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**THEME:**

# NIGERIA AT 63:
## CONTRIBUTIONS, PROSPECTS, ECONOMIC DEVELOPMENT AND TECHNOLOGY CHALLENGES.

# BOOK OF ABSTRACT

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AIFPU Auditorium
(New Lecture Theatre)
Akanu Ibiam Federal Polytechnic
Unwana, Ebonyi State, Nigeria

# LIST OF ABSTRACTS

# DEVELOPMENT OF A SECURED CLOUD-BASED E-HEALTHCARE SYSTEM USING THE RSA CIPHER ALGORITHM

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## Abstract

The exploration of IoT technology for meeting global needs led to internet virtualization technology known as cloud computing. The developed countries in most cases are conversant with distributed systems for private, public, and hybrid cloud computing. However, developing countries face numerous technological problems hindering them from achieving efficient electronic healthcare cloud systems. Indeed, medical records are highly confidential information in the healthcare sector, because of national and international health rules. Hence, patient information is sensitive and crucial, and sharing it over an unsecured wireless medium attracts vulnerability. The innovation of modern IT has enormously interoperated with high-level technology infrastructures, platforms, and software services. So, cloud-based e-healthcare is a modern technology explored in this work for the relief of patients' ado, on health data security. The process deployed virtualization of Software as a Service (SaaS) via hybrid cloud. Software as a Service was used because SaaS is the service that allows the cloud provider to develop a system that meets the user's requirements. Also, SaaS maturity level four enables scalable, configurable, multitenant, and efficient. The research achieved an asymmetric cipher algorithm that maintained the user's data communication using RSA cryptography and coded in Dev C++. It means that everybody can send a message to the user using the user's public key. But only the user can decrypt the message using his private key. However, zero downtime cloud architecture was deployed for the system availability at any needed time. So, the system swamps servers whenever it senses server failure to avoid user experience of downtime.

**Keywords**: Internet Virtualisation; Cloud-healthcare; Vulnerability; RSA Cryptography.

# FACIAL EMOTION DETECTION AND RECOGNITION MODEL: AN ENHANCED BIOMETRIC IDENTIFICATION TOOL.

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## ABSTRACT

Facial emotional expression is a part of face recognition, it has always been an easy task for humans, but achieving the same with a computer algorithm (AI) is tasking and challenging. With the recent and continuous advancements in computer vision and machine learning, it is possible to detect emotions in images, videos, objects etc. Face expression recognition model using Deep Neural Networks especially the convolutional neural network (CNN) and image edge detection is proposed in this research. CNN is used to extract relevant facial features. These features allow us to compare faces between them in an efficient way**.** The methodology involves retrieving edge of each layer of the image in the convolution process (i.e. Detect Face in Image, Extract Facial **Haar** Features; thereafter the facial expression image is normalized (i.e. Normalize Facial Land Marks). To maintain the texture picture's edge structure information, the retrieved edge information is place on each feature image. Finally, the model output the emotion expression of the image analyzed (i.e. Recognize Expression)**.** The proposed recognition method was tested with different three standard machine learning algorithms (Decision Tree (DT), K Nearest Neighbor(KNN), Support Vector Machine (SVM)) and evaluated using three datasets of face images via performance metrics of accuracy, precision, sensitivity, specificity, and time. The experimental results show that the proposed method achieves superiority over other algorithms according to all parameters. The suggested algorithm results in higher accuracy (99.06%), higher precision (99.12%), higher recall (99.07%), and higher specificity (99.10%) than the comparison algorithms.

**Keywords: Facial emotion, Biometric, convolutional, Image, machine learning.**

# PHENOTYPIC VARIATIONS AMONG WEST AFRICAN DWARF GOAT IN AFIKPO NORTH, EBONYI STATE

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## ABSTRACT

The study focused on elucidating phenotypic variations observed in West Africa Dwarf goats, specifically examining traits such as coat color, horn characteristics, beard presence, and the development of wattles conducted in Afikpo North Local Government Area. The research involved a comprehensive analysis of 150 WAD goats, comprising 129 females and 21 males, originating from four distinct communities within Afikpo North. The parameters observed includes coat color patterns, with variations such as brown, black, brown and white, brown and black, white, and mixed colors, alongside the evaluation of horns, beard presence, and wattle development. Notably, the prevalent coat color was found to be black, with proportions of 36.00%, 34.00%, and 26.6% in Ndibe, Amasiri, and Enohia, respectively. Conversely, Unwana exhibited a dominance of brown and black coloration. Interestingly, white coat color emerged as the least encountered, representing 6.67%, 10.00%, 15.00%, and 8.00% in Enohia, Ndibe, Unwana, and Amasiri, respectively. The study further revealed that 83.33% of the goats exhibited horns, while 34.67% possessed beards, and a substantial 97.33% lacked wattles. The overall level of phenotypic variation indicated a prevalence of traits such as black coat color, the presence of a beard, horned individuals, and an absence of wattles. These findings underscore the importance of considering these traits in breeding programs, as they not only contribute to enhancing breeding efficiency but also play a crucial role in genetic control, mitigating aggressive behaviors, and aligning with market demands.

**Keywords: phenotypic, variation, WAD goat**

# COCONUT OIL AND WATER: PHYTOCHEMICAL COMPOSITION AND ANTIBACTERIAL EFFECTS ON SOME BACTERIAL STRAINS

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## Abstract

The phytochemical properties and antibacterial activities of coconut oil and water were investigated in this study. Four bacterial strains, namely *Staphylococcus aureus*, *Escherichia coli*, *Bacillus sp*, and *Pseudomonas aeroginosa*, were isolated and identified using colony morphology, Gram staining, and biochemical tests. Coconut oil and water were extracted and screened for their phytochemical constituents, which revealed the presence of alkaloids, saponins, tannins, and glycosides in both samples. The antibacterial effects of coconut oil and water were determined by the agar disc diffusion method, which measured the zones of inhibition in millimeters. Coconut oil and water showed antibacterial activity against *Staphylococcus aureus*, *Escherichia coli*, and *Bacillus sp*, as indicated by the inhibition zones. The inhibition zones ranged from 9mm to 20mm for these bacteria. *Pseudomonas aeroginosa* was resistant to both coconut oil and water. Ciprofloxacin was used as a positive control and exhibited broad-spectrum antibacterial activity against all the bacterial strains tested in this study.

**Key words:** Phytochemicals, Antibacterial, Analysis, Coconut, Bacteria

# EXPLORING LANGUAGE, TRUTH, AND SOCIAL MEDIA IN NIGERIA: A PHILOSOPHICAL INQUIRY

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**Abstract**
The study delves into the complex interplay of language, truth, and communication within Nigeria's digital landscape, motivated by the nation's diverse linguistic milieu and the pervasive influence of social media. By combining philosophical insights, empirical research, and critical analyses, the research navigates the nuances of misinformation, linguistic manipulation, and truth negotiation in Nigeria's digital sphere. Through synthesizing the Nigerian experience with philosophical inquiries, the study lays a strong foundation for academic exploration in the emerging field of language, truth, and social media. In today's digital age, social media platforms wield significant influence over perceptions of truth and reality globally. This paper explores the intricate relationship between language and truth within the context of social media, examining how linguistic strategies shape information dissemination, manipulate perceptions, and shape public opinion. Drawing from diverse disciplines the research aims to unravel the mechanisms through which language operates in the digital realm, shedding light on its profound implications for our understanding of truth and reality. Employing a qualitative research methodology, specifically a literature-based approach, the study draws upon existing scholarly literature to gather, analyze, and synthesize qualitative data. Emphasizing the interpretation and comprehension of textual data over quantitative metrics, the research seeks to uncover the intricate dynamics of language use, truth negotiation, and communication practices in Nigeria's digital landscape. Through this methodological lens, the study contributes to a deeper understanding of the complexities of language, truth, and social media in the digital age.

**Keywords**: Nigeria, Language, Truth, Social Media, Philosophy

# SPEECH SYNTHESIS: AN OVERVIEW OF DEEP LEARNING APPROACH

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## Abstract

One of the most fundamental ways of expressing thoughts and ideas is speech. The ability to create synthetic speech has been a passion of mankind since the beginning. Text-to-speech systems have greatly improved in recent years. The rise of speech synthesis has attracted increasing attention. Due to the advancements in deep learning and end-to-end techniques, speech synthesis has become a widely used platform for developing applications such as chatbots and intelligent speech interaction. Deep learning techniques can be used to bridge the gap between speech and text by learning effective feature representations. This paper aims to introduce the various aspects of speech synthesis and provide a comprehensive analysis of the research activities in the field. The report first presents an overview of the various aspects of speech synthesis. It then discusses the current state of the art in deep learning-based speech synthesis and its end-to-end techniques. It also provides a variety of research directions that can help bring the field into a new era.

