



Facilities Management Practices and Students' Academic Performance: A Study of Selected Public Senior Secondary Schools in Lagos State

BY

¹Ogundiran, Omolara Mary and ²Adeoye, Abayomi Olarewaju

^{1,2}Department of Business Administration, Lagos State University

ABSTRACT

This study examined the impacts of facilities management practices on academic performance of public senior secondary school in Lagos state. The study was motivated by the urgent need to explore the gap which existed in the relationship between the management of public facilities and organization performance with respect to public senior secondary schools in education district one area of Lagos state. The study adopted the quantitative survey design. Simple random sampling techniques were used in selecting the 44 public senior secondary schools in Lagos state. A sample size of 337 respondents was deemed appropriate from the population of 2140 teachers including the 44 principals of the selected schools. A designed questionnaire was used for data collection and it was structured on 5-points Likert scale. The Cronbach alpha and pilot test was used to examine the reliability and validity of the data generated with a value of 0.861 which shows consistency in the terms of survey. Data were analyzed and hypotheses were tested using statistical packages for social science (SPSS) version 26.0, to measure the relationship between variables and analysis based on these results revealed a high positive regression coefficient ($R^2=0.519$, $P=0.000$, $R^2=0.675$, $P=0.00$ and $R^2=0.745$, $P=0.000$) between facilities management practices and students' academic performance. The findings of the study, revealed a significant effect of ICT/internet, library and classrooms facilities management have significant effect on academic performance of students in the selected schools in Lagos state. Hence, the study concluded that public senior secondary schools in Lagos State and Nigeria at large should focus more on embracing the facilities management practices in every area of education so that the state and the nation will experience a drastic improvement in the academic performance of public secondary school students in both internal and external exam such as WASSCE, NECO, and JAMB. The study recommends that government should initiate agencies and policies that will ensure facilities management practices in all public schools in order to increase the academic performance of public senior secondary students in WASSCE, NECO and JAMB.

Keywords: *Facilities Management Practices, Information Communication Technology/ Internet, Classroom, Library, Students' Academic Performance*

1.0 INTRODUCTION

The Nigeria education system particularly that of Lagos state is faced with problems ranging from dilapidated school structures, mismanagement of allocated resources to declining standard of education as being experienced in most public secondary school (Ekpoh,2018). The rate of poor academic performance of students in Nigeria had resulted to economic and social wastage and this has become a great concern to all stakeholders of education in Lagos state. For instance, as reported by Ekpoh (2018), in August 2010, the West African examination council (WAEC) gave outcome of the May/June 2010 exercise as achieving a 75 percent failure in English language and mathematics sitting alone! That report further revealed that only 24.95 percent of the candidate who sat for the examinations, made five credits, including English language and mathematics, representing 337,071 of the 1,278,843 (WAEC examiner's report 2010), candidates whose results were released by the examination body and despite the huge amount of money invested in education by the government, yet nothing visible has been observed to have eradicate or reduce this poor performance in Nigeria, most especially in Lagos state.

In spite of the general poor performance referred to above, there appeared to be difference in performance from one school to the other. It may be debated that such variation in performance may be due to certain factors. (Musa & Vincent, 2022). Therefore, the consequences of mass failure in public examination are the inability of the learners to proceed to higher educational institution. As a result of this poor performance, stakeholders in education are curious to know the causal factors associated with the problem. Some of the causes of the students' poor academic performance could include ownership of the school and inadequate or poor maintenance of the school facilities.

The practice of facilities management (FM) was alien to Nigeria until 1993, when facilities management was made central theme of discussion at the annual conference of the Nigerian institute of estate surveyors and valuers (Chukwu, Okolie & Ezekolie 2020). The conference aroused consciousness in the mind of the real estate professionals, who had hitherto been referred to as experts in the property management. The consciousness however, spurred agitations among members, as to whether or not facilities management was the exclusive presence of the estate surveyors and valuers who are trained to manage real estate. (Chukwu *et al*, 2020).

Facilities Management Practice according to Balos (2021) is an interdisciplinary field and management concept, encompassing the seven principles of management - viz-a-viz planning, organizing, controlling, motivating, coordinating, communicating, and directing. Thus, facility management is primarily devoted to the maintenance and care of commercial or institutional buildings such as office, complex, school, sports, arenas and so on. (Achoru,2015).

Moreover, Ikegbusi and Adindu, (2022), viewed facility as a building or equipment provided for specific purpose and involved in natural order and capability. Corroborating this view, the International Facility Management Association (IFMA, 2016), categorized facility management as how the equipment or tools and services were kept in good conditions in terms of comfort, functionality, safety and efficiency towards the environment either places, processes and or technology. Subsequently, Aion and Rosmaizara, (2018), opined that facilities can be categorized into two types which are: Permanent and Semi- permanent structures such as laboratory equipment, teaching aids, blocks/ building of classrooms, libraries, toilets, storage space, tools and consumables (such as electricity and water).

However, school facilities management, according to Farombi, (2018), constitutes majorly the determining factors towards ensuring quality education. He further stressed that, facilities management practice in schools, is one of the yardsticks for measuring the level of educational growth and development in any economy. It implies substantial cost of school system for their establishment, if not properly managed and maintained, it will affect

the academic performance of students. Moreso, according to Chika (2019), school facilities management is not a one-man business, it is the responsibility of all educational stakeholders (government, school administrators, staffs and students), and most of all, the nonchalant attitudes of the staffs and students towards facility management in public schools have aggravated the challenges of the school facilities management in Nigeria public secondary schools. Odhier (2019) argued that some students are irresponsible and destructive and as a result, school facilities are destroyed. Chika (2019) argued further that negative attitude of staffs (teachers) towards, maintenance culture, improper usage of facilities by students, insufficient records of damages in the school and insufficient on- the - job training of staff maintenance techniques among others are some of the challenges facing school facilities.

