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# Relevance of School Facilities and Infrastructure Towards Implementing Education Policies

## Ibrahim Yaro

<sup>1</sup>Department of Public Administration, Faculty of Management Sciences, Usmanu Danfodiyo University, P.M.B. 2346, Sokoto, NIGERIA

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Abstract: The purpose of this research is to investigate the relevance of school facilities and infrastructure to sustainable education policy implementation. This has become necessary due to the high global demand for a conducive learning atmosphere for effective knowledge dissemination. Indeed, this could be achieved in a learning environment with adequate school facilities and infrastructure. Using a qualitative research approach with 15 research participants purposely selected among the Sokoto state education stakeholders and analyzed using Nvivo 10 software, it was discovered that the availability of facilities and infrastructure leads to the development of a school system as it facilitates effective teaching and learning and the effective implementation of education policies. The findings also showed that most public schools, especially in Sokoto State, do not have adequate school facilities and infrastructure; hence, they produce substandard graduates. It is therefore recommended that the government intensify efforts to make the required facilities and infrastructure available in schools and judiciously utilize them. The government should also join hands with education stakeholders to collaboratively provide these vital educational ingredients in schools. This is believed to ensure effective teaching and learning, sustainable implementation of the school's policies, and further guarantee academic excellence for the benefit of present and future generations.

Keywords: school facilities; infrastructure; conducive atmosphere; education policy; implementation

#### 1. Introduction

In the contemporary world, the demand for a conducive learning atmosphere in educational institutions for effective knowledge dissemination is on the rise. Indeed, one of the major avenues for meeting this gigantic objective is to ensure adequate provision of school facilities and infrastructure. The imperativeness of this is that the availability of school facilities and infrastructure expedites the implementation of educational policies for the purpose of achieving academic excellence. Anang & Udik (2020) noted that school facilities and infrastructure influence students' learning outcomes. Perhaps, no matter how good the teachers are in a school system, once the required school facilities and infrastructure for effective teaching and learning are not put in place, knowledge will not be properly disseminated. Again, when there is a lack of or inadequate knowledge dissemination, academic excellence will be negatively affected. This will, however, affect implementation because teachers are central and directly involved in implementing educational policies as outlined in the curriculum (Menken and Garcia, 2010; Ricento and Honberger, 1996; and Geoffrey, 2013). Subsequently, the goals and philosophy of education could not be achieved. These goals, as outlined in the Nigerian National Policy on Education, are:

- 1. Developing individuals so as to be morally sound, patriotic, and useful citizens
- 2. Total integration of the individual into the community, Nigerian society, and the world
- 3. To make quality education accessible to all citizens at all stages of education (primary, secondary, and tertiary) within and outside the formal education system.
- 4. To instill national consciousness, values, and national unity in the minds of the students or individuals.

5. To harness and develop individuals' skills (mental and physical) as well as social abilities and competencies and empower them so as to live peacefully and contribute positively to societal development (National Policy on Education, 2013, p. 2).

According to Ihuoma (2008), ensuring effective implementation of education policies towards achieving academic excellence depends to a greater extent on the provision and prudent use of school facilities and infrastructure. Added to this, Ihuoma (2008) pointed out that the central goal of acquiring education through teaching and learning is to improve students' abilities for positive thinking, and this takes place in favorable or conducive environments. Conducive learning environments consist of an atmosphere full of the necessary school facilities and infrastructure, including recreational facilities, laboratories, blocks of classrooms, toilets, sporting facilities, workshops, etc. In Nigeria, for instance, most public secondary schools face challenges due to inadequate school facilities and infrastructure (Ekundayo, 2010; Olaniyan and Anthony, 2013). The Guardian Newspaper (2021) reported that, despite the fact that education infrastructure remains an important determinant of quality learning, there is a lack of these vital educational ingredients, including laboratories, libraries, electricity, and a quality learning environment, in most Nigerian public secondary schools. Also, in schools where the infrastructure exits, it is in deplorable condition and below acceptable standards. Some schools don't even have functional public sanitary facilities. This situation obstructs effective implementation of educational policies, academic excellence, and the standard of education, especially in Sokoto State, Nigeria (Yaro et al. 2015). This research therefore examined the relevance of school facilities and infrastructure in public secondary schools in Sokoto State, Nigeria, with a view to identifying whether such vital educational ingredients lead to sustainable education policy implementation or otherwise. Sokoto State was chosen as the scope of the study because it is one of the least educationally developed states in Nigeria. According to the National Bureau of Statistics (2010), the youth literacy rate in the state stands at 33.1 percent, while the adult literacy rate stands at 22.1 percent. This showed strong educational backwardness in the state.

