

Effective management of school facilities and students' learning in public secondary schools in Edo State, Nigeria

By

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Abstract

The place of school facilities in public secondary schools cannot be down played, hence the suggestions in public fora and among stakeholders in education for the improvisation of relevant teaching facilities for effective teaching and learning. It is against this backdrop that this paper attempted a research on the effective management of school facilities and students' learning in public secondary schools in Edo State. The study adopted the correlational research design and the population was made up of 5439 students, while a sample of 271 responded to the instrument. The Pearson r was used to analyse the four hypotheses raised for the study. Results found a significant positive relationship between the management of laboratory facility, library facility, infrastructural facility and instructional facility and students' learning, noting that school facilities in public secondary schools is in a deplorable state.

Key words: Management, School, Facilities, Learning, Students, Effectiveness.

Introduction

School plant planning starts and ends with the students. The buildings are expected to be designed to satisfy the students' physical and emotional needs. Their physical needs are met by ensuring a safe structure, adequate sanitary facilities, a balanced visual environment a satisfactory acoustical environment and sufficient shelter space for their work and play. Their emotional needs are met by creating pleasant surroundings, a friendly atmosphere, and an inspiring environment Okeke, (2019). This humanistic, student-oriented approach to school planning and construction view design and equipment as means of enhancing the pupils learning and comfort. As a skeleton is to a person, so are facilities or the school plant necessary for the realisation of result-oriented teaching and learning in the classroom (Okon and Sule, 2016).

Management, on the other hand, is a process of getting things done in an organisation through people, money and infrastructural resources in the right mix. The resources being human and material that is, human beings (both teaching and non-teaching staff), while materials are the facilities like teaching aids, furnitures, buildings, etc. In this paper, facilities include something designed, built, installed, among others that is meant to serve a specific function, afford a convenience or service, e.g. educational facilities, new research facilities, among others. It can also be described as something that permits the easy performance of an action, course of conduct, etc with a view to providing someone with every facility for accomplishing a task.

Adams (2015) described facilities management as the practice of coordination of the physical workplace with the people and the work of the organization; it integrates the principles of business administration, architecture and the behavioral and engineering sciences. To this end, school facilities management is the application of scientific methods in the planning, organizing, decision-making, coordination and controlling of the physical environment of learning for the actualization of the educational goals and objectives. To Uko (2015), effective management of school facilities requires knowledge, skill and expertise in handling different facets of the school system. This demands the ability of the principal to set required objectives, supervise facilities usage, formulate plans for procurement and ensure actual management and supervision of available facilities to attain set goals of the school system.

School facilities comprise the physical expression of the school curriculum in the construction, internal and external arrangements of the buildings, equipment, grounds, surroundings, general appearance which include the flower beds, paths, orchards, shrubs, playgrounds, classrooms, assembly halls, dining halls, desks and school farms. The management of school facilities involves aids, circumstances, which make it easy to do things, facilities for study e.g. libraries, laboratories, sports facilities like running tracks, swimming pools, among others.

Uko (2015) distinguished some aspects or stages of school plant, utilization of school plant operation and maintenance, school plant improvement and school plant audit. The operational definition of school plant entails those activities connected with keeping the physical plant opened and ready for use. School plant management includes activities such as sweeping, cleaning and keeping of school grounds, house-keeping, dusting and oiling of machines and equipment, which are regularly done to keep plants ready for use. Students could assist in keeping the school environment tidy by sweeping, dusting and scrubbing, while teachers and other staff supervise them.

Osobaifoh (2020) further posited that the provision and management of schools facilities must

take into cognizance modern views of the teaching-learning process which have moved beyond memorizing to involvement of teachers and students in applying, analyzing, synthesizing and evaluating to stress the need for flexibility in time and space. Thus, the complexity of the learning environment requires flexibility in the design of facilities to meet present day school needs that is, the facilities should be designed to meet diverse academic needs of the school system.

In today's parlance, multipurpose facilities used for academic activities during school hours may also be available for use by the community during and after school hours. Such programmes may be used for continuing education programmes, social activities and recreation. This will eliminate the burden of duplication of such facilities as conference halls, gymnasium, library, theatre, football pitch, tennis court, swimming pool and other sporting facilities, thereby integrating the collective efforts toward cost effectiveness and enhancing healthy school community harmonious relationship.

School physical facilities provide and maintain safety, cleanness and creativity learning environments to the students which encourage students to perceive high achievements and outcome. Effective management of physical facilities strive to give students a comfortable learning environment in which they work and learn. In developing country like Nigeria, low quality of learning among students can partly be attributed to poor physical facilities of the school. School physical facilities are fundamental factors for better learning environment and outcomes of the students (Saeed and Wain, 2011).