Succinctly, school facilities management in Nigeria public secondary school suffers some setbacks as a result of pressure on school facilities caused by over - enrollment of students and over utilization of school facilities (Odhier, 2019). Meanwhile, Omolola and Ogunode (2021), opined that adequate funding is essential for the management of public school. No higher educational institution can exist without adequate funding; however, inadequate funding continues to be one of the major impediments to the effective management of public schools in Nigeria. According to the following researchers, Omolola and Ogunode (2021), Ogunode and Musa (2020), they identify insecurity and corruption amongst others as challenges and impediments to the successful and effective use of school facilities. They opined that in Nigeria, public administration has become synonymous with corruption and the school system is no exception. Ogunode and Musa (2020) stressed that insecurity in Nigeria, particularly in the northern part of Nigeria, has wreaked havoc on educational facilities.

Regardless of the type of schools, therefore facilities help determine the success or failure of students (Ogunode & Lawan, 2020).

The importance of school facility management and academic performance of students cannot be overemphasized. This is because facility such as ICT, laboratories, conducive environment (i.e., spacious and not congested classrooms), complete and complement learning outcomes of students in school. (Nnoli, 2018). But on the contrary, this day overcrowded and non-conducive classrooms, non-availability of current books and amenities in some secondary schools' libraries, lack of adequate science laboratories and unhygienic environments. This has resulted in to problems and challenges in the teaching and learning process in the school system and resultant effect is the low academic performance of students (Otchere & Afara, 2019). If students have to share chairs and tables with their mates, they would be easily disturbed and distracted among themselves and the class which is supposed to be actively involved in the learning process turns out to be disturbing and this is enough discomfort for the day to discourage the interest of the student for the whole days' work. (Ikegbusi & Adidun, 2022)

It is not un-common these days to see more classrooms full of potholes on the floor, comparable to the scenes on some of our roads. Many students hardly find space to sit or move about. Lack of ceilings makes classrooms extremely hot. Some school buildings have sagging roofs on them. When facilities are not maintained, they constitute health hazards to the users of the facilities. Teachers on their own may not perform effectively without facilities. The students' academic performance may also be affected.

It is in view of these "maintenance gaps" that this study tends to investigate the impacts of school facilities management on the academic performance of students in Education district one area of Lagos state. The purpose of the study therefore was designed to appraise the extent to which public secondary school facilities were managed and how it enhanced students' academic performance in public senior secondary schools in Lagos State. The main objective of the study is to examine the effects of facilities management on student academic performance of public senior secondary school in education district one area of Lagos State while the specific objectives are to:

- i. examine the effect of ICT facilities management on academic performance of the student in education district one area of Lagos State.
- ii. investigate the effect of library facilities management on academic performance of secondary school students in education district one area of Lagos State.
- iii. explore the effect of classrooms facilities management on academic performance of secondary school students in education district one area of Lagos State.

The study covers the effect of facilities management practice on the academic performance of public senior secondary students in Senior Secondary Certificate Exam (SSCE), conducted yearly by West Africa Examination Council (WAEC). The W.A.E.C, is an examination body that is more recognized in more countries in Africa, unlike NECO which is limited to Nigeria only. The study is limited to the 44 public senior secondary schools in education district I area of Lagos State (Source: School support unit, 2022). Education district I, has the largest number of secondary schools (both public and private) in Lagos State. (Source: Ministry of Education). The district comprises of three zones; Agege, Alimosho and Ifako-Ijaiye local government areas of Lagos State, where by, Agege local government area is the headquarters of the district. The target population comprises of the 2,140 respondents (Source: School support unit, 2022) which includes the principals, vice principals and teachers of the selected schools.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 CONCEPTUAL REVIEW

2.1.1 Facilities management practice

The concept of facility management (FM) practice was first conceived in the United States in 1980s; and it has been spread all over US and Europe. (Nnokam, 2018). However, in the view of Ramlie and Zam (2018), they opined that facility management, is not only concerned about the maintenance and security but also on the proper design of the system of facilities for better maintenance, security, cost reduction and maximum functioning of every facility involved in a business. According to Usen (2016), facilities in a business context are the premises and services required to accommodate and facilitate business activities. In other word, facilities include the building itself where business activities are conducted and where hardware such as equipments and, tools and others are being utilized to run the business. It has direct significance to product or service development. Corroborating this opinion is Gima, (2020), he further stressed that the quality of the products and service that a business creates, depends so much on the functionality and the performance of the organization

However, educational facilities play important role in the academic development and behavior of students. According to Akinyemi, Lawal, and Owosoro (2021), educational or school facilities are the instructional spaces and audio- visual aids, as well as other material resources utilized in educational institutions for the aim of attaining successful teaching and learning. Manafa (2018), described school facilities management as the practice of coordinating the physical work place with the people and the work of organisation, to integrate the principles of school administration, architecture and the engineering aspect. It is a motivation to induce effective teaching and learning as well as increasing academic performance of students. Moreso, Ajayi (2020) opined that students' academic performance is the final grade which students get after a systematic and comprehensive measurement and evaluation of the individual students in a school setting for the purpose of making decision of judgments on his or her cognitive, affective and psychomotor domains.

However, the study viewed academic performance of students as the educational performance of students as measured by senior school certificate examination, (SSCE), Graduates rates or University portals and discipline referrals.

The practice of facility management in the school therefore aims to achieve but not limited to the following; asset revaluation in schools, making them highly cost effective at any given time, an enhance social culture and image, deliver efficient / effective teaching service, enable future change of our children and space use placing the schools' position strategically in the industry of operation which gives it competitive advantage (Chukwu, Okolie & Ezekoli, 2020).

Moreover, in the view of authors such as Abdullah (2016), and Nnokan (2018), facilities are equipment's that include the fixed and mobile structure and materials in the schools such as the classrooms building, laboratories, library, playground, common rooms, hostels, canteen, school offices, the audio and visual aids facilities. While Neji and Nuoh (2015), view facilities, as the frequently used tools, equipment's and structures such as laboratories library facilities, text books, set of books and other reference materials that are used during respective class lessons. It can therefore be deduced from the definitions above that school facilities are the school plant such as the school building classrooms libraries, laboratories, toilet facilities, learning materials and other infrastructures that could enhance efficient teaching and learning process and in effect motivate students towards learning. Moreso, Akinfolarin (2016), identified facilities as a major contributing factor to academic performance in the school system.

