

Instructional Space Planning for Secondary Education in Delta State, Nigeria

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Abstract

The study examined instructional space planning for secondary education in Delta State. It adopted the descriptive survey design. The population was all the public and private secondary schools. The sample for the study was 225 schools (public-115, private-110), which is 25% of the population. Stratified random sampling technique was used. A checklist was used to obtain data from the study. Data generated were analysed using percentage. The study revealed that the level of instructional space planning was higher in public schools than in private schools. The study recommended that stringent measures should be put in place to ensure strict compliance to policy provisions in this regard especially among privately owned schools. Public private partnership (PPP) should be pursued in funding education in order to ensure the provision of standardized learning facilities in view of the heavy financial implications.

Index Terms: Instructional Space Planning, Secondary Education

I. INTRODUCTION

The impact of quality education on the contemporary society cannot be over emphasized. This is obvious through the immense contributions of education to the technological and socio-economic advancement of the world of today. Basically, education equips the child with the needed skills, knowledge, and attitude to function effectively in the society. This is the crux of the human capacity thesis, which is at the vanguard of education as instrument par excellence for manpower development, and by extension, the development of the society.

Ipsa facto, educational institutions have been established at primary, secondary and tertiary levels, with the objective that a nation's human resources would be transformed into competent and productive agents of development in all the sectors of the economy. This is the reason why government, private individuals and organizations are investing heavily in education as a veritable strategy for national development.

However, these objectives may not be achieved if the various levels of education are not of appreciable standards, Jaiyeoba and Atanda (2005) posited that standard is synonymous with quality, efficiency, excellence, relevance and worthiness. When applied to education, it is the success with which an institution provides an educational environment which enables students to effectively and efficiently acquire quality education in order to be productive in the society. Secondary education is a critical part of this process, through the effective implementation of the curriculum.

Secondary education is the education children receive after primary education and before the tertiary level. Secondary education is designed to provide students with viable skills, knowledge, attitudes and opportunities to proceed to higher institutions of learning and for the world of work (FRN, 2014). Conventionally, it is through the secondary schools that the aims and objectives of secondary education can be achieved. This however cannot be achieved without school plant.

School plant refers to all the materials and structures that facilitate teaching and learning in the school environment. They include classrooms, laboratories, technical workshops, libraries, hostels, offices, water, visual and audio-visual aids, sporting facilities etc. Asiabaka (2008) asserted that the curriculum finds its physical expression in the design and construction of the school plant. According to Abraham (2013), School plant include all the facilities and equipment within the school which are used by the members of the school community. He went further to state that all the physical structures in the school are in this category. Enaohwo and Eferkeya as cited by Maduagwu and Nwogu (2006:14) stated that "school plant is the entire scope of the infrastructural facilities provided in the school for the purpose of educating the child". School plant therefore is the life wire of teaching and learning as well as other activities that are indirectly linked with the teaching-learning process within the school. To ensure the effectiveness of the school plant in the attainment of educational goals, they must be adequately planned.

Planning is an essential aspect of human development. There can be virtually no meaningful progress without careful planning which entails deciding on what to do, who is to do it, how to do it and when to do it.

Planning is therefore an indispensable tool for ensuring progress in any aspect of human endeavor. Soraj (2017) conceived planning as preparing for a goal oriented action through the most advantageous means. In other words, it is the exercise of intelligence to deal with situations as they are and finding means to solve them optimally.

Planning is therefore a formal process of thinking through, forecasting and decision making in advance on how to achieve predetermined objectives of an organization or an entity. It is an integral aspect of policy making which helps decision makers and policy formulators function effectively. It is as a result of these fundamental facts about planning that make it inevitable in education and indeed, all human endeavours.

Educational planning is a dynamic process that realizes its significance in a dynamic environment. It is a futuristic exercise in the determination of policies and courses of an educational system, having due regard for economic and political realities for the society's potential growth and for the needs of the country.

UNESCO (2005) described educational planning as preparing and subsequently evaluating a set of decisions for future actions, aimed at carrying out specific sets of actions, aimed at achieving specific set of goals. It is a set of preparatory decisions for implementation, aimed at achieving specific goals, by using available resources optimally. It is a future oriented decision-making process. One of the critical aspects of educational planning is school plant planning.

