

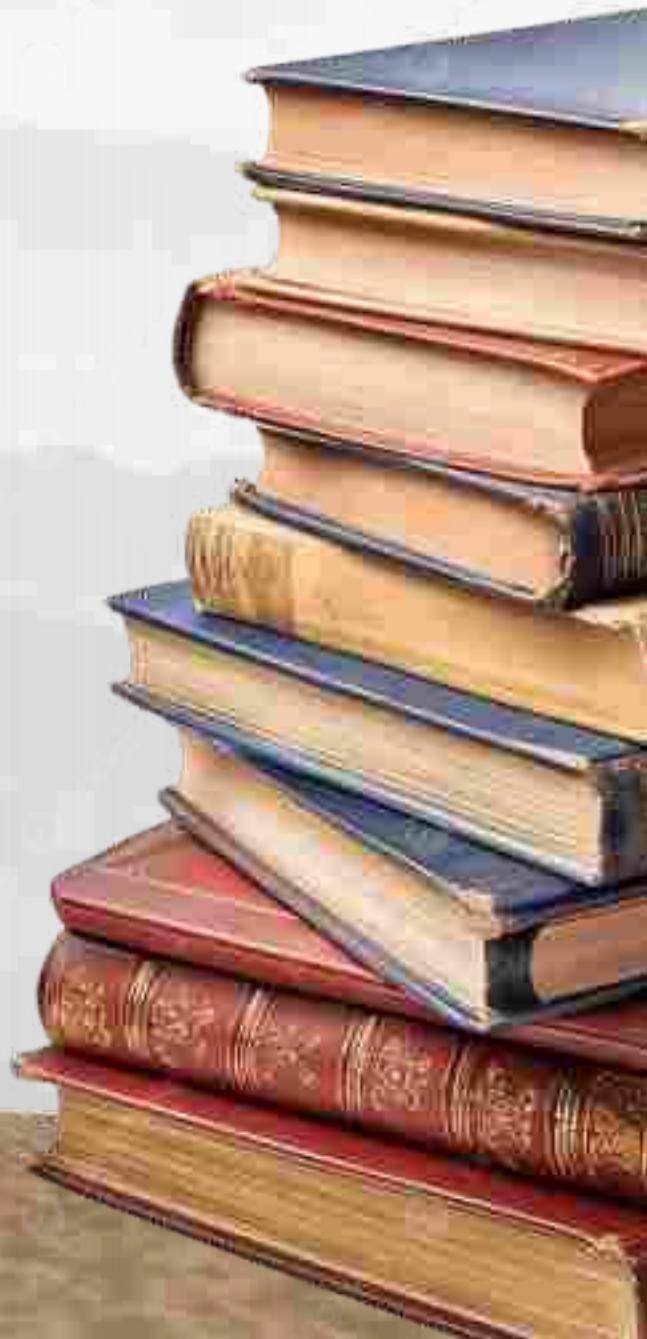


MULTI-DISCIPLINARY
RESEARCH JOURNALS
INT'L (MDRJI)

Peer Reviewed
BOOK CHAPTER

PERSPECTIVE ON EDUCATION IN NIGERIA

VOLUME TWO



Peer Reviewed
BOOK CHAPTER

PERSPECTIVE ON EDUCATION IN NIGERIA

© 2025 MULTI-DISCIPLINARY RESEARCH JOURNALS INT'L (MDRDJI).

This work is licensed under a Creative Commons Attribution (CC BY) License <https://creativecommons.org/licenses/by/4.0/>. This permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Authors retain the right to use their work for teaching, research, and other non-commercial purposes.



Published By



**MULTI-DISCIPLINARY RESEARCH
JOURNALS INT'L (MDRDJI)**

Available at

<https://mdrdji.org>

EDITORIAL BOARD MEMBERS

EDITOR-IN-CHIEF

Dr. Mariagoretti Ijeoma Obiakor

*Department of Educational Management and Policy,
Nnamdi Azikiwe University, Awka, Anambra State,
Nigeria.*

EDITORS

Prof. Francis Akubilo

University of Nigeria Nsukka

Rev. Fr. Dr. Stephen Abuchi Ezenwagu

Nnamdi Azikiwe University, Nigeria.

Rev. Sr. Dr. Anthonia Nwabugo A. Ani

Nnamdi Azikiwe University, Nigeria.

Dr. Edwin Ude

Los Angeles Unified School District USA

Mrs Chinene Eucheria Okonkwo

Nnamdi Azikiwe University, Nigeria.

Rev. Sr. Chidumebi Ngozi Oguejiofor

Nnamdi Azikiwe University, Nigeria.

Dr. Chidi Nwandiko

Los Angeles County Of Education

Dr. Ngozi Anthonia Agu

Nnamdi Azikiwe University, Nigeria.

Dr. Ebere Adimorah

University of Nigeria Nsukka

Prof. Florence Orabueze

University of Nigeria Nsukka

Assoc. Prof. John Agah

University of Nigeria Nsukka

Dr. Olachukwu Gloria Eziuzo

Nnamdi Azikiwe University, Nigeria.

Dr. Edna Ogwu

University of Nigeria Nsukka

Dr. Chukwudi Akubuilo

Lynwood Unified School District

Mrs Chiamaka Ogbuanya

Nnamdi Azikiwe University, Nigeria

Dr. Patrick Nwite Nwajioha

Ebonyi State University, Nigeria

Dr. Nwaribeaku Rosita Ogbo

Nnamdi Azikiwe University, Awka

Dr. Oluchi Okugo

University of Nigeria Nsukka

Dr. Nweke Caroline Onyinyechi

Peaceland College of Education

Dr. Chinedu Luke Egbo

St. Gregory University Uturu, Nigeria

Dr. Oby Modester Ogbuka

African Thinkers Community of Inquiry College of Education

Dr. Doris Chidi Malu

Peaceland College of Education

Dr. Patrick Ugwu

Peaceland College of Education

Dr. Chika Nonye Eziamaka

Nnamdi Azikiwe University, Nigeria

Dr. Mbonu Victoria Chimezie.

Nnamdi Azikiwe University, Nigeria

Dr Emmanuel Chika Obizue

*Educational Research and Management Consultant,
Financial Analyst and Digital Facilitator.*

President, Institute of Education, Management and Professional Studies and International Organization For Professional and Proficiency Studies, Owerri Imo State, Nigeria West Africa.

Dr Mirian N. Obizue.

*Institute of Arts Management and Professional Studies.
(Iamps).*

No. 43 Okigwe Road Opposite Nigerian Correctional Center. Owerri Imo State.

