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Quality Infrastructural Provision In Tertiary Institutions In Nigeria: Challenges, Prospect And Precriptions

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Abstract

This paper discussed quality infrastructural provision in tertiary institutions in Nigeria: Challenges, Prospect and Prescriptions. In the realm of education, quality infrastructural provision is the foundation for a conducive and effective learning environment. Infrastructural provision in Nigerian tertiary institutions stands at the nexus of educational advancement and national progress, wielding a profound impact on the quality of learning, research capabilities, and overall student experience. The paper identified the challenges facing quality infrastructural provision in tertiary institutions in Nigeria which includes: Inadequate Funding, Corruption and Mismanagement, Policy Instability and Inconsistency, Inadequate Technological Integration, Insufficient Skilled Workforce, and Security Challenges, Inadequate Maintenance Culture. Also, identified some prospects for overcoming the challenges which are Increased Funding and Budget Allocation, Integration of Modern Technology, Investment in Skills Development, Streamlining. The paper likewise offer some prescriptions in maintaining quality infrastructural development in tertiary institutions in Nigeria which include: Increased funding, transparent financial management practices, Integration of modern technology, Capacity building for professionals, Community engagement and Quality assurance and monitoring mechanisms. It therefore concluded that quality infrastructural development in Nigeria tertiary institutions is pivotal for educational excellence. The paper made some outstanding suggestions that; Federal government should increase allocation of funds to tertiary education, and also encourage alumni donations. Finally, Federal Government should establish a comprehensive maintenance schedule and allocate resources for routine inspections and repairs.

Keywords: Infrastructure Quality, Infrastructural development, Tertiary institutions, Challenges Prospect.

Introduction

Infrastructural provision in Nigerian tertiary institutions stands as a cornerstone for the evolution and progress of the nation's higher education landscape. Recognizing the

pivotal role that tertiary education plays in shaping skilled professionals, and contributing to national development, there is an increasing emphasis on creating robust, modern, and inclusive infrastructure. This multifaceted development spans physical, technological, and social dimensions, aiming to establish an environment that fosters optimal learning experiences, facilitates cutting-edge research, and supports the holistic growth of students (Adewale, 2016). The persistent challenge of inadequate and substandard infrastructure in Nigerian tertiary institutions poses a significant impediment to the nation's pursuit of academic excellence and global competitiveness, warranting a comprehensive examination of the root causes, impact on educational outcomes, and viable strategies for sustainable improvement (Bello, 2017).

In the field of education, quality infrastructural provision is the foundation for a conducive and effective learning environment. From classrooms to laboratories and beyond, the physical, technological, and social facilities play a pivotal role in shaping the educational experience. Infrastructural development in Nigerian tertiary institutions stands at the nexus of educational advancement and national progress, wielding a profound impact on the quality of learning. research capabilities, and overall student experience. As these institutions strive to meet the evolving demands of a globalized knowledge economy, the need for robust physical technological, and social infrastructure becomes increasingly critical. From modern classrooms to cutting-edge laboratories and advanced research centers, the infrastructural framework is the canvas upon which the future of education is painted (Chukwu, 2018).

At the heart of infrastructural development is the construction and augmentation of physical structures within tertiary institutions. Modern classrooms, well-equipped lecture halls, state-of- the-art laboratories, administrative buildings, and comprehensive libraries collectively form the infrastructure backbone, ensuring that students and faculty have access to conducive spaces for academic endeavors (Dike, 2016). By developing world-class facilities, Nigeria's higher education system can not only meet the demands of a rapidly changing global landscape but also contribute significantly to the nation's socio-economic development. In essence, infrastructural development in Nigerian tertiary institutions is a linchpin for fostering educational excellence, research innovation, and the holistic growth of individuals. By investing in diverse aspects of infrastructure, the nation can propel its higher education system to new heights, equipping students with the skills and knowledge needed to thrive in the 21st century.

