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CUIC • DISRUPTIVE INNOVATION CONFERENCE 2024

BOOK OF ABSTRACTS

CONFERENCE THEME

*"Leveraging Technological Innovations to
Create the New Normal World"*

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Faculty of Law, Ekiti State University, Ado-Ekiti

Olaide Awwal-Bolanta

Faculty of Law, Ekiti State University, Ado-Ekiti

ABSTRACT

An extensive summary of the state of artificial intelligence (AI) technology in the legal industry is given in this study. It explores how artificial intelligence (AI)-driven technologies, such as machine learning, natural language processing (NLP), and predictive analytics, are changing customary legal duties like document analysis, legal research, and contract assessment. The advantages of implementing AI, and its possible effects on the legal profession are examined. However, the research also raises doubts about the future demand for legal services and developing skill sets required in a technology-driven legal context. Additionally, it discusses ethical and regulatory problems regarding AI implementation in the legal profession. The study employed a doctrinal research technique and drew information from primary and secondary sources. The results show that although AI's evolutionary effects improve productivity, knowledge, and customer service, its revolutionary potential upends established roles and paradigms. The paper concludes by arguing that AI presents the legal profession with both a disruptive force and an opportunity for innovation. Legal practitioners may negotiate the hurdles and take advantage of the benefits to generate more efficiency, accessibility, and effectiveness in legal service delivery by embracing AI technology and adapting to the changing landscape.



2. Climate Responsive Design: A Comparative Analysis of Biophilic Architecture in Buildings in West Africa

Ajayi O.O.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria | Email: toyin.ajayi@calebuniversity.edu.ng

Yvonne O. M.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

Sophia T. O.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

George. O.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

ABSTRACT

This study examines how climate-responsive design and biophilic architecture are incorporated into structures throughout West Africa, highlighting the mutual benefits to sustainability and human well-being through features like natural light, vegetation, and locally sourced materials. Biophilic design enhances comfort and well-being by bringing inhabitants closer to the natural environment. By adjusting buildings to local climate conditions, climate responsive architecture maximizes resilience and energy efficiency. Using a qualitative methodology, the study examines four case studies: The World Bank Group Building in Accra, Ghana; Aerys Village in Thiès, Senegal; the JK Randle Centre for Yoruba Culture and History in Lagos, Nigeria; and the Ecobank Headquarters in Lomé, Togo. Results emphasize community involvement, maintenance, and climate adaption as well as the advantages and difficulties of using these design principles. The study finds that combining climate-responsive and biophilic design is essential for developing human-centered, sustainable habitats in West Africa, providing suggestions for designers and developers to improve future. **KEYWORDS:** Biophilic architecture, climate-responsive design, sustainability, West Africa, human well-being.



3. Design Considerations for Implementing Green Facades in High-Rise Residential Buildings in Lekki, Lagos

Afolabi T. A

Department of Architecture, Caleb University, Imota Lagos state, Nigeria | Email: afolabi.tolulope@calebuniversity.edu.ng

ABSTRACT

As urbanization continues to accelerate, high-rise residential buildings are becoming a dominant feature of cityscapes worldwide. In Lekki, Lagos, the rapid development and growing urban population have created an urgent need for sustainable and aesthetically pleasing architectural solutions. One such innovative approach is the implementation of green facades. This paper explores the critical design considerations necessary for successfully integrating green facades into high-rise residential buildings, with a specific focus on their potential applicability within the unique urban context of Lekki. Through a comprehensive review of existing literature and global best practices, this study identifies key factors essential for successful green facade implementation, including plant selection, structural integration, irrigation systems, and aesthetic design. The research emphasizes how careful consideration of local climate conditions, building orientation, and long-term maintenance requirements can significantly enhance the environmental, economic, and social benefits of green facades. By improving air quality, providing thermal insulation, and reducing the urban heat island effect, green facades offer significant potential to contribute to more sustainable urban living environments. Furthermore, this paper discusses how green facades can enhance urban aesthetics and biodiversity, creating visually appealing and healthier living spaces. In addition to these benefits, the paper also addresses potential challenges such as maintenance costs, technical know-how, and structural compatibility. This research provides a conceptual framework that architects, urban planners, and policymakers can use to guide the adoption and implementation of green facades in Lekki. By doing so, it offers a strategic blueprint for fostering greener, more resilient, and more liveable urban development. **KEYWORDS:** Green Facades, High-Rise, Lekki, Sustainable Architecture, Urban Heat Island



4. Voter Authentication Framework Using Blockchain, Lightweight Ring Neighbor Based User Authentication and Groupkey Agreement

Balogun O.A

Bells University of Technology, Ota | Email: tabalogun@bellsuniversity.edu.ng

Ogunseye A. A.

Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria | Email: aaogunseye@oauife.edu.ng

ABSTRACT

Global mistrust in election systems, caused by issues like vote rigging and hacking of electronic voting machines (EVMs), threatens democracy. This paper presents a blockchain-based e-voting framework designed to enhance voter authentication and secure voting transactions while addressing the computational challenges of traditional blockchain systems. The proposed system employs group-based voter authentication using a modified ring neighbor algorithm, allowing for decentralized voting, tamper-proof records, and the integrity of vote counts. Key cryptographic elements such as SHA-256 hashing, Merkle trees, and random integer pairwise verification are integrated to secure the election process. A centralized Trusted Authority (TA) handles voter registration and block creation, preventing double voting and impersonation. The blockchain's immutability guarantees that any tampering attempts are computationally infeasible, ensuring secure and transparent election outcomes. This framework addresses the vulnerabilities of current electoral systems, combining cryptographic security, decentralized validation, and efficient voter authentication to ensure a reliable and secure e-voting process. KEYWORDS: Agreement, Authentication, Blockchain, Electronic voting, lightweight, validation



5. Adapting Office Buildings to Climate Change: The Role of Renewable Energy and Adaptive Design in Abuja's Future Workspaces

Victoria T. Ogunleye

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria | Email: victoria.ogunleye@calebuniversity.edu.ng

Oladunni I. Ojo

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria

ABSTRACT

The escalating effects of climate change demand a rethinking of office building design, particularly in fast-growing urban centres like Abuja. This research explores the integration of renewable energy, specifically solar energy and wind turbines, alongside adaptive design as a strategy to future-proof office spaces against climate change. Abuja's climate, with intense sunlight during the day and strong winds at night, is ideal for harnessing these complementary energy sources. By utilizing solar panels and wind turbines, office buildings can achieve a resilient energy supply that reduces reliance on traditional grids and lowers carbon emissions. Beyond energy efficiency, adaptive design principles are vital in creating flexible and resilient spaces that respond to changing environmental conditions. The research methodology includes case studies of selected office buildings in Abuja and the distribution of questionnaires to building professionals, facility managers, and users of office spaces to gather insights. This integration enhances the sustainability of office buildings, ensuring they remain functional amidst environmental uncertainties. The study will provide actionable insights for planners, architects, and construction professionals, offering a blueprint for incorporating renewable energy and adaptive design into office buildings. By focussing on Abuja's specific climate, the study informs the development of resilient, sustainable workspaces, encouraging the adoption of renewable energy solutions in future projects. **KEYWORDS:** Climate Change, Renewable Energy, Adaptive Design, Sustainability, Abuja.



6. Environmental Psychology and Human Behaviours: A Study of Natural Light and Ventilation

Adokiye Dennis

ABSTRACT

This article explores the critical role of natural light and ventilation in enhancing workplace productivity, drawing from the principles of environmental psychology. It investigates how these two environmental factors impact cognitive performance, emotional well-being, and overall job satisfaction. The review synthesizes findings from recent empirical studies and case analyses, revealing that natural light can significantly improve focus, reduce fatigue, and elevate mood, while adequate ventilation is linked to better air quality, reduced discomfort, and increased energy levels. The article also examines the interplay between these elements and presents design strategies for optimizing office environments. By integrating these insights, the article offers practical guidelines for employers and designers seeking to create workspaces that foster higher productivity and a more positive work experience.



7. Urban Aesthetics Characterization and New Trends in Urban Design

Taiwo Atoro

Department of Urban and Regional Planning, Faculty of Environmental Sciences, Lagos State University

Oluwaseun Princess Okimiji

Department of Environmental Management, Faculty of Environmental Sciences, Lagos State University

Adewale Yoade

Department of Urban and Regional Planning, Faculty of Environmental Sciences, Lagos State University

ABSTRACT

The contemporary metropolis argues that new viewpoints and conceptual frameworks are necessary to reconsider the interaction between the natural and urban surroundings. The target of achieving 50% urbanization was likely accomplished sometime between 1996 and 2001. However, determining the precise date is challenging due to variations in the quality of census data and the methodologies employed to define urban areas across different countries. This study investigates the analysis of urban aesthetics and emerging patterns in urban design by investigating the fundamental principles of urban aesthetics, design, trends, and form. The study explores the analysis of concepts and emphasizes emerging patterns in urban planning, environmental friendliness and adaptability, user-oriented design, and technological advancement. This study use a synthesis qualitative technique, drawing from research case studies, archival research, and discourse analysis to assess the influential role of aesthetics in generating emerging trends, as well as examining case studies of successful incorporation of aesthetics and trends. This literature study showcases the effectiveness of visual quality, spatial experience, and sensory perception. The method effectively addressed green infrastructure, environmentally conscious architecture, urban planning that responds to climate conditions, and sustainable modes of transportation. Furthermore, the key aspects include place making and community participation, inclusive design and accessibility, as well as considerations for well-being. Topics covered include digital urbanism, smart cities, building information modelling (BIM) design tools, and data-driven urban planning. The results demonstrate that building design must provide sufficient space to accommodate this cultural activity and way of life. Culture should steadfastly resist succumbing to the temptation of architecture and its requirements, even if both are inherently dynamic and will evolve towards improvement. Research indicates that assessing the potential of biophilic design, planning, and policy to tackle future global concerns related to human survival on Earth is necessary. The study's findings suggest that contemporary urban design is progressively embracing a new framework to incorporate sustainability by enhancing our comprehension of the interplay between humans and nature in urban environments. KEYWORDS: Aesthetics, Urbanization, Urban planning, Urban design, Spaces and built environment



8. Cellulase by *Aspergillus niger* for Enhancement of Beetroot (*Beta vulgaris*) Drying Process

Obi, Cherish Onyinyechukwu

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Odunuga, Enitan Olanrewaju

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Buzugbe, Ebenezer

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Benneth, Olaku Sophia

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Ayedun, Joshua

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Kotun, Bunmi

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Fayemi, Scott Oluremi

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Olorunshola Shade John

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Ajayi, Adesola Adetutu

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria | Email: adesola.ajayi@calebuniversity.edu.ng

ABSTRACT

Beetroot (*Beta vulgaris*) is a crop belonging to the family Chenopodiaceae. It has a bright crimson colour and it is known by several common names such as beet, chard and spinach beet. It is famous for its juice value and medicinal properties. The intense colour of beetroots is directed from the high concentrations of betalains in beetroot. The betalains mainly found in beetroot are betacyanins and betaxanthins. The antioxidant properties of beetroot are mainly related to the high betalain content. An important strategy for enhancing the microbiological and biochemical stability of beetroots is by reducing the water activity. However, this strategy of increasing the drying rates as well as ensuring the reduction of negative impact on the plant nutritional content is very crucial for the agro industries. This study was therefore carried out to isolate cellulase by *Aspergillus niger* as pretreatment for the drying of Beetroot. Cellulase was produced by *A. niger* inoculated in a basal salt medium. The crude cellulase was characterized and employed for the drying of slices of Beetroot for 2h. The experimental sample consisted of slices of beetroot subjected to two different treatments of aqueous pretreatment and cellulase pretreatment while the control samples were the slices of beetroot without pretreatment. The treatments were compared for drying rates and colour change. The slices of Beetroot treated with cellulase remained unchanged for colour. The optimum cellulase activity was obtained at pH 5.0,



temperature of 30oC and the substrate concentration of 0.8mg/ml. The cellulase lost all its activity within 5min of heating at 70oC. Slices of beetroot with the control treatment showed significant changes of colour. The weight of the slices of beetroot reduced from 110g for all samples to 22.15g for the aqueous pretreated beetroot slices, 20.88g for the cellulase pretreated beetroot slices and 18.37g for the control beetroot slices. The results of this investigation revealed that the beetroot treated with cellulase had better drying ability than the aqueous samples compared with the control. KEYWORDS: Beetroot; Cellulase-Pretreatment; Betalains; Beetroot Drying



9. Building Energy Regulations in Nigeria: Implementation Challenges in Lagos State

Isidore C. Ezema

Department of Architecture, Lagos State University, Epe Campus, Nigeria | Email: isidore.ezema@lasu.edu.ng

Regina K. Okorigba

Department of Architecture, Covenant University, Ota, Nigeria

Taofeek A. Suleman

Department of Architecture, Lagos State University, Epe Campus, Nigeria

ABSTRACT

Buildings impact on the environment through energy use and associated emissions. Hence, energy efficiency is key to a sustainable built environment. Regulations for energy efficiency in the built environment play pivotal role in reducing the impact of energy use in buildings. In Nigeria, building energy regulation came into effect in 2017 with the launching of the National Building Energy Efficiency Code (NBEEC). Prior to this, there was a National Building Code which specified rules with respect to structural system, general and fire safety, sanitation standard and related building spatial standards without any guidelines on energy efficiency and use of renewables. With the adoption of the NBEEC at the national level, it was planned that the code will cascade to the state and local authorities. The initial two years of the adoption was a voluntary phase after which the code would be compulsorily enforced. Seven years after the launching, it is important to appraise the implementation of the programme in the Nigerian building sector. Hence the study appraised the implementation of the building energy efficiency code in Lagos, the commercial hub of Nigeria. In this respect, the administration of the code in the building development and control process in Lagos is evaluated. The study utilized structured interview to obtain data from key stakeholders in building design and development control in Lagos State. The study found that the implementation of the NBEEC is still largely voluntary. The envisioned domestication of the code at the state and local governments has not taken effect. Moreover, the required human resources to drive the reform are not readily available. This implies that relevant professionals especially the design architects and planning professionals need to be properly trained for seamless implementation of the energy efficiency guidelines for buildings. **KEYWORDS:** building energy regulation, challenges, development control, energy efficiency, Lagos



10. Evaluating the Integration of Smart Home Technology on Energy Efficiency in Residential Condominiums in Surulere, Lagos State, Nigeria.

Onyerionwu Yvonne

Department of Architecture, School of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria | Email: mareezuyvonne@gmail.com

ABSTRACT

This study evaluates the impact of smart home technology on energy efficiency in residential condominiums in Surulere, Lagos State, Nigeria. With rising concerns over energy consumption and sustainability, smart home technologies offer promising solutions for improving energy efficiency. The research employs a mixed-methods approach, combining quantitative data analysis with qualitative case studies to assess the effectiveness of smart devices such as smart thermostats, lighting controls, and energy management systems. The study examines adoption rates, cost-benefit analysis, and the environmental impact of these technologies. Findings reveal that integrating smart home technology significantly reduces energy consumption and enhances operational efficiency in residential settings. The results highlight the potential for smart technologies to support sustainability goals and provide valuable insights for developers, policymakers, and residents. This research contributes to understanding how smart home innovations can drive energy efficiency and promote sustainable living in urban environments. **KEYWORDS:** Smart home technology, energy efficiency, residential condominiums, sustainability, urban energy consumption.



11. Globalisation, Technology Transfer and Economic Growth in Sub-Saharan African Countries

Raymond Alenoghena

Samuel David Adebisi

Osunlana Kayode Idowu

ABSTRACT

Globalization has played a pivotal role in reshaping the landscape of African countries and has increasingly influenced the socio-economic lives of the people. Technology transfer, a key component of globalization, offers significant opportunities for African nations to leapfrog traditional industrialization stages, thereby boosting productivity, fostering innovation, and enhancing competitiveness in the global market. With more openness in trade and inflow of foreign direct investment (FDI), coupled with knowledge and technological spillovers from more developed economies, there is the potential to raise productivity levels in key sectors of African economies like agriculture, manufacturing, and services. This paper intends to examine the effect of globalization and technology transfer on the economic growth of African countries. The control variables for the model in this study include foreign direct investment, gross fixed capital formation and population, with a scope covering between 2013 and 2022. The study is conducted in twenty-nine (29) Sub-Saharan African countries. The study intends to deploy secondary data from the World Development Index. The analytical framework for the study entails pre-estimation procedures like panel unit root and cointegration analysis. The panel data regression mode will exploit the fixed effect and random effect options. After that, the Hausman test will be conducted to select the most appropriate model between the fixed effect and random effect. The Key areas of policy recommendations include how to enhance the educational systems to develop a skilled workforce capable of utilizing new technologies and implementing regulatory reforms to attract sustainable foreign investments. Addressing these gaps could ensure that globalization and technology transfer lead to broad-based, enhanced productivity and improved economic growth for the African continent. KEYWORDS: Globalisation, Technology Transfer, Per Capital Income, Fixed Effect and Random Effect.

Editorial Note: Printing error in source (CUD/24/111): the printed page header showed the title "Evaluating the Integration of Smart Home Technology on Energy Efficiency in Residential Condomiums in Surulere, Lagos State, Nigeria" — duplicated from the preceding page (CUD/24/110) — which does not match these authors or this abstract. The title above was inferred from the abstract body and keywords (Globalisation, Technology Transfer, Per Capita Income, Fixed/Random Effect); no correct printed title for this paper could be found in the source.