School plant planning is generally seen as the systematic and rational provision of educational facilities within an institution. National Open University of Nigeria (NOUN), (2010) stated that school plant planning involves constructing facilities, functional buildings and facilities that should adequately cater for the present and future needs as well as promote conducive environment for effective teaching and learning. School plant planning entails the planning of instructional space, administrative space, convenience space and circulation space. Hence, Ajayi and Yusuf (2010:48) stated that "School plant planning is referred to as a process in which a suitable site is selected and instructional space, administrative space, circulation space and space of convenience are designed to facilitate the teaching and learning process in as school system". The emphasis here is that the planning of school plant makes the implementation of educational programmes a lot easier. However, this study is concerned with instructional space planning.

Instructional spaces are spaces that have direct impact on the teaching-learning process. They include classrooms, laboratories, auditoriums, multipurpose rooms/halls and technical workshops which are essential in the teaching and learning process. The extent to which these facilitate teaching and learning depends on their location within the school premises. It is not unlikely that well planned instructional spaces in the form of location and structure will enhance effective and efficient teaching and learning process and as well ensure effective education delivery.

While emphasizing the importance of instructional space in the effective delivery of secondary education, Mark (2002) maintained that one cannot expect effective secondary education delivery where school buildings such as classrooms, laboratories, technical workshops and libraries are substandard. He emphasized that clean, quiet, safe, comfortable, and healthy environment are important components of successful teaching and learning. Similarly, Ajayi (2007) stated that effective secondary education may not be guaranteed where instructional spaces such as classrooms, libraries, technical workshops and laboratories are structurally defective, not properly ventilated and not spacious enough for use. He further emphasized that structural effectiveness, proper ventilation and well located instructional space may lead to successful teaching and learning process.

Akubuiro and Joshua (2004) reported that there was persistent mass failure of students in the Senior Secondary School Examination (SSCE) by the West African Examination Council (WAEC). They observed that poor academic performance of secondary school students in Nigeria may not be unconnected with the seemingly poor institutional space planning in the schools.

It is likely that poor instructional space planning may lead to poor teaching and learning situation which in turn may lead to poor delivery of education. Strincherz (2000) in his study showed that quality education lags in shabby school buildings, those with poor or no science laboratory, library, technical workshop, inadequate ventilation and facility heating system. All these inadequacies will have negative impact on the effective delivery of education.

The Philippines Department of Education (PDE), (2016), therefore recommended the following minimum standards for instructional space:

- Classroom: 1.40 sq meters per place
- Science laboratory: 2.10 sq meters per place. School workshops.
- Home economic: 2.50 sq meters place. Wood works – 5.00 sq meters per place
- Metal works: 5.00 sq meters per place
- Electrical works: 5.00 sq meters per place. Farm machine works – 5.00 sq meters per place. Fish farm – 2.50 sq meters per place. Computer room – 2.50 sq meters per place

It stated that the computer laboratory is a special instructional space necessary to meet the current and future advancement in information and communication technology. The space should accommodate at least 10 networked personal computers with other basic facilities such as computer tables and chairs, proper electrical connections with stable electricity supply, two window type or split unit air conditioning units preferably 1.5hp and protected windows and doors library /learning resources centre 2.40 sq meters. It should have a capacity of 10% of the environment.

Linking this study to international occurrences are the assertions of Williams, Persaud and Turner (2008), quoting Marsden report, that safe and orderly classroom environment (an aspect of instructional space), was significantly related to students academic performance in elementary schools. The three researchers, also quoted Glassman, also asserted that a comfortable and caring environment among other treatments helped to contribute to the academic performance of students.

In a study carried out by Akah (2014), it showed that instructional space planning facilitates academic performance in senior secondary schools in Rivers State. This finding was in line with the study of Odufurokan (2011) that instructional space enhances effective delivery of secondary education.

Oluchukwu (2000) highlighted the importance of instructional space planning by stating that the availability of instructional facilities and spaces alone cannot adequately ensure effective teaching and learning, rather proper siting and location of these spaces are very vital for achieving educational objectives and goals. It is no longer new that proper planning ensures efficiency and effectiveness, this truism is also applicable to educational environments. Adequately planned instructional facilities ensure effective teaching and learning. However a situation where spaces are not properly planned in the school calls for concern as such situation can hamper educational progress of the affected society.