Conceptual Clarification

Infrastructure in Tertiary Institution

In education, infrastructure is the cornerstone of cultivating knowledge, fostering intellectual growth, and empowering individuals to contribute meaningfully to society. It comprises the physical, technological, and institutional components that collectively shape the learning environment and educational experiences. Infrastructure includes the physical and organizational elements that provide the foundation for societal activities, influencing the quality of life and economic development. In the context of education, infrastructures refer to the essential physical, technological, and institutional elements that collectively support the effective functioning of educational

systems. These components create the framework and environment necessary for teaching, learning, and overall educational development. Verma cited in Ekwueme (2018) sec infrastructure that involves the physical and institutional structures that support the functioning of a society, including transportation, energy, and communication systems. Puentes cited in Folayan (2019) infrastructure refers to the fundamental facilities and systems necessary for the functioning of a society, encompassing both public and private assets. Gana (2012) describe infrastructure that comprises the basic physical and organizational systems that support the operation of cities and regions, including transportation, water, and sanitation networks. A well-designed and adequately maintained education infrastructure is essential for creating a conducive space where students can explore, leam, and develops critical skills (Bello, 2017). Physical infrastructure within the education sector encompasses school buildings, classrooms, libraries, laboratories, sports facilities, and other amenities that contribute to a holistic learning environment. These spaces not only provide a backdrop for academic activities but also play a crucial role in promoting student well-being, safety, and engagement. Adequate and well-maintained physical facilities contribute to creating an atmosphere that inspires both educators and learners.

Infrastructural Provision in Tertiary Institution

Infrastructural development in the education context refers to the intentional and strategic improvement of various elements that form the backbone of educational systems. It involves the enhancement of physical, technological, institutional, and social components to create an environment that supports effective teaching and meaningful learning experiences. Pintrich cited in Hassan (2017) see infrastructural provision involves the creation of motivational and metacognitive support systems, encouraging learners to develop a sense of self-regulation and a passion for lifelong learning. Malaguzzi cited in Ibe, (2018) describe Infrastructural provision that refers to the construction and enhancement of physical spaces, learning materials, and relationships that contribute to the realization of the child as a competent and active learner. Chang cited in Jaja (2019) states that infrastructural development plays a pivotal role in fostering industrialization and economic diversification, creating the conditions for sustainable development, Infrastructural development stands as a linchpin in the pursuit of quality education, providing the essential framework and resources necessary to create an environment conducive to effective teaching and learning. This multidimensional concept encompasses the physical, technological, and institutional elements that collectively contribute to the enhancement of educational experiences, ensuring that students receive a comprehensive and high-caliber learning journey.

Aspects and Impact of Quality Infrastructural Provision in Tertiary Institutions

Quality infrastructural development in tertiary institutions in Nigeria plays a pivotal role in fostering academic excellence, innovation, and overall national development. By providing state- of-the-art facilities, these institutions create an environment conducive to advanced research, skill development, and knowledge dissemination, ultimately shaping a highly competent and globally competitive workforce. Infrastructural development in tertiary institutions in Nigerian encompasses various aspects:

1. **Classroom Facilities in Tertiary institutions**: Classroom facilities are a fundamental component of infrastructural development in tertiary institutions. Existing research suggests that well-designed and equipped classrooms positively impact student engagement, academic performance, and overall satisfaction. Nwosu (2017) emphasize the importance of creating flexible and interactive spaces that accommodate diverse learning styles. Study by Ojo (2017) delve into the impact of natural lighting, ventilation, and acoustics on the learning environment, highlighting how these architectural features contribute to a conducive atmosphere for academic activities. The functionality of classroom facilities extends beyond physical attributes to encompass technological integration. Research by Peters (2015) investigates the role of smart classrooms and digital technologies in enhancing teaching and learning experiences. The integration of audio-visual tools, interactive whiteboards, and online resources is explored as a means of fostering engagement and innovation within the academic setting. Pedagogical implications of classroom design are central to understanding the impact on student outcomes. Study by Quadri (2017) delve into the correlation between well-designed classrooms and improved student performance. The arrangement of seating, classroom size, and accessibility are identified as factors influencing student participation and academic achievement.