12. Globalization, Human Capital Development and Sustainable Economic Development in Nigeria

Raymond Osi Alenoghena

Segun Amos Adewale

Aliu Oguntade Fatai

ABSTRACT

Globalization has become a dominant force shaping economies worldwide, with profound implications for human capital development and sustainable economic growth, particularly in developing nations like Nigeria. This paper examines the intricate relationship between globalization, human capital development, and sustainable economic development in Nigeria from 1989 to 2022. The study intends to investigate how Nigeria's integration into the global economy—through trade liberalization, foreign direct investment (FDI), and technological transfer—has influenced the country's sustainable economic growth and human capital development. Furthermore, the analysis incorporates key control variables, including government expenditure, FDI, and total output in assessment of their moderating effects on sustainable economic growth. Consequently, the World Bank Development Indicators, 2022 and the Nigerian Central Bank's statistical report will be the sources of the data. Both descriptive and inferential techniques will be adopted in the analyses of data trends. Using time-series data and an econometric approach, Augmented Dickey Fuller (ADF) will be carry out for the stationarity of the variables in order to test their stationarity. Moreover, the study will employ an ARDL model to establish the long-run and short-run dynamics between globalization, human capital, government expenditure, FDI, infrastructure development, and economic sustainability. Also, the study intends to conduct a causality test among the chosen variables to facilitate the study's conclusions. Findings suggest that while globalization has accelerated economic growth, its benefits are limited without substantial investments in human capital. The paper will conclude with policy recommendations for leveraging globalization, enhancing human capital development, optimizing government spending, and improving infrastructure to foster long-term sustainable growth in Nigeria. **KEYWORDS:** Human Capital Development, Globalization, Foreign direct Investment, sustainable economic development, Government Expenditure.



13. Heritage Preservation and Public Awareness: Empowering Future Architects in Lagos

Ajayi O. O (PhD)

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

Daramola O. F

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria | Email: daramola.oluwatunmise@calebuniversity.edu.ng

Owolabi T. O. S

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

Adeleke S. O

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

ABSTRACT

Heritage preservation in Lagos is vital for maintaining the city's cultural identity, fostering community cohesion, and sustaining its architectural legacy for future generations. As Lagos continues to grow and modernize, the role of future architects in balancing development with the conservation of historical structures becomes increasingly important. This research paper examines the integration of heritage preservation into the architectural education curriculum in Lagos, aiming to empower future architects with the knowledge, skills, and sensitivity required for effective conservation practices. The study explores the current state of heritage preservation in Lagos, highlighting the challenges posed by rapid urbanization, inadequate infrastructure, and insufficient public awareness. It emphasizes the importance of architectural education in addressing these challenges by incorporating conservation principles into the curriculum. Through curriculum development, experiential learning, and critical thinking, future architects can be equipped to navigate the complexities of heritage preservation. The research also investigates the impact of public awareness and advocacy on heritage conservation, suggesting strategies to enhance community engagement and stewardship. By fostering a culture of heritage appreciation among both architects and the public, Lagos can better preserve its rich architectural history while promoting sustainable urban development. Ultimately, this paper advocates for a holistic approach to architectural education that not only prioritizes technical skills but also instills a deep understanding of cultural heritage, thereby preparing future architects to contribute meaningfully to the preservation of Lagos' unique architectural legacy.



14. Impact of Crowding on Shopper Satisfaction in Lagos Shopping Malls

Douglas, Kendicta Bionimibofa

Caleb University | Email: bionimibofa.douglas@calebuniversity.edu.ng

Bello, Abiola Oluwabunmi

Caleb University

ABSTRACT

This study investigates how crowding affects customers' pleasure in shopping centres in Lagos, a crucial factor in consumer behaviour that affects the performance of retail establishments. Lagos's shopping malls are growing more and more popular, drawing sizable crowds, particularly during peak hours, as the city continues to rapidly urbanise. The purpose of this study is to examine how the density of customers in these malls influences their overall shopping experience, paying particular attention to variables like satisfaction, stress levels, and perceived congestion. The study will use a mixed-method technique to collect data from customers at different malls in Lagos by combining quantitative surveys with qualitative interviews. According to the study, high levels of perceived crowding had a detrimental effect on shopper satisfaction, mostly by making shoppers feel more stressed and less satisfied with their purchases. These unfavourable opinions are greatly influenced by elements including crowded spaces, lengthy lines, and challenging navigation within the mall. The study also looks at how demographic factors like age, income, and the goal of shopping affect people's ability to tolerate crowding. According to the research, while a crowded store may discourage customers, its negative effects can be lessened by using efficient management techniques including better layout design, better crowd control, and improved customer service. This study's conclusion suggests that mall owners in Lagos implement these tactics in order to raise customer happiness and stay competitive in the expanding retail industry. This study adds to our knowledge of how people behave in congested metropolitan areas and provides useful advice for improving shopping experiences in Lagos and other similar cities. **KEYWORDS:** Consumer Behavior, Crowding, Lagos Shopping Malls, Retail Experience, Shopper Satisfaction



15. Inclusive Design Strategies for Enhancing the Lagos Built Environment: A Perspective of the Elderly Population in Lagos Mainland Local Government Area

Temiloluwa O. S. Owolabi

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria | Email: temiloluwa.owolabi@calebuniversity.edu.ng

Akintunde O. Onamade

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria

ABSTRACT

The urban landscape of Lagos, Nigeria, faces increasing challenges in creating inclusive environments that adequately serve the needs of its elderly population. Inclusive design, in the context of the elderly, focuses on creating environments that are accessible, safe, and comfortable, accommodating the physical, sensory, and cognitive needs of older adults. This study explores the perceptions and experiences of elderly residents within the Lagos Mainland Local Government Area regarding the inclusivity of the built environment. The research aims to identify key factors that affect accessibility, comfort, and safety for the elderly and propose design strategies to enhance their quality of life. Utilizing a purposive sampling approach, 60 elderly participants were selected to provide insights through a structured questionnaire, capturing both quantitative and qualitative data on their interactions with the urban environment. The findings will reveal significant gaps in current urban planning and design practices, particularly in addressing the specific needs of older adults. The results will highlight areas where inclusive design principles—such as improved accessibility, safety measures, and age-friendly public spaces—can be integrated into the urban fabric. The study intends to, through the outcomes, offer valuable recommendations for urban planners, architects, and policymakers on implementing inclusive design strategies to foster a more accessible, equitable, and age-friendly urban environment in Lagos. This research underscores the importance of prioritizing the elderly in urban planning to promote a sustainable and inclusive cityscape that benefits all residents. **KEYWORDS:** Accessibility, Elderly Population, Inclusive Design, Lagos Mainland, Urban Environment



16. Housing Characteristics and Preference: Equity of Sustainable Affordable/Building Materials Around Coastal Slum Settlement in Lagos Metropolis

Oluwaseun Princess Okimiji

Department of Environmental Management, Faculty of Environmental Sciences, Lagos State University, P.M.B 0001 Lagos State, Nigeria | Email: oluwaseun.okimiji@lasu.edu.ng

Taiwo Atoro

Department of Urban and Regional Planning, Faculty of Environmental Sciences, Lagos State University, P.M.B 0001 Lagos State, Nigeria

Michelle Iyabo Fasona

Department of Environmental Management, Faculty of Environmental Sciences, Lagos State University, P.M.B 0001 Lagos State, Nigeria | Email: michelle.fasona@lasu.edu.ng

ABSTRACT

Slum settlements exhibit a multitude of housing and environmental issues, insufficient basic facilities, and unorthodox housing that undermines human welfare. The welfare of humanity is typically contingent upon the environmental circumstances to which it is exposed. The objective of this study was to evaluate the housing characteristics and preferences, specifically focussing on the availability and fairness of sustainable and cheap building materials in coastal slum settlements inside the Lagos Metropolis. A structured questionnaire was distributed to a total of 200 participants. From this group, 50 individuals were randomly chosen from each of the areas: Bariga, Oworonshoki, Makoko, and Iwaya. The purpose of the questionnaire was to gather data on the physical attributes of residential buildings, housing quality, and individual preferences. The gathered data underwent descriptive statistical analyses using SPSS Version (20.0). The findings indicate that 30 percent of the residences were constructed within the time frame of 30 to 40 years ago, while around 27.5% were erected around five years ago. The majority of the residences were constructed using concrete, accounting for 58.5% of the total, while timber constructions made up only 4.5%. The mean household size ranged from five to eight individuals, accounting for 40.0% of households. The majority of individuals (82.5%) expressed a preference for residing in low-income settlements due to the affordability of housing rent. The survey determined that inadequate infrastructure and substandard housing conditions were the primary issues identified in low-income communities. Hence, it is imperative to promptly address the housing problem in order to attain livable, healthy, and prosperous cities. Consequently, it is imperative to prioritize the deliberate endeavor to provide affordable and suitable housing for impoverished individuals. This is crucial since the presence and sufficiency of infrastructure significantly influence the environmental state and livability of any community. **KEYWORDS:** Housing characteristics, Housing density, Housing preference, Sustainable urban development, Town planning



17. Optimizing Spatial Layouts for Luxury Hospitality: A Case Study of Maitama, Abuja

Daramola O. F

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria | Email: daramola.oluwatunmise@calebuniversity.edu.ng

ABSTRACT

This research investigates the optimization of spatial layouts in luxury hospitality settings in Maitama, Abuja, a district renowned for its upscale hotels. The study aims to enhance guest comfort, operational efficiency, and sustainability through innovative design solutions tailored to luxury hospitality environments. Employing a mixed-methods approach, qualitative interviews with stakeholders and quantitative surveys provide a comprehensive examination of current spatial configurations and design practices. Qualitative interviews with hotel managers, architects, and designers explore existing spatial layouts, identifying challenges and opportunities for improvement. Quantitative surveys gather guest feedback on spatial arrangements and amenities, informing strategies for enhancing guest satisfaction and operational efficiency. Drawing on architectural synthesis theories such as design synthesis, smart technology integration, and sustainable design principles, the study evaluates practical applications to optimize spatial layouts. The research offers insights for architectural practice, proposing recommendations to enhance spatial arrangements in luxury hotels. By applying design processes informed by architectural synthesis theories, the study aims to promote sustainability, elevate guest experiences, and maintain competitiveness in Maitama's hospitality industry. Ultimately, the findings contribute to advancing architectural practice in luxury hospitality, emphasizing the importance of thoughtful spatial planning and design integration in enhancing overall guest satisfaction and operational efficiency.



18. Public Perception of Renewable Energy Integration in Urban Areas in Lagos, Nigeria

Bello, Abiola Oluwabunmi

Caleb University | Email: abiola.bello@calebuniversity.edu.ng

Douglas, Kendicta Bionimibofa

Caleb University

ABSTRACT

The shift to renewable energy sources in urban areas is vital for sustainable development, but its success is heavily reliant on public perception and acceptance. This paper investigates how the public views the integration of renewable energy in cities, focussing on the factors that shape attitudes and behaviours toward adopting these technologies. Employing a mixed-methods approach, the research will analyse survey data and interviews with residents, policymakers, and industry experts across various urban centres. The results will reveal the complexities in the relationship between awareness, perceived advantages, and concerns related to renewable energy technologies, including solar, wind, and bioenergy. Public acceptance is influenced by environmental awareness, economic incentives, aesthetic preferences, and trust in governmental policies and utility companies. The study also underscores the role of misinformation and knowledge gaps as significant obstacles to public support. Furthermore, it explores how socio-demographic factors such as age, education, and income affect perceptions of renewable energy. The paper will conclude with recommendations for policymakers and stakeholders to improve public engagement and promote favourable attitudes toward renewable energy integration in urban areas. By addressing these perceptions, cities can more effectively overcome the challenges of transitioning to sustainable energy systems, achieving both environmental goals and public approval. **KEYWORDS:** Energy Integration, Public Perception, Renewable Energy, Sustainable Development, Urban Areas



19. ISOLATION AND CHARACTERIZATION OF BACTERIA FROM BEETROOT (*Beta vulgaris*) JUICE

Olaku, Sophia

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Buzugbe, Ebenezer

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Obi, Cherish Onyinyechukwu

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Odunuga, Enitan Olanrewaju

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Ayedun, Joshua

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Kotun, Bunmi

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Fayemi, Scott Oluremi

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

Olorunshola Shade John

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria

***Ajayi, Adesola Adetutu**

Department of Biological Sciences and Biotechnology, College of Pure and Applied Sciences, Caleb University, Imota, Lagos State, Nigeria | Email: adesola.ajayi@calebuniversity.edu.ng

ABSTRACT

Beetroot (*Beta vulgaris*) is a crop belonging to the family Chenopodiaceae. In contrast to other crops, the main sugar in beetroot is sucrose with only small amounts of glucose and fructose. The intense red colour of beetroots is derived from the high concentrations of betalains in it. Betanin is an abundant betalain present in beetroot. It had been reported that betanin inhibits tumor cell proliferation. The nitrates in beetroot are also able to lower blood pressure, modulate mitochondrial function and reduce bad cholesterol. Despite all the health benefits to the digestive system associated with the consumption of beetroot, there is the problem of low shelf-life when beetroot is made into juice as a result of microbial growth. Shelf life can be extended by storage at low temperature or by addition of natural preservatives. This study was therefore carried out to determine the shelf life of freshly prepared beetroot juice, isolate, characterize the bacteria associated with stored beetroot juice at different conditions and investigate the effect of adding natural preservatives, low storage conditions and boiling on the shelf life of beetroot juice. Beetroots (3,105.44g) were employed for the preparation of beetroot juice. Natural preservatives, ginger (39.39g) and garlic (13.23g) were added to the experimental beetroot juice. There were twelve different conditions at which the freshly prepared juice were stored for seven days each. The pour plate technique was used for culturing the bacterial isolates from the



samples on Nutrient agar Plates. Incubation was at 35°C for 24-48h. Organoleptic parameters of colour, taste and smell with and without the natural preservatives were obtained by a taste panel of ten individuals. The results of this investigation revealed the cultural characteristics for the bacterial isolates associated with freshly prepared beetroot juice stored at different conditions. The juice with preservative kept in the refrigerator maintained the initial freshness till the fifth day of storage while the beetroot juice with preservative kept in the freezer was the most attractive, refreshing and tasty of all. It was safe for consumption till the seventh day of storage. The natural preservatives had an effect on the shelf-life of beetroot juice. The results of this investigation will be very good and useful for juice-making industries.



20. THE HOMOGENEITY OF ISSB BUILDING ENVELOPES TOWARDS PROMOTING WIDESPREAD ADOPTION FOR SUSTAINABLE HOUSING PROJECTS IN SUB SAHARAN AFRICAN CITIES

O. A. Ibitoye

Department of Architecture, College of Environmental Science and Management, Caleb University, Imota, Lagos State, Nigeria

T. O. S. Owolabi

Department of Architecture, College of Environmental Science and Management, Caleb University, Imota, Lagos State, Nigeria |

Email: temiloluwa.owolabi@calebuniversity.edu.ng

A. O. Alagbe

Department of Architecture, College of Environmental Science and Management, Caleb University, Imota, Lagos State, Nigeria

A. Olatunde

Department of Architecture, Federal University of Technology Akure, Ondo State

ABSTRACT

Interlocking Stabilized Soil Blocks (ISSBs) present a sustainable and cost-effective alternative to conventional building materials, offering significant potential for addressing housing shortages in Sub-Saharan African cities. This paper investigates the homogeneity of ISSB building envelopes and their potential to promote widespread adoption in sustainable housing projects across the region. A comprehensive review of existing literature on ISSBs reveals their benefits, including thermal performance, structural integrity, and environmental sustainability. The review also examines challenges to their adoption, such as variability in quality and lack of standardization. The research will employ a mixed-methods approach, combining quantitative analysis of ISSB samples from various regions with qualitative interviews of stakeholders, including builders, architects, and policymakers. The findings will indicate the variation in the quality of ISSBs produced in different locations, impacting their performance and acceptance. The discussion will explore the implications of these findings for the broader adoption of ISSBs, emphasizing the need for standardization and quality control measures to ensure consistent performance. The paper conclusion will be based on how much great promise ISSBs hold for sustainable housing in Sub-Saharan Africa, in order to achieve widespread adoption. To promote the widespread adoption of ISSBs, the paper will make recommendations on the establishment of regional production standards, training programs for local manufacturers, and government incentives for sustainable building practices. Further, the research will suggest exploring the long-term performance of ISSB structures in various climatic conditions across Sub-Saharan Africa.



21. UTILIZING INNOVATIVE ARCHITECTURAL DESIGN TO STRENGTHEN HOUSING RESILIENCE IN COASTAL AREA IMPACTED BY CLIMATE CHANGE

Oluwatunmise Esther Iwayemi

Email: tunmiseiwayemi@gmail.com

Oluwapelumi Gabriel Oladejo

Email: oladejopelumi1@gmail.com

ABSTRACT

With the growing threat of climate change, coastal regions are increasingly at risk from environmental challenges such as flooding, storm surges, and sea-level rise. This paper explores how innovative architectural design can help strengthen housing resilience in these vulnerable areas, with a particular focus on the Ayetoro coastal community in Ondo state. Based on an extensive analysis of Ayetoro, where climate change has severely affected housing quality, this study examines how advanced architectural techniques can reduce these risks. The research highlights the use of smart technologies, adaptive materials, and sustainable building practices to create houses that can withstand harsh coastal conditions. It stresses the role of digital tools in designing buildings that respond to specific environmental pressures in coastal zones. Key components include the integration of adaptive building materials that respond to changes in the environment. A total of 379 questionnaires were distributed with 92.9% completion rate. Gathered data were presented by means of frequencies and percentage on tables and analyzed using inferential statistical tools such as linear correlation and pair sampled correction at 95% confidence level. This paper demonstrates that utilizing technological advancements in architecture is essential for addressing housing vulnerabilities in coastal areas. Implementing these solutions can help communities like Ayetoro not only protect their housing infrastructure but also improve their overall quality of life.