#### 2. Literature Review

# 2.1 School Facilities and Infrastructure: A Conceptual Clarification

Several scholars attest to the fact that school facilities and infrastructure facilitate the smooth implementation of education policies. For instance, Felia, Sowiyah, and Mutiara (2021) identified that the availability of school facilities and infrastructure enables improvements in the quality of education. In view of this, schools are expected to adequately manage these vital educational ingredients in order to achieve educational policy goals of ensuring academic excellence. This becomes imperative as Masduki (2021) noted that the provision and management of school facilities and infrastructure is a collective responsibility. In another view, Joseph and Philias (2013) asserted that "learning occurs through the learner's interaction with the environment, and to facilitate learning outcomes and student achievement, the necessary facilities must be available". This points out the relevance of school facilities and infrastructure to the student's achievements because they serve as a means through which effective teaching takes place. Therefore, in order to harness students' potentials to be useful members of society, which is also the main thrust of post-independence education policies in Nigeria, the need for the provision of adequate facilities becomes paramount. These vital educational ingredients (school facilities and infrastructure), including a conducive learning atmosphere, have a great impact not only on students but on teachers' effectiveness as well, and this could eventually guarantee the attainment of not only quality education via effective implementation but its sustainability (Ayeni & Adelabu, 2012; Asiyai, 2012). Oni (1992) stated that "facilities constitute a strategic factor in organizational functioning as they determine to a large extent the smooth functioning of any social system, including education". This shows that facilities have a sort of universal function, as they are useful in any environment or organizational set-up, irrespective of the field. Thus, school facilities constitute the major components of direct and indirect action elements in an environment of learning.

Mgimba & Mwila (2022) and Matthew (2013) identified school facilities as material resources that simplify teaching and learning processes in schools and influence not only students' performance but that of teachers as well. School facilities are therefore regarded as such materials that enable a skilled teacher to achieve remarkable effectiveness that goes beyond what is possible when such materials are not provided. Such materials consist of all types of buildings for academic and non-academic activities, equipment for academic and non-academic activities, areas for sports and games, landscape, farms, and gardens, including trees, roads, and paths (Ihuoma, 2008). Others include furniture and toilet facilities, lighting, acoustics, storage facilities, and special facilities for physically challenged persons (Ihuoma, 2008). Audu et al. (2013) also identified facilities in schools as physical resources that expedite effective teaching and learning and include blocks of classrooms, laboratories, workshops, library equipment, consumables, electricity, water, visual and audio-visual aids, tables and desks, chairs, a playground, storage space, and toilets. Thus, facilities are considered to be all buildings, properties, and major infrastructure, which include physical and material assets.

Furthermore, Asiyai (2012) described facilities in a school system as "composed of the entire school plant, which school administrators, teachers, and students' harness, allocate, and utilize for the smooth and efficient management of educational institutions in order to ensure effective teaching and learning". Again, Farombi (1998) identified school facilities as including audio-visual aids, classroom size, sitting position arrangement, textbooks, software and hardware education technologies, enough tables and chairs, instruments for practical's, etc. All these are essential in order to properly disseminate knowledge.