2.1.2 Management of ICT Facilities

This is defined as the use of E- learning such as the internet, computer, telephone, radio, video and others in a manner that support teaching and learning activities (Tsai, 2017). In the management and advancement of technology, students are now able to have their learning process through ICT, which they can have their learning process out from regular learning or traditional learning. Traditional refers to the learning process through the classroom while E- learning is a learning process in which students learn from electric devices. Subsequently, most researchers had found out that e-learning is a part of telecommunications technology for students and educators to assess the information on the subject related thus it's going to help them achieve the teaching and learning objectives (Zare, Sarikhani, Salari & Mansouri, 2016). ICT provides other ways to learn in the classroom and enables the student to access information anytime and anywhere (Al-Samarraie *et al.*, 2017).

In a study by Tsai (2017), he mentioned that using ICT facilities in the educational system has brought a positive impact on students' academic achievement. The quality of learning became more effective and efficient where there is an E- learning/ ICT facilities in the teaching/ learning process.

As explained by Zare, Sarikhani, Salari and Mansouri (2016), ICT Facilities, help to increase today's self-regulation through their self-directed learning, and make students to be more responsible for what they want to learn. The researchers also stated that e-learning/ ICT helps students to specified the trends of their learning and control their learning process, hence this makes them to be able to learn more effectively and increase their academic success.

Previous research carried out by Mahmoodi, Maleki and Sanisales (2015), also mentioned that ICT provision and management has improved students learning process and became more creative in their studies learning with technology, if properly managed, is more productive and ease the educators in transferring their lesson to students in the classroom (Ainon & Rosmaizura, 2018).

H₁: ICT/internet facilities management has no significant effect on academic performance of public senior secondary school students in Lagos State.

2.1.3 Management of classroom facilities

A classroom as mentioned by Ainon and Rosmaizura (2018), is a learning place in which students absorbed skills and knowledge. It seems to play an important role in maintaining students' academic performance. More importantly, Malik and Rizul (2018), declared that classroom furniture is the most important to be considered by education institutions as it can bring a huge impact on students' academic achievement. This is because students need a comfortable learning environment to receive their lessons and allow them to focus more on their learning. (Fadaunsi et al, 2018). Some previous researchers such as Malik and Rizui (2018) and Okechukwu and Oboschi (2021), have mentioned that the physical environment which is in the classroom can actively affect students' academic performance towards their comfort and ability to learn in such environmental conditions. Therefore, students who always feel comfortable with the environment of the class can learn and receive information more than students who cannot study and learn in an uncomfortable environment. (Malik & Rizui, 2018).

As explained by Malik and Rizui (2018), the educational institutions should ensure that the furniture provided in the classrooms is in good condition and well managed to be used by students. Educators can use different methods such as visual aids or picture aids to increase students' interest in learning in the classroom and to improve their academic performances. However, Brown and Melenfant (2017) opined that overcrowded classroom and poor conditions of learning environment could bring a negative effect on students' academic achievements. In this study the researcher found out that providing adequate facilities in the classroom have an impact on students' academic performance. However, Malik and Rizui (2018) allude that classroom furniture is the most important to be considered by the educational institutions as it can bring a huge impact on students' academic achievements. This is because students need a comfortable learning environment to receive their learning and allow them to focus more on their learning. Futhermore, Chukwu, Okolie and Ezekoli (2020), stressed that those physical characteristics of the classroom, also need to be considered. Previous researchers such as Otchere and Afara (2019) and Nweke (2021) have mentioned that poor facilities in institutions could bring up the negative impact on teachers' effectiveness in the teaching process and performance, thus give a negative impact on students' performance either in academic or non- academic environment.

H₂: Classroom facilities have no significant effect on academic performance of public senior secondary school students in Lagos State.

2.1.4 Management of library facilities

A library is a place that provides a collection of sources of information and similar resources that provides other resources that support learning, teaching and research to students and lecturers (Ainon & Rosmaizura, 2018). However, according to Akomolafe and Adesua (2016), having poor or no library facilities could give a negative impact on students' academic performance as they do not have the interest today to learn. Many researchers stated that the library is an essential part of education and as guidance to the readers (Ayaz, Ali, Khan, & Ullah, 2017). Moreso, the availability and maintenance of library facilities can help the learning process to be more effective and students or teacher can get updated information easily (Ayaz *et al.*, 2017).

Besides, a researcher that makes use of online library resource in educational institutions can help students succeed in their academic performance (Hilary, 2017). The researcher also mentioned that students who used online resources such as databases and e-book provided in the library tend to increase their grade or scores in internal and external examination results.

Moreover, some students prefer to study at the library instead of studying in the classroom or at home, as it can help them avoid any interruption. Hilary, (2017) in his studies, stated that more students achieve a satisfying score in their exam and increase their reading culture when they visited the library more often. Therefore, the library services are very important and it be should consider that facilities provided always stayed in good condition to ease the use by students when they are studying, thus affecting the students' academic achievements.

Ayaz *et al.*, (2017), stated that the library is geared towards the teaching and learning process and it also provides guidance for individuals not just to enhance learning alone but that student's academic performance increases where there is a library.

Moreso, Brown and Malenfant (2017) did opined that, students became more successful as they gain higher results in the examination result compared to students who did not use the library for their studies. Besides, the researchers stated that facilities provided in the library were the main focus of students to engage in the library. Furthermore, the researchers mentioned in their study that there is a positive and a significant relation towards library facilities, resources, and services provided in the library with students' satisfaction thus impact their academic performance

H₀₃: Library facilities management has no significant effect on academic performance of public senior secondary school students in Lagos State

2.1.5 Students academic performance

Academic performance represents the grade by course or subject outcomes when an individual has attained specific goals on some specific activities when they are in school, college and University (Steinmayr *et al.*, 2017).