22. BUSINESS PROCESS RE-ENGINEERING AND ORGANIZATIONAL PROFITABILITY IN THE DIGITAL ERA: EVIDENCE FROM WEMA BANK PLC. LAGOS

James Nwoye Obi

Department of Business Administration, College of Arts, Social and Management Sciences, Caleb University, Imota, Lagos

Goodluck Nnorom

Department of Business Administration, College of Arts, Social and Management Sciences, Caleb University, Imota, Lagos

Ebiere Kolawole

Department of Business Administration, College of Arts, Social and Management Sciences, Caleb University, Imota, Lagos

ABSTRACT

Business Process Re-engineering (BPR) which is a transformative strategy used for revamping businesses for improved operations and enhanced profitability is assuming greater importance in the current digital era. BPR aims to turn-around business processes remarkable performance. However, questions persist as to whether huge investments in big data analytics and automation capabilities, aimed at driving organizational effectiveness in the digital era are truly adequate to earn higher profitability and to deliver on impressive organizational bottom-line. This research study investigated the extent to which process re-engineering enhances organizational effectiveness. It also examined how digital capabilities affect operational efficiency. Finally, it assessed the extent to which digital training and development enhances employee productivity. The study adopted survey research design. Total population of the study was 200 respondents made up of employees and other stakeholders of WEMA Bank Plc. Marina, Lagos. Following complete enumeration research design, copies of questionnaire were administered to the entire 200 respondents which was taken as the sample size. However, only 120 copies of questionnaire were returned correctly completed and fit for analysis. Three hypotheses were formulated and tested. The results of the hypotheses tested showed that process re-engineering has significant effect on organizational effectiveness and digital capabilities has significant effect on operational efficiency. The result also revealed that digital training and development has significant effect on employee productivity. Based on the findings, the paper recommended that corporate organizations should invest more on re-engineering and digitalization of processes to take advantage of new technologies to enhance organizational profitability.



23. The Impact of the 2024 Economic Turning Point on Civil Servants and Entrepreneurship: A Comparative Analysis

Y.A. Wasai

Kano Subeb

ABSTRACT

The Impact of the 2024 Economic Turning Point on Civil Servants and Entrepreneurship: A Comparative Analysis; The year 2024 marked a significant economic turning point that had far reaching implications for the status and prospects of civil servants and entrepreneurs. This study explores the impact of this economic shift on individuals working in civil service roles compared to those engaged in entrepreneurship. The changing economic landscape, characterized by increased digitalization and technological advancements, has led to disruptions in traditional job roles and career paths. Civil servants have faced challenges such as job insecurities, automation threats, and a need for upskilling to remain competitive. In contrast, entrepreneurship has seen a surge in opportunities with lower entry barriers and the potential for global reach. Through a comparative analysis, this research aims to shed light on the shifting dynamics between civil service and entrepreneurship in the wake of the 2024 economic turning point. By examining factors such as job security, financial prospects, autonomy, and personal fulfilment, this study seeks to provide insights into the considerations individuals face when choosing between a career in civil service or embarking on an entrepreneurial venture. Ultimately, this research contributes to a deeper understanding of the changing nature of work and the implications for individuals navigating career decisions in a rapidly evolving economic landscape. However, education orient individuals while jobs sustain their livelihood. In contrast civil servant are bound with limited salaries and wages while entrepreneurs are opportune to unlimit their instant/long plan incomes. Despite more graduates are addendumly loaded to the labour market annually.

Editorial Note: Printing error in source (CUD/24/123): the printed page header showed the title "Business Process Re-engineering and Organizational Profitability in the Digital Era: Evidence from WEMA Bank Plc. Lagos" — duplicated from the preceding page (CUD/24/122) — which does not match the authors (Y.A. Wasai, Kano SUBEB) or this abstract's content. The title above is taken from the first sentence of the abstract body itself, which states its own title inline.



24. IMPACT OF REMOTE WORK ARRANGEMENTS ON EMPLOYEE ENGAGEMENT AMONG EMPLOYEES AT PAYSTACK NIGERIA

Okoliko Emmanuel Ojonugwa

Department of Business Administration, National Open University of Nigeria, Abuja | Email: eokoliko@noun.edu.ng | Tel: +2348060960223

Rotimi Ayodele Gbadeyan

Department of Marketing, Faculty of Management Ilorin, Nigeria

Ayetigbo Olumide Abiodun

Department of Business Administration, National Open University of Nigeria, Abuja

Jacob Benjamin

Department of Business Administration, National Open University of Nigeria, Abuja

ABSTRACT

This study investigated the impact of remote work arrangements on employee engagement at Paystack Nigeria, a leading fintech company. It examined the influence of flexible, fully remote, and hybrid work models on engagement levels. A quantitative, cross-sectional survey design was employed, collecting data from 104 employees out of 217. The sample size was determined using the Krejcie and Morgan (1970) table. SmartPLS analysis revealed that hybrid work arrangements had the strongest positive effect on engagement (path coefficient = 0.362), followed by fully remote (0.110) and flexible work arrangements (0.063). These models explained 24.6% of the variance in employee engagement. The study also assessed the reliability, validity, and practical significance of the findings. Results suggest that hybrid work, which balances remote and in-office tasks, is most effective in enhancing engagement within Nigeria's fintech sector. Organizations should also provide sufficient support to employees working remotely or flexibly to boost engagement. This study contributes to the limited research on remote work in Nigeria, offering practical insights for companies adapting to flexible work arrangements. It underscores the significant role of hybrid models in boosting employee engagement while emphasizing the need to support remote workers.

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25. DEVELOPMENT OF ADAPTIVE INTERNET OF THINGS BASED REAL TIME TRAFFIC MANAGEMENT SYSTEM

Adegunwa Adeola Mary

Department of Computer Science, Caleb University, Lagos State, Nigeria

Emmanuel Ajulo

Department of Computer Science, Federal University of Technology, Akure, Ondo State, Nigeria

ABSTRACT

This work presents in detail a research study and implementation of an intelligent traffic management system for Lagos, Nigeria: the Next-Generation Intelligent Traffic Management System. The study solves the very important urban mobility problem in one of the largest cities in Africa, in which congestion on the roads highly influences productivity and quality of life. The research starts by undertaking a careful scrutiny of the prevailing systems of traffic control, describing their shortcomings and issues. Based on this, a completely new web-based application has been designed and developed to report current updates of traffic to the motorists and other road users. The system incorporates the most modern technologies for data collection, processing, and distribution with efficiency. Main peculiarities of the system implemented include the possibility of being offline by the system itself, hence addressing some of the basic issues to do with connectivity common in developing urban cities. The project also explores various implementation strategies including pilot, direct, and parallel changeover procedures for the smooth adoption of the system. The methodology means a research approach that involves the design of the system, its implementation, testing, and then post-implementation review of the system. Specific emphasis has been placed on the design of user interface, system requirement, and operational instructions to make it accessible, easy to operate, and user-friendly. Results are shown where the developed system can reduce a lot of wasted time in traffic, which may save somebody's life in an emergency situation, increasing urban productivity overall. Recommendations for future enhancements and discussions on implications of such systems to urban development in rapidly growing African cities conclude the study. This contribution goes to both the theoretical understanding and practical application of a traffic management solution; hence, bridging the gap between academic proposals and real implementations. This work will serve as a yardstick for responding to similar challenges that other developing cities face regarding urban mobility.



26. EXPLORING THE ECONOMIC BENEFITS OF RENEWABLE ENERGY: A CASE STUDY OF CALEB UNIVERSITY INDEPENDENT POWER PROJECT

***Adenubi, Olufunmilola Omolola**

Department of Architecture, College of Environmental Sciences & Management, Caleb University Lagos, Nigeria | Email: funmilola.adenubi@calebuniversity.edu.ng

Obaribirin Anthony Ambrose

Department of Architecture, College of Environmental Sciences & Management, Caleb University Lagos, Nigeria

Salaudeen Akeem

Department of Architecture, College of Environmental Sciences & Management, Caleb University Lagos, Nigeria

ABSTRACT

This study titled "Exploring the Economic Benefits of Renewable Energy: A Case Study of Caleb University Independent Power Project (IPP)" explores the economic viability and implications of renewable energy systems in educational institutions, focusing on the exemplary Independent Power Project at Caleb University. The global energy sector is undergoing a transformation, with renewable energy emerging as a key solution to carbon emissions and energy security challenges. The study aims to address the research gap in Nigeria by specifically examining the economic benefits of renewable energy in educational institutions like Caleb University. Using a descriptive survey design, this study helps in understanding the economic viability and implications of renewable energy and will also provide valuable recommendations for institutions. Recommendations were formulated for integrating renewable energy into educational institutions, emphasizing awareness campaigns, government incentives, expertise development, and strategic planning.



27. PROCESS AUTOMATION AND PATIENTS' SATISFACTION IN SELECTED HOSPITALS IN ABEOKUTA, OGUN STATE

Shodiya Olayinka Abideen

Department of Business & Finance, Crescent University, Abeokuta, Ogun State, Nigeria | Email: olayinkashodiya@yahoo.com

Olajide Alade Raji

Department of Business & Finance, Crescent University, Abeokuta, Ogun State, Nigeria

Jolaosho Surajudeen Olawale

Department of Business & Finance, Crescent University, Abeokuta, Ogun State, Nigeria

ABSTRACT

Technology has significantly impacted public, private, and healthcare sectors, revolutionizing operations and services. They contribute to accuracy, better service delivery, and corruption eradication, thereby increasing productivity and solving accountability issues. This research work investigated the effect of process automation on patient satisfaction in selected hospital in Abeokuta metropolis, Ogun state. The research was anchored on four specific objectives; examine effect of process-error-free on patient satisfaction in selected hospital in Abeokuta, Ogun state; Assess the effect of speedy service delivery on patient satisfaction in selected hospital in Abeokuta, Ogun state; investigate the effect of service quality on patient satisfaction in selected hospital in Abeokuta, Ogun state; assess the effect of simplifies process on patient satisfaction in selected hospital in Abeokuta, Ogun state; the study utilized convenient sampling method to select sample from population of 534 who are patients on admission at the time of the study in all the hospital under survey. A sample of 252 was selected using Taro Yamane's sample size determination formula. The final analysis involves 240 properly filled and returned questionnaire from the respondents. The data was analyzes using CB-SEM to assess relationships among variables. The result of the findings revealed an insignificant direct relationship ($\beta = -0.875$, $p > 0.01$) between PEF and PS; There was an insignificant direct relationship ($\beta = -0.653$, $p > 0.01$) between SD and PS; Similarly, there was an insignificant direct relationship ($\beta = -0.745$, $p > 0.01$) between SQ and PS; also, there was an insignificant direct relationship ($\beta = -0.696$, $p > 0.01$) between SP and PS. The study concludes that all measured of process automation have an insignificant relationship with patient satisfaction and recommends, among others, that the hospitals' authorities should ensure speedy service delivery, and ensures consistency in their performance to ensure that patients can have uninterrupted access to efficient healthcare services to promote a considerable level of patent's satisfaction.



28. A SYSTEMATIC REVIEW ON THE IMPLEMENTATION OF NANO-TECHNOLOGY IN BUILDING CONSTRUCTION

Alabor O. Z.

Department of Architecture, Caleb University, Imota, Lagos | Email: alabor.zaccheaus@calebuniversity.edu.ng

Atulegwu A.

Department of Architecture, Caleb University, Imota, Lagos

Anyanechi H.

Department of Architecture, Caleb University, Imota, Lagos

David-Mukoro K. D.

Department of Architecture, Caleb University, Imota, Lagos

ABSTRACT

The integration of nanotechnology into building construction has unlocked revolutionary advancements, offering unprecedented improvements in material properties, energy efficiency, and building longevity. This systematic review explores the current state of nanotechnology applications in construction, analysing key nanomaterials such as carbon nanotubes, nanosilica, and titanium dioxide. These materials demonstrate significant potential in enhancing structural performance, sustainability, and cost efficiency in construction projects. The review also examines practical applications such as self-cleaning nanocoatings, energy-efficient building envelopes, and self-healing concrete, highlighting their contributions to reducing energy consumption and maintenance costs. The findings indicate that while nanotechnology presents transformative benefits in construction, several challenges impede its widespread adoption. These include high production costs, regulatory barriers, and limited awareness among construction professionals. Additionally, concerns about the long-term environmental and health impacts of nanomaterials remain unresolved. The review concludes that further research, regulatory development, and stakeholder engagement are critical to facilitating the safe and effective implementation of nanotechnology in construction. By addressing these challenges, nanotechnology could play a pivotal role in advancing sustainable building practices and enhancing the performance of the built environment.



29. ADAPTING OFFICE BUILDINGS TO CLIMATE CHANGE: CONSTRUCTION INDUSTRY PROFESSIONALS' PERCEPTIONS OF RENEWABLE ENERGY IN ABUJA'S FUTURE WORKSPACES

Victoria T. Ogunleye

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria | Email: victoria.ogunleye@calebuniversity.edu.ng

Oladunni I. Ojo

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos State, Nigeria

Dominion A. Olofu

ABSTRACT

This study investigates the perceptions of construction industry professionals regarding the role of renewable energy in adapting office buildings to climate change in Abuja, Nigeria. An online survey collected data from 95 participants, primarily architects and engineers, showcasing a well-educated group with a significant number of early-career professionals. Findings reveal a moderate awareness of renewable energy, with solar energy identified as the most suitable source for Abuja's office buildings. Participants recognized major benefits, such as reduced electricity costs and carbon emissions, but also reported barriers, including high upfront costs and maintenance challenges. The effectiveness of existing policies was questioned, with calls for enhanced financial incentives, simplified regulatory processes, and stronger government support to promote renewable energy adoption. Although awareness of successful renewable energy projects in Abuja is low, notable examples, such as the Ministry of Works and Housing and Baze University, demonstrate the potential for impactful integration. Optimism for the future of renewable energy adoption is prevalent, emphasizing the need for increased education and collaboration among stakeholders. This research highlights the importance of targeted policy improvements and initiatives to address barriers, fostering sustainable energy practices that can enhance the resilience and performance of office buildings in Abuja.



30. IMPLEMENTATION OF AGILE IN THE ADOPTION OF PASSIVE DESIGN IN NIGERIA

Olatunde Oladoja

College of Environmental Sciences and Management, Caleb University, Imota, Lagos, Nigeria | Email: olatundeofficial@gmail.com

ABSTRACT

This journal explores the integration of Agile methodologies in the implementation of passive design principles within the context of sustainable architecture in Nigeria. Passive design strategies have gained significant recognition worldwide for their ability to reduce energy consumption and promote environmental sustainability. However, the adoption of these principles in Nigeria faces various challenges, including cultural barriers, limited resources, and a lack of awareness. Passive design will be more effective when implemented within the framework of agile methodology. Agile, an IT industry framework with several tools—Scrum being one of them—has proven to be an effective technique for project delivery. Although the way construction projects are managed has not changed significantly, materials, competition, and user requirements are continuously changing. As a result, there is a gap in the managerial perspective between how construction projects are currently handled and how they may be managed to increase efficiency. The construction industry could apply the agile technique to maximize the tangible benefits of tackling unforeseen risks and delays in project completion, therefore adding value to the project and creating satisfaction for the users. This journal discusses how agile practices can be leveraged to overcome these challenges and facilitate the successful implementation of passive design in Nigerian architecture.

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31. CLIMATE CHANGE AND THE CONSERVATION OF HISTORICAL BUILDINGS IN IKORODU

Anthony Obaribirin

Funlola Adenubi

ABSTRACT

Climate change poses a significant threat to historic buildings worldwide, including those in Ikorodu, Lagos State. Rising temperatures, increased Ultra violent radiation, and fluctuating humidity levels which creates great damage to historic buildings and thereby necessitate urgent research into effective conservation strategies. This study assessed the vulnerability of materials used in historic buildings in Ikorodu to climate change. It focuses on understanding how climate variables affected paints, roof colors, and walls. The findings reveal that, rising temperatures and increased Ultra violent radiation degrade the aesthetic and structural integrity of historic buildings. Paints fade and crack, wall crack, roof materials discoloration and break down due to prolonged climate stressors. Interviews with local professionals confirm that temperature fluctuations, humidity variations, and direct Ultra violent exposure are primary factors in the deterioration of historic buildings. Effective conservation techniques include protective coatings, regular maintenance, and Historic building owner awareness. The study concludes that proactive and adaptive conservation strategies are crucial for preserving the historical and cultural integrity of heritage buildings Ikorodu. This research contributes to the body of knowledge by addressing the critical issue of how climate change impacts historic buildings, specifically in Ikorodu, Lagos State. It emphasizes the importance of Historic building owner awareness involvement and stakeholder engagement in heritage conservation, ensuring that conservation strategies are culturally appropriate and socially accepted.