EDITORIAL BOARD MEMBERS

CONSULTANTS

Prof. Chiedozie Loyce Onyali
Nnamdi Azikiwe University, Nigeria

Prof. Ndubueze Wenceslaus Ofojebe
Nnamdi Azikiwe University, Nigeria

Prof. Ndidi Patience Egboka
Nnamdi Azikiwe University, Nigeria

Associate Prof. Isaac N. Nwankwo
Nnamdi Azikiwe University, Nigeria

Prof. Vivian Nwogbo
Nnamdi Azikiwe University, Nigeria

Prof. Emenike Febian Obi
Nnamdi Azikiwe University, Nigeria

Prof. B. C. Achilike
Ebonyi State University, Nigeria

Prof. Ugodulunwa Christiana Amaechi
Alex Ekwueme University, Nigeria

Prof. Chinedu Ifedi Okeke
University of The Free State Republic Of South Africa

Prof. Patience Egboka
Nnamdi Azikiwe University, Nigeria



© 2025

Acknowledgments

The authors gratefully acknowledge the support of our academic institutions and colleagues whose insights and contributions informed the development of this chapter, *Perspective on Education in Nigeria*. We also extend our appreciation to the editors of this volume for their guidance and for providing a platform to share our collective work.

CONTRIBUTING AUTHORS

Ogunode Niyi Jacob, PhD

Department of Educational Management, Faculty of Education, Federal University Wukari, Taraba State, Nigeria

Ayodele Ebunolu Nwesigbo, PhD

Department of Educational Management, Faculty of Education, Rivers State University, Port Harcourt, Nigeria

Usman Ibrahim, PhD

Department of Sociology, Faculty of Social Sciences, Federal University of Lafia, Nasarawa State, Nigeria

Oyekanmi, Funmilayo Bosede, PhD

Department of Fisheries and Aquaculture, University of Ilesa, Osun State, Nigeria

Mary Adanna Chinwuba, PhD.

Executive Director, Chalcedony Schools; National Association of Proprietors of Private Schools (NAPPS), Abuja

Adamu Awwal Salman

Kogi State College of Education, Ankpa, Nigeria

Danyawo Musa Adamu, PhD.

Department of Criminology and Security Studies, Faculty of Social Sciences, Federal University of Lafia, Nasarawa State, Nigeria

Olamoyegun, Stephania Olabisi, PhD.

Department of Science Education, University of Abuja, Nigeria

Ola-Adeniji Elizabeth Bolarinwa

Department of Science Education, University of Abuja, Nigeria

Olapade Olubunmi Olayinka.

Department of Human Resources and Administration, Nigeria Airspace Management Agency (NAMA), Nigeria

Sani Kasimu, PhD.

Department of Public Administration, Faculty of Management Sciences, Federal University Wukari, Nigeria

Inemesit Nsikak Edet.

Assistant Chief Education Officer, Federal Ministry of Education, Abuja, Nigeria

Nwankwo Nkechi Chinelo, PhD.

Department of Educational Management and Planning, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria

Unachukwu Ijeoma Blessing, PhD.

Department of Economics Education, Federal College of Education (Technical), Umuze, Nigeria

Christopher Idowu Ojo.

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Temitope Zulfah Mustapha

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Emeana Geraldine Chinwe

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Victor Olugbenga Ayoko.

Department of Educational Foundations, Faculty of Education, National Open University of Nigeria

Galadima, Farida Ibrahim.

Department of Adult and Continuing Education, Federal University Wukari, Nigeria

JAE, Talatu

Department of Educational Foundation, Taraba State University, Jalingo

Maryam Abdullahi, PhD.

Department of Education, Nigerian Police Academy, Wudil, Kano, Nigeria

Muhammad Danjuma Maiwada

Department of Education, Nigerian Police Academy, Wudil, Kano, Nigeria

Umoru Abdulrasheed Oseni.

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Saleh Khalid Mahmud.

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Ronald Winifred Abhulimen, PhD.

Biological Sciences Department, Faculty of Pure and Applied Sciences, Federal University Wukari, Nigeria.

TABLE OF CONTENTS

Cover Title	
Editorial Board Members	iii
Acknowledgement	v
Contributing Authors	vi
Table of Contents	vii
 CHAPTER ONE:	
AN ASSESSMENT OF THE CONTRIBUTIONS OF WEST AFRICA TERTIARY INSTITUTIONS TO THE DEVELOPMENT OF WEST AFRICA COUNTRIES	1
Ogunode Niyi Jacob, Ph.D.	
 CHAPTER TWO:	
IMPACT OF RAPID GROWING POPULATION ON THE INFRASTRUCTURE IN NIGERIA	9
Usman Ibrahim, Ph.D.	
 CHAPTER THREE:	
THE ROLE OF TERTIARY INSTITUTIONS IN FISH PRODUCTION DEVELOPMENT IN NIGERIA	19
Oyekanmi, Funmilayo Bosede, Ph.D.	
 CHAPTER FOUR:	
FACTORS THAT WILL ENHANCE DEVELOPMENT OF CAREER SERVICE CENTRES IN NIGERIAN TERTIARY INSTITUTIONS	26
Mary Adanna Chinwuba, Ph.D. ; Adamu Awwal Salman	
 CHAPTER FIVE:	
TERTIARY INSTITUTIONS IN NIGERIA AND CRIME MANAGEMENT STRATEGIES	34
Danyawo Musa Adamu, Ph.D.	
 CHAPTER SIX:	
GAMIFICATION IN SCIENCE EDUCATION IN NIGERIA	42
Olamoyegun, Stephanía Olabisi, Ph.D. ; Ola-Adeniji Elizabeth Bolarinwa	
 CHAPTER SEVEN:	
TERTIARY INSTITUTIONS IN NIGERIA AND HUMAN MANAGEMENT STRATEGIES	53
Olapade Olubunmi Olayinka	
 CHAPTER EIGHT:	
TERTIARY INSTITUTIONS AND COMMITTEE SYSTEM IN NIGERIA	68
Sani Kasimu, Ph.D.	
 CHAPTER NINE:	
TERTIARY EDUCATION AND ACCREDITATION OF ACADEMIC PROGRAMMES IN NIGERIA	82
Inemesit Nsikak Edet	

CHAPTER TEN: TERIARY EDUCATION AND COMMUNITY SERVICE PROGRAMME IN NIGERIA	95
Nwankwo Nkechi Chinelo, Ph.D.; Unachukwu Ijeoma Blessing, Ph.D.	
 CHAPTER ELEVEN: TERIARY EDUCATION AND COMPUTER-BASED TEST IN NIGERIA	107
Unachukwu Ijeoma Blessing, Ph.D. ; Nwankwo Nkechi Chinelo, Ph.D.;	
 CHAPTER TWELVE: DIGITALIZATION OF TERTIARY EDUCATION IN NIGERIA: BENEFITS, PROBLEMS AND SOLUTIONS	116
Christopher Idowu Ojo (Lead Author), Temitope Zulfah Mustapha, Emeana Geraldine Chinwe	
 CHAPTER THIRTEEN: DEPLOYMENT OF ARTIFICIAL INTELLIGENCE FOR FRAUD DETECTION AND PREVENTION IN TERTIARY EDUCATION IN NIGERIA	128
Victor Olugbenga Ayoko	
 CHAPTER FOURTEEN: DEPLOYMENT OF TECHNOLOGIES IN CURTAILING EXAMINATION MALPRACTICES IN NIGERIA TERTIARY EDUCATION	139
Galadima, Farida Ibrahim; JAE Talatu	
 CHAPTER FIFTEEN: SMART RESEARCH IN TERTIARY EDUCATION IN NIGERIA: PROBLEMS AND SOLUTIONS	148
Maryam Abdullahi, Ph.D. ; Muhammad Danjuma Maiwada	
 CHAPTER SIXTEEN: TERIARY EDUCATION IN NIGERIA AND CONFLICT MANAGEMENT STRATEGIES	159
Umoru Abdulrasheed Oseni	
 CHAPTER SEVENTEEN: TERIARY EDUCATION AND FUNDING IN NIGERIA	169
Saleh Khalid Mahmud	
 CHAPTER EIGHTEEN: AN ASSESSMENT OF THE IMPACT OF URBANIZATION ON LOCAL BIODIVERSITY	180
Ronald Winifred Abhulimen, Ph.D.	
 Authors' Bibliography	190