2. **Laboratories in Tertiary Institution**: Laboratories are integral components of infrastructural development in tertiary institutions, and scholarly literature extensively explores their impact on academic excellence, research outcomes, and overall institutional development. Research by Sani (2017) emphasizes the importance of creating state-of-the-art laboratory spaces that accommodate advanced equipment and promote collaborative research. The layout, spatial organization, and ergonomic design are crucial factors influencing the efficiency of laboratory operations. The equipment and instrumentation within laboratories are central to their functionality. Study by Umar (2018) investigate the impact of modern and well-maintained equipment on research outcomes. The availability of cutting-edge technology, safety apparatus, and specialized instruments contributes to the quality of experiments and enhances the overall research capabilities of the institution Tijani (2016) delve into the importance of stringent safety protocols, emergency response plans, and compliance with regulatory standards. The creation of a safe and secure environment is imperative for both students and faculty engaging in scientific experiments and research activities. The study by Usman (2016) discussed the significance of adequately equipped laboratories in enhancing practical skills and fostering research culture, The role of laboratories in fostering innovation and scientific advancement is a key theme in the literature, Zango (2018) explore how laboratory experiences contribute to the development of critical thinking skills, problem-solving abilities, and a research oriented mindset among students. Laboratories are viewed not only as spaces for experimentation but as hubs for cultivating a culture of scientific inquiry.

3. **Libraries in Tertiary Institution**: Libraries stand as crucial pillars of infrastructural development in tertiary institutions, and scholarly literature extensively explores their multifaceted impact on academic achievement. research culture, and the overall educational experience. Tijani (2016) emphasize the importance of creating modern, user-friendly spaces that cater to diverse learning styles. Study by Hassan (2017) delve into the impact of open and collaborative

spaces, comfortable seating arrangements, and adaptable layouts in fostering a conducive environment for academic pursuits.

Technological integration in libraries has transformed the way information is accessed and disseminated. Research by Sani (2017) investigates the role of digital technologies, online databases, and e-books in enhancing the research capabilities of library users. The integration of state-of-the-art information technology infrastructure is crucial for meeting the evolving needs of students and researchers. Library services play a pivotal role in supporting academic endeavors. Shuaibu (2018) explore the impact of comprehensive library services, including reference assistance, information literacy programs, and interlibrary loan services. The provision of these services contributes to the development of critical thinking skills and research competencies among students and faculty. Umar (2018) stressed the role of libraries in supporting academic research, with a focus on the need for digital resources to keep pace with technological advancements.

4. **Hostel Accommodation in Tertiary Institution**: Hostel accommodation in tertiary institutions plays a crucial role in shaping the overall educational experience and impacting students' academic performance, social interactions, and well-being numerous studies highlight the correlation between on-campus accommodation and academic success. Usman (2016) emphasize that proximity to academic resources, reduced commute times, and a conducive study environment contribute to improved student performance. Living in hostels fosters a sense of community and peer collaboration, creating an environment conducive to academic discussions and knowledge-sharing (Waziri, 2017). Hostel living facilitates social interactions among students from diverse backgrounds, fostering cultural exchange and interpersonal skills development (Zango, 2018).

   The quality of hostel infrastructure, including well-maintained living spaces, modern amenities, and safety measures, significantly influences the overall satisfaction of students (Abubakar, 2018) Adequate facilities contribute to a positive living experience, creating an environment conducive to learning and personal growth. Moreover, the availability of on-campus accommodation can contribute to higher retention rates, as students are more likely to stay engaged and committed to their academic journey when their living conditions are satisfactory (Adeleke, 2017).