According to the study carried out by Akomolafe and Adesua (2016), Students' academic performance is measured by their performances in SSCE or NECO. In this study student academic performance received an impact from the facilities that management provided in the institutions. Poor services or maintenance towards facilities might bring a harmful influence on students. Students need to have a comfortable and safe environment as it assists them to make good grades in their academic.

According to Adediwura and Tayo (2017), academic performance is the outcome of education or the extent to which a student, teacher, or institution has achieved their educational goals. Academic performance is commonly measured by examinations or continuous assessment. Students' performance according to Noble (2016), and Herb & El-Sharawi (2016), cannot be traced to single factor, but by multiple factors. They emphasized that student academic accomplishments factors can be divided into two; internal and external classroom factors. Internal classroom factors include student competence, class schedules, class size, textbooks, class test result, learning facilities, environment of the class, complexity of course materials, teacher role in the class, technology used in the class and exam system. While the external ones include; extra- curricular activities, family problems, financial problems, social and other problems. Young (2019) opined that academic performance is multidimensional construct composed of the skills, attitudes and behaviors of a learner that contribute to academic success in the classroom. He also is of the view that students' performance is intended with the use of library and level of their parental education.

2.2 Conceptual framework

The diagrammatic representations of both the independent and dependent variables are hereby drawn. The facilities managed are operationalised as ICT/E-learning facilities, classrooms and library while the dependent variable is given as students' academic achievement.

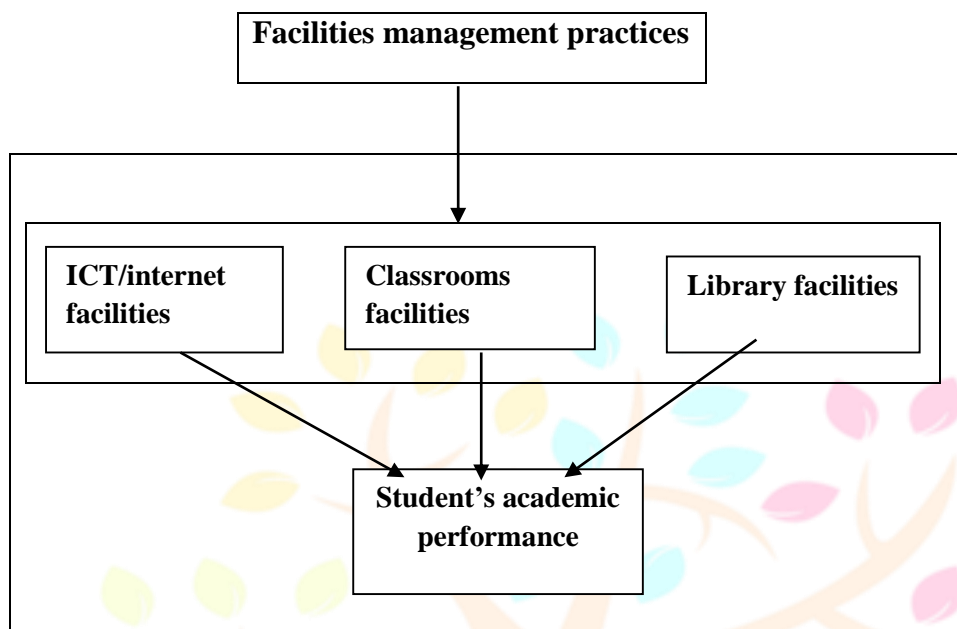


Fig 1 Source: Researchers conceptual model (2023)

2.3 Theoretical Review

2.3.1 The Field Theory of Learning:

This study examined Field Theory of learning, which was established by Kurt Lewin in the year 1930. Lewin postulated that an individual conduct was not a result of previous occasions or future desires, but the capacity of the collaborations among people and their present condition or "field" as he named it. The theory tends to affirm that there is a relationship between human learning and environment (physical facilities). In this wise, Lewin's hypothesis, views learning as a relativistic cycle by which a learner grows new understanding or changes old ones. As a result, the environment in this hypothesis is observed as a main consideration that shapes human conduct including learning. This therefore, implies that academic performance depends not only on the learner's cognitive or intellectual ability but also on the quality of his/her environment which in the basic physical facilities of the school system. This theory is relevant to this study because extant literatures such as Ayaz *et al.*, (2017), revealed that adequate maintenance of school library facilities is related to academic performance of students.

Hence, this theory is very relevant to this study so as to find out the effects of facility management in school environment on students' academic performances.

2.3.2 System Resource Theory

The present study is hinged on Yutchman and Seashore's (1967) System Resources Theory of organisations effectiveness. The Theory states that an organisation is said to be effective in managing its resources when it has the ability to secure an advantageous bargaining position in its environment and capitalize on that position to acquire, judiciously distribute and monitor utilization of scarce resources. According to this theory an organisation is efficient in managing its facilities and equipment, when it is able to adequately acquire, rationally distribute,

efficiently utilize and regularly maintain scarce resources in implementing its programmes in order to improve and achieve organisation goals and objectives.

The system resource theory, considers a school as a social system which its survival depends on the system's ability to maintain the relative consistency of its processes and the relationship within and outside the systems. The process involves a model of energetic input- output systems with energetic returns. According to Ovwigbo (1999) cited in Ajayi (2020), System is often analyzed in terms of their effectiveness and efficiency. The system effectiveness refers to the extent to which goals are achieved in the school environment. Therefore, effectiveness is considered to measure the degree of goals attainment of the school of learning. While efficiency refers to how the activities of a school could be conducted to minimize waste of resources for the purpose of attaining the objectives. Efficiency therefore, aim at minimizing cost and measure how well facilities are being utilized for maintenance of available facilities. This is dependent on ratio of output to input, availability of facilities cost and other facilities programmes.