**Keywords**: deep learning, speech synthesis, natural language processing, machine learning

# IMPLEMENTATION OF AN EFFICIENT DEEP-LEARNING MODEL FOR MULTICLASS IMAGE CLASSIFICATION

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**Abstract:** Image classification in the field of machine learning is an interesting aspect and cogent area of deep learning with an artificial neural network. Meanwhile, it is the framework for training data, testing data, and evaluating the performance to ascertain the function ability of the model. Owing to the advancement in the artificial neural network which produced a convolutional neural network that gives room to various multi-class image classification applications. These applications detected and recognized each object in multiple categories. The activation function is among CNN features that use the sigmoid activation function to introduce non-linearity. Rectified Linear Unit (ReLU) for processing, and leaky ReLU are the most preferable option used. Moreover, the CNN model adopted was most preferred because of its multi-classification capacity. LeNet-5 architecture is selected for the report because it is the most fitted architecture for the convolutional neural network using the MNIST dataset. However, the algorithm was clearly stated, and best coded with Keras library of Python. Finally, these were integrated to build an efficient deep-learning model.
**Keywords:** Image; Classification; Deep-Learning; Model; CNN.

# APPLCATION OF TECHNICAL AND ENGINEERING EDUCATION IN STUDY OF MINERAL SAND MINING IN SCHOOL OF HIGHER LEARNING

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## ABSTRACT

The study of mining procedures using technical and engineering education in higher institutions plays a crucial role in producing skilled professionals who can contribute to the sustainable development and advancement of the mining industry while prioritizing safety, environmental responsibility, and social welfare. Mineral sand mining involves the extraction of valuable minerals, such as titanium, zircon, and rare earth elements, from sand deposits found in coastal and inland areas. This process requires specialized knowledge, skills, and technologies to ensure efficient and environmentally sustainable mining practices.

# AN INTELLIGENT HUMAN EMOTIONS DETECTION USING MACHINE LEARNING

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## Abstract

One of the important ways humans display emotions is through facial expressions. Facial expression recognition is one of the most powerful, natural and immediate means for human beings to communicate their emotions and intensions. This work aims to classify physically through emotional expressions based on facial landmarks and electroencephalograph (EEG) signals using a convolutional neural network (CNN) and long short-term memory (LSTM) classifiers by developing an algorithm for real-time emotion recognition using virtual markers through an optical flow algorithm that works effectively in uneven lightning and subject head rotation (up to 25°), different backgrounds, and various skin tones. Six facial emotions (happiness, sadness, anger, fear, disgust, and surprise) are collected using ten virtual markers. Fifty-five undergraduate students (35 male and 25 female) with a mean age of 22.9 years voluntarily participated in the experiment for facial emotion recognition. Nineteen undergraduate students volunteered to collect EEG signals. Initially, Haar-like features are used for facial and eye detection. Later, virtual markers are placed on defined locations on the subject's face based on a facial action coding system using the mathematical model approach, and the markers are tracked using the Lucas-Kande optical flow algorithm. The distance between the center of the subject's face and each marker position is used as a feature for facial expression classification. This distance feature is statistically validated using a one-way analysis of variance with a significance level of $p < 0.01$. Additionally, the fourteen signals collected from the EEG signal reader (EPOC+) channels are used as features for emotional classification using EEG signals. Finally, the features are cross-validated using fivefold cross-validation and given to the LSTM and CNN classifiers. We achieved a maximum recognition rate of 99.81% using CNN for emotion detection using facial landmarks. However, the maximum recognition rate achieved using the LSTM classifier is 87.25% for emotion detection using EEG signals.

## A COMPARATIVE STUDY OF JACOBI AND GAUSS-SIDEL ITERATIVE METHODS FOR PARABOLIC PARTIAL DIFFERENTIAL EQUATION

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**Abstract**:
Numerical Methods are crucial in various fields of Science, Engineering, Technology and Mathematics. Numerical methods try to find an approximate solution to a complex problem, Mathematics or System where analytical method fails. Many research work been done on numerical methods in ordinary differential equation but more research is needed in parabolic partial differential equation, hence, the need for this research. In this research paper, a comparative study of Jacobi and Gauss-sidel iterative method to a parabolic partial differential equation is carried out. The error analysis and the rate of convergence of both methods are worthy for further investigation.
**Keywords:** Numerical Methods, Parabolic Partial Differential Equation, Jacobi, Gausssidel, Rate of Convergence, and Error Analysis.

## GENDER CLASSIFICATION USING CONVOLUTIONAL NEURAL NETWORK

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**Abstract**
This paper focuses on detecting the human gender using Convolutional Neural Network (CNN). The aim is to design and develop a real-time gender detection model using CNN, a deep learning algorithm used as an extractor of features that takes input images and assigns value to different aspects of the image and differentiate between them. The model focuses on classifying human gender only into two different categories; male and female. The major reason why this work was carried out is to solve the problem of imposture. A CNN model was developed to extract facial features such as eyebrows, cheek bone, lip, nose shape and expressions to classify them into male and female gender, and also use demographic classification analysis to study and detect the facial expression. We used both image processing technique and machine learning algorithm for implementation and achieved a promising result for both Kaggle data and Nottingham Scan database.
**Keywords:** Gender Detection, Convolutional Neural Network, Deep Learning, Artificial Intelligence, Gender

# MATHEMATICAL MODEL ON THE TRANSMISSION DYNAMICS AND INCIDENCE OF ANTHRAX DISEASE WITH EFFECTIVE CONTROL PARAMETERS.

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## ABSTRACT

Considering the historical background of the zoonotic disease known as anthrax disease, its transmission dynamics and incidence in Nigeria, we decided to construct a mathematical model using a SEIR (Susceptible, Exposed, Infected and Recovered/Removed) approach to address the emergence of this disease in Nigeria, hoping to develop a model that will control the rate of transmission and as well conduct some mathematical analyses that will address the transmission dynamics of the disease from human to human, animal to human, human to animal and animal to animal. Good control measures are introduced compartmentally to ease analyses and quality control strategies using the developed equations from the schematic diagram to conduct favourable and considerable analyses making use of a sensitivity index table for the simulation with the application of a dominant Eigen-value $R_0$. $R_o$

**Keywords:** Anthrax disease, transmission, control measure, reproductive number.

# IMPROVING LIBRARY SERVICES THROUGH ARTIFICIAL INTELLIGENCE IN NIGERIAN LIBRARIES

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## Abstract

Latest technological development in the twenty-first century has brought a dramatic change in every field, and library science is no exception. Like any other fields, Librarianship is also incorporating many fascinating technologies into their armories. This research looked into the conceptual background of artificial intelligence (AI), library services, and the application of AI in library services. The study also reviewed existing literatures on the impact of AI on library services and the extent of its application in Nigeria libraries. The findings show that AI can improve library services like; circulation and reference services, book shelving and shelve reading, cataloguing of library materials, analyzing big data, creating metadata, interpreting search items among others. The research goes on to discuss some of the factors that affect the use of AI in academic libraries such as funding, lack of maintenance, lack of experts in AI, erratic power supply as well as possible strategies to solve the problems: developing policy for AI, consultation, adequate funding, employment of AI experts among others.

**Keywords:** Artificial Intelligence, Academic Libraries, Utilization, Library Services, Nigeria

# ANTIBACTERIAL ACTIVITIES OF AQUEOUS EXTRACT OF *ALCHORNEA CORDIFOLIA* AGAINST URINARY TRACT INFECTION (UTI) ISOLATES.

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## ABSTRACT

A high incidence of resistance has been observed in the treatment of bacterial urinary tract infections (UTIs) using routine antibiotics. This situation has been blamed on the widespread inappropriate use of antibiotics resulting in super bugs, thus necessitating a search for alternative source of antimicrobial agents. This study was done to examine the antibacterial activities of aqueous leaf extracts of *Alchornea cordifolia* plant against UTI isolates (*Pseudomonas aeruginosa* and *Escherichia coli*). Pure biochemically confirmed clinical isolates were subjected to antimicrobial susceptibility testing of both routine antibiotics and two fold dilutions of the aqueous extract of the plant using Kirby Bauer disc and agar diffusion methods. Results showed multiple resistance of the isolates to routine antibiotics with MAR indexes of 0.6 for *P. aeruginosa* and 0.7 for *E. coli* while susceptibility to the aqueous plant extracts measured by zone of inhibition in millimeters for the isolates ranged from 14 – 19.5mm for *Pseudomonas aeruginosa* and 5 – 22mm for *Escherichia coli* with effect being dilution dependent. The phytochemical analysis of the extract showed the presence of phytochemicals such as saponins, phenolics, flavonoids, Phytosterol and Anthracenosides. The antimicrobial activities of the extract is believed to be as a result of these phytochemicals. The aqueous leaves extract of *A. cordifolia* possesses good antibacterial activities, therefore, may serve as a source of antimicrobial agents for the development of alternative antibacterial treatment drugs for infectious diseases such as UTI.

**Keywords**: *Alchornea cordifolia*, antibacterial activities, aqueous leaf extracts, alternative treatment, Urinary Tract Infections (UTIs).