II. STATEMENT OF PROBLEM

Instructional space consists of the basic system and structure which an educational institution needs in order to function effectively and efficiently in the realization of set educational goals and objectives. However, in a situation whereby these spaces are not well planned, might hinder the effective delivery of education. In recent times, stakeholders in education have persistently complained about the continued decline in the quality of education provided, which reflects on the quality of the products of the system. Again, there have been injury cases among students in some of the schools. Very unfortunately too, there have been cases of student drop out from schools. Obviously, this is a very worrisome situation that bothers the researchers. Could this ugly situation be significantly be related to the lack or inadequate instructional space provision and planning?

III. PURPOSE OF THE STUDY

The purpose of the study was to determine the extent to which instructional space was planned in secondary schools in Delta State.

IV. RESEARCH QUESTION

To what extent is instructional space planned in secondary schools in Delta State?

V. METHODOLOGY

The study adopted the descriptive survey design. The population of the study comprised all the public and private secondary schools in Delta state. They were eight hundred and ninety one number (public =453; private =438). The sample size for the study was 225 secondary schools (public =115; private =110). This was 25% of the population. The stratified random sampling technique was adopted to draw the sample. Each of the zones in the state serves as a stratum. They were twelve educational zones in the states. From each of the strata a simple random sampling technique was used to draw the sample size. The instrument was a checklist used to ascertain the rate at which instructional spaces were planned in both technique and private secondary schools. Facilities or spaces that had properly sited ratings of $X \geq 60\%$ were rated satisfactory whereas those that have below 60% were rated unsatisfactory. Data generated were analysed using percentage.

VI. RESULTS

Research Question

To what extent is instructional space planned in secondary schools in Delta State?

Table 1: The result of a checklist on the extent for which instructional space is planned in public and private secondary schools in Delta state

S/N	Description item	Public schools			Private schools		
		Properly sited %	Rank	Remarks	Properly sited	Rank	Remarks
1	Classroom	71	1	Satisfactory	75	1	Satisfactory
2	Library	64	4	Satisfactory	58	5	Unsatisfactory
3	Laboratory	65	3	Satisfactory	59	4	Unsatisfactory
4	Workshop for technical subject	66	2	Satisfactory	63	3	Satisfactory
5	School hall	63	5	Satisfactory	51	6	Unsatisfactory
6	Music room	58	6	Unsatisfactory	64	2	Satisfactory

The table above shows the percentage measure of the extent instructional space was planned in both public and private secondary schools in Delta state. The analysis of checklist data as shown above revealed that item 1, 2, 3 4, and 5 had properly sited ratings of 71%, 64%, 65%, 66% and 63% for public schools and item 1, 4 and 6 for private schools with properly sited ratings of 75%, 63% and 64%. This implies that classrooms, libraries, laboratories, workshops for technical subjects and school halls were properly planned and provided for in public secondary schools while classrooms, workshop for technical subjects and music rooms were properly planned and provided for in private secondary schools. This is because their properly sited ratings were above 60% which was the benchmark for satisfactory. On the other hand, libraries, laboratories and school halls were not properly sited and planned for because their percentages were below 60. Also music rooms were not properly sited in public schools because the percentage was 58% which was below the benchmark of 60.

VII. DISCUSSION OF FINDINGS

From the findings, the study revealed that instructional space is planned in both public and private secondary schools. However, the results revealed that the planning level was higher in public schools than in private schools. Instructional space is one of the most vital components necessary for effective teaching and learning. This is the reason why government pays so much attention to it. The Ministry of education has educational planner on its payroll to ensure the proper planning of schools.

Consequently, Ajayi (2007) maintained that effective secondary education may not be guaranteed if instructional spaces such as classrooms, libraries, technical workshops, etc are not properly planned and located. This is also in line with Akah (2014), whose work also revealed that instructional space planning facilitates academic performance in senior secondary schools in River state.

This position was corroborated by the finding of a study carried out by Akubuiro and Joshua (2004), which showed that lack of essential instructional spaces and facilities contributed largely to the continued poor academic performance of students in senior school certificate examination.

VIII. CONCLUSION

Based on the findings of the study, it was concluded that instructional space planning is carried out in secondary schools in Delta State. However, the level of planning is higher in public schools than in private schools.

IX. RECOMMENDATIONS

On the strength of the findings, the following recommendations were made:

1. Stringent measures should be put in place to ensure strict compliance to policy provisions in this regard especially among privately owned schools.
2. Both public and private schools should always utilize the services of qualified educational planners to ensure adherence to standards.
3. Public-Private Partnership should be encouraged in the provision and planning of school plant.

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