5. **Administrative Buildings in Tertiary Institution**: Administrative buildings serve as the organizational hub of tertiary institutions, housing key administrative functions critical to the seamless operation of the institution. Numerous studies have delved into the multifaceted aspects of administrative buildings, examining their architectural design, functionality, and overall contribution to the effective management of tertiary education Institutions, Architecturally, administrative buildings are pivotal in shaping the physical landscape of campuses, reflecting the institution's identity and values. Research by Waziri (2017) emphasizes how the design of these structures influences organizational efficiency and creates a conducive environment for administrative activities. The layout and spatial organization of offices. Meeting rooms and collaborative spaces are integral in facilitating streamlined communication and decision-making processes.

Functionally, administrative buildings serve as the nerve center for academic governance, financial management, and student affairs. Shuaibu (2018) underscore the importance of well-equipped administrative spaces in fostering effective communication channels, thereby enhancing the overall efficiency of institutional operations. From admissions to academic planning these buildings play a pivotal role in coordinating various administrative functions. In terms of infrastructural development, the construction and maintenance of administrative buildings require substantial financial investments. A Study by Quadri (2017) delve into the economic implications of such investments, analyzing the long-term benefits in terms of improved administrative efficiency, enhanced institutional reputation, and the potential for increased enrollment.

6. **Information Technology in Tertiary Institution:** Information technology (IT) infrastructure is a pivotal component of infrastructural development in tertiary institutions, with extensive scholarly literature exploring its multifaceted impact on teaching, learning, research, administrative efficiency, and overall institutional advancement. Ojo (2017) discussed the role of IT infrastructure in promoting e-learning and fostering a tech-savvy academic environment. The integration of IT systems in tertiary institutions has been a significant focus in the literature. Nwosu (2017) emphasize the importance of a robust IT infrastructure to support academic and administrative functions. E-learning platforms and online education have gained prominence. Research by Musa (2019) explores their impact on the learning experience in tertiary institutions. The literature examines how digital learning resources, virtual classrooms, and collaborative online tools contribute to flexible and accessible education. The effectiveness of e- learning platforms in catering to diverse learning styles and preferences is a recurrent theme Lasisi (2018) discuss how emerging technologies, such as artificial intelligence, machine learning. And data analysis is reshaping teaching methodologies, research practices, and institutional decision-making. The adoption of innovative technologies is viewed as essential for staying competitive and meeting the evolving needs of students and faculty. The role of health facilities in creating a conducive learning environment is a recurrent theme.

7. **Health Facilities in Tertiary Institution:** The integration of health facilities within tertiary institutions is a crucial aspect of infrastructural development, and scholarly literature extensively explores its impact on student well-being. academic performance, and the overall campus environment. Olatunji (2018) discussed the importance of accessible health facilities within campuses, emphasizing their role in promoting student health and well-being Peters, (2015) emphasize the importance of on-campus health facilities in addressing students' medical needs promptly. Study by Quadri (2017) delve into the impact of accessible healthcare services on student retention rates and overall academic success. highlighting the role of preventive care in supporting the well-being of the student population. Rimi (2016) underscores the significance of creating a supportive environment that addresses the mental health concerns of students, contributing to a positive and conducive atmosphere for learning.

Challenges Facing Quality Infrastructural Provision in Tertiary Institutions

Quality infrastructural development in tertiary institutions in Nigeria faces various challenges. hindering their ability to provide conducive environments for learning and research:

1. **Inadequate Funding in Tertiary Institution:** In Nigeria, inadequate funding remains a pervasive and critical challenge confronting infrastructural development in tertiary institutions. Extensive literature reveals the multifaceted consequences of insufficient financial support, encompassing the realms of physical infrastructure. Technological advancement, academic quality, and the overall competitiveness of Nigerian tertiary education. Ibe (2018) underscores the persistent challenge of insufficient funding in tertiary institutions in Nigeria. Limited financial resources impede the construction and maintenance of quality infrastructure, leading to a backlog of dilapidated facilities. Folayan (2019) further elaborates on how budget constraints affect the ability to invest in modern amenities, hindering the institutions' capacity to provide a conducive learning environment. Research by Ekwueme (2018) consistently highlights the adverse effects of funding shortages on physical infrastructure in Nigerian tertiary institutions. Insufficient funds contribute to the deterioration of facilities, including classrooms, laboratories, libraries, and administrative buildings, compromising the learning environment and overall academic experience.