# ANTICANCER POTENTIAL OF SOME MEDICINAL PLANTS- A REVIEW

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## Abstract

Cells in any part of the body can at certain times or conditions grow uncontrollably. This uncontrollable growth makes the cell to be abnormal and such cells are categorized as cancer cell. The development of cancer is a multistage process that start from simple lesion or pains to tumor. The causes of cancer are usually multifactorial and basically an interaction between genetic and epigenetic factors. The epigenetic factors are physical carcinogens such as; physical (UV, ionizing radiation), chemical (asbestos, tobacco smoke, alcohol, arsenic) and biological (certain viruses, bacteria or parasite) carcinogen. Increasing exposure to these factors cause a rise in incidence of cancer and eventual accumulation of carcinogen will interfere with normal cellular processes and cause the repair mechanism to be rendered ineffective as the subject increases in age. Many therapeutic procedures (chemotherapy, surgery, hormonal) have been used to combat this disease, however the use of biological agents mostly sourced from plants can serve as natural biological agents (interferon, interleukins, cytokines). The administration of these agents will imitate, influence and provoke natural responses. The immune response will then activate the defense response to control the cancer cells. Medicinal plants contain secondary metabolites such as polysaccharides, polyphenols, alkaloids and terpenoids that serves as ligands to receptors of immune cells and this cause regulation of proinflammatory and stimulatory molecules; cytokines, interleukin, interferons. The plants active agents can be used as adjuvants that effectively promote antitumor response and enhance cytotoxicity. Immunotherapy enhances the body's immune system to function better or enable immune system to locate the cancer cells and destroy it. Medicinal plants have natural products with immense potential and efficacy towards ameliorating the debilitating effects and occurrence of cancer.

# MICROBIAL ECOTOXICOLOGY AN EMERGING RESEARCH TOPIC

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## ABSTRACT

Microorganisms provide or support key ecosystem services that are essential to life on earth such as decomposition of organic matter, nutrient cycling, bio-remediation and others but have been neglected as an end point of concern in environmental risk assessment framework. Exposure of these organisms to organic and inorganic pollutants has the potential to kill or inhibit sensitive microorganisms or disrupt their activities. Environmental microorganisms however, have developed different kinds of adaptation which may be physiologic or genetic to help them overcome the effects of these pollutants on them. Indeed a wide range of tools are available today to characterize microbial responses at different biologic level following their exposure to large varieties of pollutants and their transformation products. The responses are very complex and it Include the ability of these organisms to modify the bioavailability of pollutants and to transform or degrade any of them. Though knowledge about the interactions between pollutants and microbial communities is increasing, several challenges are faced in microbial ecotoxicology studies. Reinforced inter disciplinary knowledge is required to better characterize microbial responses to pollutants. Future researches in microbial ecotoxicology should be geared towards development of more effective polices and/or regulations that will help preserve our environment and health from the adverse effect of pollutants.

**Keywords**: Microbial Ecotoxicology, Pollutants, Ecosystem

# STRATEGIES TO SAFEGUARD INDIVIDUAL PRIVACY WHILE ENABLING THE BENEFITS OF BIG DATA WITHIN POLYTECHNICS

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## Abstract

The adoption of big data within Nigerian polytechnics holds immense potential to transform educational experiences, personalize learning, and enhance institutional decision-making. However, harnessing this potential necessitates a careful and balanced approach that prioritizes the ethical and responsible use of data. This research explores strategies and frameworks for achieving this balance, ensuring student privacy is protected while data is utilized effectively for educational advancement. The paper highlights the crucial role of data minimization by collecting only essential data and anonymization/ pseudonymization when possible. Additionally, it emphasizes the importance of robust technical safeguards like encryption and access controls to secure data storage and access. It also underscores the need for a comprehensive data governance framework to establish clear policies, procedures, and responsibilities for data handling within the polytechnic. This framework should be aligned with the Nigerian Data Protection Regulation (NDPR) and tailored to the specific context of each institution. The research paper also emphasizes the importance of transparency and stakeholder engagement; this involves proactively informing students and stakeholders about data practices, their rights under the NDPR, and opportunities to participate in decision-making processes. Finally, the paper acknowledges the need for continuous research and development. Exploring advanced anonymization techniques like differential privacy and federated learning, and developing context-specific data governance models, are crucial for navigating the evolving landscape of big data in Nigerian polytechnics. By implementing these comprehensive strategies, Nigerian polytechnics can unlock the potential of big data while upholding ethical principles and fostering a culture of responsible data use. This will ultimately allow them to leverage data analytics for continuous improvement, contribute to a future of data-driven educational excellence, and ensure that student privacy remains a fundamental priority.

# BLOCKCHAIN TECHNOLOGY: AN OVERVIEW OF A DECENTRALIZED NETWORK

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***ABSTRACT***
This work seeks to illuminate the foundational principles and mechanics underpinning blockchain technology, offering a comprehensive overview of its decentralized architecture and transformative potential. By virtue of its distributed ledger, blockchain engenders a trustless environment wherein transactions are recorded immutably across a network of nodes, obviating the need for centralized authorities. Moreover, the advent of smart contracts extends the utility of blockchain beyond mere financial transactions, enabling programmable agreements and decentralized applications (dApps) to flourish. As we navigate the intricate terrain of blockchain technology, it becomes evident that its disruptive impact extends far beyond the realm of finance, permeating diverse sectors such as supply chain management, healthcare, and governance. Yet, challenges persist, ranging from scalability concerns to regulatory hurdles, necessitating ongoing research and innovation to unlock the full potential of blockchain. This work serves as a beacon, illuminating the path forward in the realm of decentralized networks. Through collaboration, experimentation, and steadfast adherence to the principles of decentralization and transparency, blockchain technology holds the promise of ushering in a new era of trust, empowerment, and societal transformation.
***KEYWORDS:*** Decentralization, Blockchain, dApps, Network, Nodes, P2P

## BLOCKCHAIN TECHNOLOGY: ADVANCEMENTS AND APPLICATIONS

Dr. Gavin Woods

**Abstract**: This paper provides a comprehensive overview of blockchain technology, delving into its core concepts, applications, and potential implications. Building upon the foundational principles of blockchain, we explore new features and advancements in the field, including cryptographic innovations, decentralized identity management, and enhanced transactional capabilities. By examining the evolving landscape of blockchain technology, we aim to shed light on its transformative potential across various industries.

Introduction: Blockchain technology, pioneered by the enigmatic Satoshi Nakamoto in 2008, has emerged as a disruptive force in the realm of digital transactions. While initially conceptualized as the underlying technology for Bitcoin, blockchain has since evolved to encompass a myriad of applications beyond cryptocurrency. This paper aims to elucidate the multifaceted nature of blockchain technology, exploring its foundational principles, recent advancements, and potential future directions.

## DESIGN AND CONSTRUCTION OF AN IOT BIOMETRIC FINGERPRINT ATTENDANCE SYSTEM

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**Abstract**

The traditional systems of attendance which include rollcall and manually signing in has some security deficiencies mainly in form of impersonation and forgery. This paper proposes a more secured and reliable system of attendance which overcomes the above stated flaws and this is the use of biometrics. In this paper an IOT fingerprint biometric attendance system was implemented. An R307 optical fingerprint sensor was used to capture fingerprints and an ESP32 development board was used for the processing of the fingerprints. The system employs a webhook which triggers anytime an authorized fingerprint is sensed. The action of this trigger is to log the details of the authorized person into a google sheet which is used as the attendance sheet. The information logged includes the person's ID, name, date and the time of attendance. The result obtained was a reliable system of attendance which can be accessed and viewed by the administrator anywhere in the world and at any time.

**Keywords:** Attendance, biometric, fingerprint, IOT, Webhook, ESP32, Google sheet

# MICROMINERAL EVALUATION OF WILD AND CULTURED *Clarias gariepinus* FROM AFIKPO METROPOLIS

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## ABSTRACT

This study presents a comprehensive micromineral evaluation of wild and cultured *Clarias gariepinus* from Afikpo metropolis. Morphometric parameters including whole body weight (BW), viscera weight (VW), intestinal weight (IW), gonadosomatic weight (GSW), intestinal length (IL), whole body length (WBL), viscera somatic index (VSI), intestinal somatic index(ISI), gonadosomatic index (GSI),and intestinal body ratio (IBR), were analyzed. Micromineral concentration of iron (Fe), zinc (Zn), copper (Cu), manganese (Mn), selenium (Se), and chromium (Cr) were determined. A total of 6 fishes of variable gender was used. Morphometric standard measurements and formulas were used to collect data while AOAC method was used to analyze the microminerals. The result of morphometric evaluation shows significant variations in morphometric parameters of T1 (WFCG), T2 (WMCG), T3 (CFCG) and T4 (CMCG) respectively ($p<0.05$). Micromineral analysis revealed high concentration of Microminerals (Fe, Zn, Cu, Mn, Se, and Cr) in T2 (WMCG) compared to T1 (WFCG) and also high concentration of Microminerals (Fe, Zn, Cu, Mn, Se, and Cr) in T4 (CMCG) compared to T3 (CFCG). That is to say that there are significant variations in the morphometric evaluations while the micromineral analysis shows high concentration in T2(WMCG) and T4(CMCG) compared to T1(WFCG) and T3 (CFCG).The study recommends further exploration of factors influencing variations and implications for fish health and human nutrition. In conclusion, this research enhances our understanding of the micromineral characteristics of *Clarias gariepinus*, of wild and cultured of both genders providing a foundation for aquaculture practices and nutritional considerations.

