old ones considerable require expertise and commitment of human and material resources. Changes in weather conditions and lack of maintenance culture are responsible for the aging and deterioration of school buildings, grounds and equipment. School managers and teachers who constantly use school facilities lack knowledge of facilities maintenance planning.

Hence, the aim of this research was to assess five old secondary school buildings within Ibadan, Oyo State, Nigeria and proffer maintenance management procedures.

## II. Materials and method

# A. Description of Study Area

Ibadan is the capital of Oyo State located in South-Western Nigeria. It is the most populous city in the state with a population of over three million. It is the third most populous city in Nigeria, after Lagos and Kano. The city of Ibadan has some of the oldest secondary schools in Nigeria. In this research five schools established in the pre-independence era and located within Ibadan metropolis were chosen based on their year of establishment, historical importance and viability of alumni. It is

important to note that there was no preference of choice in selecting the schools considered in this research. The schools are St. Anne's School, Molete (1869), Wesley College of Science Elekuro(1905), Ibadan Grammar School, Molete (1913), Loyola College, Agodi (1954) and Queen's School Apata (1956).

## B. Site Visit

Site visits to the selected schools were conducted to get acquainted with the location, and to identify the best time for collection of data. During this visit, photographs were taken to show the present condition of the buildings.

## C. Distribution of Questionnaire

A series of face-to-face interviews were conducted as one of the data collection method. The interview for this study involves all relevant parties that are directly involved in the maintenance of the buildings being evaluated. The agenda of the interview has been finalized prior to interview session and the discussion notes were also taken. Pertinent issues bordering around maintenance of the school buildings were discussed, such as, source of funding for maintenance works, years of experience in maintenance of school buildings, challenges encountered implementing maintenance works on school buildings. In addition to this a questionnaire was drafted and issued to respondents.

#### D. Visual Assessment

Visual appearance of the buildings was inspected and classified as either good, fair or poor; depending on the external indicators of structural deficiencies caused by loading, environmental factors, physiological

deterioration, construction deficiencies, or a combination thereof.

# III. Findings and Discussions

# A. Demographic Profile of Respondents

Information gathered from the oral interview and questionnaire reveals that most of those involved in the maintenance of the school buildings are not building maintenance officers and as such do not have an in depth understanding of maintenance works as this is evident in their definition of maintenance, in their opinion maintenance of the school building is rather cosmetic than structural. Maintenance of the buildings according to them includes, painting of the buildings, fixing of the windows, fixing of the doors, periodic cleaning of the environment and plastering of dilapidated walls. It was observed that only Queens School in Apata has a maintenance officer who sees to the repair of some of the facilities when the need arises. The absence of such department therefore makes it difficult for the schools to establish effective gather maintenance and repair policies, essential information about the conditions of buildings, develop and monitor compliance with the repair plan, prioritize and budget for maintenance and repairs, oversee on-going

Table 1. Showing demographic profile of respondents

School	Position	Profession	Years spent in school
St. Anne's School Molete	Principal	Teaching	3
Ibadan Grammar School	Vice-Principal General Duties	Teaching	5
Loyola College Agodi	Principal	Teaching	3
Queens School, Apata	Principal	Teaching	4
Wesley's College of Science	-	-	-

Source: Field



Plate 1 Showing a block of class rooms recently renovated by 1987 and 1988 Alumni - Loyola College, Agodi



Plate 3: Showing the administrative building renovated by the Old Boys Association (Class 1991) - Loyola College, Agodi.



Plate 5: Showing the administrative building in good condition. - St. Anne's School, Molete.



Plate 7: Showing the senior secondary school recently renovated by the Old Girls Association.-St. Anne's School Molete.



Plate 2: Showing a 2 storey building that is not in good condition - Loyola College, Agodi.



Plate 4: Showing a 3 storey building that is been renovated by Old Boys Association -Loyola College, Agodi.



Plate 6: Showing chemistry laboratory been poorly maintained as shrubs were seen growing freely around the building, some windows are out of place. - St. Annne's School, Molete.



Plate 8: Junior school Class rooms - St. Anne's School Molete.



Plate 9: Showing the School's Hall (Emmanuel Alayande Hall) been properly maintained with the basic features in good condition. - Ibadan Grammar School, Molete.



Plate 11: Showing a classroom with dripping roofs and windows out of place.- Ibadan Grammar School, Molete.



Plate 13: Showing an overview of some properly maintained buildings. - Queen's School, Apata.



Plate 15: Showing a 2 storey building in poor condition (L) and an abandoned block opposite (R).

Queen's School, Apata.



Plate 10: Showing Mike Adenuga ICT Centre, donated by MD Globacom Nigeria. - Ibadan Grammar School, Molete.



Plate 12: Showing the administrative building of the school - Ibadan Grammar School, Molete.



Plate 14: properly maintained structure with basic facilities in place. - Queen's School, Apata.