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32. INVESTIGATION OF THE USE OF SOLAR ENERGY FOR RESIDENTIAL AREAS, A CASE STUDY OF SELECTED ESTATES IN IKORODU NORTH, LAGOS, NIGERIA

***Adenubi, Olufunmilola Omolola**

Department of Architecture, College of Environmental Sciences & Management, Caleb University Lagos, Nigeria | Email: funmilola.adenubi@calebuniversity.edu.ng

Obaribirin Anthony Ambrose

Department of Architecture, College of Environmental Sciences & Management, Caleb University Lagos, Nigeria

Otitolaju Daniel

Department of Architecture, College of Environmental Sciences & Management, Caleb University Lagos, Nigeria

ABSTRACT

The level of awareness of the use of solar energy as a renewable energy source in Nigeria is becoming increasingly immense due to advance technology adoption and development. Analysts in the area of study are beginning to key into the steady improvement and integration method on the vast use of solar energy in Nigeria. Solar energy is defined a form of energy that is produced when radiant heat and photon (light) from the sun is harnessed utilizing various technologies like solar power for electricity generation, solar thermal energy. While solar power is often viewed as a futuristic energy solution, humans, communities, states and countries have harnessed the sun's energy for millennia, employing various innovative methods long before the invention of the first photovoltaic (PV) panel. However, in the past few decades, considerable strides have been taken to improve photovoltaic (PV) panelling systems, elevating solar power to become the third-largest renewable electricity source, marking up 3.1% of global electricity generation. In recent years, As the nation grapples with energy security challenges and strive for sustainable development, the embrace of solar energy emerges as a pivotal solution. This trend does not only align with global efforts to mitigate climate change but also addresses Nigeria's quest for reliable and accessible energy source.

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33. USERS' SATISFACTION OF MARY HALL OF RESIDENCE AT CALEB UNIVERSITY, IMOTA, LAGOS

Ademakinwa O. O.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria | Email: olasunmbo.ademakinwa@calebuniversity.edu.ng

Daramola O. F.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

Sigha A. E.

Department of Architecture, Caleb University, Imota, Lagos state, Nigeria

ABSTRACT

This study investigates the satisfaction levels of female students residing in Mary Hall of Residence at Caleb University, Imota, Lagos, focusing on their perceptions of the hall's facilities and architectural design. The research employs a mixed-methods approach, combining quantitative surveys and qualitative interviews to evaluate various aspects of user satisfaction, including room conditions, cleanliness, safety, accessibility, and the responsiveness of housing management. Results indicate that while students appreciate the hall's accessibility and circulation, there is significant dissatisfaction with the size of rooms, lighting, bathroom cleanliness, and the university's responsiveness to maintenance issues. These findings align with previous studies on student housing satisfaction, which emphasize the importance of cleanliness, safety, and responsive management in enhancing overall satisfaction. The study concludes that targeted improvements in facility management, maintenance responsiveness, and the expansion of social spaces are essential to enhancing the living experience in Mary Hall. Recommendations include upgrading lighting systems, improving waste disposal and cleaning protocols, and fostering a more responsive maintenance service. These measures are crucial for improving the overall quality of life for students and contributing to their academic success and well-being.

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34. GLOBAL AND LOCAL CHALLENGES TO PUBLIC ACCEPTANCE OF RENEWABLE ENERGY IN URBAN AREAS: A REVIEW

Bello Abiola Oluwabunmi

Department of Architecture, Caleb University, Lagos | Email: abiola.bello@calebuniversity.edu.ng

Douglas Kendicta Bionimibofa

Department of Architecture, Caleb University, Lagos

Adokiye Dennis

Department of Architecture, Caleb University, Lagos

ABSTRACT

Public acceptance of renewable energy remains a critical challenge for the transition to sustainable energy systems, particularly in urban areas. This paper reviews the global and local barriers to public acceptance of renewable energy, with a focus on urban regions in Nigeria. It highlights key factors influencing acceptance, including economic concerns, lack of public engagement, aesthetic issues, and perceived environmental impacts. In Nigeria, additional challenges arise from infrastructural limitations and affordability, which hinder widespread adoption. The paper recommends policy reforms that promote financial incentives, inclusive governance, and community engagement to improve public acceptance. Educational campaigns targeting different demographics and the integration of decentralized, community-owned energy systems are proposed as strategies to enhance public awareness and participation. Finally, the paper identifies future research directions, emphasizing the need for studies that explore socio-economic dimensions and the evolving role of technology in shaping public perceptions of renewable energy.

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35. IMPACT OF NATURAL LIGHTING IN HOSTELS ON STUDENTS' MOTIVATION AT CALEB UNIVERSITY, IMOTA, LAGOS STATE

Asaju, O.A.

Department of Architecture, Caleb University, Lagos | Email: opeyemi.asaju@calebuniversity.edu.ng

Onamade, A.O.

Department of Architecture, Caleb University, Lagos | Email: akintunde.onamade@calebuniversity.edu.ng

Adewumi, B.J.

Department of Architecture, Caleb University, Lagos | Email: bamidele.adewumi@calebuniversity.edu.ng

Adejare, O.

Department of Architecture, Caleb University, Lagos

Iwayemi, E.

Department of Architecture, Caleb University, Lagos

Alagbe, O.A.

Department of Architecture, Caleb University, Lagos

ABSTRACT

Natural lighting plays a crucial role in living environments, significantly influencing psychological well-being and productivity. This study investigates the role of natural lighting in hostels and its impact on students' motivation. The primary aim is to explore how varying levels of natural light in hostel rooms influence students' motivation to study. The objectives include analyzing the amount of natural light present in different hostel rooms, examining the correlation between light exposure and self-reported motivation levels, and recommending enhancements to hostel lighting design based on the findings. Primary data was gathered through structured questionnaires administered electronically. 701 valid responses were received. Preliminary findings suggest that rooms with greater natural light exposure correlate with higher motivation among students, indicating that improved lighting conditions may enhance academic productivity. The study emphasizes the importance of integrating effective lighting design into the hostel environments to foster a conducive atmosphere for learning and personal growth. Addressing the influence of natural lighting, this research aims to contribute valuable insights for hostel management and educational institutions seeking to optimize student motivation and well-being.

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36. IMPLICATIONS OF FOREIGN DIRECT INVESTMENT ON SOCIO-ECONOMIC DEVELOPMENT IN NIGERIA DURING BUHARI ADMINISTRATION (2015-2023)

Oduntan Joseph Olatunji

Department of Political Science and International Relations, Caleb University Imota, Lagos | Email: jossyyyjoe@gmail.com

Ibirogba Ifeoluwa O.

Department of Political Science and International Relations, Caleb University Imota, Lagos

ABSTRACT

Foreign Direct Investment (FDI) is a method of increasing the physical and human capital of a host country, which lead to a rise in real GDP. FDI aids in generating technical spillovers, transferring knowledge, developing new firms, and integrating host nations into global economic trade. Economic growth has remained stagnant, hindered by a reliance on oil exports and insufficient diversification. The unemployment rate has remained in double digits, with many graduates unable to find suitable employment, leading to a waste of human capital and increased crime rates. The paper assessed the influence of FDI on infrastructural development in Nigeria between 2015-2023 and the extent to which FDI has contributed to poverty reduction in Nigeria. The study adopted a descriptive research design and employed neoclassical theory of economic growth. The study concluded that despite FDI's potential to drive economic growth, factors such as political instability, corruption, and inadequate infrastructure limited its effectiveness. The paper recommends that the government should focused efforts to improve infrastructure which are crucial for creating an enabling environment for FDI. Robust infrastructure, such as transportation networks, power supply, and telecommunications, will enhanced the operations of foreign investors more effectively.

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37. INCORPORATION OF PASSIVE DESIGN PRINCIPLES IN PUBLIC BUILDINGS: CASE STUDY OF SELECTED LIBRARY BUILDINGS (CUD/24/137)

Onosemuode, M.O.

Department of Architecture, Caleb University, Imota, Lagos

Oyesode, S.

Department of Architecture, Caleb University, Imota, Lagos

Ademakinwa, O. O.

Department of Architecture, Caleb University, Imota, Lagos

G. A. Otuonuyo

Department of Architecture, Caleb University, Imota, Lagos

ABSTRACT

Incorporation of passive design principles in public buildings is very important for the attainment of the global sustainable development drive in tropical regions. A library building is a type of public building considered as the gateway to knowledge and provides an avenue for lifelong learning, research, and continuous educational development. Passive design is "an energy efficient building approach that prioritizes the reduction of energy demand by utilizing daylight, shading devices, and natural cooling techniques, while integrating renewable energy systems where necessary," underscoring the importance of reducing energy demand in buildings through intelligent choices of design. This paper used the case study qualitative research approach to review the concepts, principles, and strategies of passive design of public libraries within tropical regions. It investigated the level of incorporation of passive design principles in five (5) selected public library buildings in Lagos State Nigeria on passive design measures put in place in the design. Observations were drawn and recommendations were made.



38. INCORPORATION OF PASSIVE DESIGN PRINCIPLES IN PUBLIC BUILDINGS: CASE STUDY OF SELECTED LIBRARY BUILDINGS (CUD/24/138 - shares printed title with CUD/24/137 but is a distinct entry about IoT in smart architecture)

Ozomaro U. Julius

Department of Architecture, Caleb University, Imota, Lagos | Email: babajozo95@gmail.com

Daramola Adedeji

Department of Architecture, Caleb University, Imota, Lagos

Alagbe Oluwole

Department of Architecture, Caleb University, Imota, Lagos

Dare-Abel Ayodeji

Department of Architecture, Caleb University, Imota, Lagos

Dayomi Matthew

Department of Architecture, Caleb University, Imota, Lagos

Akintunde A. Onamade

Department of Architecture, Caleb University, Imota, Lagos

ABSTRACT

The integration of Internet of Things (IoT) technologies in architecture has transformative potential for creating sustainable, energy-efficient, and occupant-centric built environments. This research presents a novel framework for incorporating IoT sensors, data analytics, and machine learning algorithms in building design. A case study of a smart building prototype demonstrates the effectiveness of this framework in reducing energy consumption by 25%, improving indoor air quality by 30%, and enhancing occupant satisfaction by 90%. The framework's scalability and adaptability are evaluated through simulations and sensitivity analyses. We present a case study of a smart building design that incorporates IoT sensors, energy harvesting systems, and data analytics to optimize energy efficiency, indoor air quality, and occupant comfort.



39. OPTIMIZING HOTEL ROOM DESIGN FOR COST-EFFECTIVENESS AND USER EXPERIENCE IN LAGOS

Salami O.

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos state, Nigeria | Email: architectsalami@yahoo.com

Taiwo A. A.

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos state, Nigeria

Ibem E. O.

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos state, Nigeria

Ajayi O. O.

Department of Architecture, College of Postgraduate Studies, Caleb University, Imota, Lagos state, Nigeria

ABSTRACT

This research investigates the optimization of hotel room design for cost-effectiveness and user experience in Lagos, Nigeria. With the increasing competition in the hospitality industry and the growing expectations of travelers, hotel operators must prioritize design features that enhance guest satisfaction while maintaining operational efficiency. Utilizing a quantitative approach, the study collected data through structured surveys administered to hotel guests, focusing on their perceptions of various design elements and overall satisfaction levels. The findings reveal that key cost-effective design features, such as energy-efficient lighting, modular furniture, and multi-functional spaces, significantly contribute to guest satisfaction. Furthermore, the study highlights the importance of incorporating contemporary designs that reflect local cultural elements and maximizing natural light to create inviting environments. A notable correlation was found between the implementation of cost-effective strategies and high levels of guest satisfaction, suggesting that thoughtful design choices can lead to improved financial performance for hotels. However, challenges such as budget constraints and the lack of design flexibility remain prevalent among hotel developers in Lagos. The research underscores the need for continuous innovation in hotel design to address these challenges and adapt to evolving consumer expectations. The findings offer practical recommendations for hotel operators aiming to enhance their competitive edge while ensuring a positive guest experience. This study contributes to the existing body of knowledge in hotel management and design, providing insights that can inform future research and practice in the hospitality sector.

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40. PREVALENCE AND ANTIFUNGAL SUSCEPTIBILITY PATTERN OF ORAL CANDIDIASIS AMONG STUDENTS ATTENDING THE UNIVERSITY HEALTH CENTRE

Ini, E.R.

Department of Biological Sciences and Biotechnology, Caleb University Lagos, Nigeria

Ezeanya-Bakpa C.C.

Department of Biological Sciences and Biotechnology, Caleb University Lagos, Nigeria | Email: chinyere.bakpa@calebuniversity.edu.ng

Lambe F.

Department of Biological Sciences and Biotechnology, Caleb University Lagos, Nigeria

ABSTRACT

Oral candidiasis is a state that involves the presence of white patches in the mucous area of the oral cavity of an individual. They are typically characterized by whitish patches in the mouth which recurrently presents as lesions, crevices, sores, and ulcers. Information on oral candidiasis among students is limited. The aim of this study was to assess the prevalence and antifungal susceptibility pattern of oral candidiasis among the students attending Caleb University. Oral swabs were collected from 52 students. Candida species was isolated using Potato Dextrose Agar (PDA), germ tube test and lactophenol blue staining methods afterwards antifungal susceptibility testing was done. The prevalence of the Candida species among the students was 40.3%. The distribution of the Candida species showed that Candida albicans was the most isolated. The possible risk factors were identified were: Students that did not brush twice a day, irregular change of toothbrush every three months, kissing of persons with recent oral yeast infection, use of dentures at night, and students that takes antibiotics without doctor's prescription. Antifungal susceptibility test showed 66.66% susceptibility to Ketoconazole and 80.95% resistance to Clotrimazole. This study has highlighted the presence of Clotrimazole-resistant Candida species in the student community which necessitates regular monitoring.

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41. INCORPORATION OF PASSIVE DESIGN PRINCIPLES IN PUBLIC BUILDINGS: CASE STUDY OF SELECTED LIBRARY BUILDINGS

Onosemuode, M.O.

Department of Architecture, Caleb University, Imota, Lagos

Oyesode, S.

Department of Architecture, Caleb University, Imota, Lagos

Ademakinwa, O. O

Department of Architecture, Caleb University, Imota, Lagos

G. A. Otuonuyo

Department of Architecture, Caleb University, Imota, Lagos

ABSTRACT

Incorporation of passive design principles in public buildings is very important for the attainment of the global sustainable development drive in tropical regions. A library building is a type of public building considered as the gateway to knowledge and provides an avenue for lifelong learning, research, and continuous educational development. Passive design is "an energy efficient building approach that prioritizes the reduction of energy demand by utilizing daylight, shading devices, and natural cooling techniques, while integrating renewable energy systems where necessary," underscoring the importance of reducing energy demand in buildings through intelligent choices of design. This paper used the case study qualitative research approach to review the concepts, principles, and strategies of passive design of public libraries within tropical regions. It investigated the level of incorporation of passive design principles in five (5) selected public library buildings in Lagos State Nigeria on passive design measures put in place in the design. Observations were drawn and recommendations were made.



42. INTEGRATION OF IoT SENSORS, DATA ANALYTICS AND MACHINE LEARNING IN SMART BUILDING DESIGN (page misprinted with title of previous paper: 'INCORPORATION OF PASSIVE DESIGN PRINCIPLES IN PUBLIC BUILDINGS: CASE STUDY OF SELECTED LIBRARY BUILDINGS')

Ozomaro U. Julius

Department of Architecture, Caleb University, Imota, Lagos | Email: babajozo95@gmail.com

Daramola Adedeji

Department of Architecture, Caleb University, Imota, Lagos

Alagbe Oluwole

Department of Architecture, Caleb University, Imota, Lagos

Dare-Abel Ayodeji

Department of Architecture, Caleb University, Imota, Lagos

Dayomi Matthew

Department of Architecture, Caleb University, Imota, Lagos

Akintunde A. Onamade

Department of Architecture, Caleb University, Imota, Lagos

ABSTRACT

The integration of Internet of Things (IoT) technologies in architecture has transformative potential for creating sustainable, energy-efficient, and occupant-centric built environments. This research presents a novel framework for incorporating IoT sensors, data analytics, and machine learning algorithms in building design. A case study of a smart building prototype demonstrates the effectiveness of this framework in reducing energy consumption by 25%, improving indoor air quality by 30%, and enhancing occupant satisfaction by 90%. The framework's scalability and adaptability are evaluated through simulations and sensitivity analyses. We present a case study of a smart building design that incorporates IoT sensors, energy harvesting systems, and data analytics to optimize energy efficiency, indoor air quality, and occupant comfort.



43. THE AGE OF DISRUPTIVE TECHNOLOGIES AND LEGAL DEVELOPMENT; HAS THE "EAGLE" LANDED: A CONCEPTUAL ANALYSIS

Daniel Idibia

Caleb University | Email: danielobida@3gmail.com

ABSTRACT

Law and human development are a creation of humans for societal development. The legal profession has been on the cusp of technological revolution in an era marked by human innovations enhancing development, locally and internationally, vividly achieving targeted goals in a neo-normal tempo. Besides doing away with the billable hour, in-house teams and legal clients now get more back than they have gotten before from the law firms for the same amount of money. This paper seeks to question the reality of Artificial Intelligence as a neo-normal aiding challenge in legal development predicated on technology. The study also investigates the paradigm of legal understanding of technology as necessary tools as a new order in achieving new oriented service legal development. The papers further interrogate the advantages of technology in advancement legal world. The research finds that embracing the technologic innovations can promote legal development, enhance access to justice, and improve the overall efficiency of the legal system. The research further finds that what is termed "disruption" is just the new world order of service delivery in the contemporary world aided by technological intervention. The paper concludes that rather than being a curse, the neo-normal of technological advancement can only be a blessing to the development of the legal world. The paper further concludes that given the new era of technology, more creative ways of achieving goal in a shortest time is now possible for those with eagle eyes that will take advantage of the landing eagle.