The effective management of instructional facilities is an important ingredient in any education programme. In recent times, it has been observed that academic performance seems to be losing steam in almost all secondary schools. This is being considered as part of the reasons why some states in Nigeria have not been performing excellently in examinations both internally and externally. This situation may likely persist if the available faculties are not effectively managed. In this regard, the level of success of the educational programmes is greatly dependent on the degree of management of up-to-date facilities, equipment and supplies. This is because they form the hub around which such programmes revolve.

Other facility that if effectively managed can influence students learning is the physical facility which is also known as school buildings. Physical facilities refer to the school plant, that is the school buildings, classrooms, libraries, laboratories, toilet facilities, offices and other infrastructures that would likely motivate students towards learning. The effective management of physical facilities are germane to effective learning and academic performance of students. Hallak (2012) claimed that the quality, appropriateness, adequacy and effective management of these items contribute to performance in the school system.

Udosen (2022) elucidated some obvious advantages of effective school facilities managements one of which is improved students academic performance. The author asserted that students who lack adequate facilities are likely to have lower test scores. School success is also linked to regular school attendance, and attendance depends on how conducive the school environment is and that aesthetics of the school such as beautiful surroundings, internet accessibility and air conditioners can motivate students to attend school regularly. In addition to improving students' attendance to school, positive learning environments also affect students' attitude to learning and their behavior in the classroom. It is against this backdrop that this paper elucidated the relationship between effective management of school facilities and students learning in public secondary schools in Edo state, Nigeria.

Effective management of instructional facilities can not be divorced from students' learning outcomes. Instructional facilities are materials or tools that are locally made or imported that could make tremendous enhancement of lesson impact if intelligently used. Osadebe (2019) referred to instructional facilities as objects or devices which help the teacher to make a lesson clearer to the learner. They are also described as concrete or physical objects which provide sound, visual or both to the sense organs during teaching. Audio instructional facilities refer to those devices that make use of the sense of hearing only, like radio, audio tape recording, etc. Visual instructional facilities, on the other hand, are those devices that appeal to the sense of sight only such as the chalkboard, chart, slide and filmstrip. An audio-visual instructional facility however, is a combination of devices which appeal to the sense of both hearing and seeing such as television, motion picture and the computer. Among the instructional facilities the classroom teacher uses, the visuals out-number the combination of the audio and audio-visual.

To ensure quality instructional delivery for the benefit of both teacher and learner, basic education requires the appropriate use of a judicious mix of both print, audio, visual, audio-visual and other facilities. These materials include text books, journals, magazines, periodicals, wall charts, posters, pictures, maps, globes, filmstrips, slides, projectors, graphs, radio, tape-recorders and televisions (Okam 2023). Garba (2022) affirmed that instructional resources help bridge the gap between reality and the abstract. For effective lesson delivery, the teacher is encouraged and expected to effectively utilize relevant instructional materials. Such materials make the teaching and learning process more interesting, more effective, livelier and appealing to the learner and makes lesson delivery simpler and easier.

In a study by Olayirika (2016), it was formed that there was a significant difference in the pre-test and post-test of students in the experimental groups. The study also found that gender effect was not statistically significant in social studies. The study concluded that students who were taught with

instructional materials performed better than those taught without it. The study, therefore, recommended that teachers of social studies should employ the use of essential instructional materials for their teaching and also improvise where and when the materials are not available.

The Problem

A successful management of school facilities is a necessary and essential investment that would increase quality of schools and educational performance and future outcomes. An academically successful school must radiate a sense of well being of its facilities which in turn generate information for positive results. This will lead to effective restoration achieved through good design that addresses educational needs of the students. Apart from the grossly inadequate facilities in most secondary schools in Nigeria, the classrooms are usually overcrowded with up to sixty or more students in classrooms designed for only thirty or forty students, the chairs and desks are not enough, students therefore, engage in sharing chairs, standing up, or sitting at the windows on broken desks', a situation that generally stalls the teaching learning process, disrupts the students' mental activity and militates against the intellectual development of the students.

There are serious negative consequences for students when school facilities are not properly managed. First in the ranking is poor academic performance. There is a nexus between learning and facilities, as availability and good condition will exude academic excellence. Also, if facilities are poorly maintained, this could lead to health and sanitary condition problems. For instance, if the toilets are broken down and students defecate indiscriminately, epidemics and other contagious diseases may occur to endanger not only the lives of the students but also of the staff, and immediate neighborhood and the nation at large. Also, poorly managed physical education facilities may turn health hazards to the students and teachers during use.