CHAPTER EIGHTEEN

AN ASSESSMENT OF THE IMPACT OF URBANIZATION ON LOCAL BIODIVERSITY

By

Ronald, Abhulimen Winifred

Department of Biological Sciences, Faculty of Biosciences,
Federal University Wukari.

Orchid-id: 0009-0006-3670-4079. **Email:** Ronaldwinifred@gmail.com

ABSTRACT

Urbanization is transforming landscapes worldwide, reshaping ecosystems and profoundly impacting local biodiversity. This chapter investigates how urban growth leads to habitat destruction and fragmentation, pollution, invasive species, climatic alterations, and overexploitation of natural resources. It also explores practical mitigation strategies such as green infrastructure, ecological zoning, sustainable transport systems, environmental impact assessments, native plant restoration, and community stewardship. The findings reveal that while urbanization imposes serious threats to biodiversity, there are multiple opportunities to balance development with conservation. By integrating ecological considerations into urban planning, engaging local stakeholders, and restoring degraded habitats, cities can become places that support both human well-being and biological diversity. This balanced approach is essential for sustaining resilient ecosystems in urban settings.

Keywords: urbanization, local biodiversity, habitat fragmentation, green infrastructure, ecological zoning, sustainable urban planning, Nigeria

18.1. Introduction

Urbanization is a rapidly growing global phenomenon characterized by the expansion of human populations into urban areas and the transformation of natural landscapes into built environments.

As cities expand to accommodate increasing human populations, natural habitats such as forests, wetlands, and grasslands are often replaced by infrastructure, including roads, buildings, and industrial zones. This transformation has profound ecological consequences, particularly for local biodiversity.

Local biodiversity — the variety of plant, animal, and microbial life within a specific geographic area — is highly sensitive to changes in land use and environmental conditions. Urbanization can lead to habitat fragmentation, pollution, and the introduction of invasive species, all of which threaten native species and disrupt ecological balance. While some species may adapt to urban settings, many are unable to survive in altered or degraded habitats, resulting in population declines or local extinctions.

The chapter helps us to understand the relationship between urban development and biodiversity is crucial for developing sustainable urban planning strategies that minimize ecological damage. This research explores the multifaceted impacts of urbanization on local biodiversity, examining both the threats it poses and potential mitigation approaches to preserve ecological integrity in urban landscapes.

18.2. Clarification of concepts

i. Concept of Urbanization

What is Urbanization?

Urbanization is the process by which an increasing proportion of a population comes to live in urban areas, such as towns and cities, rather than rural areas. It involves the growth and expansion of cities due to population movement from rural to urban regions, as well as the physical development of urban infrastructure like housing, roads, industry, and public services. Urbanization is the process of the growth and expansion of cities and urban areas. It involves the migration of people from rural to urban areas, leading to a concentration of the population and economic activities in a particular location. This trend has been ongoing for centuries and has significantly impacted society, economy, and the environment. The process of urbanization is closely linked to industrialization and modernization, as urban areas offer better opportunities for employment, education, and access to resources. However, it also presents challenges such as overcrowding, pollution, and strain on infrastructure and resources. Urbanization is an ongoing global phenomenon that continues to shape our world and the way we live (Femi, 2019).

Key Features of urbanization includes:

Population Growth in Cities: More people move to cities in search of better job opportunities, education, healthcare, and living standards.

Land Use Change: Natural landscapes like forests, grasslands, and wetlands are often cleared or modified to make room for urban development.

Economic Transformation: Urbanisation is typically linked to industrialisation and a shift from agriculture-based economies to service and industry-based ones.

Infrastructure Development: Increased construction of buildings, transportation networks, and utilities such as water and electricity supply.

The causes of Urbanisation include:

Rural-to-Urban Migration: People migrate to cities for better employment, education, and healthcare.

Natural Population Growth: High birth rates in cities contribute to urban expansion.

Government Policies and Industrialisation: Development policies and the growth of industries attract people to urban areas.

The types of Urbanisation includes:

Planned Urbanisation: Guided by urban planning, with regulated development and infrastructure.

Unplanned (or Rapid) Urbanisation: Often leads to overcrowding, slums, traffic congestion, and inadequate public services.

ii. Concept of Local Biodiversity

Local biodiversity refers to the variety of living organisms—plants, animals, fungi, and microorganisms—that exist within a specific area or ecosystem, such as a forest, wetland, park, or even an urban neighborhood. It includes: number of species present (species richness), the genetic variation within those species, the diversity of ecosystems or habitats in the area, and the interactions between different organisms and their environment. Local biodiversity refers to the variety of living organisms that are present in a specific geographic area. This includes all plants, animals, and microorganisms that inhabit an environment, as well as the interactions between these species. Local biodiversity is important for the health and functioning of ecosystems, as well as for providing ecosystem services such as pollination, nutrient cycling, and pest regulation. Understanding and preserving local biodiversity is crucial for maintaining the balance of nature and promoting sustainable development. The term "local biodiversity" refers to the variety of living organisms found in a specific geographical area. This includes the diversity of species, genes, and ecosystems within that area. Local biodiversity is important as it supports and maintains the health and balance of an ecosystem, providing essential services such as clean water, air, and soil. It also plays a crucial role in our daily lives, as it provides food, medicine, and materials for various industries. Understanding and protecting local biodiversity is crucial for maintaining the overall health and sustainability of our planet (Niyi, 2018).

a) Components of Local Biodiversity:

- **Species Diversity** – The range of different species living in the area.
- **Genetic Diversity** – The genetic differences within a species, which help populations adapt to environmental changes.
- **Ecosystem Diversity** – The variety of habitats (e.g., ponds, woodlands, grasslands) in a local region.
- **Functional Diversity** – The roles species play in the ecosystem (e.g., pollinators, decomposers, predators).
- **Examples of Local Biodiversity:**
 - A **pond** may host frogs, fish, aquatic plants, algae, and insects.
 - An **urban park** could contain native trees, birds, insects, fungi, and even small mammals.
 - A **tropical forest** may support hundreds of species of plants, birds, reptiles, and microorganisms within a small area (Niyi, 2018).