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44. THE IMPLEMENTATION OF PUBLIC-PRIVATE PARTNERSHIP (PPP) AS SOLUTION TO HOUSING PROBLEMS IN NIGERIA: A CRITICAL REVIEW

Oroniyi K. T.

Department of Architecture, Caleb University, Lagos | Email: oroniyikehinde@gmail.com

Ogunnaike O. A.

Department of Architecture, Caleb University, Lagos

Ajayi O. O.

Department of Architecture, Caleb University, Lagos

ABSTRACT

The housing deficit in Nigeria has escalated due to rapid urbanization, population growth, and inadequate public funding for large-scale housing development. Public-Private Partnerships (PPPs) have emerged as a viable solution to address this deficit by combining government oversight with private sector efficiency, expertise, and capital investment. This paper critically reviews the implementation of PPPs in Nigeria's housing sector, assessing their effectiveness in delivering affordable and sustainable housing. The study adopts a qualitative descriptive methodology, synthesizing findings from existing academic literature published between 2020 and 2024. Sources include peer-reviewed journals and academic theses, with a focus on success factors, challenges, legal frameworks, stakeholder roles, and financing mechanisms in PPP housing projects. Key success factors identified include robust legal frameworks, financial viability, and stakeholder collaboration, while challenges such as bureaucratic delays, limited financing mechanisms, and land tenure issues are highlighted. The paper concludes with policy recommendations, including legal reforms, innovative financing models, and enhanced stakeholder engagement to promote inclusivity, transparency, and affordability in housing delivery through PPPs.

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45. The Vital Role of Responsive Urban and Landscape Planning in Sustainable [title truncated/incomplete in source]

Omoniyi, Iyetunde Wemimo

Department of Architecture, Caleb University, Imota

ABSTRACT

Full abstract text is not available for this entry — see editorial note below.

Editorial Note: Printing error in source (CUD/24/144): this page prints the title above with author Omoniyi, Iyetunde Wemimo, but the abstract body underneath is not this paper's own text — it is a verbatim duplicate of the abstract correctly printed on the following page (CUD/24/145, "A Review of Online Learning Environment: Traditional Methods versus Virtual Classrooms", also credited to Omoniyi, Iyetunde Wemimo). This page was photographed twice in the source scan; both copies show the identical misprint. The true abstract text for "The Vital Role of Responsive Urban and Landscape Planning..." could not be located in the book and is not available.



46. A REVIEW OF ONLINE LEARNING ENVIRONMENT: TRADITIONAL METHODS VERSUS VIRTUAL CLASSROOMS

Omoniyi, Iyetunde Wemimo

Department of Architecture, Caleb University, Imota

ABSTRACT

The pandemic period of the COVID-19 added some values to the education system which was not noticed and even pronounced through the online learning. Online learning has become so paramount in this present era. The relationship fostering between the instructors, teachers and students has changed as well as the teaching and learning approaches which the migration affected. The traditional classroom environment of learning seems to be reducing and being taken over by the virtual classroom teaching environment. The study is to evaluate the traditional learning environment vis-à-vis the virtual classroom learning environment. Different assessment methods are compared as well, such as online quizzes, open book exams. The study used the qualitative method of survey which embraces conceptual frame work, literature review, descriptive and comparative approaches. The traditional classroom learning environment was checked in its merits and demerits as well as the virtual classroom learning environment. Articles related were sourced through the internet, textbooks and library materials for data survey. The findings shows that the level of understanding and usage of virtual classroom learning is being embraced to some extent but cannot be fully implemented due to some challenges. The traditional classroom environment of learning is still in massive use within the universities in Nigeria.

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47. EVALUATING AND QUANTIFYING THE EFFECTIVENESS OF CRISIS MANAGEMENT FRAMEWORKS: A COMPARATIVE ANALYSIS ACROSS INDUSTRIES

Seyi Bamidele Oludare

Caleb University, Imota, Lagos | Email: seyi.oludare@yahoo.com

Adetolu Toyese Amusan

Augustine University, Ilara-Epe, Lagos

Patience Oghenekevwe Wunude

Caleb University, Imota, Lagos

ABSTRACT

This paper evaluates and quantifies the effectiveness of crisis management frameworks through a comparative analysis across various industries, focussing on leadership, preparedness, communication, and the integration of technology, particularly AI. By examining sectors such as healthcare, construction, media, and SMEs, this study highlights the distinct challenges and opportunities these industries face in crisis management. The integration of mathematical models allows for a more precise assessment of how different frameworks perform under varying conditions. Findings emphasise that AI-driven strategies significantly enhance preparedness and response, particularly in resource-constrained environments like SMEs. The paper also underscores the importance of leadership and communication in shaping successful crisis outcomes. Recommendations are provided for tailoring crisis management frameworks to the unique regulatory, operational, and dynamic needs of each sector.

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48. EXPLORING THE INFLUENCE OF TECHNOLOGICAL INNOVATION ON SMEs OPERATIONAL EFFICIENCY: FOCUS ON SELECTED SMEs IN LAGOS STATE

Adefunke Adetutu Odumosu

Department of Business and Entrepreneurship Education, College of Vocational and Entrepreneurship Education, Lagos State University of Education, Oto/Ijanikin, Lagos State, Nigeria | Email: odumosuaa@lasued.edu.ng

Fatai Oguntade Aliu

Department of Management Sciences, Trinity University, Yaba Lagos

ABSTRACT

This study investigates how technological innovation affects several operational efficiency parameters, such as process, quality, time, cost, supply chain and energy efficiencies, among a sample of small and medium-sized enterprises (SMEs) in Lagos State, Nigeria. A quantitative technique and a standardised questionnaire which was administered online were used to collect data from 289 SMEs owners and operation managers. To evaluate the connection between technological innovation and these efficiency metrics, the data was subjected to multivariate analysis of variance (MANOVA). Specifically, the results show that technological innovation has a significant effect on process efficiency, quality efficiency, time efficiency, cost efficiency, energy efficiency, and supply chain efficiency ($p < 0.001$). The effect sizes range from large to moderate, with quality efficiency showing the largest effect (85.3%) and supply chain efficiency showing the moderate impact (51.8%). The results imply that effective use of technological innovation will enhance operational efficiency in SMEs. This study has crucial implications for SME owners, managers, and policymakers by emphasizing the critical role that technological innovation provides in increasing operational efficiency within small and medium-sized enterprises. In light of these findings, the study recommends that SMEs owners and managers cultivate a culture of continuous innovation to further enhance operational efficiency in their organisation.

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49. THE IMPACT OF EDUCATION ON SOLID AND LIQUID WASTE MANAGEMENT IN COOPERATIVE ESTATES WITHIN LAGOS MEGACITY

Adewumi, B.J.

Department of Architecture, Caleb University, Imota, Lagos State | Email: bamidele.adewumi@calebuniversity.edu.ng

Asaju, O.A.

Department of Architecture, Caleb University, Imota, Lagos State

Onamade, A.O.

Department of Architecture, Caleb University, Imota, Lagos State

Otuonuyo, G.A.

Department of Architecture, Caleb University, Imota, Lagos State

Adejare, O.

Department of Architecture, Caleb University, Imota, Lagos State

Adegbile, M.B.O.

Department of Architecture, Caleb University, Imota, Lagos State

Dayomi, M.A.

Department of Architecture, Caleb University, Imota, Lagos State

ABSTRACT

Waste management in Lagos, Nigeria, presents significant challenges due to rapid urbanization, population growth, and inadequate infrastructure. This study investigates the relationship between education levels and liquid waste management methods in cooperative estates within Lagos Megacity. Using a quantitative research design, data were collected through structured questionnaires from 99 respondents, stratified by education level. The study aimed to identify the most common liquid waste disposal methods, examine the correlation between education and waste management practices, and assess how education influences compliance with proper waste disposal systems. The findings revealed that the majority of respondents, regardless of education level, rely on septic tanks/soak-away pits for liquid waste disposal, with only a small proportion using centralized systems. Statistical analysis using chi-square tests showed no significant relationship between education level and the choice of waste management method ($p\text{-value} = 0.827$). While education did not significantly influence waste disposal practices, the use of septic tanks was more prevalent among those with higher education. These findings suggest that factors such as infrastructure and access to formal waste management systems may have a stronger impact on waste disposal methods than education alone. The study concludes that improving waste management infrastructure, alongside educational initiatives, is critical for sustainable waste disposal in cooperative estates.

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50. ASSESSING THE POTENTIAL OF INTEGRATING THERMAL MASS WITH PASSIVE COOLING SYSTEMS FOR ENHANCED THERMAL COMFORT AND ENERGY EFFICIENCY

Adejare, Oludele Sunday

Department of Architecture, Caleb University, Imota, Lagos

ABSTRACT

The cooling and heating of buildings contribute significantly to global energy consumption, with the demand for cooling accounting for 10% of all electricity consumption and expected to triple by 2050. Passive cooling, a natural method of cooling buildings, involves heat management techniques such as heat prevention, modulation, and dissipation. Thermal mass is the ability of materials to absorb, store, and release heat at different temperatures. Through a thorough assessment of the literature and empirical case studies, this study examined the thermal mass characteristics of various construction materials to identify their optimal use for ensuring thermal comfort and energy efficiency. Building materials like water, concrete, sandstone, compressed earth blocks, rammed earth, fibre cement sheets, brick, and earth walls are considered good thermal mass due to their high potential heat storage and effectiveness in daily thermal management schemes. Steel, glass, and wood are unsuitable for thermal mass due to their low emissivity, shortening storage cycle, and low heat storage potential. The proper use and application of thermal mass depends on the climate of the area. For passive cooling and resistance to extreme heat, thermal mass works best in areas with high average daily temperature swings, especially in areas where the average 24-hour temperature swing is 25 degrees Fahrenheit and where the outdoor temperature ranges significantly above and below the indoor temperature during the day. Conclusively, thermal mass building materials should be considered alongside other passive cooling strategies for effective incorporation.

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51. ASSESSING RESIDENTIAL SATISFACTION AMONG THE RESIDENTS IN STAFF QUARTERS OF UNIVERSITIES IN SOUTH WEST, NIGERIA

Olubukola Abosede Akindele

Department of Architecture, College of Environmental Sciences and Management, Caleb University, Imota, Lagos State, Nigeria | Email: akindeleabosede@yahoo.com

Dorcas Oluwaseyi Adeoye

Department of Architecture, Faculty of Environmental Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo state, Nigeria

Kayode Amoo

Department of Architecture, Faculty of Environmental Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo state, Nigeria

ABSTRACT

The importance of residents' satisfaction with housing cannot be over-emphasised as it contributes to the quality of residents' life. This study assessed residential satisfaction among residents university staff quarters in south west Nigeria. Multistage sampling techniques and simple random sampling were applied, with the aid of questionnaire administration among 350 residents and all were returned, and analysed. The population of the study area was collected from the National University Commission to determine the population trend and the number of copies of the questionnaires to be administered in each of the selected universities. Residential satisfaction was obtained through factors that contribute to the residents' satisfaction and satisfaction level. Descriptive analysis with the use of frequency and percentage, cross-tabulation, regression analysis, mean index, residents' relative satisfaction index, and relative importance satisfaction index were explored to assess residential satisfaction among the residents. The results revealed that the residents are not satisfied with the house and neighbourhoods. Their current demographic status has constrained them to continue staying within their residential neighbourhoods. The researchers believe that, there is a need for a realistic and vigorous approach towards the provision of better housing and environment that enhance better living. This will invariably improve residents' quality of life and reduce the socio-spatial divergence among various staff cadres in the universities.

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52. EFFECT OF EMPOWERMENT ON POST LIVES OF INMATES OF NIGERIAN CORRECTIONAL SERVICE CENTRES IN NIGERIA

Adeyemo F. S.

Department of Business Administration, Caleb University, Imota, Lagos State | Email: Felicia.adeyemo@calebuniversity.edu.ng

Inegbedion D.

Department of Business Administration, Caleb University, Imota, Lagos State

Oremodu A.

Department of Business Administration, Caleb University, Imota, Lagos State

ABSTRACT

The Nigerian Correctional Service Centre (NCSC) has the main aim of giving various vocational training to prison inmates while still serving within their facilities. Essentially, this is to help to empower them with skills that will make them to be meaningfully engaged and prevent them from going back to criminal activities. This study therefore reveal that various empowerments were organised by NCSC within the period under review. The study covered a period of eleven years: 2010-2020. Secondary data were collected from the training records of NCSC. The various types of empowerments covered sectors such as: agriculture-crop production, agric-mechanization; livestock, fish farming, grass cutter production, poultry production, piggery; popcorn production, fashion designing, carpentry; welding; hair dressing; laundry & dry cleaning; fabrication (pop corn making machine); barbing, cleaning and mansory; soap production, shoe making, building, bakery and confectionery making. The skill acquisition programmes were mainly organized by NCSC and other external trainers including Blov Investment Ltd., Petikevin Concept Ltd, Divine Farmers Cooperative Society Ltd, NACIL Globals Concept Ltd, Consociate Int'l Ltd and National Institute of Building. The study revealed that the total number of inmates empowered during the 11 year period was 6,941. This gives an average of 631 trainees per year. Specifically, each of the years has data/percentage display as follows: 2010-718(10.3%); 2011-636(9.2%); 2012-636(9.2%); 2013-664(9.6%); 2014-474(6.8%); 2015-224(3.2%); 2016-848(12.2%); 2017-678(9.8%); 2018-751(10.8%); 2019-752(10.8%); and 2020-560(8.1%). The study also revealed that about 7% of the trainees were females while 93% were males, implying that there is no discrimination between gender as each is given the opportunity to avail themselves of skill acquisition of their choice. The duration of each year's training programme covered between 2 years and three years.

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53. FINANCIAL INTERMEDIATION AND ECONOMIC GROWTH IN NIGERIA

Salawu Nurudeen Olawale

ABSTRACT

The objective of this study was to examine the effect of financial intermediation on economic growth in Nigeria, from 2008-2022. The data was obtained from the statistical bulletin were analyzed by the use of Ordinary Least Square Method (OLS). Loan to Deposit ratio was used to measure financial intermediation while Economic Growth in Nigeria was proxy by Gross Domestic Product. The result of the analyses showed that financial intermediation are really fundamental to the Nigerian economic growth. The test further reveals that there is a significant relationship between Financial Intermediation and the Nigerian Economic Growth. The study concluded that Financial Intermediation activities affect Nigerian Economic Growth negatively. Finally, the study recommended that Nigerian Government need to manage the ratio of loan to deposit efficiently and also consider other factors that can enhance economic growth.

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54. GROWING POPULATION AND BIOPHILIC DESIGN ELEMENTS ON HOUSING AFFORDABILITY. A REVIEW OF IBADAN, OYO STATE, NIGERIA

Akinmoladun A. Ayotunde

Department of Architecture, Caleb University, Lagos | Email: propracteco@gmail.com

Asaju A. Opeyemi

Department of Architecture, Caleb University, Lagos

Daramola Adedeji

Department of Architecture, Caleb University, Lagos

Alagbe Oluwole

Department of Architecture, Caleb University, Lagos

Dare-Abel Ayodeji

Department of Architecture, Caleb University, Lagos

Dayomi Mattew

Department of Architecture, Caleb University, Lagos

ABSTRACT

Rural-urban migration continues to be on the increase yearly due to quest for greener pasture. This has impacted major cities both positively and negatively making the cost of shelter in these cities higher than imagined. The growing population has not only destroyed layouts of the ancient cities, but gradually eroding connection to the environment which biophilic design explains. This study examines the impact of an increasing population on housing affordability in Ibadan, with a particular emphasis on the incorporation of biophilic design principles. Biophilic design, which blends natural components into constructed settings, is known for its ability to increase occupant well-being, indoor environmental quality, and overall quality of life. However, in Nigeria, its relationship with housing affordability has received little attention. Through a literature search and analysis of existing housing developments in Ibadan, the study assesses the economic implications and possible benefits of introducing biophilic characteristics, including natural ventilation, green areas, and water components, into inexpensive housing. The findings imply that, while biophilic design can improve living conditions in densely populated places, its use in low-cost housing developments is limited by economic and policy reasons. The assessment continues by emphasising the importance of regulatory frameworks and architectural innovations that integrate biophilic design principles with the urgent demand for affordable housing in developing urban areas such as Ibadan. By incorporating sustainable and nature-based solutions into housing policies, we may reduce the negative effects of fast population increase while also improving environmental and human health.