On the other hand, Ganiyu and Afolabi (2014) are of the view that infrastructure is the necessary structure required to develop the economy as well as the physical human settlement. Thus, infrastructure has to do with the provision of fixed tangible assets upon which other intangible assets can be built. It involves the provision of vital facilities that society requires, including health facilities, housing facilities, transport facilities, education facilities, and communication and technology facilities, among others (Ojuola & Martin, 2012). This, in essence, indicated that for any organization, be it public or private, to carry out its functions efficiently, there is a need for infrastructure. For this reason, Olufemi (2012) stressed that infrastructures are the medium, the tools, and the techniques of a project, program, or strategy.

Facilities and infrastructure are adequately needed in schools, as they are designed to simplify the teaching and learning process. The facilities are also meant to serve some purposes, which include the following:

- 1. To explain concepts.
- 2. To provide an avenue for getting a good experience.
- 3. For conducting tests and demonstrations.
- 4. For scientific inquiry and discovery.
- 5. To provide a variety of
- 6. For survey and analysis.
- 7. For developing scientific methods and aids.
- 8. For the student's safety and

The indirect or teaching support facilities comprising common rooms and cleaning materials, offices, cafeteria, acoustics, residential halls, toilets, laundry, and mowers, among others, fulfill individuals' physical and emotional requirements, and their key functions consist of the following:

- 1. Increasing infrastructural efficiency
- 2. Improving orderliness, hygiene, and protection of the facilities
- 3. Decreasing operational expenses and the cost of a building.
- 4. Increasing staff and students' competence and ability
- 5. Prolonging the life span of the building.
- 6. Improving the building's outlook
- 7. Collecting and utilizing data and analyzing it for making decisions

In addition to these, it is important to note that infrastructure and school facilities should not only be adequately provided but should also be judiciously utilized. This is because the provision and maintenance of infrastructure and the school's facilities are integral parts of the overall management of a school (Ihuoma, 2008). Management of facilities is the process of ensuring that buildings and other technical systems support the operation of the organization (Fenker, 2004). In a school system, "facilities management refers to the application of scientific methods in the planning, organizing, decision-making, coordination, and controlling of the physical learning environment for the actualization of the educational goals and objectives (Ihuoma, 2008). There is therefore a need for those responsible for the maintenance of the facilities to see that they are always in good shape and in good condition so that students can make optimum use of them.

# 2.2 Implementing Education Policies in Nigeria

Educational institutions the world over seek to attain academic excellence. For this reason, such institutions emphasize quality service delivery so as to accelerate the phase of implementing education policies (Prabha & Pushpa, 2010). In a school system, quality service delivery is guaranteed in a conducive learning environment with the essential facilities and infrastructure. For instance, in the Nigerian context, among the goals that the National Policy on Education seeks to achieve is to develop individuals' (students') skills, mental, physical, and social abilities and competencies and empower them so as to be useful members and contribute positively to developing society. However, this educational goal could only be achieved when there is a conducive learning atmosphere and adequate facilities and infrastructure, because these are the vital educational ingredients that aid effective teaching and learning (Mgimba and Mwila, 2022).

Paudel (2009) pointed out that policy implementation is about carrying out a task for the purpose of achieving a goal or goals. This is true because in an educational institution such as a school, as teachers teach, they are directly

implementing education policies as outlined in the curriculum. According to Dorathy (2011), the curriculum in Nigeria is well designed, but the problem is in the mode of implementation. However, implementation is guaranteed when there are enough instructional materials (school facilities and infrastructure). For this reason, UNICEF (2000) emphasized the provision of enough instructional materials and a conducive learning atmosphere for knowledge to be effectively disseminated. In Nigeria, however, despite the fact that education is used as a mechanism for national development (Kazeem & Ige, 2010), there is the issue of inadequate school facilities and infrastructure in most public secondary schools (Ekundayo, 2010; Olaniyan and Anthony, 2013). However, in schools where the infrastructure and school facilities exist, in most cases they are in dilapidated condition (Guardian, 2021). This makes it difficult or almost impossible to accomplish the educational policy goal of ensuring academic excellence through effective implementation. This adversely resulted in producing poor graduates (Yaro, Rozita, and Dani, 2017). In developed countries, for instance, the effectiveness of schools in terms of teaching and learning stems from the availability of adequate school facilities and infrastructure. This simplifies the learning process, as a result of which students in those countries excel in their academic activities. On the contrary, in the less developed or developing countries, including Nigeria, where such vital educational ingredients are lacking, the resultant effect is producing sub-standard graduates that could not be to a greater extent useful members of society and are therefore unable to participate actively in developing it.