**Key words:** Wild and cultured African catfish, *Clarias gariepinus*, Microminerals evaluation

# PROXIMATE PROFILE EVALUATION OF *Clarias gariepinus* AND *Ictalurus punctatus* HARVESTED FROM UNWANA AND NDIBE RIVER, AFIKPO, EBONYI, STATE

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## ABSTRACT

Proximate composition of both wild samples of African catfish (*Claria sgariepinus*) and channel catfish (*Ictalurus punctatus*) were studied using standard methods. Three (3) samples each of table-sized wild *C. gariepinus* and *I.punctatus* were used for determining proximate composition and labeled WFAC and WFCC respectively. All the samples were analyzed by using proper analytical procedure in the laboratory of Biology unit. Samples were prepared and analyzed in 3 replicates and the mean of the results obtained were recorded. The WFCC was statistically higher than the WFAC sample ($P<0.05$) in the crude protein, ash, fat, and energy content. The WFAC was statistically higher than the WFCC sample ($P<0.05$) in the crude fibre, carbohydrate and nitrogen free extract. The results have shown that there was proximate nutritional difference between WFCC and WFAC. However, they are both nutritionally standard for human consumption and can be recommended as food and use as nourishment for human.

Key words: African catfish, *Claria sgariepinus*, channel catfish, *Ictalurus punctatus*, Proximate evaluation

# MACHINE LEARNING ARCHITECTURE FOR COMBATING HATE SPEECH IN IGBO LANGUAGE

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## *ABSTRACT*

This research embarked upon the creation and integration of an Igbo Language Hate Speech Detection System into the Facebook platform. It commenced with a deep dive into the landscape of hate speech and its nuances in Igbo, the study identified a critical need for language-specific solutions. The implementation phase involved rigorous data preprocessing, focusing on cleaning the dataset by removing non-English characters and special symbols. Tokenization and lemmatization techniques were then applied to enhance the quality of the textual data. The TF-IDF vectorization method played a pivotal role in converting text into numerical features, laying the groundwork for a robust neural network model designed using Keras. Extensive testing, including precision, recall, and F1-score assessments, underscored the model's effectiveness in distinguishing hate speech from non-hate speech. Visualizations, such as word clouds and heatmaps, provided valuable insights into the dataset and model training process. The research also emphasized the user-centric approach with the integration of a user-friendly graphical interface using Kivy. This interface, featuring the Montserrat-Medium font and error handling mechanisms, not only enhances accessibility but also contributes to the overall reliability of the system. Regular monitoring, model retraining to accommodate evolving language patterns, security audits, user feedback analysis, and documentation updates form the pillars of a comprehensive maintenance plan. This ensures the sustained performance, security, and user satisfaction of the Hate Speech Detection System on the Facebook platform.

## *KEYWORDS*

Hate Speech, Deployment, Machine learning, Model, Igbo, tokenization

# CHEMICAL CHARACTERIZATION OF SYNTHESIZED NANOPARTICLES FROM NONI (*Morinda citrofolia*) SEED

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## ABSTRACT

*Morinda citrifolia* is an herbal medicine that is used for disease treatment as recommended in traditional medicine. The present study aimed to characterize silver nanoparticles from Noni seed. In this experimental study, green synthesis was carried out then the synthesized nanoparticles were characterized using SEM, EDX, TEM and FTIR. Findings showed that SEM images of the AgNPs of different shapes were obtained in the case of different seed extracts being used as reducing and capping agents. Seed extract formed approximately spherical, triangular, and cuboidal AgNPs, respectively. Elemental mapping of AgNPs by SEM-EDX shows the presence of 0.31% Ag and 40% oxides with 39% Carbon and other elements in trace amounts. TEM image demonstrates that the AgNPs were spherical. The image shows agglomerates of small grains and some dispersed nanoparticles, confirming the results obtained by SEM. FTIR result reveals the assignment of functional groups to 19 FTIR bands (690-3833 $cm^{-1}$). Bands were categorized based on possible functional group classes (alkene, aromatic, alcohol/phenol/ether, amine, etc.). Specific functional groups like alkenes, conjugated alkenes, ketones, aldehydes, nitriles, alkynes, and carboxylic acids were identified based on characteristic wavenumbers. The study presents a green synthesis approach to prepare silver nanoparticles using Noni seed extract. Reduction of silver nitrate with Noni seed extract is a simple, conducted at room temperature, efficient, and clean method to synthesize silver nanostructures.

**Keywords:** Nanoparticles, Characterization, Noni Seed, Medicinal Plants.

# A MATHEMATICAL ANALYSIS OF THE NEWS VENDOR'S DILEMMA

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## Abstract

News –vendors buy and sell newspapers on a daily basis. The amount of profit they make depend on their ability to sell most of the papers they buy. Demand variation has made it necessary for the newspaper vendors to make constructive decision on the quantity of papers they should buy to maximize profit. Therefore, there is need for a careful decision making in order to deduce the optimal quantity of papers that should be bought by the newspaper vendor to maximize profit. In this work a conceptual approach was adopted in formulating a model that maximizes the average daily profit in the long run. Analysis of the model with the incorporation of the data collected reviewed that an optimal ordering quantity of $n^* = 73$ Guardian newspaper was obtain and this has long run daily profit of ₦1130.45. Hence, a newspaper vendor is then advised to adopt this decision.

**Keywords:** Newspaper, Vendor, Dilemma, Optimal Ordering, Maximum

# THE IMPACT OF TELECOMMUNICATION LIBERALISATION IN A DEVELOPING ECONOMY, NIGERIA A CASE STUDY.

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The paper examines the impact of telecommunication liberalization in a developing economy, a case study, Nigeria. The goal of the study was to examine telecom contribution to gross domestic product (GDP), volume of local and foreign direct investment, employment generation and the availability of telecom services to the majority of the citizenry. Secondary data were used for the study while descriptive analytical tools were employed in the data analysis. Findings from the study revealed that telecommunication liberalization has increased employment opportunities to many Nigerians. The numbers of people that have direct access to telecom services in Nigeria have also increased tremendously. The study further revealed that the total revenue accruing to the government in form of tax and other charges from the telecom sector has increased greatly. Moreover, the study revealed that the liberalisation of the telecommunication sector has boosted local and foreign direct investment (FDI) in the country. Likewise, the contribution of telecommunication sector to real GDP has increases tremendously. Finally, the study showed that telecommunication sector plays important role in social transformation in Nigeria by bringing connectivity to remote areas and to lower-income strata of the population. The main recommendation, which is to the Federal Government of Nigeria, is the full liberalization of the power sector.

# POINT SOURCE EFFLUENT ANALYSIS OF A SATCHET WATER FACTORY IN UNWANA AFIKPO

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## ABSTRACT

Industrial activities are mostly responsible for waste discharged into the environment and these wastes contain toxic and hazardous substances most of which are detrimental to human health. In this study, the physiochemical properties of effluent water from the water factory in Unwana Afikpo was analyzed and the following results were obtained for pH 3.19, Temperature 27.5, COD 221.1, BOD 68.9 TDS 0.44 Alkalinity 41 Conductivity 55.5 and Turbidity 93.24. Temperature, pH, TDS, Alkalinity and conductivity were all within WHO permissible limit for waste water while COD, BOD and Turbidity were higher than WHO permissible limit. For heavy metals, the following concentrations in ppm were obtained, for Cu 2.6 ppm, Pb 0.097 ppm, Cd 0.2 ppm and Cr 0.005ppm. Cu, Pb, Cd were higher than WHO permissible limit of 1.0 ppm, 0.01ppm and 0.005 ppm. Only Cr was within WHO permissible limit. There was a marked variation in the electrical conductivity, turbidity, total dissolved solids, heavy metals, BOD and COD of the waste water from the factory table water. COD increased with effluent discharge into the receiving water. The result shows that the discharges of untreated wastewater contaminate the ground water of the surrounding environment.

Keywords: Effluent, hazardous, concentration, water etc.

# THE PRESENCE AND HEALTH CONSEQUENCES OF LACTIC ACID BACTERIA IN SALT WATER PRESERVED AFRICAN BLACK OLIVES.

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## Abstract

This study investigated the effects of brine preservation, availability of lactic acid bacteria and health benefits of African black olives.The olives were obtained from Freshly harvested fruits of African black olives (One small paint bucket) which was purchased from eke Awka market of Anambra state in Nigeria on July,2023. It was taken to the laboratory for microbiological and proximate analysis.The olives were fermented in brine for 30 days. The nutritional composition and availability of lactic acid bacteria of the african black olives were investigated whereby the fermented samples were employed in this investigation, thus lactic acid bacteria were isolated using one-tenth serial dilution and cultivated anaerobically on De Man, Rogosa, and Sharpe (MRS) agar for 48 hours. Gram staining, biochemical, motility, and other conventional microbiological investigations were performed. Four lactic acid bacteria isolates were obtained; they were Gram positive, catalase negative, non-spore producing rods and cocci, and the presence of *Lactobacillus, Bifidobacteria, Lactococcuss,* and *Leuconostoc species* was found. The proximate analysis showed a moisture, protein, fat, carbohydrate, fibre and ash content of 53.5%,7.6%,18.2%,15.9%,6.1% and 2.8% respectively. Therefore, brine preserved African black olives can be considered as a functional food with probiotic and health benefits. The study recommends developing new products or formulations based on the olives, investigating the mechanisms and pathways of their probiotic and health effects, and exploring other olive varieties or cultivars for brine preservation.