2. **Corruption and Mismanagement in Tertiary Institution:** Corruption and mismanagement present formidable challenges to infrastructural development in Nigerian tertiary institutions, with extensive literature highlighting the pervasive impact of these issues on physical facilities, technological advancements, academic quality, and overall institutional effectiveness. Hassan (2017) explores the detrimental impact of corruption and mismanagement on infrastructural development. The misappropriation of funds intended for construction and maintenance undermines the quality of projects, leading to substandard facilities. Jaja (2019) delves into the lack of transparency in the procurement process, emphasizing the need for stringent measures to curb corruption and ensure that funds are utilized appropriately. Corruption and mismanagement directly affect the quality of physical infrastructure in Nigerian tertiary institutions. Research by Adegoke (2016) highlights cases where funds earmarked for constructing classrooms, laboratories, and administrative buildings are siphoned off, leading to poorly constructed and maintained facilities that undermine the learning environment. Kalu, (2015) emphasize the adverse effects of corruption and mismanagement on academic quality and institutional reputation. Diversion of funds meant for faculty development, research, and educational resources compromises the quality of education, eroding the institutions' standing both nationally and internationally.

3. **Policy Instability and Inconsistency in Tertiary Institution:** Policy instability and inconsistency emerge as critical challenges to infrastructural development in Nigerian tertiary institutions. The impact of fluctuating policies on physical infrastructure. technological advancements, academic quality, and overall institutional effectiveness is a recurring theme in scholarly works. Lasisi (2018) investigates the challenge of policy instability in the educational sector. Frequent changes in government policies disrupt the continuity of infrastructural

development plans, impeding progress. Musa (2019) suggests that a lack of long-term vision and strategic planning contributes to the inconsistency in policy implementation. hindering sustained efforts in infrastructure development. Nwosu (2017) underscores the dynamic nature of policies governing infrastructure projects in Nigerian tertiary institutions. Frequent changes in government policies related to budget allocations, project approvals, and procurement processes contribute to delays, uncertainties, and disruptions in the execution of crucial infrastructure initiatives. Numerous studies highlight the adverse effects of policy instability on physical infrastructure. Ojo (2017) reveals instances where abrupt policy shifts lead to project cancellations, modifications, or the abandonment of ongoing construction, resulting in incomplete or substandard facilities that compromise the learning environment.

4. **Inadequate Technological Integration in Tertiary Institution:** Inadequate technological integration stands out as a formidable challenge to infrastructural development in Nigerian tertiary institutions. The impact of insufficient incorporation of technology on educational quality, research capabilities, and overall institutional effectiveness is a recurrent theme in scholarly works Peters (2015) highlights the slow adoption of technology in Nigerian tertiary institutions, affecting teaching methods and research capabilities. Outdated technological infrastructure undermines the institutions' competitiveness on a global scale. Rimi (2016) recommends investing in modern technological solutions to enhance the learning experience and improve the overall efficiency of academic activities. Sani (2017) consistently highlights the existence of a digital divide in Nigerian tertiary institutions, where inadequate technological integration exacerbates disparities in access to educational resources. Insufficient infrastructure, including reliable internet connectivity and access to computing devices, hampers the ability of students and faculty to fully engage with digital learning resources. Shuaibu (2018) discusses the inadequate development of e-learning infrastructure in Nigerian tertiary institutions. Insufficient investment in learning management systems, online platforms, and digital content creation tools hinders the effective implementation of e-learning initiatives, especially during times of crises or disruptions.