18.3. Threats of Urbanization on local biodiversity

Urbanisation affects biodiversity in complex and often interrelated ways. These impacts can be direct—such as the destruction of habitats—or indirect, like changes in climate, pollution, and species interactions. Below is an examination of the key dimensions through which urbanisation influences local biodiversity according to Kingsley, (2020):

i. Habitat destruction (e.g., due to urbanisation or agriculture)

Habitat destruction is the primary cause of loss of biodiversity in local ecosystems. It occurs when natural habitats, such as forests and wetlands, are destroyed or altered by human activities. This can include deforestation, land conversion for agricultural purposes, and urban development. When habitats are destroyed, the species that rely on them for food, shelter, and reproduction are also affected. This disruption can lead to a decline in local biodiversity, as species may be forced to move or adapt to new environments. In addition, habitat destruction can also disrupt the delicate balance of an ecosystem, leading to further impacts on biodiversity. Without intervention and conservation efforts, habitat destruction will continue to be a major threat to local biodiversity.

One of the most immediate and significant effects of urbanisation is the conversion of natural habitats into urban infrastructure. Forests, wetlands, grasslands, and other ecosystems are cleared to make way for buildings, roads, and industrial development. This has led to loss of habitat reduces the space available for native species to live and reproduce. Even when patches of habitat remain, they are often **isolated**, limiting gene flow and species movement. This can lead to reduced genetic diversity and increased vulnerability to extinction (Abimbola, Adewumi & Abubakar, 2025).

ii. Pollution (air, water, soil)

Pollution poses a serious threat to local biodiversity. It can harm the delicate balance of ecosystems, introducing chemicals and toxins that can harm plants and animals. Additionally,

pollution can also disrupt food webs, leading to declines in certain species and upsetting the natural balance of an ecosystem. In aquatic environments, pollution can lead to decreased water quality and oxygen levels, resulting in the death of many aquatic species. Furthermore, pollution can also have indirect effects on biodiversity, such as altering reproductive patterns and weakening the immune systems of animals. Urban areas are major sources of air, water, noise, and light pollution, all of which can negatively affect biodiversity.

Air Pollution: Impairs respiratory function in animals and damages sensitive plant species.

Water Pollution: Runoff from cities carries heavy metals, oils, and chemicals into nearby water bodies, affecting aquatic life.

Noise Pollution: Disrupts animal communication, breeding, and navigation.

Light Pollution: Affects nocturnal species' behaviors such as feeding, migration, and reproduction. It is crucial to address pollution in order to protect our local biodiversity and maintain healthy ecosystems.

iii. Invasive species

The presence of invasive species is a major threat to local biodiversity. These species are non-native and often have no natural predators in their new environment, allowing them to grow and spread rapidly. This leads to a decrease in the population and diversity of native species, as invasive species compete for resources and sometimes even prey on them. Additionally, invasive species can alter ecosystem processes and disrupt the balance of the local ecosystem. This can have cascading effects on the entire food web, leading to further declines in native species. Invasive species also have the potential to introduce new diseases to the local ecosystem, further deteriorating the health and resilience of native species. Overall, invasive species pose a significant threat to local biodiversity and require immediate attention and management to prevent further harm. Urban areas often become gateways for **invasive alien species**, which outcompete native flora and fauna. It increased movement of people, goods, and materials introduces non-native species to local ecosystems. Invasive species can alter habitat structure, spread disease, or displace native species, leading to biodiversity loss (Odafivwotu & Abotutu, 2015).

iv. Climate change

Climate change poses a significant threat to local biodiversity. Rising temperatures, changes in precipitation patterns, and extreme weather events are all impacts of climate change that can have serious consequences for the delicate ecosystems that support diverse species of plants and animals. As the climate becomes warmer, many species may be unable to adapt and migrate to more suitable habitats, leading to declines in population sizes and even extinction. In addition, changes in precipitation patterns can cause droughts or floods, affecting the availability of food and water for many species. Extreme weather events such as hurricanes and wildfires can also

have devastating impacts on local biodiversity, destroying habitats and displacing or killing many species. These threats on local biodiversity are not only detrimental to the health of individual species, but can also have cascading effects on entire ecosystems and the services they provide to humans. It is crucial that we address and mitigate the effects of climate change in order to protect local biodiversity and the delicate balance of life on our planet. Urbanisation contributes to localized warming due to the Urban Heat Island (UHI) effect, where cities become significantly warmer than surrounding rural areas. It has leads to changes in local microclimates can affect temperature-sensitive species, leading to shifts in distribution, altered migration patterns, or mortality.

v. Overexploitation (e.g., overfishing, deforestation)

Overexploitation is a serious threat to local biodiversity. This refers to the excessive use or extraction of natural resources, such as plants and animals, beyond their sustainable levels. When this occurs, it can lead to the decline or extinction of certain species, disrupting the delicate balance of the ecosystem. This is because overexploitation can lead to the depletion of important resources, including food and shelter, for many species. Additionally, overexploitation can also disrupt the natural processes that are necessary for these species to thrive, such as pollination or seed dispersal. As a result, this can have a cascading effect on the entire ecosystem, causing further declines in biodiversity. This issue is particularly prominent in local areas where the resources are limited and the pressure for their use is high. Therefore, it is crucial to address overexploitation in order to protect and preserve the local biodiversity. This can be done through implementing sustainable management practices and regulations, as well as educating the local communities about the importance of maintaining a balanced and healthy ecosystem.

18.4. Potential mitigation approaches to preserve ecological integrity in urban landscapes.

The potential mitigation approaches to preserve ecological integrity in urban landscapes according to Abel, (2016) and Ogunde, (2017):

i. Green Infrastructure Development

Incorporate parks, green roofs, rain gardens, and urban forests into city planning to support biodiversity, improve air quality, and manage stormwater naturally. Green infrastructure development is an essential approach to mitigating the impacts of urbanization on ecological integrity in urban landscapes. By implementing green infrastructure, cities and urban areas can effectively manage stormwater runoff, reduce urban heat island effect, and improve air and water quality. This is achieved through the use of natural systems and approaches, such as rain gardens, green roofs, and urban forests, that mimic the natural functions of the environment. These green infrastructure practices help to preserve and restore ecological integrity in urban landscapes by providing habitat and promoting biodiversity, reducing erosion and flooding, and improving soil health. Additionally, green infrastructure can also provide multiple co-benefits, such as

recreational spaces and attractive urban amenities, further enhancing the livability of urban areas. Overall, green infrastructure development is a crucial tool for mitigating the negative impacts of urbanization on ecological integrity and promoting sustainable development in cities.

ii. **Urban Planning with Ecological Zoning**

Designate and protect ecological zones (e.g., wetlands, riverbanks, green corridors) within cities. Limiting development in these areas helps preserve native habitats and species. Urban planning with ecological zoning helps to mitigate urban development's negative impact on the environment by designating specific zones for different levels of land use intensity and ecological protection. By using ecological zoning, urban planners can prioritize areas for ecological preservation and limit development in those areas to maintain the integrity of the natural ecosystems. This approach allows for the coexistence of urban development and ecological conservation, preventing urbanization from completely overtaking and destroying natural habitats. It also promotes sustainable development by identifying areas suitable for urban expansion while also preserving critical ecological areas. Ultimately, this helps to maintain ecological balance and protect the biodiversity of urban landscapes, ensuring the long-term health and resilience of both the environment and the communities living within it.