**Key words:** Brine preservation, African black olives, Lactic acid bacteria, Probiotic potential, Health benefits.

# A GLANCE AT ALZHEIMER'S DISEASE AND THE CONTRIBUTION OF GLYCOSYLATION OF FLAVONOID TO THE SEARCH FOR NEW THERAPIES.

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Alzheimer's disease, a major cause of dementias is a complex neurodegenerative disease characterised by intracellular neurofibrillary tangles that is composed of hyperphosphorylated tau protein, an extracellular dense plaque of amyloid-β and necrotic neuronal cell death with major clinical manifestations such as impaired memory and cognition, poor judgement and depression. AD crisis has not been addressed with sufficient speed and success partly due to the complexity of the disorder and the gap in understanding this complexity which has limited the development of therapeutic and diagnostic approach. The need for new management and therapeutic approach is vital since strategies that slowdown or prevent its progression have continued to remain elusive, while management drugs provide only relieve of the symptoms. Although phytochemicals such flavonoid is a promising alternative, its pharmacological potentials are not completely harnessed due to its poor solubility and bioavailability, high dose with narrow therapeutic index, non-specificity to target sites and high clearance rate, hence the need for biotechnological input. Glycosylation of flavonoid, a biotechnological modification tool has overcome majority of these challenges. This involves the coupling of flavonoid aglycones and glycosyl groups in conjugated form via the formation of a glycosidic bond. This process has successfully produced many glycosylated products of flavonoids with improved pharmacokinetic potentials and cellular distribution. This has become one of the leading, and an amazing alternative source of new molecular agents for evaluation of pharmacological potentials against Alzheimer's disease. This tool may in future provide the needed treatment strategy for AD. We therefore present a brief review of current understanding of AD and a vital source of new molecular agents for evaluation, which are necessary prerequisites for the development of new treatment approach.

# BIG DATA: TECHNOLOGIES, EVOLUTION, ISSUES AND CHALLENGES: A Review

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## Abstract

Big Data is *a large data set with increasing volume, variety and velocity*. Big data technologies has remained the major tool which plays crucial role in the analysis of large, hard-to-manage volumes of data both structured, unstructured and semi-structured data which are generated from different sources and the fast transition from digital technologies has led to the growth of big data. The data generated has resulted in Big Data. This data has many formats and consists of structured, unstructured, and semi-structured data. Big data is characterized by its; volume, velocity, variety, veracity, and value. Big data technologies also plays a crucial role to handle, store, and process this tremendous amount of data in real-time. Thus, the advancement in Big Data technologies is their ability to lower the expenses associated with storing, processing, and analyzing massive data volumes for decision making. This paper presents the Evolution, issues and challenges related to big data, characteristics of big data, and technologies used for processing the large data.

Keywords: Big Data, volumes, Big Data Technologies, velocity and variety

# EXPLORING THE USAGE OF E-RESOURCES BY LIBRARIANS AT AKANU IBIAM FEDERAL POLYTECHNIC UNWANA

By

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## Abstract

This research aimed to investigate the usage of e-resources among academic librarians at Akanu Ibiam Federal Polytechnic Unwana, Afikpo, Ebonyi state in Nigeria. Three research questions and three null hypotheses were developed to steer the investigation. The study encompassed academic librarians specifically within the institution and adopted an ex-post facto research design. The sample comprised 7 academic librarians chosen through census sampling. The reliability of the research instrument was assessed using Cronbach's Alpha, yielding a coefficient of .72. Data analysis involved computing mean and standard deviation for research questions 1-3, and t-tests were employed to assess null hypotheses 1-3 at a significance level of .05. The results indicated that librarians' characteristics significantly influenced the usage of e-resources in the institution. Consequently, the study concluded that these characteristics play a pivotal role in determining the extent of e-resource usage. Recognizing the critical importance of librarians' usage of e-resources for accessing current, relevant, and up-to-date materials, the study recommended that librarians should not encounter barriers based on their characteristics. It advocated for a universal engagement and interest among librarians in the usage of e-resources, irrespective of their status within the institution.

# SOCIETAL IMPLICATIONS OF ADVERSARIAL ATTACKS IN ARTIFICIAL INTELLIGENCE

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## Abstract

Recent research has found that many AI models are vulnerable to adversarial examples: inputs that are specifically designed to cause the target model to produce erroneous outputs. In this survey, we focus on machine learning models in the visual domain, where methods for generating and detecting such examples have been most extensively studied. We explore a variety of adversarial attack methods that apply to image-space content, real world adversarial attacks, adversarial defenses, and the transferability property of adversarial examples. We also discuss strengths and weaknesses of various methods of adversarial attack and defense. Our aim is to provide an extensive coverage of the field, furnishing the reader with an intuitive understanding of the mechanics of adversarial attack and defense mechanisms and enlarging the community of researchers studying this fundamental set of problems

**Key Words:** AI, Machine Learning, Adversarial Attacks, Cyber Security

# TECHNOLOGY CHALLENGES IN NIGERIAN EDUCATION SYSTEM AT 63.

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## *Abstract*

*Though it has been rightly said that what is wrong with 'education' cannot be fixed with technology; there is no doubt that modern life is dominated by technology. There is universal recognition of the need to use Technology in education as we are in the era of globalization where the free flow of information via satellite and the internet hold sway in global information dissemination of knowledge. Already, Nigeria is on the wrong side of the international digital divide, as all efforts to digitalize proved abortive. A great deal of instructional and administrative work in Nigeria is still carried out manually. This paper, therefore, examines the major obstacles militating against the use of Technology in education in Nigeria. They include: high cost of computer hardware and software, weak infrastructure, lack of human skills and knowledge in Technology, lack of relevant software appropriate and culturally suitable to Nigeria, inadequate telecommunication facilities, limited access to the internet, inadequate technology facilities, staff development impediment, and lack of funds as hindrances to technology education in Nigeria. As the world is moving fast into technology, Nigeria as the Giant of Africa will not be left behind. Nigeria needs technology in teaching and learning and educational management. It is equally an instrument for economic development.*

# PROXIMATE AND MICROBIOLOGICAL QUALITIES OF FERMENTED FOOD SEASONING SOLD IN EKE MARKET, AFIKPO, EBONYI STATE

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## ABSTRACT

The study was aimed at examining the proximate and microbiological qualities of fermented food seasonings sold in Eke Market Afikpo, Ebonyi State Nigeria. A total number of three samples of ogiri-Igbo derived from *Cucumis melo* seed (melon seed) were randomly purchased from three different sellers from the market and taken to the laboratory for analysis. Samples were divided into two for microbiological and proximate analysis, from one portion, 10g were weighed out and used for preparation of 10-fold serial dilution from where 0.1ml aliquot of $10^{-2}$ was by spread plate technique, inoculated onto solidified media and incubated at 37°C for 24hours. Isolates were identified based on standard microbiological methods. Proximate analysis was performed on the remaining portion to ascertain the percentage composition of fibre, protein, fats, ash, carbohydrates. Sample A had the highest viable count of $14.2x10^5$cfu/g and also the highest coliform count of $13.3x10^5$cfu/g. Four genera of bacteria isolates namely *Salmonella* sp., *Staphylococcus aureus, Escherichia coli* and *Enterobacter aerogenes* were recovered. Proximate evaluation indicates that ogiri igbo is not just a reasoning agent but also a good supply of protein at 9.02%, frat 5.0%, fibre 2.45%, moisture content 35.0%, carbohydrates 41.10% From the foregoing, it is recommended that the producers of these food seasonings should improve on the personal hygiene and storage techniques as these will reduce the rate of microbial contaminations.

**KEY WORDS:** Proximate, Microbiological and Seasoning

# CONTRIBUTIONS OF TECHNOLOGY IN ADVANCEMENT OF CHRISTIANITY IN NIGERIA AT 63 YEARS

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## Abstract

Technological advancements for the past 63 years of our Independence have significantly contributed to the growth and dissemination of Christianity in Nigeria. With the evolution of technology in Britain in the 18th Century and the subsequent technological evolutions cum innovations and spread across the globe, the relevance of technology in human – social development became a global knowledge .Hence; the creation of the Federal Ministry of Science and Technology in Nigeria in 1980. The objective of this paper is to present the existential marriage between technology and Christianity, to assess the contributions of technology in advancement of Christianity in Nigeria and to point out the challenges of technology to Christianity and its ethical principles. Data were collected from primary and secondary sources while technological determinism and digital theology theories were employed for the study. The work noted that technological contributions greatly improved the developmental dynamics of Christianity and as well, changed the traditional mode of evangelism, worship, education, administration and socio-economic life of the church. The study further x- rayed the technological innovations that have enhanced the advancement of Christianity in Nigeria to include: digital platforms, Christian – oriented mobile applications, radio and television platforms to mention just a few. The Impacts include: easy gospel propagation, effective administration, connection of believers across the globe, enhancement of religious education and a sense of community, provision of online Christian resources for global conversations, understanding and practice of the faith. Notwithstanding the outstanding positive impacts, the paper acknowledged some ethical challenges associated with technology and the practice of Christianity. Recommendations were offered to aid more strides and solutions to technological engagements.