The theory notes that the influence of school facilities on students' performance hold a very important position in any institution of learning, (especially secondary schools), for this provides and allows smooth planning, directing, organizing, staffing and controlling with the school. The main aim of school facilities is to ensure that students' as well as teachers are comfortable to teach and learn in order to achieve a greater academic performance.

Therefore, since the effectiveness an organisation facility is measured in terms of the capability to acquire resources, utilize and maintain then in achieving the organisation objectives Yutchman and Seashore (1967), System resources theory of organisations effectiveness is relevant to the study

2.4 Empirical Review

In the study carried out by Solomon Molla and Yilfashewa (2022), the purpose of the study was to explore the status of information and communication technology integration in Dire Dawa city Administration secondary schools' curriculum. The study was conducted using a survey design. A total of 563 respondents (374 students and 189 teachers), four schools' supervisors and 12 school principals and vice principals were selected using systematic random and purposive sampling techniques from the eight secondary schools. Data were gathered by questionnaire, interview, and observation. The data were being analyzes using mean, standard deviation, and an independent sample t-test. The findings revealed that the integration of information and communication technology, was minimal and inconsistence across secondary school. The study however, revealed that there was a significant mean difference in the in integration of information and communication technology between private and government secondary schools. The study showed that lack of training and technical knowledge, the high cost of technology, the high cost of technological devices and internet services and a lack of internet connectivity were major challenges.

Moreover, in the study carried out by Akomolafe and Adesua (2016), titled the impact of physical facilities on students' level of motivation and academic performance in senior secondary schools in southwest Nigeria. The study employed explanatory sequential mixed method research design. Data were collected from seven Tamil medium and five Sinhala medium types, two government schools located in the Monaragala, Nuwara Eliya districts. Thematic analysis was used for analyzing data. Analysis of interviews showed two main themes in relation to the school related conditions that impacted students' motivation and engagement in learning; 1) quality of classroom relationships; and 2) quality of curriculum and resources. The study therefore, revealed that physical facilities have significant influence on students' motivation to learn and achieve greater academic performance.

Oredein and Balola (2020) investigated the influence of professionalism and school faculties on students' cognitive performance in science subjects in secondary schools in Oyo State". A descriptive survey research which was questionnaire based. The population of the study was all the public secondary schools (science teachers and students). Purposive, cluster and simple random sampling techniques were used to select twenty public schools from each of the six educational zones in Oyo state making a total of one hundred and twenty schools, only science teachers were involved in the sample and the students that registered and wrote WAEC examination of May/June 2018. The data collected were analyzed using descriptive statistics like percentage and mean, multiple Regression analysis (ANOVA) and t-test. All hypotheses were tested at 0.05 level of significance. The study revealed that there was significant combined influence of teacher's professionalism and school facilities (well-equipped laboratories, library, classrooms and conveniences) on science students' academic performance in Oyo state. The study recommended that the school environment should be made conducive for teaching and learning activities.

3.0 RESEARCH METHODS

The researcher adopted a survey research design approach to identify the factors of facilities management that affect academic performance among senior secondary school students in education district one area of Lagos State. The study used a self-administered questionnaire to gather the data regarding the facilities management provided in public senior secondary schools in education district area of Lagos State.

The sampling technique used is probability based on stratified sampling technique whereby the respondents are grouped according to the three educational zones (Agege, Alimosho and Ifako- Ijaiye) under Education district I. The reason for this is that the 3 zones have the highest number of public senior secondary schools in Lagos state (ministry of education,2022). The population of the study comprised of 2,140 teachers including principals and vice-principals of the 44 senior secondary schools in education district one. (School support Unit, Education district one Agege, Lagos,2022). The sample size was determined using the Taro Yamane (1967) formula.

The Formula is:

$$n = \frac{N}{1+n(e)^2}$$

Where n= sample size, N= the target population

e= level of precession or error limit= 0.05

$$\text{Hence, } n = \frac{2140}{1+2140(0.05)^2}$$

$$n = \frac{2140}{1+5.35} = \frac{2140}{6.35}$$

$$n=337$$

The researcher administered the questionnaire to the 337 teachers in the selected senior secondary school in all the three educational zones of Education district one using simple random sampling technique (Agege =107, Alimosho=140 and Ifako-Ijaiye = 90). Data were analysed using SPSS Version 26.0 to measures the effects between variables and Regression analysis. A total number of 335 questionnaires were used for the analysis representing 99.4% while only 2 representing 0.6% questionnaires were not properly filled and so were discarded.

Instrument for Data Collection

The instruments for data collection is a questionnaire with five Likert scale measurement. Two research instruments were adapted by the researcher for the purpose of collecting data for the study.

1. Management of school facilities questionnaire (MSFQ) and Student Academic Performance Questions (SPAQ). (Source: Education district 1).

2. Student academic performance pro forma. (Using WAEC/SSCEE result 2018-2021)

Validity and Reliability:

In determining the validity of the research instrument, the researcher employed in this study, the twenty items drafted in the questionnaire were presented for face and content validation, observations and suggestions to three lecturers from my faculty. All the suggestions and recommendations of the lecturers were considered and used for the final preparation of the questionnaire.

The reliability of the research instruments were determined through a pilot study using 40 respondents comprising five principals and thirty-five teachers selected at random from five senior secondary school in education district two of Lagos state. The overall reliability coefficient for FMPQ and SAPQ was 0.86 and 0.89 respectively, which gave a high reliability index for the full length of the test using Cronbach alpha.

4.0 DATA ANALYSIS

4.1 REGRESSION ANALYSIS

Table1: Reliability Analysis

Facilities Management Practices	Cronbach Alpha
Criteria	Coefficient
ICT/Internet	0.856
Library Facilities	0.859
Classroom	0.861
Students' academic performance	0.889

Source: SPSS (2023)

From table 1 above, it can be observed that the reliability coefficients of Cronbach's Alpha value for the various factors are all above 0.855. It can therefore be concluded that all the factors are internally reliable.