iii. **Sustainable Transportation Systems**

Promote public transport, cycling, and walking over car-dependent infrastructure. This reduces emissions, limits habitat fragmentation, and improves overall environmental health. Sustainable transportation systems help to mitigate approaches to preserve ecological integrity in urban landscapes by reducing carbon emissions and air pollution. These systems promote the use of alternative modes of transportation such as public transportation, cycling, and walking, which reduces the reliance on private vehicles. This reduces the overall carbon footprint of the city and helps to preserve the quality of air and water in the urban environment. Furthermore, sustainable transportation systems often incorporate green infrastructure, such as green roofs and rain gardens, which can help to mitigate the effects of urbanization on the natural landscape. These systems also prioritize the use of renewable energy sources, such as electric buses and trains, to further reduce the impact on the environment. By promoting sustainable transportation, cities can reduce their contribution to climate change and support the preservation of ecological integrity in urban landscapes.

iv. **Environmental Impact Assessments (EIAs)**

Mandate EIAs before any major urban development. This ensures ecological concerns are identified early and mitigated through design adjustments or conservation offsets. The use of Environmental Impact Assessments (EIAs) play an essential role in preserving the ecological integrity of urban landscapes by providing comprehensive analyses of potential environmental impacts of proposed projects. Through this process, potential negative impacts can be identified

and mitigated before any development takes place. This helps to ensure that urban landscapes maintain their natural balance and prevent harm to the surrounding ecosystems. Additionally, EIAs also help to promote sustainable development practices by considering alternative approaches and recommending mitigation measures that minimize environmental impact. This not only preserves the ecological integrity of urban landscapes but also promotes the long-term sustainability of these areas.

v. Native Plant Landscaping and Restoration

Encourage the use of native vegetation in landscaping and rehabilitate degraded urban areas. This supports local wildlife and reduces the need for irrigation and pesticides. Native Plant Landscaping and Restoration play a crucial role in mitigating the negative impacts of urbanization on ecological integrity. By using native plant species in urban landscapes, we can help restore the natural balance and diversity of local ecosystems. These plants have evolved to thrive in their local environment and are better equipped to withstand the challenges of urban living. One of the main ways Native Plant Landscaping and Restoration help preserve ecological integrity is by providing habitat for native wildlife. As urbanization continues to encroach on natural habitats, many species are forced to adapt or disappear altogether. By incorporating native plants into urban landscapes, we can create a more suitable habitat for these species, which in turn helps maintain the overall ecological balance. Native plants are also more resilient to local climate conditions and require less maintenance compared to non-native plants. This reduces the need for watering, fertilizing, and other maintenance practices that can have harmful effects on the environment. This also leads to a reduction in the use of chemicals and pesticides, which can have detrimental effects on both the environment and human health. In addition to providing habitat and reducing maintenance needs, Native Plant Landscaping and Restoration also help to mitigate stormwater runoff. Native plants have deep root systems that can absorb and filter water, which helps to prevent erosion and flooding. This not only helps to preserve the ecological integrity of the surrounding environment, but also helps to prevent damage to urban infrastructure. Native Plant Landscaping and Restoration are essential tools in preserving ecological integrity in urban landscapes. By incorporating native plants into our urban environments, we can promote biodiversity, reduce maintenance needs, and mitigate the negative impacts of urbanization. This not only benefits the environment but also helps to create a more sustainable and healthier city for all inhabitants.

vi. Community-Based Environmental Stewardship

Engage local communities in urban greening projects, environmental education, and conservation efforts. When people feel ownership, they help protect and maintain ecological spaces. Community-Based Environmental Stewardship (CBES) is a vital approach to preserving ecological integrity in urban landscapes by engaging local communities and empowering them to take care of and protect their local environment. By involving the community in stewardship activities such as litter cleanups, tree plantings, and restoration projects, CBES promotes a strong

sense of ownership and responsibility for the environment, leading to more sustainable and long-term preservation efforts. Moreover, CBES also fosters a sense of community and promotes understanding and appreciation of the local ecosystem, which can help mitigate potential conflicts between development and conservation in urban areas. With the support and involvement of the community, CBES can effectively address environmental issues and implement effective mitigation approaches, such as implementing green infrastructure, promoting sustainable development practices, and creating green spaces in urban areas.

Conclusion

Urbanization is an increasingly dominant force shaping natural landscapes and ecosystems across the globe. While it offers numerous social and economic benefits, its environmental costs—particularly to local biodiversity—are significant. The expansion of urban areas leads to habitat loss, fragmentation, pollution, and the introduction of invasive species, all of which place immense pressure on native flora and fauna. Additionally, urban heat islands and disrupted ecological interactions further threaten the stability of local ecosystems.

However, the negative impacts of urbanization are not inevitable. With strategic urban planning, the integration of green infrastructure, and community involvement in conservation, it is possible to mitigate biodiversity loss and even enhance ecological resilience within cities. Preserving local biodiversity is not only vital for maintaining ecosystem services and ecological balance but also for promoting healthier and more sustainable urban environments for future generations.

In summary, understanding and addressing the ecological consequences of urbanization is essential. Through collaborative efforts between governments, scientists, urban planners, and local communities, cities can evolve into spaces that support both human development and biological diversity.

Revise Questions

1. What is Urbanization?
2. Define local Biodiversity
3. Discuss five threats of Urbanization on local biodiversity
4. Highlight five potential mitigation approaches to preserve ecological integrity in urban landscapes.

References

Abel, S.Y (2016), Impact of urbanization on ecology. KYT. London.

Femi, P. R. (2019). Urbanization, Education and human development. *Science Journal of Ecology*, 2(3), 23-30

Kingsley, R.T (2020). Urbanization and Sustainable development in Nigeria. Lagos.

Niyi, E. G. (2018). Urbanization and Ecological integrity in Local Environment. *Journal of Science Education*, 2(1), 46-57

Ogunde, F.Y (2017). Human activities and local Biodiversity: A Review study. *Management Journal*, 1(4),20-34

Abimbola, O. J., Adewumi, T., & Abubakar, M. (2025). Dynamics of Urban Heat Island in Lafia, Nasarawa State of Nigeria: A remote sensing analysis of land surface temperature, urban development, and vegetation change. *Discover Environment*, 3(10). <https://doi.org/10.1007/s44274-025-00186-x>

Odafivwotu, O., & Abotutu, A. (2015). Environmental impact of urbanization in Nigeria. *Current Journal of Applied Science and Technology*, 9(3), 212–221. <https://doi.org/10.9734/BJAST/2015/18148>

AUTHORS' BIBLIOGRAPHY

CHAPTER ONE:

AN ASSESSMENT OF THE CONTRIBUTIONS OF WEST AFRICA TERTIARY INSTITUTIONS TO THE DEVELOPMENT OF WEST AFRICA COUNTRIES

Authors:

Ogunode Niyi Jacob, Ph.D.