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55. IMPACT OF AI ON THE STRATEGIC MANAGEMENT PROCESS: AN INTEGRATED ANALYSIS OF THE NIGERIAN BANKING SECTOR

Chimsunum Osanebi

Department of Management Sciences, Trinity University, Lagos, Nigeria | Email: chimsunum.osanebi@trinityuniversity.edu.ng

Aliu, Fatai Oguntade

Department of Management Sciences, Trinity University, Lagos, Nigeria

Duyile Adeyemo

Department of Management Sciences, Trinity University, Lagos, Nigeria

ABSTRACT

The integration of Artificial Intelligence (AI) into the Nigerian banking sector is transforming strategic management processes, but its full potential has not been fully tapped. This study examined the impact of Artificial Intelligence (AI) on the strategic management process in Nigerian banks, focusing on four key areas: environmental scanning, strategy development, strategy implementation, and strategy evaluation and control. The study used a quantitative approach, and primary data were gathered from 398 banking professionals across six major banks through structured questionnaire. The validity and reliability of the instrument were established. Convenient sampling was used to distribute the questionnaire. Primary data collected were analysed using descriptive and regression analysis method at 5% level of significance to ascertain the relationship between AI-driven data analytics, AI-enhanced decision-making, AI-enabled automation, and AI-performance monitoring on the strategic management process. The results indicated that AI-driven data analytics significantly enhanced environmental scanning, with a strong positive correlation ($R = 0.676$) and an R^2 value of 0.467, meaning that AI-driven analytics accounts for 46.7% of the variance in environmental scanning. Similarly, AI-enhanced decision-making has a moderate positive impact on the strategy development process ($R = 0.474$), explaining 22.4% of the variance. AI-enabled automation showed a moderate influence on the implementation of strategies ($R = 0.391$, $R^2 = 15.3\%$), while AI-performance monitoring had a significant effect on strategy evaluation and control, with a moderate positive correlation ($R = 0.459$) and an R^2 value of 0.211. The study concluded that AI technologies significantly enhanced all phases of the strategic management process, enabling Nigerian banks to make informed decisions, improve operational efficiency, and optimize performance monitoring. By taking advantage of AI, banks can maintain a competitive edge in a rapidly changing industry. The study recommended that banks increase investments in AI infrastructure and employee training to fully maximize Artificial Intelligence's potential. Also, policymakers should implement supportive regulations that promote AI innovation while mitigating potential risks.

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56. A PROPOSED FRAMEWORK OF ALTERNATIVE ENERGY SUPPLY BY DISCOs IN NIGERIA

Adenubi, Olufunmilola O.

Caleb University, Imota, Lagos | Email: funmilola.adenubi@calebuniversity.edu.ng

Olaoye Gabriel O.

Caleb University, Imota, Lagos

Alagbe Oluwale A.

Caleb University, Imota, Lagos

ABSTRACT

In Nigeria, the efforts of government in making sure that electricity is available in the past and present has proved abortive, going forward, there is need to explore other alternative source for power generation despite the availability of numerous energy resources that is available in the country. This is unacceptable to terms with economic as no country should take its electricity supply as an excuse. Reluctant to liberalize the electricity sectors due to energy security concerns and private investment in the country were not mutually exclusive. Therefore, this study examines the use of solar energy as an alternative energy source for power supply by DISCOs in Nigeria. It was discovered that financial and economic, institutional and regulatory, technical, market, awareness and information and behavioural factors are the impediments to achieving alternative source for power supply in Nigeria. Therefore, this study hypothesizes these factors which forms the foundation to understanding the proposed framework for alternative energy sources for power supply by DISCOs in Nigeria.



57. AI IN THE NEW NORMAL: HARNESSING TECHNOLOGICAL INNOVATION IN NIGERIA

Oluseyi Akindeinde

ABSTRACT

Welcome to the Caleb University Disruptive Innovation Conference 2024. This year, we delve into the profound impact of Artificial Intelligence (AI) on our world. Our theme, "Leveraging Technological Innovations to Create the New Normal World," underscores the importance of harnessing AI to shape the future of Nigeria and beyond. This presentation will explore the potential of AI across key economic sectors, highlighting both opportunities and challenges in this transformative era. AI represents a paradigm shift in investment opportunities, demanding a shift in focus from traditional hard assets towards human capital and intellectual property. AI-driven innovation holds the potential for exponential growth and returns on investment, making it a crucial driver of economic progress in the 21st century. For decades, African financiers have primarily focused on investments in tangible assets such as land, buildings, and infrastructure. While these investments play a vital role in economic development, they often fail to capture the full potential of a rapidly evolving economy. With a population exceeding 220 million, Nigeria boasts a remarkable demographic profile. The majority of its citizens are young, with 60% being under the age of 30 and a median age of 18 years. This vibrant youth population presents a unique opportunity for economic growth and development. The digital landscape in Nigeria presents a unique opportunity for AI to drive inclusive economic growth. By leveraging AI to enhance education, healthcare, and financial services, we can overcome geographic barriers and reach underserved communities. Nigeria's rich linguistic tapestry presents a unique opportunity for AI to play a transformative role. With over 525 native languages and 370 tribes, language barriers can significantly hinder access to education, healthcare, and other essential services. AI-powered translation and transcription technologies can bridge this divide, making information and knowledge readily accessible to underserved communities. AI-powered solutions can provide access to information, training, and essential services, fostering a more equitable and prosperous society. AI and automation hold the potential to revolutionize labour markets, leading to increased efficiency and productivity. With AI taking over repetitive tasks, human workers can focus on more complex and creative endeavours, boosting innovation and economic growth.



58. ARTIFICIAL INTELLIGENCE: THE MISSING LINK IN FIGHTING CRIMES AND INSECURITY IN NIGERIA

Aigbe, Diyeli Segun (PhD)

Department of Criminology, Peace, Conflict and Security Studies, Caleb University, Imota, Lagos State, Nigeria | Email: diyeli.aigbe@calebuniversity.edu.ng; aigbediyeli@gmail.com

Oni, Oluwasola (PhD)

Department of Economics, Caleb University, Imota, Lagos State, Nigeria | Email: Oluwasola.oni@calebuniversity.edu.ng; onioluwasola@yahoo.com

Akinboboye, Felix Ayodeji (FSS, CPO, CPI)

Chief Security Officer, Ikoyi Club 1938 | Email: Preciousfelix307@gmail.com; sm@ikoyiclub1938.org

Brigadier-General Stanley Eze (DSS, SEP)

PhD Defence, Space Administration, Nigerian Army, Abuja, Nigeria | Email: ystlean@yahoo.com

Adi, Isaac (PhD)

Dept. Of Criminology, Security, Peace & Conflict, Caleb University, Imota, Lagos State, Nigeria | Email: dradisaac57@gmail.com

ABSTRACT

Artificial intelligence (AI) has become an indispensable tool in combating crimes and insecurities especially in developed countries. AI systems have played a prominent role in ensuring the overall security architecture of many countries. Thus, this study investigates how adopting artificial intelligence can help combat crimes and insecurities in Nigeria. The study found that the traditional means of fighting crimes and insecurities in Nigeria have not yielded significant impacts since the rate of crimes and insecurities in the country is still on the increase. Another finding from the study indicated that artificial intelligence has the potential to significantly improve the state of security in Nigeria by enhancing the speed, accuracy, and efficiency of the country's security operatives. Artificial intelligence can help address crimes and insecurity challenges in the country such as terrorism, piracy, trans-border crime, kidnapping, cybercrime, banditry, Fulani herdsmen–farmer clashes, and other forms of crimes and deviant behaviours. The study also revealed that Artificial intelligence can help in predictive policing, behavioural analysis, content moderation, rehabilitation and support, etc. The study concluded that despite the positive effects of Artificial intelligence, however, the implementation of Artificial intelligence is not without challenges which include inadequate data, lack of military hardware for possible AI integration, non-existent of knowledge base, etc. Finally, the study recommends the effective integration of AI tools into Nigeria's security architecture to help tackle crimes and insecurities.



59. CAPACITY BUILDING, HUMAN RESOURCE PRACTICES AND TEACHER PERFORMANCE IN MINISTRY-CONTROLLED SECONDARY SCHOOLS IN OYO STATE, NIGERIA

Ojoawo, Iyanuoluwapo Modupe, M.Ed

Department of Christian Religious Studies Education, Caleb University, Imota, Lagos State, Nigeria | Email: iyanuoluwapo.ojoawo@calebuniversity.edu.ng | Tel: 08122628737

ABSTRACT

This study explored the relationship between capacity building, human resource practices and teacher performance in ministry-controlled secondary schools in Oyo State, Nigeria. It examined ways through which training programs, work-life balance and workplace environment can influence teacher performance. The methodology of this study included surveys and interviews with teachers, school administrators and government officials. The sample size of the study was drawn from ministry-controlled secondary schools in Oyo State, with a total of 220 participants. The data collected were analyzed, using descriptive statistics, correlation analysis, and thematic analysis. ANOVA was used to test the level of significance of the variables. Teachers who participated in capacity building programs had higher job satisfaction, were more motivated, and performed better in the classroom. Additionally, effective human resource practices such as fair recruitment, promotion, and performance evaluation processes, contribute to teacher performance and retention. The findings revealed that capacity building programs and effective human resource practices are essential for improving teacher performance in ministry-controlled secondary schools in Oyo state. In conclusion, this study provides evidence that capacity building programs, effective human resource practices, adequate teaching resources, and collaboration among teachers are essential for improving teacher performance in ministry-controlled secondary schools in Oyo State. The findings from the study have practical implications for policymakers, school administrators, and government officials that are interested in improving the quality of education in Nigeria.



60. Extraction, Characterization and Larvicidal Activity of Essential Oil and Hydrosol from *Sida acuta* Leaves Grown in Nigeria

Isaac S Njoku

Department of Chemistry and Biochemistry, College of Pure and Applied Sciences, Caleb University, Imota, Lagos, Nigeria

Nisar-Ur Rahman

Department of Chemistry and Biochemistry, College of Pure and Applied Sciences, Caleb University, Imota, Lagos, Nigeria

Olayinka T Asekun

Department of Chemistry, Faculty of Science, University of Lagos, Akoka, Lagos, Nigeria

ABSTRACT

Mosquitoes transmit the malaria parasite, causing diseases and thousands of deaths annually. The major problems associated with the use of chemicals for the control of mosquitoes include the development of resistance to these chemicals by the plasmodium parasite and their undesirable toxic effects on humans and the environment. In this research, the volatile oil was extracted (in n-hexane) from the air-dried leaves of *Sida acuta* by the hydrodistillation method. The hydrosol was extracted with n-hexane in the ratio 10:2. The oils were analysed using Gas Chromatography–Mass Spectrometry (GC-MS). The larvae of the mosquito species were exposed to five different test concentrations of the volatile oil and hydrosol oil of *Sida acuta* and were assayed. The larval mortality was observed and IC₅₀ value was calculated using the probit analysis test. The GC–MS chromatograph of the oil revealed a total of 28 volatile constituents. The major components of the leaf oil are α -pinene (15.47%), cubebol (9.59%), junenol (6.31%), spathunelol (6.12%), and caryophyllene (5.47%) while the major components of the stem oil are junenol (8.29%), germacrene D (7.42%), caryophyllene (4.21%), σ -cadinene (3.77%), and spathunelol (3.58%). The oils displayed varying degrees of larvicidal activities against the larvae, with highest larval mortality percentage of 85% and 78% at 500 mg/L respectively in comparison to chloroquine, positive control (92%) and hexane, negative control (0%). The results show that the essential oil and hydrosol of *Sida acuta* Burm. f. possess strong larvicidal properties. NOTE: title on the printed page says 'Turnera diffusa Leaves' but abstract body discusses 'Sida acuta' -- transcribed as printed, apparent mismatch/misprint in source document.

Editorial Note: Apparent typo in source (CUD/24/159): the printed title names the plant “Turnera diffusa”, but the abstract body consistently and repeatedly (5×) refers to “Sida acuta” as the species studied, including in the concluding sentence (“...essential oil and hydrosol of Sida acuta Burm. f. possess strong larvicidal properties”). The title has been corrected here to match the body; the original printed title said “Turnera diffusa”.



61. LEVERAGING TECHNOLOGICAL INNOVATION IN THE ADVANCEMENT OF HUMAN RESOURCE MANAGEMENT IN TERTIARY INSTITUTIONS

Odunayo, Henry Adewale, PhD

Department of Economics, Lagos State University of Education, Oto/Ijanikin, Lagos | Email: waleodunayo2002@yahoo.com | Tel: 08037204088

Asa, Kolawole Jayeola, PhD

Department of Political Science, Lagos State University of Education, Oto/Ijanikin, Lagos | Email: asakj@lasued.edu.ng

Odunayo, Olufunmilayo Mabel

TOPMOST College of Education, Ipaja/Agbado, Lagos | Email: layosept61@yahoo.com

ABSTRACT

Leveraging technological innovation is a plus for institutions. The study adopted correlational design because it helps establish relationships between variables in a study frame. The population comprised HRMs stakeholders from four tertiary institutions in Lagos State while the target population consisted of HR final-year students, Staff (academics and non-academics), and HR managers across the identified institutions. Purposive and simple random sampling techniques were used to select participants from the four institutions in the study to make a sample size of 250 participants. A self-structured instrument titled, Leveraging on Technological Innovation in Advancement of Human Resource Management in Tertiary Institutions Questionnaire (LTIAHRMTIQ) was used to collect data. The Questionnaire contains 15 items with response patterns of agree and disagree. Content validity was asserted by two experts in the Department of HR, Lagos State University, Ojo as Cronbach-alpha a reliability form generated .793 meaning internal consistency was met. Descriptive statistics (simple percentages) and Pearson Product Moment Correlation Analysis were used to analyse generated data and tested at a 0.05 significant level. The study reveals that technology innovation promotes healthy competition and keeps track of staff productivity. It concluded that technological innovation helps reduce drastically the administrative burden carried out by the HRM department as they can now focus better on some sensitive and result-oriented duties expected of HRt with little or no error expected. The study recommended that HRs be exposed to in-service training periodically to keep them abreast with the current techniques and methods expected by 21st-century managers.



62. QUANTITATIVE INVESTMENT MODELS AND PORTFOLIO PERFORMANCE OF HEDGE FUND COMPANIES IN NIGERIA

Dr. Areghan Isibor

Department of Accounting, Finance, and Taxation, Caleb University | Email: Areghan.isibor@calebuniversity.edu.ng

Rasaq Adeyemi Salaudeen

Email: rasaqadeyemi2013@gmail.com

ABSTRACT

This study investigates the impact of quantitative investment models—specifically Value at Risk (VaR), Mean-Variance Optimization (MVO), and Sentiment Analysis (SA)—on portfolio performance within Nigerian hedge fund companies. A survey research design was employed, gathering data from 73 fund managers across top hedge fund firms in Nigeria. Descriptive statistics and multiple regression analysis were utilized to analyze the data. The findings reveal a significant relationship between VaR, MVO, SA, and portfolio performance, explaining approximately 60.5% of the variability in portfolio outcomes. The regression results indicate positive coefficients for VaR ($\beta = 0.590$, $p = 0.003$), MVO ($\beta = 0.238$, $p = 0.027$), and SA ($\beta = 0.514$, $p = 0.009$), highlighting their substantial impact on enhancing investment outcomes. These results underscore the critical role of strategic risk management and methodological precision in achieving favorable portfolio performance in Nigerian hedge funds. Based on the study's findings, it is recommended that Nigerian hedge fund companies integrate VaR, MVO, and SA into their investment strategies, with a focus on continual refinement and adaptation to local market conditions.



63. PREDICTION OF STUDENTS' ACADEMIC PERFORMANCE USING RANDOM FOREST AND SMOTE ALGORITHM

Olajide Adegunwa

Computer Science Department, Caleb University, Imota, Lagos | Email: olajide.adegunwa@calebuniversity.edu.ng

Ayorinde Oduroye

Computer Science Department, Caleb University, Imota, Lagos

Adeniyi Akanni

Computer Science Department, Caleb University, Imota, Lagos

Opeoluwa Ajilore

Computer Science Department, Caleb University, Imota, Lagos

Nancy Ekpebu

Computer Science Department, Caleb University, Imota, Lagos

ABSTRACT

The inability of educational institutions to properly plan and allocate their resources in teaching their students has been one of the leading causes of students' poor performance. The consequences of this poor planning have both short-term and long-term effect which include increase in drop-out rate of students, human capital under-development, and reduction in the Gross Domestic Products (GDP) of the country. This research proposed a machine-learning model, the Random Forest (RF) algorithm, which can be used to predict the performance of newly admitted students in a university. In order to overcome the challenges faced by similar researches, this research employed a unique strategy which was the use of socioeconomic data of students and their sponsors in predicting the performance of the students before the students undergo any form of examination. This research also explored Synthetic Minority Oversampling Technique (SMOTE) in resampling the unbalanced data set in order to improve the prediction's accuracy. The result of the research shows an improvement in the accuracy of the model from 0.6516 to 0.8372 on a scale of 0 to 1. Other evaluation metric employed in the research were F1-score, Precision, and Recall which revealed improved performance in the model's ability to correctly classify the predictions. The model was thereafter deployed on a user-friendly web interface hosted on Streamlit. The proposed model in this research can be used by schools, government agencies, and parents in predicting students' performance.



64. A REVIEW ON BUILDING A GREENER FUTURE THROUGH SUSTAINABLE ARCHITECTURAL PRACTICE IN NIGERIA

Odebiyi, Ezekiel Adewole

Department of Architecture, Caleb University, Imota, Ikorodu Lagos State, Nigeria | Tel: +23480380404321

ABSTRACT

Sustainable Architecture has been considered imperative in contemporary Architectural practice due to alarming global concerns about climate change, energy consumption and urbanisation challenges. This paper reviews building a greener future through sustainable architectural practice in Nigeria. The study adopted a comprehensive literature on the concepts, conceptual framework, principles, benefits and barriers of sustainable architectural practice in Nigeria. This paper reviewed literature, global best practices and local case studies including grey literature appropriately in line with specific research questions on sustainable architecture as a basis for understanding the current status of sustainability practice by Nigerian architects; possible opportunities, common challenges and policy gaps affecting compliance to green building principles. Additionally, the study emphasizes sustainable design methods and energy-efficient modes of operation including environmentally friendly building materials. The report also calls for policy reforms, capacity building, and stakeholder engagement to instil a culture of sustainability in the Nigerian building industry. The findings and recommendations of this study provide useful advice to policymakers, architects, developers, and other stakeholders working to create climate-resilient and resilient habitats in Nigeria.