4.2 SUMMARY OF HYPOTHESES

Table 2: Regression Summary for Hypothesis 1

Variable (s)	Coefficient	T-value	P-value
Constant	.727	3.223	.002
ICT/ Internet	.345	8.105	.000
F-stat= 61.114			
P-value=0.000			
			R ² =0.519

Source: SPSS (2023)

The results from table 2 above revealed that ICT/ Internet facilities management has a significant effect on students' academic performance.

This can be deduced from the regression coefficients and the probability value (F=61.4, P=0.000). This implies that one unit change in the ICT/ internet facilities of the school, will lead to a .345 change in academic performance. The coefficient of determination (R²) of 0.519 indicates that ICT/ Internet facilities account for 51.9% variation in the academic performance of students. Therefore, the null hypothesis will be rejected while the alternate hypothesis is accepted.

Table 3: Regression Summary for Hypothesis 2

Variable (s)	Coefficient	T-value	P-value
Constant	9.907	9.432	.000
Library	.422	7.639	.000
F-stat =39.281			
P-value=0.000			
			R ² = 0.675

Source: SPSS (2023)

The analysis of the result on table 3 shows that library facility management has a significant effect on Students academic performance. This is evident from the regression coefficient and the probability value (F=39.281, P=0.000), this simply implies that a unit change in the library facility management of the school, will result in .422 change in students' academic performances.

The coefficient of determination (R²) of 0.675 indicates that library facility management accounts for 67.5% variation in academic performance of students. The null hypothesis is thereby rejected, while the alternate hypothesis is accepted.

Table 4: Regression Summary for Hypothesis 3

Variable (s)	Coefficient	T-value	P-value
Constant	11.632	8.436	.000
Classroom	.646	5.487	.000
F-stat= 38.726			
P-value=0.000			
			R ² =0.748

Source: SPSS (2023)

The analysis of result in table 4 above reveals that classroom facility management has a significant effect on students' academic performance. This is also evident from the regression coefficient and the probability value (F= 38.726, P=0.000) this therefore, implies that a unit change in classroom facility management of the schools will result in .646 Change in students' academic performance.

Moreso Coefficient of determination (R²) of 0.748 indicates that classroom facility management accounts for 74.8% variation in academic performance of students.

Hence, the null hypothesis is rejected", While the alternate hypothesis is accepted.

Table 5; Summary of Means and Standard deviation of Students Academic Performance in WAEC 2018-2021 in Education district one area of Lagos State

Year	N	Pass	%	Not pass	%	Mean	Standard deviation	Remark
2018	7641	3130	40.96	4511	59.04	1.69	0.71	Poor
2019	6851	2985	43.57	3866	56.43	1.77	0.80	Poor
2020	7385	1927	26.09	5458	73.91	1.35	0.49	Poor
2021	7569	5986	79.08	1883	20.82	4.02	1.93	Good
Grand mean						2.21	0.98	Poor

Table 5 shows the mean and standard deviation of students' academic performance in 2018 -2021 WAEC/SSCE in education district one area of Lagos State. The grand mean of 2.21 and standard deviation of 0.98 shows that students' academic performance in public senior secondary schools in education district 1 in Lagos State was poor in the years under review

4.3 DISCUSSION OF FINDINGS

The study examined the effect of facilities management practices on academic performance of students in public senior secondary school in Lagos State. From the test of analysis of the hypotheses, there is enough evidence to conclude that facilities management practices have significant effect on student academic performance. ($R^2=0.519$, $P=0.000$).

The result of the hypothesis one reveals a significant effect of ICT/ internet facilities on the academic performance of students. This result is in accordance with the findings by Ainon & Rosmaizura (2018). They discovered that there is a strong positive effect of ICT on students' academic achievement in their research at UMK. Similarly in Zare *et al*, (2016), it was discovered that more students learn effectively and increase their academic performance when they have access to ICT/ e-learning facilities as part of their learning process.

The next factor that contributed to the study is the library facilities management and academic performance of students with the results ($R^2= 0.675$ and $P=0.000$). The results were statistically significant where the level of p value is less than 0.05. This result is supported by Brown and Malefant (2017), who affirmed that students who visited and use the library more often, tend to increase the academic success due to the availability of a well-maintained library facility provided by the school. Also, Ayaz *et al*, (2017), supported the motion by saying that teachers and students can as well get up-to-date information and the learning process can be more effective when there is a good library facility available in the school.

The results of hypothesis two ($R^2=0.748$, $P=0.000$), adequately reports that there exists a significant positive effect of classroom facilities management on the academic performance of public secondary school students in Lagos State. The results were statistically significant at $P<0.05$. The result is supported by Anion and Rosmaizura (2018), who concluded that there exists a significant impact of classroom facilities management on student academic performance in UMK. As a result of this research all the variables has significant effects on students' academic performance.

Table 5 revealed that students learning outcome as indicated in academic performance in education district one of Lagos state was low in WAEC examinations between 2018-2021 academic years. This could be attributed to the poor maintenance culture of school facilities among other factors. It therefore meant that a good school manager should not neglect the managerial function of resources, including school physical facilities, to achieve desired objectives. This helps to explain the rate of school dropout, poor performance in external and internal examinations and many other syndicates. Therefore, the only path to thread is an urgent need to rescue the standard of education in Lagos state by reviving the quality of the school facilities in general.

5.0 CONCLUSION

Consequent upon the major findings of the study therefore, the researcher infers the following conclusions. The study has provided insight into facilities management that affects students' academic performance. The study was conducted among public senior secondary schools in education district one, with 335 teachers including principals of the various schools as respondents. Various techniques such as reliability test (Cronbach Alpha value), descriptive statistics for each item in independent variables, and the multiple regression analysis was employed to test the effect of each variable involved on the academic performance of students.