Department of Educational Management, Faculty of Education, Federal University Wukari, Taraba State, Nigeria

About the Authors:

Ogunode Niyi Jacob, Ph.D., a professional educational planner and an administrator. Ogunode Niyi Jacob Ph.D. have written many articles and conference papers on education especially educational planning, educational administration and management in Nigeria, Tertiary education, ICT education, Green Education, Gender Education, Artificial intelligence and special education. Ogunode Niyi Jacob is currently a staff with Federal University Wukari, Taraba State, Nigeria. He graduated from the famous university of Abuja. He has Master and Ph.D. in Educational Administration and Planning.

CHAPTER TWO:

IMPACT OF RAPID GROWING POPULATION ON THE INFRASTRUCTURE IN NIGERIA

Authors:

Usman Ibrahim, Ph.D.

Department of Sociology, Faculty of Social Sciences, Federal University of Lafia, Nasarawa State, Nigeria

About the Author:

Dr. Usman Ibrahim holds Ph.D., MSc and BSc in Sociology from the Department of Sociology, Bayero University Kano, where he was a Lecturer before moving to the Department of Sociology, Federal University of Lafia, Nasarawa State-Nigeria. Dr. Usman taught at all level of Nigerian education from Primary School Teacher in Awe Local Government Education Authority to Nasarawa State Ministry of Education (Teachers Service Commission) as Secondary School Teacher and finally to university. His area of specialization in Sociology is demography, population studies and social statistics with main interest in fertility and reproductive health and its associated social problems. He has attended so many

international and local conferences and participated in many research activities in addition to publishing in both local and international journals. Dr. Usman also contributed chapters in more than five different text books so far and is a Senior Lecturer in the Department of Sociology, Federal University of Lafia-Nasarawa State.

CHAPTER THREE:

ROLE OF TERTIARY INSTITUTIONS IN FISH PRODUCTION DEVELOPMENT IN NIGERIA

Authors:

Oyekanmi, Funmilayo Bosede, Ph.D.

Department of Fisheries and Aquaculture, University of Ilesa, Osun State, Nigeria

About the Author:

Oyekanmi Fumilayo Bosede is a distinguished academic and fisheries scientist with over three decades of experience in teaching, research, and academic administration. She began her academic career in 1989 as a Senior Instructor at the College of Agriculture, Mokwa, and now a Reader in the Department of Fisheries and Aquaculture, University of Ilesa, Osun State. Her areas of specialization include aquaculture nutrition, fish farming systems, freshwater prawn ecology, and environmental impacts on aquatic productivity. Dr. Oyekanmi has contributed extensively to the academic community through numerous publications in reputable national and international journals, and conference proceedings. Her research has attracted grants, including international funding from Zoetis Pharmaq SA and TETFund IBR. She is a Fellow of the Strategic Institute for Natural Resources and Human Development (FRHD), and holds membership in several professional bodies including FISON, WAS, ANIFS, and NIAS. Her work has been recognized with multiple awards for academic excellence and nation-building contributions, she remains committed to advancing sustainable fisheries practices, mentoring young scholars, and promoting gender inclusiveness in agricultural research and development in Nigeria and beyond.

CHAPTER FOUR:

FACTORS THAT WILL ENHANCE DEVELOPMENT OF CAREER SERVICE CENTRES IN NIGERIAN TERTIARY INSTITUTIONS

Authors:

1. **Mary Adanna Chinwuba, Ph.D.** – *Lead Author*
Executive Director, Chalcedony Schools; National Association of Proprietors of Private Schools (NAPPS), Abuja

2. Adamu Awwal Salman

Kogi State College of Education, Ankpa, Nigeria

About the Authors:

Dr. Mary Adanna Chinwuba. She graduated with a 2.1 in Biochemistry from the Federal University of Technology Owerri, after which she proceeded to obtain a Post Graduate Diploma in Education, then Masters in Educational Administration and Planning and Doctor of Philosophy (Ph.D.) in Guidance and Counselling from the prestigious University of Abuja. She has published over 25 Academic Journals online and has featured in so many international conferences. She is a renowned educationist and the Executive Director of Chalcedony Schools. She is a certified member of Association of Professional Counsellors of Nigeria (APROCON), Secretary of National Association of Proprietors of Private Schools (NAPPS Kubwa Satellite), A Licensed and professional teacher with TRCN, She is a trainer and coach to a lot of teachers. She is a genuine lover of God, she is married to Pastor Chibuzo Chinwuba and they are blessed with 2 beautiful daughters.

Adamu Awwal Salman is a distinguished educational psychologist with a B.Ed from Bayero University Kano and an M.Ed from Nasarawa State University. He is a staff member at Kogi State College of Education, Ankpa. Adamu Awwal Salman has authored numerous articles and conference papers on topics including educational psychology, gender, artificial intelligence, tertiary institutions, ASUU, and educational administration. He also holds roles such as Secretary of the Akus Educational Foundation, Ankpa, and Secretary of the Economic Tree Management Committee at Kogi State College of Education, Ankpa, Director of the College of Arts, Science and Islamic Studies (CASIS) reflecting his commitment to education and community development.

CHAPTER FIVE:

TERTIARY INSTITUTIONS IN NIGERIA AND CRIME MANAGEMENT STRATEGIES

Authors:

Danyawo Musa Adamu, Ph.D.

Department of Criminology and Security Studies, Faculty of Social Sciences, Federal University of Lafia, Nasarawa State, Nigeria

About the Author:

Danyawo Musa Adamu, Ph.D., a professional lecturer with the Department of Criminology and Security Studies, Federal University of Lafia. Danyawo Musa Adamu Ph.D. has written many articles and conference papers on criminology, especially educational planning, educational administration in

Nigeria, the role of ICT in administration, and Artificial Intelligence. Danyawo Musa Adamu is currently a staff with Federal University of Lafia, Nasarawa State, Nigeria. He graduated from the University of Maiduguri. He has a Master's in Sociology and a Ph.D. in International Studies. Dr. Danyawo Musa Adamu is a lecturer in the Department of Criminology and Security Studies, in the Faculty of Social Sciences, Federal University of Lafia, Nasarawa State. He is a member of Association of Professional Councilors of Nigeria. He is an academician par excellence and a professional lecturer who has published in a number of academic journals, contributed to chapters in books, and continues to impact knowledge in Criminology and Security Studies as well as Change and Innovation in the Educational System.