65. TRADE RESTRICTIONS AND INCOME GENERATION IN BORDER COMMUNITIES: AN ASSESSMENT OF OWODE-IDIROKO AXIS

Adepelu Emmanuel O.G

Department of Political Science and International Relations, Caleb University, Lagos State, Nigeria | Email: emmanuel.adepelu@calebuniversity.edu.ng

Idowu Samuel

Department of Political Science and International Relations, Caleb University, Lagos State, Nigeria

Devid Kosoko

Department of Political Science and International Relations, Caleb University, Lagos State, Nigeria

ABSTRACT

Nigeria-Benin trade relationship is huge but characterized by frequent border closure orchestrated by the former in most cases as part of economic stimulating and security management measures. However, there has always been accompanying profound impacts on the borders' residents' communities. This study examines the socio-economic effects of border closures on these communities focusing on Owode-Idiroko axis as a case. It employs qualitative descriptive design and obtained primary data via interview of local traders, community leaders and government officials while secondary data sources were used to complement as well. Human Security Theory was used as theoretical analysis framework. The research findings reveal that border closures adversely affect Owode-Idiroko border residents, particularly small-scale traders, women, and ethnic minorities, who heavily rely on cross-border trade for their socio-economic livelihoods, making them more vulnerable than other Nigerians. Therefore, the study recommends that Nigeria government should adopt an integrated border management policies that balance both national security and socio-economic concerns with needs of border communities and be deliberate in providing agricultural and small-scale business supports to enhance their livelihood that will minimize the effects of trade restrictions on these communities, amongst others.



66. IMPACT OF STRATEGIC PARTNERSHIP ON INNOVATION AND PRODUCT DEVELOPMENT (A STUDY OF SEAMLESSHR LIMITED)

Efosa Oluwadamilare

Email: efosaakpata@gmail.com | Tel: 08059709496

Ukeka Adekemi Sidikat

Email: kemiogunsy2k@gmail.com | Tel: 08033315862

Amusan Adetolu Toyese

Email: dijitolu@yahoo.com | Tel: 08030823221

ABSTRACT

This study examines the impact of strategic partnerships on innovation and product development. A study of SeamlessHR Limited. The objectives of the study were to examine the influence of strategic partnerships on the innovation capacity of organizations, to analyze the impact of strategic partnerships on the speed and efficiency of product development and to assess the success of strategic partnerships in innovation and product development. The study adopted Cross-sectional survey for the purpose of this research. The study adopted the Taro Yamene's model for the determination of the sample size. The data collected from this study were analyzed using mean and standard deviation for answering the research questions. It was concluded that strategic partnerships significantly reduce time-to-market for new products, with companies reporting shorter development cycles due to shared resources and reduced financial burdens. It was recommended that organizations should define clear, shared goals and objectives at the outset of any partnership. Ensuring that all partners have aligned strategic priorities will minimize conflicts and misunderstandings. Regular discussions and updates can help maintain alignment as projects evolve, enabling partners to work cohesively towards common innovation targets.



67. THE ROLE OF AGRITECTURE IN CITY SUSTAINABILITY (A STUDY OF THE FUSION OF ARCHITECTURE AND AGRICULTURE AIMED AT CITY SUSTAINABILITY)

Olumide Oreoluwa Rabi

Department of Architecture

ABSTRACT

Agritecture is the framework of knowledge that encompasses the means, methods, and concepts to resolve the developing crisis as regards to overpopulation which entails food scarcity. Architects are generally not concerned with the concept of food security, as it not a major topic in the field, due to recent findings and propositions, it has been concluded that the involvement of architects is paramount for the resolution of this problem. Various professionals of different disciplines and multidimensional backgrounds are hence working to provide solutions to the problem of food security. The fusion of these various professional fields with the involvement of architecture has been tagged as agritecture, a union that hopes to redeem humanity from starvation and loss of biodiversity. This research investigates the various existing buildings and upcoming concepts as regards agritecture, revising the proposed means for city development and sustainability. Essentially Agritecture proffers the integration of both disciplines; architecture and agriculture so that urban farms can be properly designed with all necessary factors and elements for successful implementation and operation. For the effective execution of this research the methodology utilized for a beneficial result are the qualitative analysis of case studies as well as a study of relevant literature. Food security is an essential factor for human existence as such various interdisciplinary and multidimensional fields must continue to incubate and provide ideas to ensure that the factor is not only present but has a degree of abundance attached to it. In the field of architecture, professionals are most necessarily concerned with the development of shelters of various forms; the issue of food security might not necessarily be of importance but at the rate of development, the deep involvement of architects are required, with the designs of vertical farms, home gardens, the use of roof gardens, green wall claddings, to further increase the percentage of positive food security. Agritecture is a field that must be developed strongly through the unification of information from farmers and the design expertise of architects, and several other fields of construction and agriculture alike, to produce a working bond that will forge a line of fruitfulness as pertains to food security and sustainability in the city.



68. DEVELOPMENT OF A DETECTION MECHANISM FOR IDENTIFYING DISTRIBUTED DENIAL-OF-SERVICE ATTACKS IN UAV NETWORKS

Adesola-Zion Oluwaseun

Email: Oluwaseun.adesola-zion@calebuniversity.edu.ng

ABSTRACT

The increasing use of Unmanned Aerial Vehicles (UAVs) across various domains has highlighted the urgent need for robust security measures to protect these networks from cyber threats. One of the major attacks on these networks is the Distributed Denial-of-Service (DDoS) attacks. This study aims to develop an effective scheme for detecting DDoS attacks in UAV networks using machine learning techniques. In this study, a comprehensive network traffic dataset that simulates attack scenarios in UAV networks, was collected and processed. The dataset consists of both normal and malicious traffic. Data preprocessing steps, including normalization and the removal of missing values, were applied to enhance the dataset's quality. Thereafter, three ensemble-based machine learning classifiers were developed to predict attacks in UAV networks. The performance of these classifiers was evaluated. Three different ensemble-based classifiers were trained on the dataset. Classifier 1 combines Logistic Regression (LR) and Decision Tree (DT); Classifier 2 combines Random Forest (RF) and DT; while Classifier 3 combines LR, DT, and RF. The performance of these classifiers in detecting DDoS attacks was evaluated using the detection accuracy, precision, recall, F1 score, ROC curve, loss function, and epoch. The results indicate that Classifier 2 has the best performance, achieving a high accuracy of 97.05%, superior precision of 98.79% and F1 score of 97.27%. Furthermore, Classifier 1 achieved 87.68% accuracy, 97.99% precision, 79.17% recall, an F1 score of 87.58%, loss value of 0.0764 and an ROC curve value of 0.0201, indicating reasonable prediction capability but with lower recall and higher prediction error. Classifier 3 performed similarly to Classifier 2, with 97.09% accuracy, 97.41% precision, 97.27% recall, and F1 score of 97.34%, slightly higher loss value of 0.0182 and an ROC curve value of 0.0259, making it a strong but slightly less robust option compared to Classifier 2, which was identified as the best model. Future studies should focus on using ensemble methods to boost accuracy, applying robust feature engineering, and employing cross-validation techniques to ensure reliability. Regularization should be used to prevent overfitting, with continuous metric monitoring for effectiveness. Prioritizing model interpretability through SHAP values and feature importance is also key for trust and insight.



69. STRATEGIC CHANGE AND INDUSTRIAL DEVELOPMENT IN ORE INDUSTRIAL PARK, ONDO STATE, NIGERIA

Olufemi Chris Akinkuebi

Caleb University, Imota, Lagos | Email: femi@oreindustrialpark.com | Tel: 08036869000

Ilori Michael Olusegun

Caleb University, Imota, Lagos | Email: ilorimic12@gmail.com | Tel: 08025026936

ABSTRACT

This paper explores the strategic changes and industrial development in Ore Industrial Park, Ondo State, Nigeria, highlighting its contributions to regional economic growth. The study evaluates four key factors and looks at how they affect industrial development in Ore Industrial Park: infrastructural development, employee motivation, resource investment, and innovation. The study determines which elements have a significant impact on sustainable growth in the Ore Industrial Park through statistical analysis. The results show that the key drivers are infrastructure development, employee motivation, resource investment, and innovation. These factors all significantly correlate with the proxies of industrial development, including financial growth, productivity, profitability, and the development of human capital. According to employee motivation, policies that support training, engagement, and equitable pay have a direct positive impact on productivity. Infrastructure development also comes out as being important since it provides the framework for effective company operations and seamless logistics, both of which are critical to draw in more investors. According to the study's findings, Ore Industrial Park in Ondo State, Nigeria, has seen substantial industrial development because of strategic changes. The paper suggested boosting funding for improvements to the infrastructure, implementing staff incentive schemes, and encouraging an innovative culture. To maintain long-term development, it places a strong emphasis on cooperation between public and private parties. By establishing Ore Industrial Park as a paradigm for industrial expansion, these strategies could promote economic diversification in Ondo State. These results provide valuable insight for investors and governments looking for practical ways to support Nigeria's developing industrial sector.



70. EFFECTS OF ORGANIZATIONAL DESIGN ON STRATEGIC FLEXIBILITY IN A TECHNOLOGY-DRIVEN INDUSTRY: A CASE STUDY OF FIRST BANK

Wunude, Patience O.

Caleb University, Imota, Lagos | Email: desiredpat@yahoo.com | Tel: 07068584600

Fakeye, Damilare B.

Caleb University, Imota, Lagos | Email: chatwithdammy@gmail.com | Tel: 08032056234

Akinsanmi, Omowunmi E.

Caleb University, Imota, Lagos | Email: akissbabe@gmail.com | Tel: 08061311075

ABSTRACT

This study explores the impact of organizational design on strategic flexibility within technology-driven industries, using First Bank of Nigeria as a case study. As financial institutions face rapid technological advancements and market shifts, strategic flexibility—defined as the capacity to adapt swiftly to external changes—has become essential. The study examines how First Bank's organizational structure, particularly its shift from a traditional hierarchical model to a decentralized design, affects its responsiveness and adaptability in a competitive, tech-focused environment. Through qualitative data from interviews, document analysis, and observations, findings reveal that decentralization has facilitated faster decision-making, empowered regional managers, and fostered cross-functional collaboration, thereby enhancing the bank's capacity to respond to market dynamics. Additionally, First Bank's investments in digital platforms, data analytics, and artificial intelligence have significantly bolstered its strategic flexibility by streamlining operations, improving customer experience, and enabling data-driven decisions. However, challenges such as legacy systems, regulatory compliance, and talent retention persist, highlighting the complexity of balancing innovation with operational stability in the banking industry. This research contributes to a deeper understanding of how organizational design can be optimized to foster strategic flexibility in technology-intensive sectors.



71. STRATEGIC MANAGEMENT PROCESSES AND IT'S RELATION TO OPERATIONAL EFFICIENCY IN AN ORGANIZATION IN SOME SELECTED MANUFACTURING INDUSTRIES IN LAGOS STATE, NIGERIA

Omotosho Opeyemi Moses

Caleb University, Imota, Lagos | Email: omotoshopm@gmail.com | Tel: 08130604589

Njoku Bill Nora

Caleb University, Imota, Lagos | Email: norarexmusa@gmail.com | Tel: 09072021529

Obaweki Endurance Ehichioya

Caleb University, Imota, Lagos | Tel: 07057542819

ABSTRACT

This study investigates the relationship between strategic management processes and operational efficiency in selected manufacturing industries in Lagos State, Nigeria. The primary objective is to evaluate how effective strategic management practices influence the operational performance of these organizations. The study emphasizes the importance of strategic management as a vital tool for enhancing operational efficiency, particularly in the context of Nigeria's evolving industrial landscape. A mixed-methods approach was employed, combining quantitative surveys with qualitative interviews from industry stakeholders. The research identifies key strategic management practices employed by these companies and analyzes their impact on operational outcomes such as productivity, cost-effectiveness, and responsiveness to market changes. Key findings reveal that organizations that implement robust strategic management frameworks experience higher levels of operational efficiency, characterized by improved resource allocation, reduced waste, and enhanced productivity. Additionally, the research identifies critical strategic management components, such as goal setting, performance monitoring, and adaptive planning, as essential drivers of operational success. The implications of these findings underscore the necessity for manufacturing firms to adopt comprehensive strategic management practices to navigate competitive market challenges effectively. This study contributes to the existing literature by highlighting the significance of strategic management in improving operational efficiency, offering valuable insights for practitioners aiming to optimize their organizational performance.



72. TALENT MANAGEMENT PRACTICES AND PRODUCT DIFFERENTIATION IN THE SELECTED DEPOSIT MONEY BANKS IN LAGOS STATE, NIGERIA

Adeoye, Solomon Olusegun, PhD.

Department of Business Administration and Marketing, Babcock University, Ilishan-Remo, Ogun State, Nigeria | Email: adeoyeso@babcock.edu.ng | Tel: +2348106209049

Ajala, Olatunbosun Paul

Department of Business Administration and Marketing, Babcock University, Ilishan-Remo, Ogun State, Nigeria

ABSTRACT

The challenge of weak products among other issues confronting organization and its output has been attributed to insufficient investment in talent management. This study investigated talent management practices from a product differentiation perspective among selected deposit money banks in Lagos State, Nigeria. A survey research design was adopted and the population was 2,169 senior employees and managers. A stratified random sampling technique was adopted and a sample size of 425 respondents was determined using Rao soft online sample calculator. A validated structured and adapted questionnaire was used in gathering data and Cronbach's alpha reliability coefficients for the constructs ranged from 0.929 to 0.942, with a response rate of 85.6%. Findings indicated that talent management components had a significant effect on product differentiation ($\text{Adj.}R^2 = 0.779$, $F(5,366) = 261.564$, $p < 0.05$). The conclusion was that talent management significantly affects product differentiation. It was recommended to the management of the deposit money banks in Lagos specifically and Nigeria in general to prioritize talent management practices to advance product differentiation in their various units of operations.



73. THEOLOGICAL EDUCATION AND ARTIFICIAL INTELLIGENCE: THE PROSPECTS AND CHALLENGES

Awojobi Olabode Rotimi

Prof Afolurunso Dairo

ABSTRACT

This article aims to investigate the potential applications of AI in theological education, to enhance its quality and elevate students' knowledge levels. The paper then explores the integration of Artificial Intelligence (AI) into theological education, examining both its prospects and challenges. AI holds significant potential to enhance accessibility, personalized learning, and research efficiency in theological studies. It offers tools for global access to resources, advanced textual analysis, and innovative pedagogical support. However, its integration also raises critical ethical concerns, including the risks of dehumanization, bias in interpretation, and the potential erosion of spiritual formation. This study evaluates the balance needed between AI's technological capabilities and the relational, spiritual, and ethical dimensions that are central to theological education. By engaging with current applications, ethical reflections, and case studies, the paper provides recommendations for theological institutions on how to harness AI effectively while preserving the core values of theological tradition and formation. It will also foster the adaptation and implementation of AI in educational institutions thereby fostering enhancement of teaching techniques, teaching quality and preparation of future professional and theological educators.



74. EFFECT OF COVID 19 PANDEMIC IN ENTREPRENEURSHIP PERFORMANCE ON SELECTED UNIVERSITIES IN ONDO STATE, NIGERIA

Ebiere Olakemi Kolawole

Department of Business Administration, Caleb University, Ikorodu, Nigeria

Johnson Helen Olabisi

Federal University of Technology, P.M.B 704, Akure, Ondo State, Nigeria | Email: hodjohnson@futa.ng

James Nwoye Obi

Department of Business Administration, Caleb University, Ikorodu, Nigeria

ABSTRACT

In a transitional economy such as Nigeria, the importance of small-scale enterprises (SSEs) as sources of sustainable economic growth and development is well researched and documented. A major economic objective of government is therefore, to accelerate economic growth and development through supports for SSEs with a view to improving the quality of life of citizens. Entrepreneurial activities among SSEs are therefore, increasing in all sectors on daily basis in the country. The critical importance of SSEs for wealth creation, employment generation, poverty alleviation as well as economic recovery and growth keep attracting the attentions of researchers, industrial operators and policy makers in Nigeria. Entrepreneurship focuses on new opportunities for creating values for customers or users for prosperity of the Nigerian society. However, the entrepreneurship growth and development of MSEs were caught-up when the Corona-virus (COVID-19) pandemic was experienced across the globe. Corona-virus (COVID-19) was officially confirmed on the 27th of February, 2020 in Nigeria by the Virology Laboratory (VL) of Lagos University Teaching Hospital (LASU) which is part of the Laboratory Network of the Nigeria Centre for Disease Control (NCDC). Due to upsurge in confirmed cases of COVID-19 in Nigeria, Federal government introduced non-pharmaceutical measures as part of preventive measures to curtail the escalation of the virus (Among the non-pharmaceutical measures deployed is staying at home; maintaining physical/social distancing of at least two meters; regular wearing of face mask; regular hand wash, etc.) This study is therefore to examine the effects of COVID 19 on performance of small businesses in selected institutions in Ondo state.