Plate 16: Showing an abandoned 2 Storey building, with the formation of algae on the walls, roofs were seen to be in bad condition. - Queen's School, Apata.

maintenance and repair work in the schools, and make sure that a good job is done.

The trend herein observed agrees with the view of some scholars, [8] observed that there is an apparent lack of maintenance culture in Nigeria, and that much emphasis is placed on the construction of new buildings for public sector at the detriment of old buildings owing largely to the monetary benefit such individuals or organization stands to get from the construction process this is also corroborated by [9] who argued that the absence of an effective maintenance set up in Nigeria has been a major setback for the Federal Housing schemes where some of those structures built with tax payers money are left uncared for only to be sold to highest bidders in the society. For implementation effective of building maintenance there is a need for the establishment of maintenance department, [10] suggests that, the maintenance department should carry out the maintenance survey as to seek as much as more valuable information in the historic building. He added that, the maintenance for historic building should be ideally tackled by routines.

## **B.** Visual Assessment

The buildings in the schools can be classified according to their functions as; administrative buildings, classrooms, laboratories, hostels and halls. These buildings range from three storey to simple bungalows. Some of the buildings were recently constructed while others have been in existence since the inception of the school. It was difficult to ascertain the age of some of the old buildings as all our respondents who claim to be actively involved in the maintenance of the structures have been there for not more than 5 years. Typical

deterioration observed in the school buildings are cracks, plaster detachment, biological colonization and water staining of the building surface. The architecture and materials of construction were used to ascertain the age range of the structures.

Ibadan Grammar School has the highest number of buildings put together, with well above 30 numbers built over the years, of this number a considerable amount is been properly maintained. Plates 9-12, shows the present state of some of the buildings as at the time of visit. St. Anne's school in Molete, has buildings within the range of 15-20 numbers, from visual inspection of the buildings it can be inferred that a large number of this buildings have not been properly maintained as shown in plates 8,9,10 and 11. Shrubs were seen to grow freely in some of the buildings and cracks that are quite alarming are present in others. However, the administrative building, the senior student classrooms, the assembly hall have been well maintained. Loyola College, Agodi, have 10 buildings, of this number, 5 buildings have been recently renovated and can be considered to be in good condition, while 3 others are in fair conditions. Others were totally abandoned, pictures of some of the buildings are shown as plates 1-4. Queen's school in Apata, has the highest ratio of good to poorly maintained structures, this can be attributed to the presence of a maintenance officer and the. Wesley School of Science, has some of the oldest buildings been properly managed over the years. However, an attempt to take photographs of some of the buildings was repelled by the principal. The visual assessment rating is as shown in Figure.

## C. Funding for Maintenance Works

Funding for maintenance works in all the government schools considered in this study as gathered from the questionnaires is primarily

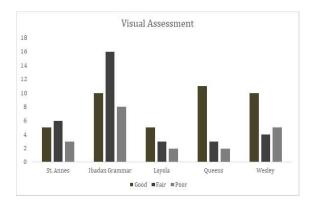


Figure 1. A bar chart representation of the visual assessment of the buildings.

carried out by Old Students Associations. In some cases, alumni of the schools who have succeeded in their various fields of endeavours do provide facilities through NGO's. As a result of this those that are directly responsible for maintaining the structures do not have direct access to the funds and only rely on such voluntary organizations to render supports when it calling. According to them, funds from the government have not been forthcoming and this explains why some of the structures are in deplorable states.

## **IV.** Conclusions

After careful evaluation of the present situation of some buildings across the schools considered in this research the following conclusions were drawn. The absence of an effective maintenance department in most of the schools considered makes it difficult for those managing the buildings to have a planned maintenance structure. Hence, most of those involved with the maintenance do adopt a fire brigade approach when the malfunction or failure of the structure becomes intolerable and unsafe, thereby making it more expensive than it would have been if strategic periodic maintenance had been adopted

The government over the years have failed in establishing specific guidelines, procedures, method and system of maintenance in these schools thereby making it difficult to sustain the conservation of some of these infrastructures and leaving the responsibility to the old student's associations and other non- governmental organisation.

In a bid to salvage the current situation the following recommendations are made to help implement building maintenance in old schools in Ibadan, Oyo State South –Western, Nigeria. The establishment of maintenance department with qualified maintenance officers in all the schools is of great importance to the preservation of the structures. These departments will develop repair policies, collect information about the building repair needs and report to school building maintenance board

Establishment of a School Buildings Maintenance Board by the State Government: This board will consist of all stakeholders in the maintenance of the school buildings. The stakeholders shall include; Principal/Head of Teachers, Presidents of Old Student Associations, Representatives of Parents Teachers Associations (PTA), Representatives of Private organizations and NGO's. The board will collect information from the various maintenance departments, proffer possible maintenance solutions to the state government and monitor the progress achieved by various maintenance departments.

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