CHAPTER SIX:

GAMIFICATION IN SCIENCE EDUCATION IN NIGERIA

Authors:

1. **Olamoyegun, Stephanía Olabisi, Ph.D. – Lead Author**

Department of Science Education, University of Abuja, Nigeria

2. **Ola-Adeniji Elizabeth Bolarinwa**

Department of Science Education, University of Abuja, Nigeria

About the Authors:

Stephanía Olabisi Olamoyegun (Ph.D.) is a science educator and Chemist with 15 years of teaching experience at senior secondary school. She holds a degree in Chemistry Education from University of Uyo, Masters and Ph.D. in Science Education from University of Abuja. Her work focuses on improving the teaching and learning of science. She has published scholarly articles on teacher preparation, students' misconceptions in science, and the integration of digital learning tools in classrooms. With years of experience teaching at the university level, Dr. Stephanía is committed to bridging the gap between research and classroom practice. She has served as a mentor for pre-service and in-service science teachers. Her current research interests include curriculum innovation, psychosocial factors of interest, self-efficacy, and learning environment on achievement in Basic Science among Junior Secondary School Students in North Central Nigeria, and the role of technology in advancing science education in Nigeria.

Ola-Adeniji Elizabeth Bolarinwa is a distinguished educator and chemist with a decade of teaching experience. Born with a passion for science and

education, Elizabeth has established herself as a dedicated and accomplished professional in her field. Elizabeth holds a Bachelor's degree in Applied Chemistry from Usman Danfodio University. She furthered her education by obtaining a Postgraduate Diploma in Education (PGDE) from the National Open University. Her academic pursuits culminated in a Master's degree from the University of Abuja. With a strong foundation in chemistry and education, Elizabeth embarked on a teaching career that has spanned over ten years. Her dedication, expertise, and commitment to excellence have made her a respected and beloved educator among her students and peers. Throughout her career, Elizabeth has demonstrated a tireless passion for inspiring and mentoring young minds. Her contributions to the field of education have been significant, and her legacy continues to inspire future generations of scientists, educators, and leaders.

CHAPTER SEVEN:

TERTIARY INSTITUTIONS IN NIGERIA AND HUMAN MANAGEMENT STRATEGIES

Authors:

Olapade Olubunmi Olayinka

Department of Human Resources and Administration, Nigeria Airspace Management Agency (NAMA), Nigeria

About the Author:

Olapade Olubunmi N. Olayinka is an experienced Public Administrator and Human Resource professional with a strong academic background, including a Master's degree and a Postgraduate Diploma in Public Administration. Currently serving at the Nigeria Airspace Management Agency (NAMA), Olubunmi has held various key roles since 2012, including Head of the Environment Unit and Officer in charge of the Office and Housing Unit. Her work spans administrative coordination, human resources, environmental management, and project oversight. A Fellow of the Chartered Institute of Human Resources Management and Member of both the Nigerian Institute of Management and the Chartered Institute of Personnel Management, she combines professional expertise with a passion for leadership and service. Olubunmi is also active in community development, particularly in women and youth-focused initiatives. Her core values are integrity and professionalism.

CHAPTER EIGHT:

TERTIARY INSTITUTIONS AND COMMITTEE SYSTEM IN NIGERIA

Authors:

Sani Kasimu, Ph.D.

Department of Public Administration, Faculty of Management Sciences, Federal University Wukari, Nigeria

About the Author:

Dr. Sani Kasimu holds a B.A. in Public Administration (2011), M.Sc. in Public Administration (2016), PGD in Economics & Statistics (2019), and Ph.D. in Public Administration (2024) from Ahmadu Bello University (ABU), Zaria, Nigeria. He is a Senior Lecturer with the Department of Public Administration, Faculty of Management Sciences, Federal University Wukari. His areas of interest include Public Financial Management, Public Sector Accounting, Statistics, Econometrics, Public Debt Management, Development Administration, Strategic Planning and Management, Project Management Analysis, and Public Policy Analysis.

CHAPTER NINE:

TERTIARY EDUCATION AND ACCREDITATION OF ACADEMIC PROGRAMMES IN NIGERIA

Authors:

Inemesit Nsikak Edet

Assistant Chief Education Officer, Federal Ministry of Education, Abuja, Nigeria

About the Author:

Inemesit Nsikak Edet is a post-graduate student currently pursuing a Ph.D. degree in Educational Administration and Planning at the University of Abuja, Nigeria. She holds a Bachelor's degree in Science Education and a Master's Degree in Educational Administration and Planning, among other professional certifications. She currently works with the Federal Ministry of Education as the Assistant Chief Education Officer. She taught Sciences in Federal Government Boys' College Abuja specializing in Biology. She is a member of the Teachers Registration Council of Nigeria and the Local School Board, Living Faith Church Worldwide.

CHAPTER TEN:**TERTIARY EDUCATION AND COMMUNITY SERVICE PROGRAMME IN NIGERIA****Authors:****Nwankwo Nkechi Chinelo, Ph.D.**

Department of Educational Management and Planning, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria

Unachukwu Ijeoma Blessing, Ph.D.

Department of Economics Education, Federal College of Education (Technical), Umuze, Nigeria
Email: ijeoma.unachukwu@fcetumunze.edu.ng

About the Author:

Nwankwo Nkechi Chinelo, Ph.D., is a distinguished educational administrator, planner, and researcher. Dr. Nwankwo has authored numerous articles and conference papers in the fields of educational administration, planning, and management, anxiety management, tertiary education, and artificial intelligence. She holds a Ph.D. in Educational Management and Planning from Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State. She is an active member of the Nigerian Association for Educational Administration and Planning (NAEAP), Association of Educational Management and Policy Practitioners (AEMPP), and Forum for African Women Educationist (FAWE).

CHAPTER ELEVEN:**TERTIARY EDUCATION AND COMPUTER-BASED TEST IN NIGERIA****Authors:****Unachukwu Ijeoma Blessing, Ph.D.**

Department of Economics Education, Federal College of Education (Technical), Umuze, Nigeria
Email: ijeoma.unachukwu@fcetumunze.edu.ng

Nwankwo Nkechi Chinelo, Ph.D.

Department of Educational Management and Planning, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria

About the Author:

Dr. Unachukwu Ijeoma Blessing is a lecturer in the Department of Economics Education at Federal College of Education (Technical), Umuze. She holds her Bachelor's degree, Masters of Science (MSc), and Ph.D. in Economics (Development & Labour Economics). She is a researcher, analyst, and critical

thinker, with excellent communication and human development management skills. Dr. Unachukwu has published many papers in reputable local and international journals. She is currently the Head of Department in the Economics Department at Federal College of Education (Technical), Umuze. She is an active member of the Nigerian Economic Society (NES) and the Nigerian Economic Society of Female Professionals (NESFP).

CHAPTER TWELVE:**DIGITALIZATION OF TERTIARY EDUCATION IN NIGERIA: BENEFITS, PROBLEMS AND SOLUTIONS****Authors:****1. Christopher Idowu Ojo – Lead Author**

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Phone: 08133154731

Email: christopheroj070@gmail.com

2. Temitope Zulfah Mustapha

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Phone: 08039171701

Email: temitopemustapha29@gmail.com

3. Emeana Geraldine Chinwe

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Phone: 08033752432

Email: jaygreg2003@gmail.com

About the Authors:

Christopher Idowu Ojo, a professional educational planner and an administrator. Christopher Idowu Ojo has written several articles and conference papers on education especially educational planning, educational administration and management in Nigeria, tertiary education, and ICT education. Christopher Idowu Ojo is currently a staff with University of Abuja, Nigeria where he also graduated from. He has a Master's and Ph.D. (in view) in Educational Administration and Planning.