5. **Insufficient Skilled Workforce in Tertiary Institutions:** Insufficient skilled workforce emerges as a critical challenge to infrastructural development in Nigerian tertiary institutions. The impact of inadequate expertise on the planning, execution, and maintenance of infrastructural projects within higher education settings is a recurring theme in scholarly works. Waziri (2017) discusses the shortage of skilled professionals in the construction and maintenance of educational infrastructure the lack of qualified personnel leads to delays. cost overruns, and compromises the quality of work. Yakubu (2016) proposes initiatives to develop the capacity of local professionals and foster collaboration with international experts to address Break the challenge of a skilled workforce. Zango (2018) consistently highlights capacity gaps in project planning and management within Nigerian tertiary institutions. Insufficient skilled personnel with expertise in project management, engineering, and architecture often lead to inadequate project planning, delays, and cost overruns, impacting the successful execution of infrastructural initiatives. Abdulrahman (2020) underscores shortages in engineering and technical expertise as a significant impediment to infrastructural development. Limited availability of skilled professionals such as

civil engineers, architects, and technical specialists hampers the design. construction, and maintenance of quality infrastructure within higher education institutions

6. **Security Challenges in Tertiary Institutions:** Security challenges in Nigerian tertiary institutions constitute a pervasive and multifaceted obstacle to infrastructural development. The impact of insecurity on physical infrastructure, technological advancements, academic activities, and overall institutional effectiveness is n recurrent theme in scholarly works. Chukwu (2018) delves into the impact of security challenges on infrastructural development. Instances of vandalism and insecurity in some regions of Nigeria pose threats to infrastructure, requiring additional resources for security measures. Dike (2016) emphasizes the need for collaborative efforts between security agencies and educational institutions to mitigate security risks and safeguard infrastructure. Ekwueme (2018) consistently highlights the deleterious effects of security challenges on physical infrastructure within Nigerian tertiary institutions, Instances of vandalism, theft, and destruction of property during security incidents contribute to the deterioration of facilities, undermining efforts to maintain a conducive learning environment. Folayan (2019) emphasize the disruption of academic activities resulting from security challenges. Incidents such as campus violence, kidnappings, and student unrest can lead to interruptions in the academic calendar, affecting the scheduling and execution of infrastructural projects and impeding overall institutional progress.

7. **Inadequate Maintenance Culture in Tertiary Institution:** Inadequate maintenance emerges as a substantial challenge to infrastructural development in Nigerian tertiary institutions. The impact of insufficient attention to maintenance on physical infrastructure, technological resources, academic quality, and overall institutional effectiveness is a recurrent theme in scholarly works. Hassan (2017) discusses the challenge of sustaining infrastructure over time. The lack of a robust maintenance culture leads to the deterioration of facilities shortly after construction, requiring frequent repairs and reconstruction. Ibe (2018) recommends the implementation of comprehensive maintenance plans and the cultivation of a culture that prioritizes the regular upkeep of infrastructure. Jaja (2019) consistently underscores the consequences of inadequate maintenance on physical infrastructure within Nigerian tertiary institutions. Insufficient funds and attention to regular maintenance lead to the deterioration of facilities, including classrooms, laboratories, and administrative buildings, compromising the quality and safety of the learning environment. Adegoke, (2016) highlight the implications of inadequate maintenance for technological resources. Insufficient investment in the upkeep of digital infrastructure, including computers, laboratories, and network systems, contributes to equipment obsolescence, hindering the effective integration of technology into teaching and research activities.