#### 3. Research Framework

This research adopts the resource input model as the framework of the study. The resource input model is one of the seven (7) models of ensuring quality education in a school system proposed by Cheng and Tam (1997). The model emphasizes how the management of a school delivers high-quality services with limited resources (Cameron, 1984). The assumption of the model is that quality education depends on the inputs (i.e., the resources utilized, both human and material) to deliver services. This input includes adequate school facilities, good infrastructure, a conducive learning environment, quality and adequate staff, etc.

This model is relevant and fits in this study because school facilities and infrastructure are considered educational inputs and aid in accomplishing educational policy goals through effective implementation, thus guaranteeing quality schooling. However, the central concern of this study is those vital educational ingredients (school facilities and infrastructure), which is the reason for adopting the model.

#### 4. Methodology

# 4.1 Research Technique and Sample

The research used a qualitative research approach in data gathering and analysis using interviews. The reason for choosing this method is due to the greater possibility of obtaining precise and reliable facts, especially if fear of no consequences is felt (Miles & Huberman, 1994). Again, the research used secondary data from research conducted in the field. The target population of the study is the education stakeholders in Sokoto State, Nigeria. Specifically, a total of fifteen (15) education stakeholders in Sokoto State were purposefully selected to participate in the research. This is in order to have a broad representation and provide the necessary information about the main focus of the study (Creswell, Vicky, & Clark, 2007). The research participants include ministry-level stakeholders, state-legislative stakeholders, school-based stakeholders, and societal stakeholders. The choice of the research participants was based on the recommendation of Adler and Adler (2011) that a total of twelve (12) interviews is adequate for qualitative research.

However, only four (4) out of the fifteen research participants talked about the issue of school facilities and infrastructure. This is acceptable, as Creswell (2013) pointed out that the participation of between 4 and 5 people in a qualitative case study is okay.

### 4.2 Method of Data Analysis

Nvivo 10 software was used to analyze the data. After the interviews, the collected data was analyzed through thematic analysis in order to extract the major themes and sub-themes (Descombe, 2003; Gibson, 2006; McNamara, 2009).

#### 5. Results and Discussion

First and foremost, it is worthy to note that there are a total of 259 public secondary schools spread across the three (3) senatorial zones of the state. 98 schools from the central senatorial zone, 76 schools from the eastern senatorial zone and 85 schools from the southern senatorial zone. This constitutes the population of the quantitative study. Krejcie and Morgan (1970) table was used to determine the sample size. According to the table, the corresponding sample size of the school's population is 159 schools. The issue of lack of or inadequate schools' facilities and infrastructure was observed in these sampled schools.

However, it is also good to note that this study used only interviews (qualitative study), in which educational stakeholders as stated in the methodology were selected as research participants.

The results and findings of the interviews are displayed using verbatim quotations, as shown below. This is because, as stated in the methodology, interviews were used to get the required information. The quotations indicate the views of the research participants.

- "There is utmost need for the provision of the necessary infrastructures, especially the classrooms and furniture, among others, in as much as there is a need for quality education because there is a shortage of such vital ingredients in most schools, which results in low quality output".
- "To achieve academic excellence and obtain quality education, the right infrastructure required in schools should be provided".
- "Providing the required facilities, such as furniture and a conducive learning atmosphere for both staff and students, enables obtaining quality education".
- Availability of infrastructure enables effective teaching and learning, which in turn guarantees effective policy implementation and subsequently achieves quality education".