It is to be noted that the compounds of some of the schools visited in Edo State are bushy, with dilapidated buildings, leaking roofs, broken chairs and desks, rough floors and windows without louvers. In some of the schools, the buildings were ditty, no lightning, while some have blown off roofs. The roads leading to the sports fields in some schools were weedy. It appears adequate management and maintenance is not provided on the available school facilities. A cursory observation of both primary and secondary schools in Edo State showed that majority of the constructed school buildings have deteriorated and required urgent maintenance. It is also observed that the causes of the school building dilapidation could be likened to lack of facility management on the part of the school administrators and if these facilities are not effectively managed, effective teaching and learning would not be achieved and the goals of secondary school education would not be realized. This creates a gap which this research

seeks to fill. Therefore, the study investigated the relationship between effective management of school facilities and students' learning in public secondary schools in Edo State.

Hypotheses

The following hypotheses were formulated to guide the study:

1. There is no significant relationship between effective management of laboratory facilities and students' learning in public secondary schools in Edo State.
2. There is no significant relationship between effective management of library facilities and students' learning in public secondary schools in Edo State.
3. There is no significant relationship between effective the management of infrastructural facilities and students' learning in public secondary schools in Edo State.
4. There is no significant relationship between the management of instructional facilities and students' learning in public secondary schools in Edo State.

The Method

This study adopted the correlational research design because it sought to find out the degree of relationship between two sets of variables. This design was deemed appropriate for this study because correlational design is usually the appropriate design for studies which focus mainly on finding out the association or relationship between two or more variables.

The population of the study was made up of 5439 students from 15 public secondary schools in the three senatorial districts of Edo State. The researcher selected 1813 students from each senatorial district using the purposive sampling technique. Thereafter, the random sampling technique was used to select 5% of 1813 students from each senatorial district and this gave a sample size of 271 students. The questionnaire titled 'Effective Management of School Facilities and Students' Academic Performance Questionnaire (EMSFASAQ) was used for the collection of data in the study. It consisted of 30 items and it was divided into two sections. Section A and B. Section A elicited information on demographic variables of the respondents, while section B contained 30 items that were carefully drawn in line with the research objectives. Respondents were expected to respond to the item raised on four point rating scale.

The instrument was validated by the researcher and the test-retest reliability technique was used to determine the internal consistency of the instrument. The reliability index of 0.71 was obtained and adjusted by the researcher as reliable enough to be used. Copies of the instrument were administered to the respondents by the researcher and two research assistants and retrieved them the same day to enhance high return rate. The exercise took two weeks. The data obtained were analyzed using the Pearson Product Moment Correlation Coefficient Statistics and the hypotheses were tested at 0.05

level of significance.

Results

Hypothesis one: There is no significant relationship between effective management of laboratory facilities and students' learning in public secondary schools in Edo State.

Table 1: Analysis of Relationship Between Effective Management of Laboratory Facilities And Students' Learning In Public Secondary Schools In Edo State.

Variables	N	$\bar{X}$	S.D	r-cal	p-value	Remarks
Laboratory Facilities	271	2.70	.44	0.521*	.032	Null hypothesis rejected ($p < 0.05$)
Students Learning		2.60	.51			

Table 1 showed that $r\text{-cal} = .521$ was found significant at a P-value of .32 ($.032 \leq .05$). Therefore, the null hypothesis was rejected, indicating that there was significant positive relationship between the management of laboratory facilities and students' learning in public secondary schools in Edo State.

Hypothesis two: There is no significant relationship between effective management of library facilities and students' learning in public secondary schools in Edo State.

Table 2: Analysis of Relationship Between Effective Management of Library Facilities And Students' Learning In Public Secondary Schools In Edo State.

Variables	N	$\bar{X}$	S.D	r-cal	p-value	Remarks
Library Facilities	271	3.70	.54	0.674*	0.001	Null hypothesis rejected ($p < 0.05$)
Students Learning		3.60	.71			

The data in table 2 showed that $r\text{-cal} = .674$ was found significant at a P-value of .001 ($.001 < .05$). Therefore, the null hypothesis was rejected, indicating that there was a relationship between effective management of library facilities and students' learning in public secondary schools in Edo State.

Hypothesis three: There is a significant relationship between effective the management of infrastructural facilities and students' learning in public secondary schools in Edo State.

Table 3: Analysis of Relationship Between Effective Management of Infrastructural Facilities And Students' Learning In Public Secondary Schools In Edo State.