Keywords: Technology, Contributions, Innovation, Advancement, Christianity and Development

# BACTERIOLOGICAL EVALUATION OF SPOILED TOMATOES SOLD IN AFIKPO METROPOLIS

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## Abstract

Spoilt tomatoes locally called *awara* tomatoes are the cheapest forms of tomatoes mostly sold and consumed on Sundays. These tomatoes though already spoiled are patronized by women due probably because of its lost cost despite the fact that it is already spoilt. This study therefore was aimed at evaluating the bacteriological qualities of spoilt tomatoes sold in Afikpo Metropolis. Six samples of spoilt tomatoes were randomly purchased from six different sellers in Afikpo Metropolis, labelled and sent to the laboratory for analysis. 10g each of the samples were weighed out, blended with sterile electric blender and then mixed with 20ml distilled water from where 10-fold serial dilution was performed up to $10^{-2}$ dilution. By spread plate technique, 0.1ml aliquot of $10^{-2}$ dilution were aseptically inoculated on isolating media; spread evenly and incubated for 24hours at 37°C. Results showed that the highest viable count of $17.2\times10^{5}$ CFU/g was recorded from samples A while sample C had the highest coliform count of $4.9\times10^{4}$ CFU/g. Four (4) bacteria genera (*Salmonella, Shigella, Staphylococcus and Enterobacter aerogenes*) were recovered. From the forgoing, it is recommended that proper washing of *awara* tomatoes before cooking should be observed, cooking utensils and all items that came in contact with the tomatoes should be thoroughly washed to avoid cross contamination.

**Key words:** Bacteriological, Evaluation, Spoilt, Tomatoes

# DERIVATION OF TWO-POINT OPEN NEWTON-COTES FORMULA ON THE INTERVAL [0, 1]

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## Abstract
One of the major work of researchers in Mathematics especially in the area of Numerical, is to derive formulas that will give a better approximate solution to the exact solution of a particular problem. In this research work, a two point Newton-Cote's Formula was derived and applied to a particular problem which we used to compare the existing Mid-point Rule. Our result shows that the Two-Point Formula yielded a better result than the Mid-Point Formula.
**Keywords:** Interpolation Quadrature, Newton Cotes Method, Numerical Integration

# INFLUENCE OF LOADING CONDITIONS ON CREEP- FATIGUE DAMAGE EVOLUTION.

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**Abstract -** In the realm of materials science, the interplay of loading conditions holds a pivotal role in shaping various mechanical phenomena, The evolution of creep fatigue damage is significantly influenced by loading conditions, shaping the materials degradation over time. This paper investigates the influence of loading conditions on the evolution of creep-fatigue damage in materials. Examining factors such as temperature, stress levels, and cycling frequency, the study examines into the intricate interactions shaping material degradation.. The study was carried out analyzing the intricate relationship between loading conditions and material behaviour by experimental techiques,such as mechanical test ,fatigue test ,creep tests to investigate the response of lead materials under different loading conditions. The incorporation of case studies and predictive models further contributes to the practical implications of this investigation, offering insights crucial for designing resilient structures exposed to dynamic and time-dependent mechanical loads.
**Keywords –**Creep-fatigue, Temperature effects, Stress levels,Loading conditions, Cycling frequency.

# PROXIMATE AND PHYSIOCHEMICAL CHARACTERIZATION OF BUNGA FISH (SUNGU) OIL

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## ABSTRACT

The study investigated the proximate and physiochemical characteristics of oil extracted from bunga fish. Fresh samples were purchased from Eke market,Afikpo washed,dried and processed, The oil was extracted using chloroform:- methanol:- water mixture in the ratio of 4:2:1. The % yield of the oil was calculated and it gave 39.31%.The oil was analyzed using standard analytical procedures. Results obtained for proximate composition showed that the oil contained moisture (10%), ash (16%), crude fibre (17%), protein (4.78), fat (20%), and carbohydrate (32.22%). The physiochemical properties of the analyzed oil indicated saponification value (183.63), acid value (0.8), peroxide value (63.3), iodine value (111.75), and fatty acid value (0.4) Results of this study implies that bunga fish (sungu) can be consumed since the oil is rich in nutrients but cannot be applied or used as functional food or stored for a prolonged period of time due to bacterial-storage deterioration that may occur as a result of high peroxide value >10KOH/ml The study therefore, suggest other conventional methods of oil extraction in order to improve the shelf life.

# EXPERIMENTAL STUDY OF SELF-COMPACTING CONCRETE USING PLANTAIN LEAF ASH AS A PARTIAL REPLACEMENT OF CEMENT

**By**

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**Abstract**

*Self-Compacting concrete is an innovative that does not require vibration for placing and segregation for compaction. It flows under its own weight, completely filling formwork and achieving full compaction, even in the presence of congested reinforcement. The hardened concrete is dense, homogenous and has the same engineering properties and durability as traditional vibrated concrete. Plantain leaf ash is waste and is threat to the environment in terms of odour. This innovation seeks to solve this problem. A concrete made with plantain leaf ash (PLA) as replacement of cement at different percentages of replacement with time in days was prepared and compared with the conventional concrete as control. The result showed that viscosity and workability of self compacting concrete improved remarkably when Portland Cement was partially replaced with plantain leaf ash at 10%.*

# STUDY OF SORPTION PROPERTIES AND THE DEVELOPMENT OF MATHEMATICAL MODEL FOR VARIED TEMPERATURES OF BITTER KOLA

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## ABSTRACT

The physicochemical properties and sorption isotherms of Bitter kola (*Garcina kola*) has been studied. It was processed into powder of 500 µm. The physicochemical properties determined were moisture (52.50 %), crude protein (2.51 %), crude fiber (5.12 %), fat (4.16 %), ash (0.86 %) and carbohydrate (34.85 %) content. The sorption isotherms were determined using the static gravimetric method. The obtained data were fitted into the Brunauer-Emmett-Teller, Guggenheim-Anderson-de Boer and Oswin models using the nonlinear regression method. From the results obtained, equilibrium moisture content increased with increasing water activity at a particular temperature and decreased with increase in the temperatures studied. The water surface areas of the adsorbents were calculated and the values obtained were less than 260 $m^2.g^{-1}$. The sorption isotherm curves obtained were sigmoidal and the models were also suitable for describing the experimental data with coefficient of determination values of approximately equal to unity. A mathematical model was developed and was fitted to the experimental data which gave the correlation coefficient of $R^2$ = 0.984992. The result of this work revealed that shelf life of bitter kola would be sustained by storage under lower temperatures.

**Keywords:** Bitter kola, Physicochemical, Sorption, Isotherms, Static gravimetric method

# UTILIZING WIRESHARK APPLICATION FOR ENHANCED DATA SECURITY ANALYSIS ON THE AKANU IBIAM FEDERAL POLYTECHNIC UNWANA WEBSITE

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## ABSTRACT

Ensuring data security is crucial for safeguarding information transmitted over networks, along with addressing software security concerns. Within computer systems, the Internet Protocol, particularly Hypertext transfer protocol (HTTP), serves as a common gateway for accessing websites. At Akanu Ibiam Federal Polytechnic Unwana (A.I.F.P.U.) website, students and staff enjoy access to online real time course registration, fees payments, hostel allocation, results checking, e.t.c. Wireshark, a network sniffing tool, facilitates the analysis of network protocols by logging all packets and providing detailed data displays. This study aims to utilize Wireshark to identify vulnerabilities within the A.I.F.P.U. website. The analysis of A.I.F.P.U.'s HTTP traffic reveals a lack of encryption, highlighting potential security risks. Recommendations for enhancing security include adopting the Hypertext transfer protocol secure (HTTPS) protocol, implementing Multi-Factor Authentication, monitoring website logs, and employing robust password management practices. These practices involve periodic password changes, enforcing character standardization in passwords, and utilizing password hashing techniques. Implementing these recommendations is expected to bolster security on the A.I.F.P.U. website and mitigate data communication risks.

# BACTERIOLOGICAL QUALITY OF READY TO DRINK TIGER NUT MILK SOLD IN EKWULOBIA METROPOLIS

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## Abstract

An investigation into the bacteriological quality of *Cyperus esculentus L.* juice, commonly known as tiger nut milk juice, retailed within the Ekwulobia region of Anambra State, Nigeria, was conducted. This study involved the procurement of five distinct samples, designated A through E, from various sellers. These samples underwent examination employing standard microbiological and physicochemical procedures. The statistical analysis was facilitated by the Statistical Package for the Social Sciences (SPSS). The findings indicated that the pH values of the samples were between 4.1 and 4.4. Concurrently, the total heterotrophic bacterial count fluctuated from ($1.4 \times 10^5$) to ($2.3 \times 10^5$) CFU/mL. The bacteriological analysis led to the identification of seven bacterial genera: *Staphylococcus aureus* (20%), *Escherichia coli* (20%), *Salmonella sp.* (10%), *Pseudomonas sp.* (13%), *Klebsiella sp.* (8%), *Bacillus sp.* (16%), and *Shigella sp.* (13%). Notably, *Staphylococcus aureus* and *Escherichia coli* manifested as the most prevalent, each constituting 20% of the occurrences, followed by *Bacillus sp.* at 16%. In contrast, *Salmonella sp(10%).* and *Klebsiella sp(8%)* were the least encountered. The comprehensive analysis revealed that all the samples, irrespective of their procurement location, was contaminated with pathogenic bacteria. However, the colony-forming units remained within the permissible threshold delineated by the National Agency for Food and Drug Administration and Control (NAFDAC), which mandates that the mesophilic aerobic count for locally produced beverages should not exceed < 5.0 log10 CFU/mL. The pervasive contamination across all samples could be attributed to substandard hygienic practices during the production process. In light of these findings, the implementation of stringent manufacturing protocols, augmented public health awareness initiatives, and rigorous enforcement by pertinent regulatory bodies are imperative to mitigate the risks of foodborne illnesses, diseases, and potential fatalities stemming from the ingestion of contaminated tiger nut milk beverages.