The findings of the study are supported by literature. Scholars such as Felia, Sowiyah, and Mutiara (2021) uphold the view that instructional materials, including school facilities and infrastructure, contribute immensely to the teaching and learning process towards achieving academic excellence. They further asserted that adequate provision of school facilities and infrastructure leads to attracting and retaining schoolteachers and also helps in harnessing students' potential. As such, there is a need for adequate provision and judicious utilization of them. This is why Sinta (2019) pointed out that the management of school facilities and infrastructure is a crucial activity in an educational setting, as it supports to a greater extent the success of the learning process. This, in essence, indicates that apart from providing schools with facilities and infrastructure, school authorities are expected to adequately take care of them.

In another view, Ige (2013) and Ihuoma (2008) pointed out that school infrastructure is a set of resources and items that guarantee effective teaching and learning in schools. It includes buildings for academic and non-academic activities, equipment for academic and non-academic activities, storage facilities and special facilities for physically challenged persons, areas for sports and games, landscape, farms, and gardens, including trees, roads, and paths, as well as furniture and toilet facilities, lighting, and acoustics. This is also in line with the views of Joseph and Philias (2013), who asserted that quality infrastructure is a strong contributing factor to students' academic achievement. This is again supported by the views of Ayeni and Adelabu (2012) and Asiyai (2012), who pointed out that the availability of both infrastructure and instructional materials has a great influence on teachers' efficiency and students' academic achievements. All these scholarly views affirm the findings of the research that school facilities and infrastructure enable effective teaching and learning, which in turn guarantees effective policy implementation and subsequently quality education.

Furthermore, Ahmad et al. (2020), Isola *et al.* (2011), and Adebule (2009) are of the view that adequate use of instructional materials increases students' abilities and academic achievements, and this usually happens in conducive places (schools). The instructional materials comprise many items, including teacher manuals, print and non-print materials, media collections, computer software, video and audio recordings, and textbooks. It also consists of consumables and non-consumables, depending on the nature of the teaching. In essence, the location of the school itself has enormous importance, and it should be set up in a suitable environment far away from a polluted and unconducive atmosphere where the child finds it difficult or almost impossible to absorb what is being taught in school.

On the other hand, conducive atmospheres, otherwise known as high-quality learning environments, advocate attention to three elements: physical, psychosocial, and service delivery (UNICEF, 2000). The physical elements consist of excellent or high-grade school facilities, class size, and an interaction between the school infrastructure and other quality dimensions. The psychosocial element consists of a non-violent and harmless environment. It also involves the teacher's behavior as it affects safety and an inclusive environment. The service delivery element consists of the provision of academic and remarkable health services. All these are required in schools, as they aid to a greater extent in the success of a school system by increasing students' academic ability, ensuring teacher quality, and finally achieving academic excellence.

#### 6. Conclusion

Based on the findings of the study, it was identified that school facilities and infrastructure are powerful instruments that facilitate students' learning outcomes and thus lead to sustainable education policy implementation in a school system. This research identified that adequate provision and judicious utilization of infrastructure and school facilities will no doubt lead to attaining quality education, as they facilitate effective teaching and learning. It is, however, a well-known fact that as teachers teach, they are directly implementing education policies, especially as stipulated in the curriculum.

#### 7. Recommendations

In line with the findings of the study, which are supported by literature, it is recommended that the government take appropriate measures to make school facilities and infrastructure, including a conducive learning atmosphere, available in schools. In addition to this, it is imperative for the government to join hands with relevant education stakeholders so as to collaboratively make these vital educational ingredients available in schools. It is believed that with this, the learning process would be enhanced, and educational policy goals of ensuring academic excellence via effective implementation would be guaranteed for the benefit of present and future generations.

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