The results obtained from the regression analysis were useful to determine the overall fit of the model in this study. Based on the study conducted, all the variables involved which are ICT/internet facilities, library and classrooms facilities has positive significant effect on the academic performance. As education district one has the highest number of senior secondary schools in Lagos state (source: school support education district 1), the school in education district one, need to pay more attention to facilities management and services to ensure that students meet their satisfaction in learning, the permanent and the semi- permanent classroom structure must be in good condition, adequately furnished and safe to use. Thereby implying that the learning process can be achieved more effectively and efficiently thus encouraging students and teachers to achieve academic results more excellently.

Wrapping up therefore, with evidence to conclude that facilities management (in schools) has positive effect on student academic Performance.

5.1 RECOMMENDATIONS

1. The study recommended that Government and various stakeholders in public secondary schools should identify with facilities management practices that are capable of supporting academic performances among our students in public secondary school in Lagos state.
2. Being the fact that school facilities made positive effect on students learning in secondary schools in Lagos State, the study recommend that school administration and teachers should all be involved in the policy of maintenance culture to keep the standard of the physical facilities in good condition so as to improve the teacher's ability and the student's learning behavior in the area of study.

5.2 SUGGESTIONS FOR FURTHER STUDIES

The result of the study has revealed that there is inadequate learning facilities and consequently low academic performance of students. Therefore, based on the limitation and delimitations of the study, the following are suggested for further studies;

1. The role of principals or administrators in proper maintenance of school facilities in order to improve academic achievement of students in Nigeria.
2. The effect of proper maintenance of school facilities on students' discipline in schools in Nigeria

REFERENCES

- Abdullah, S. (2016) What is school plant? and importance of school plant management. <https://notesread.com/what-is-school-plant/#more-2207>
- Akinyemi, I.A., Lawal, R.O., & Owosoro, P. (2021). Provision and utilization of facilities and public senior secondary school students' academic achievement in Lagos State Education District V. *African Journal of Educational Management, Teaching, and Entrepreneurship Studies*,3, 54-65.
- Akomolafe, C.O, & Adesua, V.O (2016). The impact of facilities on student academic performance in senior secondary schools in South West Nigeria. *Journal of Education and Practice*, 7(4), 38-42.

- Ainon, Ramli & Rosmaizura, M.Z, (2018). The impact of facilities on student academic achievement. *Science International Journal*, 30(2), 299-311.
- Ajayi, K. (2020). Educational facility age and the academic achievement of upper elementary school students. PhD, dissertation, University of Georgia.
- Al-Samarraie, H., Teng, K.B., Alzahrani, I.A., & Slalwan, N. (2017). E- learning continuance satisfaction in higher Education. *A unified perspective from instructors and students. Studies in Higher Education*. 1-17. <https://doi.org/10.1080/03075079.2017.1298088>.
- Ayaz, M. Ali, N., Khna, A B., Ullah, R., & Ullah, M., (2017). Impact of school library on students' academic achievement at secondary school level in Southern districts of Khyber Pakhtunkhwa. *International Journal of Academic Research in Business and Social Sciences*, 7(5). 95-103.
- Balos, T.M. (2021). School facilities, Conditions and Students academic achievement. *New York: Guilford press*.
- Brown, K., & Malenfant, K.J. (2017). Academic library impact on student learning and success finding from assessment in action team project. *Association of College and Research Libraries*. <http://www.ala.org/acrl/files/issues&values/findings>.
- Chika, O. Z. (2019). Management and maintenance of secondary school facilities in Anambra State, Nigeria: challenges and way forward. *Global Journal of Education, Humanities and Management Sciences (GOJEHMS)*, 1(1), 165.
- Chukwu, E.D. Okolie, K.C & Ezekoli, F.O (2020). Facility management practices in Nnamdi Azikiwe University teaching Hospital. (NAUTH), Nmewi, Anambra states, Nigeria. *PM Word Journal*, 9(3), 1-20.
- Ekpoh U. I. (2018). School Plant maintenance, Culture and utilization. Retrieved from: <https://www.researchgate.net>3328> on 2nd March, 2023.
- Fadaunsi, J.O, Utom, J.A, Ochim, M.R., Ayedun, C.A, & Oloke O.C, (2018). Benefit of the adoption of facilities management practices in tertiary institution. A case study of Covenant University. *Material Science and Engineering*. 640, 01232 doi:10. 10881175. 899x/640/1/012032.
- Farombi, G. (2018). The effect of interaction of location facilities and class size on academic achievement of secondary school students in Ekiti State Nigeria. An unpublished PhD. thesis, University of Ibadan, Ibadan, Nigeria.
- Filardo, M., Vincent, J.M., & Sullivan, K. (2018). Education equity requires modern School facilities 21st century school fund.
- Gbesoevi, E.S. & Adeleke, A.A. (2021). Planning and restructuring teaching and learning for higher education in the New Normal", *Al-Hikneh Journal of Educational Management and counseling*. 3(2) 7-14.
- Gima, B. A. (2020). School plant planning and maintenance strategies for enhanced students' academic performance in public secondary schools in Rivers State. *International Journal of Institutional Leadership, Policy and Management*, 2(4), 802-813.
- Hilary, R. (2017). Obstacle towards the use of ICT tools in teaching and learning of information system in Malaysian universities. *The International Arab Journal of Information Technology*. 3(3), 205-219.
- Ikegbusi, N.G. (2019). Effective strategies for improving school environment in climate change in Anambra states secondary schools. Paper presented at the first annual international conference of the faculty of education. AE. FUNAI, Ndufu-Alike, Ikwo. Ebonyi state, Nigeria, 1(2), 493- 503.