**Keywords**: Tiger nut milk; Bacterial quality; Contamination; Ekwulobia; Food safety

# HEMATOLOGICAL INDICES OF BROILERS FED VARYING LEVELS OF BLACK PLUM (*VITEX DONIANA*) LEAF MEAL DIETS

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## ABSTRACT

This study was conducted to investigate the proximate composition and the effects of varying inclusion levels of Black plum (*Vitex doniana*) leaf meal diets on haematological indices of broiler chickens. The experiment lasted for eight weeks. Four experimental broiler diets were formulated with 0, 1.5, 2.5 and 3.5 % inclusion levels of *Vitex doniana* leaf meal (VDLM) to serve as energy feedstuff. One hundred and twenty (120) day-old broiler birds (mixed sexes) were used.The birds were randomly divided into four treatments T1, T2, T3, and T4, respectively with thirty birds each. Each treatment group was further divided into 3 replicates of 10 birds each in a completely randomized design (CRD). Feed and water were provided *ad libitum* throughout the study. The results of the proximate composition showed that VDLM contained 90.44 % dry matter, 18.80 % crude protein, 2.14 % crude fibre, 3.62 % ether extract, 6.93 % ash content, 59.04 % nitrogen free extract and metabolizable energy of 3088.30 MEKcal/kg. The results of the haematological indices showed significant ($P < 0.05$) differences for haemoglobin and packed cell volume. Based on the results of this study, it was concluded that air- dried Black plum (VDLM) contained high nutrients, therefore could be included in broilers diet without any adverse effects on haematological indices.

**Keywords:** proximate composition, broilers, inclusion levels, Black plum, *Vitex doniana*,

# PROVIDING QUALITY EDUCATION THROUGH CLOUD-BASED LEARNING A PANACEA FOR POOR EDUCATION FUNDING

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## Abstract

Since the year 2020, the world has been faced with several challenges ranging from covid-19, the Ukraine-Russia war and lately the Israel-Hamas war. Apart from the loss of lives, one important sector of national development that has suffered severe damage is the funding of education sectors by different government of nations. As a beacon of nation building, this paper aims at strengthening the education integrity by proposing different cloud platforms available for educational institutions to adopt amidst poor funding to enable consistent quality education. To achieve this, the different cloud adoption based on cloud types; and based on cloud deployment models was x-rayed. Also, the criteria for cloud implementation were discussed. The successful implementation of a cloud-based learning will help school authorities to remedy the challenges of poor funding by providing uninterrupted quality education at a reduced overhead cost when compared to either conventional classroom learning or web-based learning.

**Keywords:** cloud-based learning, cloud types, deployment models, education funding.

# APPLICATION OF LAPLACE TRANSFORM METHOD IN SOLVING PARTIAL DIFFERENTIAL EQUATIONS

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**Abstract**:

The use of Laplace Transform method in solving initial value problems of ordinary differential Equations has been extensively researched. Such extension and research has not been carried out in partial differential Equations. In this paper, we show how partial derivatives cab be converted to its Laplace transform equivalent. Numerical experiments are used to drive home the applications of the method to partial differential equations with constant coefficients. Obtained results are elegant and commendable.

**Keywords**: Laplace Transform, partial derivatives, partial differential Equations, etc.

# EXAMINING THE IMPACT OF TECHNOLOGY OVERLOAD AT THE WORKPLACE

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## Abstract

Information and communication technologies have changed and created a ubiquitous work environment for employees to work at any place and at any time. But it also caused technology overload for them. This study aims to evaluate the previously published literature to examine the effects of technology overload in the workplace. This systematic literature review employed a qualitative research design and reviewed articles on technology overload from the workplace perspective. This study looked at factors that create technology overload such as interruption overload, work-life conflict/work-family conflict, stress, social network service addiction/email addiction, social overload, and lost productivity. This study also established the challenges that workers/employees have to face at the workplace. Results indicate that self-efficacy, training, and time management are the key strategies to overcome technology overload. This study would contribute to the literature by examining the technology overload in the workplace. It will increase the employees' awareness of strategies to overcome technology overload. It reviewed only empirical studies published about technology overload from the employees' perspective. Future research may be conducted focusing on the employers' perspective regarding technology overload. It has implications for the administration of the workplace to conduct training for the employees before the implementation of new technology. Organizations should establish laws for timings after work hours and disconnection from the internet at home to reduce technology overload.

**Keywords:** Technology Overload, Worklife, Social Media, Technology

# COMPARATIVE NUTRITIONAL AND ANTINUTRITIONAL CONTENT OF SELECTED CONDIMENTS *MUCUNA SLOANEI* (UKPO) AND *BRACHYSTEGIA EURYCOMA* (ACHI) USED AS THICKENER IN THE PREPARATION OF SOUP

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## Abstract

Comparative Nutritional and Antinutritional Content of Selected Condiments *mucuna sloanei* (Ukpo**)** and *Brachystegia eurycoma* (Achi) used as Thickener in the Preparation of Soup were carried out using standard methods. The result of the proximate composition of *mucuna sloanei* (Ukpo**)** and *Brachystegia eurycoma* **(**Achi) are presented reveals that the moisture contents of *mucuna sloanei* (Ukpo**)** and *Brachystegia eurycoma* (Achi were 4.2±0.01%and 4.53± 0.01% respectively, and were quite moderately low. The moisture content obtained for Achi was slightly higher than that of Ukpo. The percentage ash of *mucuna sloanei* (Ukpo) and *Brachystegia eurycoma* (Achi were 3.22±0.02% and 3.10± 0.01%. The analysis also revealed 13.18±0.01% and 11.62± 0.01% as the protein content for Ukpo and Achi, respectively. The percentage fiber content of Ukpo and Achi were 1.57±0.02% and 1.36± 0.02. The carbohydrate contents of Ukpo and Achi were, 72.57±0.02% and 74.83± 0.02% respectively. Analyses of the mineral contents showed that calcium, phosphorus, were higher in *Brachystegia eurycoma* than *mucuna sloanei* seed. While, *mucuna sloanei* has the highest concentration of potassium, Iron and Zinc when compare to *Brachystegia eurycoma* (achi). Analysis of the vitamin composition of the two seeds used as thickener revealed that Vitamin A and C were higher in *mucuna sloanei* seeds that *Brachystegia eurycoma* seed. The antinutritional analysis showed that phytate and oxalate were higher in *mucuna sloanei* (Ukpo) than than *Brachystegia eurycoma* (achi). The results of this study suggest that *Brachystegia eurycoma* and *mucuna sloanei* are good sources of carbohydrate, crude fibre and protein, it also contain minerals and vitamins in appreciable quantities therefore, their consumption as thickener should be encourage.

**Keywords**: proximate, minerals, vitamins, antinutrients, Condiments

# EVALUATION OF THE POLLUTION INDEX OF BOREHOLE WATER SUPPLIES IN AKANU IBIAM FEDERAL POLYTECHNIC, UNWANA

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## ABSTRACT

The study evaluated the pollution index of water supply in Akanu Ibiam Polytechnic, Unwana, in order to ascertain its safety for consumption. Water samples were collected from four different borehole water in Akan Ibiam Federal Polytechnic, Unwana. pH, temperature , conductivity of the water samples were analyzed at the point of sample were taken to the Laboratory for immediate analysis using standard analytical methods. Results samples obtained from this study indicate the physiochemical properties of water determined in this study are below the recommended standard of WHO. The physiochemical analysis of water is used to measure the safety index of water. The findings from Akanu Ibiam Federal Polytechnic, Unwana are not contaminated. However, as perceived by consumer, the taste and may not be appealing as a result of storage tank, duration of storage etc but are safe for consumption since they fall within the recommended standards. The routine treatment of water is an effective way of eradicating the contaminants in water thereby making then safe for consumption.
Key words: borehole. Conductivity, physicochemical, contaminant, water

# OCCUPATIONAL HEALTH HAZARDS AND THE EFFECTS OF POLLUTION IN PLASTIC INDUSTRY – A CASE STUDY OF MILLENNIUM PLASTIC INDUSTRY, NODU, OKPUNO, AWKA, ANAMBRA STATE,NIGERIA.

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## ABSTRACT

The process of manufacturing in plastic industries releases toxic chemical compounds into the air, on the land and in the water, and is an emerging area of concern. In addition to creating pollution problem during plastic production, accidents have been registered. This study evaluates the pollution and occupational health hazards that are usually experienced by workers in the process of plastic manufacturing. Proper collection of gas samples was done using a deflated football. The gaseous samples were later injected into a gas chromatography device. The result provided sixteen (16) toxic gaseous pollutants and their respective concentrations. The results were later compared with the WHO maximum standard concentrations for toxic gases. As plastic production is associated with many toxic pollutants that have the potential to cause significant harm to the environment and human, care should be taken to always monitor and control these pollutants to save the lives of persons working in the plastic industries. More effort and research should be geared towards detecting more pollutants and improve on gas analyzing device in a bid to safeguard the lives of people working in the plastic industries and protect our environment from further degradation.