Variables	N	$\bar{X}$	S.D	r-cal	p-value	Remarks
Infrastructural Facilities	271	2.45	.31	.531*	.04	Null hypothesis rejected ($p < 0.05$)
Students Learning		3.90	.46			

The data in table 3 showed that $r\text{-cal} = .531$ was found significant at a P-value of .04 ($.04 \leq .05$). Therefore, the null hypothesis was rejected, indicating that there was a relationship between effective management of infrastructural facilities and students' learning in public secondary schools in Edo State.

Hypothesis four: There is no significant relationship between the management of instructional facilities and students' learning in public secondary schools in Edo State.

Table 1: Analysis of Relationship Between Effective Management of Instructional Facilities And Students' Learning In Public Secondary Schools In Edo State.

Variables	N	$\bar{X}$	S.D	r-cal	p-value	Remarks
Instructional Facilities	271	2.65	.49	.542*	.004	Null hypothesis rejected ($p < 0.05$)
Students Learning		3.82	.55			

The data in table 4 showed that $r\text{-cal} = .542$ was found significant at a P-value of .004 ($.004 < .05$). Therefore, the null hypothesis was rejected, indicating that there was a relationship between effective management of instructional facilities and students' learning in public secondary schools in Edo State.

Discussion

The result showed that there was a significant positive relationship between effective management of laboratory facilities and students' learning in public secondary schools in Edo State. This may have been influenced by the fact that the use of laboratory facilities most especially for teaching science based subjects to arouse learner's interest and make learning more interesting. This findings supports Dike and Salisu (2015) who found that laboratory facilities affect meaningful teaching and learning in schools hence the significant relationship between the laboratory facilities and the performance of students in Biology in the SSCE as revealed by findings.

This result also corroborates that of Bello (2022) who found the optimal utilization of physics laboratory equipment being effective in the teaching of physics.

The result of the study also found that there was a significant positive relationship between effective management of library facilities and students' learning in public secondary schools in Edo State. This is believed to be influenced by the fact that the effective management of library facilities impact positively on the students and enhances effective teaching and learning. This finding is in agreement with the findings of Osnji (2016) who found that school library offers learning services, books and resources that enables all members of the school community to become critical thinkers and effective users of information in all formats and media. This result also supports Uko (2015) who earlier found a significant relationship between the principals' proficiency, creativity and the overall educational objectives in the management of school facilities. Results of this study agreed with Ossai-Ugbah (2020) that having pre-university computer literacy did not account for better academic performance and students who made use of automated library were better exposed to academic materials and performed better than those who did not make use of the services of the automated library services.

The result also found that there was a significant positive relationship between the effective management of infrastructural facilities and students' learning in public secondary schools in Edo State. The researcher is of the view that a good school infrastructure, with renowned spaces, make it possible for children and youths to study and, in addition, tends to improve the attendance and interest of students and teachers in learning. The result is in line with that of Okunola (2015) that well sited school buildings with aesthetic conditions, laboratory and playground offer contribute to improved performance in the school system, arguing that the availability of school building and other plant facilities are very important as they could enhance effective teaching and learning. Result also aligned with that of Adewunmi (2020) that the availability of adequate number of physical facilities had significant influence on student's academic performance and that adequate number of physical facilities should be supplied to state secondary schools.

Furthermore, results of this study revealed that there was a relationship between effective management of instructional facilities and students' learning in public secondary schools in Edo State. This result may be attributed to the fact that the management of instructional facilities constitutes tangible products, which can be used by learners and during such usage, a learner interacts with the materials. Such interaction may entail that a learner manipulates the instructional materials and

expresses his/her views about the problem and idea encapsulated in the material. This finding supports that of Okam (2023) who found that the physics teachers in FCT secondary schools were using instructional aids and there was a significant difference in academic performance of students taught with instructional aids. The result supports Osadebe (2019) that students who were taught with materials performed better than those taught without them. However, this result agrees with that of Garba (2022) who found that teacher characteristics have no significant relationship with student's performance but instructional materials and school facilities have significantly influenced students' performance. It was therefore recommended that instructional facilities should be effectively managed to avoid easy damages and pilfering.

Conclusion

Based on the results, it was concluded that there is a deplorable state of school facilities in public secondary schools and there was a significant positive relationship between the management of laboratory, library, infrastructural and instructional facilities and students' learning in study area.

Recommendations

Based on the results, the following recommendations were made:

- a) Government should ensure the provision and utilization of adequate and modern facilities to improve on the state of school facilities in public schools in Edo State.
- b) The school management should be effective in the management of laboratory and library facilities to enhance effective teaching and learning in public secondary schools in Edo State.
- c) The parents teachers association should be actively involved in the provision and management of infrastructural facilities to enhance teaching and learning.
- d) The teachers in schools should also be involved in the management of instructional facilities to improve students' learning in public secondary schools in Edo State.

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