75. ASSESSMENT OF STUDENTS' ATTITUDES TOWARDS WASTE DISPOSAL IN ACADEMIC BUILDINGS: A CASE STUDY OF CALEB UNIVERSITY, LAGOS

Halimat Adeyemi

Department of Architecture, Caleb University, Lagos | Email: haleeade0403@gmail.com

Ifeoluwa Fagbohun

Department of Architecture, Caleb University, Lagos

Akintunde Onamade

Department of Architecture, Caleb University, Lagos

Opeyemi Asaju

Department of Architecture, Caleb University, Lagos

Bamidele Adewumi

Department of Architecture, Caleb University, Lagos

Esther Iwayemi

Department of Architecture, Caleb University, Lagos

Oluwole Alagbe

Department of Architecture, Caleb University, Lagos

ABSTRACT

Waste management is a critical environmental issue, particularly within academic institutions where improper disposal practices contribute to environmental degradation. Understanding students' attitudes towards waste disposal is essential for promoting sustainable practices. This study investigates students' attitudes toward waste disposal in the academic buildings of Caleb University, Lagos, and assesses their roles in sustainable waste management. A cross-sectional survey design was employed, utilizing a structured questionnaire administered to students across three colleges. 201 respondents returned the questionnaire and data were collected on students' demographic characteristics, attitudes, perceptions, and behaviors related to waste disposal. 52.7% came from the Architecture department, followed by Mass Communication (13.9%), with the rest of sample distributed across other departments. Most respondents (87.1%) reside on campus, and 92% are undergraduate students. Waste disposal attitudes, over 70% of respondents feel responsible for proper waste disposal, and 74.1% believe waste practices contribute to cleanliness. Additionally, 78.6% think waste disposal methods adequately address environmental concerns, though a small minority remains neutral or disagrees. The study recommends targeted awareness programs focused on the influence of individual actions, particularly among younger students. Emphasis should be placed on fostering peer leadership and role model relationships to enhance sustainable waste management practices within the institution.



76. EFFECT OF INTEGRATED MARKETING ON BRAND PERFORMANCE OF SELECTED SMES IN LAGOS STATE, NIGERIA

Obajinmi Femi Olawoyin

Department of Business Administration, Caleb University, Lagos | Email: femijinmi@gmail.com

Adeyemo Felicia Solayide

Department of Business Administration, Caleb University, Lagos

Ebiere Olukemi Kolawole

Department of Business Administration, Caleb University, Lagos

ABSTRACT

This study examines the impact of Integrated Marketing on the brand performance of selected Small and Medium Enterprises (SMEs) within the wood and furniture sector in the Ogolonto area of Ikorodu, Lagos State, Nigeria. A quantitative research design was employed, utilizing a stratified sampling technique. Correlation and regression analyses were used to test the hypotheses at a 0.05 significance level. The results indicate a significant positive relationship between key marketing components—advertising, digital marketing, social media, and public relations—and brand performance. The study concludes that advertising, as part of an integrated marketing approach, plays a critical role in enhancing brand performance by improving communication with target audiences and optimizing the return on marketing investments. Furthermore, it highlights that digital marketing, when integrated with other media, contributes more substantially than when used independently. The research recommends that SMEs in the wood/furniture sector leverage integrated media strategies to enhance brand performance and maximize returns. This study contributes to knowledge by offering a comprehensive communication plan that underscores the strategic role of various marketing disciplines in boosting brand performance.



77. ORGANIZATIONAL STRATEGY AND BUSINESS PERFORMANCE IN A SELECTED MANUFACTURING FIRMS IN LAGOS STATE, NIGERIA

Ogbonna Stephinie Ngozi

Email: Hermajesty404@gmail.com

Salami Idris Temitayo

ABSTRACT

The study examines organizational strategy and business performance in selected manufacturing firms in Lagos State, Nigeria. The objectives of the study were to assess the impact of strategic alignment on the performance of manufacturing firms in Lagos State, to evaluate the role of technological integration in improving business performance within manufacturing firms and examine the influence of strategic partnerships on innovation and performance in selected manufacturing firms. Three research questions were raised and three research hypotheses were formulated. The study was reviewed using conceptual, theoretical framework as well as empirical review. The study adopted a descriptive survey research design to investigate the relationship between organizational strategy and business performance in manufacturing firms. Stratified random sampling technique was employed, a sample size of approximately 150 firms was selected from the population. Data for this study was collected using structured questionnaire designed to measure both organizational strategy and business performance. Mean scores, standard deviations, and percentages were used to summarize the demographic characteristics of the respondents and their responses to the questionnaire items. To examine the relationship between organizational strategy and business performance, the regression analysis or correlation analysis were adopted. It was concluded that the importance of strategic alignment, technological integration, and strategic partnerships in driving key performance indicators such as productivity, profitability, and innovation. It was recommended that manufacturing firms should regularly assess both internal and external environments to ensure their strategies remain relevant. This includes market analysis, competitor benchmarking, and understanding customer needs. It should adopt flexible strategic planning processes that allow for adjustments based on market changes. This can help firms respond effectively to new challenges and opportunities.



78. CHRISTIAN MINISTRY IN THE AI ERA: LEVERAGING DIGITAL TOOLS FOR PASTORAL CARE AND OUTREACH

Ojieabu Stanley O.

Religious Studies Department, Caleb University, Imota, Lagos State, Nigeria | Email: pststanose@gmail.com

Abodunrin Adeniyi G.

Religious Studies Department, Caleb University, Imota, Lagos State, Nigeria | Email: adeniyi.abodunrin93@calebuniversity.edu.ng

ABSTRACT

Artificial intelligence (AI) is increasingly impacting many sectors, including religious practices, offering new possibilities for Christian ministry. As churches adapt to the digital age, artificial intelligence (AI) offers promising tools for enhancing pastoral care and outreach. However, the integration of AI into ministry raises important questions about maintaining human connection and ethical use of technology. This qualitative study examines how AI can be leveraged to enhance pastoral care and outreach within the church, focusing on both the benefits and challenges associated with its implementation. By reviewing current literature and analyzing existing digital tools, the study explores AI's role in augmenting pastoral counseling, prayer networks, and evangelism. AI-driven applications can assist pastors by providing personalized support to congregants, automating administrative tasks, and optimizing outreach efforts through data-driven insights. For instance, AI tools can facilitate online prayer communities, offer mental health support, and enhance sermon preparation through data analysis. However, the integration of AI into ministry raises ethical and theological concerns, such as the potential loss of human connection and issues of fairness in AI algorithms. This study emphasizes the importance of preserving relational aspects of ministry, ensuring that technology complements, rather than replaces, human interaction. The findings suggest that while AI offers practical benefits in terms of efficiency and reach, its application must align with Christian values of empathy, equality, and care. This paper provides a framework for thoughtfully integrating AI into ministry to enhance spiritual care without compromising its foundational principles.



79. THE DETERMINANTS OF DIVIDEND POLICIES ON THE PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

Erinwusi Olugbile Oloyede

Caleb University, Imota, Lagos State, Nigeria

ABSTRACT

This study assesses dividend policy as a key determinant of performance among Nigerian banks. Although a representative sample of the Deposit Money Banks was selected, the result provides a generalized position of the impact of dividend policy among banks. Of the twenty-nine deposit money banks, six were selected, and factors such as the Firm Size, Return on Assets, Return on Equity, Leverage, and Dividend Payout were considered in the study using theories tested to explain the behaviour of those firms in terms of dividend payment structure. It is important to stress that the theories in some cases are at variance with one another leading to some level of doubts as to which theory best represents the observed dividend behavior of Nigerian firms, hence the need for this study. In carrying out this study, it became necessary to identify the statement of the problem in relation to dividend payment as a key determinant of the performance of deposit money banks. Since the bedrock of any institution that underpins its business continuity is capital, the concept of dividend payment plays a significant role in the capital structure of deposit money banks. The objective, therefore, is to assess various dividend payment decisions using available historical data to proffer appropriate recommendations for an efficient dividend payment system as well as guide future research studies. More recent secondary data for the period (2018 – 2022) were reviewed across the sample deposit money banks, with which various models and data analyses were conducted. The result revealed previous dividend payments, firm size, and return on equity are significant factors influencing dividends per share. It shows a significant negative relationship between previous dividend payments (DPS at $t-1$) and current Dividend per share, suggesting a degree of inertia or persistence in dividend policy among banks. Our estimation reveals the impact of the traditional factors in clarifying and explaining the firms' dividend policy decisions especially as it related to the reviewed period. The outcome also provides strong support for the explanatory or predictive power of Lintner's model. Also, factors that attempt to explain variations in share market prices were identified, and the magnitude of their effect was estimated. The study recommended the need to monitor dividend policy closely, emphasize increased return, and anticipate shareholders' expectations in dividend payment relative to the firm size since the earnings per share tend to have a positive correlation with asset size.



80. THE IMPACT OF ORGANISATIONAL CULTURE IN CRISIS MANAGEMENT

Seyi Bamidele Oludare

Caleb University, Imota, Lagos | Email: seyi.oludare@yahoo.com

Michael Sunday Adigun

Caleb University, Imota, Lagos

Modupe Ajoke Agbaje

Caleb University, Imota, Lagos

ABSTRACT

Organisational culture plays a crucial role in determining how effectively organisations manage crises, influencing both the strategic and emotional dimensions of crisis response. This paper presents a comprehensive review of the impact of organisational culture on crisis management, drawing from key conceptual and empirical literature. It explores how cultural dimensions such as leadership, communication, and trust shape an organisation's crisis preparedness, response, and recovery. The paper integrates theoretical insights from Contingency Theory and Trust Theory to explain how culture aligns with specific crisis conditions, while empirical evidence from diverse sectors demonstrates the real-world applicability of these cultural factors. Key findings highlight those organisations with resilient and adaptive cultures—marked by open communication, trust, and proactive leadership—are better equipped to navigate crises and sustain long-term resilience. Conversely, organisations with rigid, hierarchical cultures face greater challenges in managing crises effectively. The review provides practical recommendations for fostering a crisis-resilient culture, including enhancing leadership capabilities, promoting trust and communication, and tailoring crisis strategies to the organisation's size and context. This study contributes to the growing body of knowledge on crisis management by integrating cultural factors into existing frameworks and offering insights for organisational leaders and managers. It emphasizes the importance of embedding cultural interventions into crisis management strategies to improve organisational resilience. The paper also identifies opportunities for future research, particularly in exploring industry-specific cultural dynamics and the evolving role of technology in crisis management.



81. THE DEVELOPMENT OF A MACHINE LEARNING MODEL FOR PREDICTING DIVORCE (CUD/24/180)

Igwe Jennifer Nnenne

Caleb University Lagos, Department of Computer Science

Adeniyi Akanni

Caleb University Lagos, Department of Computer Science

ABSTRACT

This study discussed the development of a machine learning model for predicting divorce, the aim to address and adverse outcome thus revolutionizes the understanding of divorce. The proposed outcome is to develop an accurate, interpretable, comprehensive machine learning-based model to provide valuable insights for couples, policymakers, and healthcare providers due to the fact that high rate of divorce has long been a cause for concern. A decision trees model was trained on a dataset of couples, with variables including age, income, education, alcohol use, and domestic violence. The model was evaluated on a dataset, with a high degree of accuracy in predicting divorce. The results suggest that machine learning techniques have potential for improving the understanding of divorce and supporting couples at risk. The object-oriented analysis and design method (OOADM), was adopted in the development. This approach was used to model and develop the system using real intrusion features and processes to detect intrusions more flexibly and efficiently. It depicts the aim of providing a proficient system to predict the cause of divorce of married couples and also improve relationship outcomes for couples to avoid any divorce.



82. STUDIES ON BIOCHEMICAL STATUS AND mRNA EXPRESSION OF BAX/BCL-2 IN CYTARABINE-INDUCED ENDOMETRIAL TISSUE TOXICITY AND MODULATORY EFFECT OF MELATONIN

Ojo, Olajumoke Omolara

Department of Biochemistry, Ekiti State University Ado-Ekiti, Nigeria | Email: olajumoke.ojo@eksu.edu.ng

Ayodeji Ruth Folashade

Department of Biochemistry, Ekiti State University Ado-Ekiti, Nigeria

ABSTRACT

Chemotherapy remains a cornerstone in cancer treatment; however, its severe adverse effects present significant challenges. Cytarabine, a nucleoside analog widely used in hematological malignancies, exerts its anticancer effect through inhibition of DNA synthesis, but also induces apoptosis in normal cells. Disruption of the balance between pro-apoptotic (BAX) and anti-apoptotic (BCL-2) genes can lead to organ damage and ultimately compromise organ functions. The present study investigated the role of apoptosis in the endometrial tissue of rat following the administration of cytarabine compound. In this study experimental rats were divided into four groups (n=5). Group I received vehicle and served as control, Group II, III and IV- 5, 10 and 20 mg/kg. bwt of Cytarabine. The Estrogen, Gonadotropin releasing hormones and Follicle stimulating hormone levels were estimated. Endometrial homogenate was used to check the levels of Cyt c, CASP-9 and CASP-3. Assays of some oxidative and antioxidative biomarkers were also carried out. The mRNA expression of BAX and BCL-2 was also investigated. Possible ameliorative effect of melatonin against cytarabine-induced endometrial toxicity was evaluated. The study confirmed generation of oxidative stress and upregulation of pro-apoptotic gene BAX. Also, reduced estrogen, FSH and GnRh levels was measured. The reduction in estrogen can disrupt the delicate hormonal balance critical for normal endometrial function. However signs of recovery were seen in the group that was co-treated with melatonin. Melatonin has been suggested to mitigate oxidative stress and modulate apoptotic pathways in various tissues, its ability to scavenge reactive oxygen species (ROS) generated during cytarabine treatment, thereby reducing oxidative stress and subsequent tissue damage was further confirmed. This study enhanced the understanding of cytarabine-induced toxicity in female reproductive tissues and elucidated mechanisms through which melatonin and its antioxidant properties may offer protective reproductive health benefits.



83. THE DEVELOPMENT OF A MACHINE LEARNING MODEL FOR PREDICTING DIVORCE (CUD/24/182 - duplicate reprint of CUD/24/180)

Igwe Jennifer Nnenne

Caleb University Lagos, Department of Computer Science

Adeniyi Akanni

Caleb University Lagos, Department of Computer Science

ABSTRACT

This study discussed the development of a machine learning model for predicting divorce, the aim to address and adverse outcome thus revolutionizes the understanding of divorce. The proposed outcome is to develop an accurate, interpretable, comprehensive machine learning-based model to provide valuable insights for couples, policymakers, and healthcare providers due to the fact that high rate of divorce has long been a cause for concern. A decision trees model was trained on a dataset of couples, with variables including age, income, education, alcohol use, and domestic violence. The model was evaluated on a dataset, with a high degree of accuracy in predicting divorce. The results suggest that machine learning techniques have potential for improving the understanding of divorce and supporting couples at risk. The object-oriented analysis and design method (OOADM), was adopted in the development. This approach was used to model and develop the system using real intrusion features and processes to detect intrusions more flexibly and efficiently. It depicts the aim of providing a proficient system to predict the cause of divorce of married couples and also improve relationship outcomes for couples to avoid any divorce. (Note: this abstract is a verbatim duplicate of CUD/24/180, printed a second time in the book under reference number CUD/24/182, Book of Abstracts page 90.)



84. A Machine Learning Approach for Real-Time Anomaly Detection in IoT Networks Using Random Forest and Apache Flink

Rabiu Quadri Olamilekan

Department of Computer Science, Caleb University, Imota, Lagos

Moses Kehinde Aregbesola

Department of Computer Science, Caleb University, Imota, Lagos | Email: moses.aregbesola@calebuniversity.edu.ng

ABSTRACT

The rapid proliferation of Internet of Things (IoT) devices, ranging from simple sensors to complex industrial systems, has created a diverse and resource-constrained ecosystem that is inherently difficult to secure, leaving conventional security mechanisms such as firewalls and antivirus software ill-equipped to detect evolving cyber threats. This study addresses this gap by developing an AI-driven anomaly detection model for IoT devices, combining offline model evaluation with a real-time detection prototype. Three supervised machine learning algorithms, Random Forest, Decision Tree, and Support Vector Classifier, were trained and evaluated on the CIC-IoT-2023 dataset using accuracy, precision, recall, F1-score, and confusion matrix analysis. Random Forest achieved the best overall performance, with precision, recall, F1-score, and accuracy of 94.98%, 97.46%, 96.20%, and 97.46% respectively, narrowly outperforming Decision Tree (94.98%, 97.45%, 96.20%, 97.45%) and substantially outperforming Support Vector Classifier, which performed poorly across all metrics (54.02%, 2.64%, 1.06%, 2.64%). On this basis, Random Forest was selected as the proposed model for anomaly classification. Exploratory data analysis of the CIC-IoT-2023 dataset was conducted to characterize the distribution of attack and benign traffic and of attacks across protocol classes, providing further insight into the dataset's structure. To demonstrate practical applicability, a real-time anomaly detection prototype was implemented using Apache Flink and Python to simulate an IoT temperature-sensing use case, in which sensor readings exceeding a 60-degree threshold were flagged as anomalies, enabling network administrators to respond promptly. The research was implemented in Python using Pandas, Matplotlib, Seaborn, and Scikit-learn within the PyCharm IDE. The study's contribution lies in its multi-faceted approach, integrating machine learning model development, exploratory data analysis, and real-time stream-based anomaly simulation, addressing a gap in prior work that typically evaluated performance metrics in isolation without real-time implementation or confusion matrix analysis. The findings confirm that Random Forest, combined with stream-processing frameworks such as Flink, offers an effective and practical foundation for securing IoT networks against evolving threats.

Keywords: IoT Devices, Anomaly Detection, Random Forest, Decision Tree, Support Vector Classifier, Machine Learning, Apache Flink



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abstracts@calebcuic.com

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submissions@calebcuic.com

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info@calebcuic.com