Temitope Zulfah Mustapha is an Educational Strategist and Media Education Expert. She has written many reports, articles, and seminar papers on education—especially on educational administration and management, basic education concerns, inclusive education, tertiary education, ICT education, gender education, and special education. She is presently a staff with the Voice of Nigeria, where she heads the Education Desk and has served for 13 years. She

graduated from the University of Ilorin and has a Master's and Ph.D. (in view) in Educational Administration and Planning.

Emeana Geraldine Chinwe is a seasoned Administrator and currently an Assistant Director/Admin with the National Film & Video Censors Board (NFVCB), Abuja. She has held different administrative positions and is currently in charge of Appointment, Promotion, and Discipline. She is also a member of the NFVCB Media Literacy Campaign Team that educates and carries out enlightenment campaigns on film matters. Emeana Geraldine C. is a professional Educational Planner and a fellow of the Chartered Institute of Human Resource Management (FCIHRM). She graduated from the University of Nigeria, Nsukka, and the University of Abuja, Nigeria, and is presently pursuing her Ph.D. in Educational Administration and Planning at the University of Abuja, Nigeria.

CHAPTER THIRTEEN:

DEPLOYMENT OF ARTIFICIAL INTELLIGENCE FOR FRAUD DETECTION AND PREVENTION IN TERTIARY EDUCATION IN NIGERIA

Authors:

Victor Olugbenga Ayoko

Department of Educational Foundations, Faculty of Education, National Open University of Nigeria
Email: victorayoko@gmail.com

About the Author:

Victor Olugbenga Ayoko is a research scholar in the Department of Educational Foundations, Faculty of Education, National Open University of Nigeria. He is a multidisciplinary scholar with qualifications across the faculties of science, management science, social science, and education. He is a member of the Open Distance and e-Learning Association of Nigeria (ODeLAN), the National Association of Educational Administration and Planners (NAEAP), and the Nigerian Economic Society (NES). He has published in several local and international journals, contributed to book chapters, and presented papers in relevant conferences. His areas of interest include school administration, sustainable development, economic development, and open and distance learning.

CHAPTER FOURTEEN:

DEPLOYMENT OF TECHNOLOGIES IN CURTAILING EXAMINATION MALPRACTICES IN NIGERIA TERTIARY EDUCATION

Authors:

Galadima, Farida Ibrahim

Department of Adult and Continuing Education, Federal University Wukari, Nigeria.

JAE, Talatu

Department of Educational Foundation, Taraba State University, Jalingo

About the Author:

Galadima Farida Ibrahim has a Master's Degree in Educational Administration and Planning and is currently pursuing a Doctorate in the same field. She is a lecturer with Federal University Wukari, Taraba State, Nigeria. She is a research scholar and has written many articles in education and beyond. Farida is a member of the National Association of Educational Administration and Planning (NAEAP).

CHAPTER FIFTEEN:

SMART RESEARCH IN TERTIARY EDUCATION IN NIGERIA: PROBLEMS AND SOLUTIONS

Authors:

1. **Maryam Abdullahi, Ph.D.** – *Lead Author*

Department of Education, Nigerian Police Academy, Wudil, Kano, Nigeria

2. **Muhammad Danjuma Maiwada**

Department of Education, Nigerian Police Academy, Wudil, Kano, Nigeria

About the Authors:

Maryam Abdullahi, Ph.D., is a professional educational psychologist. She has written many articles and conference papers on education, especially educational psychology, guidance and counseling, tertiary education, computer and ICT education, and special education. Maryam Abdullahi is currently a lecturer at the Nigerian Police Academy, Wudil, Kano, Nigeria. She graduated from Bayero University Kano for her first and second degrees and obtained her Ph.D. at Federal University Dutse-Ma, Katsina State, Nigeria. She has a Master's and Ph.D. in Educational Psychology.

Muhammad Danjuma Maiwada is currently pursuing his Ph.D. at Bayero University, Kano. His research interests include Educational Psychology, Literacy in Education, Tertiary Education, Special Education, and

Guidance and Counseling. He serves as a Lecturer in the Department of Education at the Nigerian Police Academy, Wudil, Kano. Maiwada is dedicated to advancing knowledge and contributing to the academic community through his research endeavors. He earned both his Bachelor's and Master's degrees from Bayero University, Kano, with a Master's in Educational Psychology.

CHAPTER SIXTEEN:

TERTIARY EDUCATION IN NIGERIA AND CONFLICT MANAGEMENT STRATEGIES

Authors:

Umoru Abdulrasheed Oseni

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

About the Author:

Umoru Abdulrasheed Oseni is a part-time lecturer in the Department of Educational Management, Faculty of Education, University of Abuja. He holds a Diploma in Accounting, B.Sc (Ed) Accounting, and an M.Ed in Educational Administration and Planning. He is currently working on his Ph.D. thesis in Educational Administration and Planning, all at the University of Abuja. Umoru Abdulrasheed Oseni has conducted many analytical and empirical research studies in educational leadership and management, published in reputable local and international journals. He is happily married with children.

CHAPTER SEVENTEEN:

TERTIARY EDUCATION AND FUNDING IN NIGERIA

Authors:

Saleh Khalid Mahmud

Department of Educational Management, Faculty of Education, University of Abuja, Nigeria

Email: khalidmahmuh13@yahoo.com

About the Author:

Saleh Khalid Mahmud is a professional educational planner and administrator. He has written many articles and journals on education, especially educational planning, educational administration, and management in Nigeria, tertiary education, and ICT education. Saleh Khalid Mahmud is currently a Ph.D. student in the Department of Educational Management, Faculty of Education, University of Abuja, Nigeria. He earned his Master's degree in Educational Planning and Policy from the University of Ibadan, Nigeria.

CHAPTER EIGHTEEN:

AN ASSESSMENT OF THE IMPACT OF URBANIZATION ON LOCAL BIODIVERSITY

Authors:

Ronald Winifred Abhulimen, Ph.D.

Department of Biological Sciences, Faculty of Biosciences, Federal University Wukari, Nigeria

Email: ronaldwinifred@gmail.com

ORCID iD: 0009-0006-3670-4079

About the Author:

Ronald Abhulimen Winifred, Ph.D., is a distinguished wildlife ecologist with a Ph.D. from the University of Benin, Benin City, Nigeria. She is a Senior Lecturer in the Department of Biological Sciences, Faculty of Biosciences, Federal University Wukari. She has authored numerous articles and conference papers on the terrestrial and aquatic biodiversity of molluscs, arthropods, and aquatic macroinvertebrates fauna. She was awarded Best Departmental Lecturer in 2025 and serves as an Academic Board Member of ENE Health College, Wukari. She lectures both undergraduate and postgraduate students in Biological Sciences and has supervised many project works. Dr. Winifred is also a member of NES Taraba State Chapter (pioneer Financial Secretary, 2023/2024), as well as Unit Head of the Decoration Unit in her church, where she serves as a deaconess of God.