Prospects for Circumventing the Challenges Facing Quality Infrastructural Development in Tertiary Institutions

Overcoming the challenges of quality infrastructural development in Nigerian tertiary institutions involves a multi-faceted approach:

1. **Increased Funding and Budget Allocation in Tertiary Institution:** Increased funding and enhanced budget allocation hold promise as crucial prospects for infrastructural development in Nigerian tertiary institutions. The impact of sufficient financial resources on physical infrastructure, technological advancements, academic quality, and overall institutional effectiveness is a recurring theme in scholarly works Adewale (2016) advocates for a substantial increase in funding for tertiary institutions in Nigeria Bello (2017) underscores the importance of transparent financial management practices to ensure that allocated funds are efficiently utilized for infrastructure development. Gana (2012) consistently highlights the positive correlation between increased funding and improved physical infrastructure in Nigerian tertiary institutions. Adequate financial resources facilitate the construction, renovation, and maintenance of classrooms, laboratories, libraries, and administrative buildings, contributing to a conducive learning environment. Hassan (2017) emphasize the transformative potential of increased funding for technological advancements in higher education Sufficient budget allocations allow for the acquisition of modern equipment, laboratories, and the integration of cutting-edge technologies into teaching and research activities, enhancing the institutions technological capabilities.

2. **Integration of Modern Technology in Tertiary Institution:** Enhanced accountability and effective anti-corruption measures are regarded as crucial prospects for fostering infrastructural development in Nigerian tertiary institutions. The impact of transparent governance, financial accountability, and anti-corruption initiatives on physical infrastructure, technological advancements, academic quality, and overall institutional effectiveness is a recurring theme in scholarly works. Lasisi (2018) explores the potential benefits of integrating modern technology in educational infrastructure. Utilizing advanced technologies in construction, maintenance, and educational tools enhances efficiency, competitiveness, and the overall quality of infrastructure. Musa (2019) emphasizes the need for capacity-building programs to ensure that institutions can effectively leverage and adapt to evolving technological solutions. Nwosu (2017) consistently highlights the positive correlation between enhanced accountability and improved financial transparency in tertiary institutions. Transparent budgeting and resource allocation processes contribute to effective utilization of funds for infrastructural projects, minimizing the risk of mismanagement and corruption.

3. **Prescriptions in Tertiary Institution:** The need for increased funding and resource allocation for tertiary institutions is very crucial for fostering infrastructural development in Nigerian tertiary institutions. Adequate financial resources are essential for constructing and maintaining quality infrastructure, ensuring that educational facilities are well-equipped and up-to-date. Folayan (2019) suggests a more strategic allocation of funds, considering the specific needs of each institution and prioritizing projects that enhance the overall quality of the educational environment, Transparent financial management practices is very important for fostering infrastructural development in Nigerian tertiary institutions. Clear

accounting procedures, regular audits, and financial accountability contribute to the effective utilization of funds for infrastrcture projects. Dike (2016) recommends establishing financial oversight mechanisms to ensure that funds allocated for infrastructural development are used efficiently and effectively. Integration of modern technology is very crucial for fostering infrastructural development in Nigerian tertiary institutions. Utilizing innovative technologies in construction, educational tools, and management systems enhances the overall quality of educational facilities. Gana (2012) recommends investing in research and development to stay abreast of emerging technologies and incorporating them into the design and maintenance of infrastructure.

Conclusion

Quality infrastructural development in Nigerian tertiary institutions is pivotal for educational excellence. Despite the challenges faced by tertiary institutions such as inadequate funding, bureaucratic hurdles, and maintenance issues, there's a promising prospect for improvement. To overcome these challenges, increased government investment, transparent allocation of resources, and partnerships with the private sector are essential. Emphasizing efficient project management and regular maintenance, coupled with embracing technological advancements, will contribute to creating a conducive learning environment and fostering academic growth in Nigerian tertiary institutions.

Suggestions

The following suggestions were made for consideration;

1. Federal government should increase allocation of funds to tertiary education, and also encourage alumni donations.
2. Federal government should establish a comprehensive maintenance schedule and allocate resources for routine inspections and repairs.
3. Federal government should establish a dedicated committee for strategic planning. involving stakeholders to anticipate future needs and trends in education infrastructure.

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