- Ikegbusi, N.G & Adindu, C.O (2022). Extent of awareness and implementation of development of appropriate practices in early childhood education in Anambra State. *Journal of Educational Research and Development*. 3(1), 333-343.
- Ikegbusi, N.G, Eziamaka, C.N & Iheanacho, R.C. (2021). Influence of school environment on academic achievement of preschool pupils in Lagos State. *Journal of Educational Research and Development*. 4(2), 188-199.
- International facilities management association (IFMA), (2016). What is facility management? <https://www.ifma.org/about/what-is-facility-management> 2nd March, 2023.
- Kolawole, O & Arikpo, A. (2018). The status of women and material resources in primary schools. Implication for curriculum implementation. *Ibadan Journal of Education Studies*. 1, 251-260.
- Lemaistre, T., Shi, Q., & Thanki, S., (2018). Connecting library used to student success. *Library and the Academy*, 18(1), 117-140.
- Machara, H k, (2016). Influence of school playground safety on the participation of preschool children in outdoor activities in central division Naivasha district, Kenya (Master's Thesis), university of Nairobi, Kenya.
- Mahmoodi, M., Maleki, S., & Sanisales, Z. (2015). The impact of e-learning on creativity and learning in physiology course in nursing students of Shahrekord University of Medical Sciences. *Future of Medical Education Journal*, 5(4), 25-29.
- Malik, H., & Rizui, A.A. (2018). Effects of classroom learning environment on students' academic achievement in mathematics at secondary school level. *Bulleting of Education and Research*, 40(2), 207-218.
- Manafa, F.U. (2018). Education and national development in Nigeria. Inc.Okolo.O. Anyuegbu, N. Ikegbusi &P. From (Eds). The teachers of teachers. A festschrift for Dr.Uwanda (.254-263). Awka: *Nnamdi Azikiwe university press*.
- Memon.,M., Abro, S., Ali,L. &Sajid,M., (2019). The perception of student's feedback with hotel services: case study of mehnan UET, Pakistan. *Journal of Basic and Applied scientific Research*, 9(3), 7-13.
- Neji, H.A. & Nuoha, C.O. (2015). Utilization of laboratory facilities and students' academic performance of chemistry students in Calabar, Nigeria. *Chemistry and Materials Research*, 7(3), 57-62.
- Nnokam, N. C. (2018). Meaning and nature of school plant planning. In N. P. Ololube (Ed.), *Handbook of research on educational planning and policy analysis* (pp. 87-100). Pearl Publishers
- Monkwe, C. (2021). Strategies and policies that secondary school employee to protect educators and learners. Retrieve from <https://ul.netd.acc.za/bitstream/1038t/15e/table>. 2nd March, 2023
- Nnoli,L. (2015). Utilisation of laboratory facilities and students' academic performance of chemistry students in Calabar Nigeria. *National Education Journal*, 4(2), 19-23.
- Nweke, I. (2021). Effect of school location on student achievement in enugu state. *Journal of educational research*, 3(1), 109-120.
- Nzare, M., Sarikhani, R., Salari,M., & Mansori, V., (2016). The impact of E-Learning on university students' academic achievement and creativity. *Journal of technical education and training (JTET)*. 8(1), 2229-8932.
- Odhier, P. O. (2019). Perception of Selected Stakeholders on Challenges Faced by Principals in School Plant Management in Kenyan Secondary Schools. *International Journal of Advanced and Multidisciplinary Social Science*, 5(3), 37-44.

- Ogunode, N. J. & Lawan A. (2020). Public Universities Administration in Nigeria: Challenges and the ways forward. *International Journal on Integrated Education*, 3(11).
- Ogunode, N. J. and Musa, A. (2020). Higher education in Nigeria: challenges and the ways forward. *Electronic Research Journal of Behavioural Sciences*, 3(1). www.erjbehavioural.sciences.com
- Okechukwu, J N., & Oboschi, B.C. (2021). Influence of overcrowded classroom on pupils' academic achievement in public primary schools in Idemili south local government area of Anambra State. *Journal of Educational Research and Development*, 4(2), 91-99.
- Okorie, N.C. (2017). Organisational setting of leadership: theory into practice in educational organisations. Port Harcourt: *Gideon & sons press*
- Omolola, A. I. & Ogunode, N. J. (2021). Management of public universities in Nigeria: challenges and the ways forward. *Central Asian Journal of Social Sciences and History*, 2(6) 41-51.
- Oredein, O., & Balola, K. Effect of School Variables on Student Academic Performance in Calabar Municipal Area of Cross River State. Retrieved online 10/08/2023.
- Osuj, C.U& Omah, I.G. (2019). Safety management practice for quality public senior secondary schools' administrations in Rives state. *International Journal of Innovative Human Ecology & Nature studies* 7(4), 31-39.
- Otchere, S.S & Afara, D. (2019). Relationship between school facilities and the learning environment. A case study of Oda senior high School. *National Education Journal*, (2), 19-25.
- Ramli, A., & Zain, R.M. (2018). The impact of facilities on students' academic achievement. *Science International Journal*, 30(2), 299-311.
- Sabir, A., & Fatima, F. (2019). Comparative analysis of safety and security measures in public and private schools at secondary level. *Journal of Socialomics*. 5(3), 56.
- Steinmayr, R. Meibner, A., Weidinger, F.A., & Wirthwein, L. (2017). Academic achievement Oxford Bibliography.
- Tsai, C.C. (2017). Conceptions of learning in technology-enhanced learning environment. A review of case study in Taiwan. *Asian association of open universities journal*. 12(2).184-205.
- Ugwuanyi, C.C., Nwachukwu, C.W., Ugwuanyi,S.C., Okeke, I.O.C., Nworgu,G.B.,Nwoye, N.M., Odo,O.I, Okeke,M.A., Inweregbuh,C.O., Osakwe,J.I., & Idoko, U.J (2020). Perceived impact of the use of the internet resources on undergraduate students' academic achievement in mathematics: implication for physics and engineering teaching. *International Journal of Mechanical and Production*, 10(4), 359-368.
- Usen, O. M. (2016). Teachers' utilization of school facilities and academic achievement of student's nurses in human Biology in schools of Nursing in Akwa Ibom State, Nigeria. *Journal of Education and Practice*, 7(16) 73-80.
- Zare, M., Sarikhani, R., Salari, M., & Mansouri, V. (2016). The impact of e-learning on university students' academic achievement and creativity. *Journal of Technical Education and Training (JTET)*, 8(1), 2229-8932.