**Keywords**: Plastic, Toxic gas, Pollutants, Manufacturing, Environment

# ASSESSMENT OF NOISE POLLUTION IN SELECTED MARKETS IN YENAGOA, BAYELSA STATE.

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## ABSTRACT

Noise is an unwanted or undesirable sound that is considered an environmental challenge in the society as it relates to human comfort and psychological wellbeing. Assessment of noise pollution level was carried out in major markets within Yenagoa with a sound level meter. The weekly level of sound intensity measured ranges from 43.5dB to 103.7dB with a mean of 80.9dB for Swali market, 46.5dB to 94.2dB with a mean of 71.0dB for UPE market, 47.3dB to 97.2dB with a mean value of 75.3dB for Okaka market, 54.0dB to 90.0dB with an mean value of 78.6db for Kpansia , 43.9dB to 94.7dB with a mean value of 76.2dB for Opolo market and 47.3dB to 96.0dB with a mean of 74.2dB for Akenfa market The average weekly noise levels are below the WHO limit except for Swali, Kpansia, Opolo and Okaka Market which were above the limit.

**Keywords**: Noise pollution, Decibel, environmental noise, sound intensity

# CURRENT TRENDS IN COGNITIVE RADIO SYSTEMS

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## Abstract

The advancements in wireless technology have led to an increase in the flexibility of spectrum usage. One of the main factors that has affected this is the policy of fixed spectrum assignment, which means that a lot of the spectrum is wasted. This led to the development of cognitive radios, which can help improve the efficiency of the spectrum. Through this process, spectrum sensing was developed to monitor the usage of the radio spectrum. This technique is very important for cognitive radios as it allows them to improve their efficiency by optimizing the spectrum usage. This report presents a detailed analysis of the various characteristics of cognitive radios. This report talks about the various techniques involved in spectrum sensing and discusses the latest advancements in this area. It also looks into the cognitive radio applications that are currently being used in this field.

**Keywords:** Cognitive Radio Network, MIMO, spectrum sensing, software define radio

# PROXIMATE AND VITAMIN CONTENTS OF TWO VARIETIES OF OIL PALM (*Elaeis guineensis)* FRUITS MESOCARP AQUOUS EXTRACTS

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## ABSTRACT

The research examined the proximate and vitamin contents of two varieties (pisifera and dura) of oil palm (*Elaeis guineensis)* fruits mesocarp aqueous extracts. The samples obtained from selected Unwana oil palm trees were thoroughly washed with distilled water, boiled for 30 minutes in a hot plate at 55 $^0$C, gently crushed in a wooden mortar with pestle to separate the mesocarp (pulp) from the nuts and then analyzed for the proximate and vitamin levels using standard official methods of analysis of AOAC. The results revealed that % moisture content (49.28 ± 0.78 and 47.34 ± 0.82), % protein (1.59 ± 0.14 and 2.01 ± 0.16), % crude fiber (7.67 ± 0.57 % and 8.41 ± 0.11 %), % crude lipids (38.57 ± 1.43 % and 39.25 ± 2.01 %), % ash (1.16 ± 0.05 % and 0.92 ± 0.08 %) and % carbohydrate (1.73 ± 0.47 % and 2.07 ± 0.51 %) were analyzed for pisifera and dura varieties respectively. The vitamins analyzed showed that vitamin A, B1 and C were respectively 3.85 mg/ml, 5.74 mg/ml and 1.15 mg/100g for dura species, while 4.90 mg/ml, 4.62 mg/ml and 0.38 mg/100g were detected respectively for vitamin A, $B_1$ and C in the pisifera species. Thus, to promote food security and economic sustainability, the consumption of the mesocarp extracts of *Elaeis guineensis* fruits commonly used as food delicacy contributes significant potential health benefits for mankind.

**Key Words**: Proximate contents, vitamins, mesocarp extract, *Elaeis guineensis* and Unwana.

# THE DRIVING FORCE TO SELF RELIANT AND TOTAL INDEPENDENCE TO A DEVELOPING NATION, LOOKING AT POWER GENERATION AND DISTRIBUTION IN NIGERIA.

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***Abstract***

*This paper "driving force to self reliant and total independence" analyses the electric power situation in Nigeria, given the structure after the unbundling of the Nigerian Electricity Supply Industry following the reform and privatization by the passing of the Electric Power Sector Reform Act. As a solution to Nigeria's electricity issues, the paper considers the introduction of distributed energy resources. Still, it recognizes the limitation to this due to the restriction in Items 13 and 14 of the Second Schedule to the Constitution of the Federal Republic of Nigeria 1999 (as amended). Following the amendment of these items by Bill No.33 2022, the paper proposes that state governments begin to consider introducing distributed energy resources to improve their energy supply and economic activities.*

# REVIEWED STUDY OF COMPOSITE MATERIALS PRODUCTION PROCESSES

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## ABSTRACT

*Reviewed study of composite materials production processes was successfully carried. Researchers adopted a descriptive survey approach. It is of paramount to achieve a material whose properties are at the leading edge of materials technology, with performance and costs appropriate to ultra demanding applications such as automotive car body, structures, spacecraft, marine, energy, etc, should be the most demanding aspects of material technology. This study revealed that the primary advantages of composite materials are lightweight, relative stiffness, corrosion resistance and strength properties, which have widened their applications in engineering professions. The paper also presented the various production processes of composite materials. Easy of production, lower cost and availability of polymer or fiber materials have widened the usability of composite products. However, the recyclability and damage repair approaches of composite products are still underdeveloped.*

***Keywords:*** *composite materials, production processes, engineering, automotive, descriptive survey.*

# THEORETICAL DESIGN, MOLECULAR SIMULATION, AND DFT STUDIES OF NEW HYDRAZONE DERIVATIVES OF HYDRAZINCARBOTHIOAMIDES.

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## Abstract

In this work, a theoretical study of π-conjugated materials of hydrazinecarbothioamides is derived from the coupling of thiosemicarbaziede to 2-substituted benzaldehydes. Hydrazinecarbothioamides are usually synthesized from the coupling of hydrazine hydrate to carbonyl compounds. They are electron-rich intermediates used in the synthesis of heterocyclic compounds. Three compounds, 2-(2-hydroxybenzelenden)hydrazinecarbothioamide, 2-(2-mercaptobenzelenden)hydrazinecarbothioamide, and 2-(aminobenzelenden) hydrazinecarbothioamide, were designed using Chemdraw Ultra 12 and investigated for their biological activities. Molecular docking studies using AutoDockTools 4.2 showed that the compounds achieved binding affinities ranging from -4.1 to -4.4 kcal/mol, with 22ABHCTA having the highest binding affinity for the target protein, Aspergillus flavus, at its best pose. All the compounds obeyed the Lipinski rule of five and are therefore suitable pharmacological options for A. flavus disease treatment. Quantum chemical parameter calculations for the title compounds of HOMO-LUMO energies, energy gaps, chemical potentials, electronegativity, electrophilicity, global hardness, and global softness were performed using Spartan 14 computational chemistry software. The investigations showed that the compounds are potential precursors for the synthesis of novel drugs. The studied compounds showed antimicrobial activities, potential agents for drug synthesis, and preferred alternatives. The DFT calculations showed that the compounds are stable and reactive as electron-rich intermediates.

# THE PROSPECTS AND CHALLENGES OF INDIGENOUS FABRICATION OF AGRICULTURAL PROCESSING MACHINERY IN NIGERIA

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## ABSTRACT

Effectively equipping and supporting the fabrication of machinery by all regions are vital in the improvement of the agricultural processing sector in the right developmental trends that will foster high productivity, drastically reduced post-harvest losses and enhanced food security prospects. The study appraised the prospects and challenges of indigenous fabrication of agricultural processing machinery in Nigeria – a nation that has marked her sixty three years of existence. Indigenous machinery fabrication presents such good prospects as reduced importation of alien or foreign technology, improves economic growth, of a nation, increased self-employment potentials, enhanced regional technological self-reliance, optimized national standardization and technological competitiveness, motivated industrial development and domestic capacity building, stimulated export and trademark of indigenous products, enhanced farm products conversion and diversification, and enhanced food and food products quality. The realization of these good prospects has been mitigated by numerous challenges posed by local fabricators, agricultural and food processing entrepreneurs, and the government.

**Keywords:** *Indigenous fabrication, processing machinery, prospects, food processing, challenges*

# DESIGN AND CONSTRUCTION OF A DUAL-AXIS SOLAR TRACKING SYSTEM

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**Abstract**

Fixed mounted solar panels come with a drawback of lowered efficiency as a result of not being able to harness the sun rays in a perpendicular direction for most hours of the day. One of the solutions to this problem is using a tracking device to focus the solar panel in the right direction. A dual axis solar tracking system was implemented in this work. Four photosensitive resistors were used to track the elevation which is the vertical angle of the sun and the azimuth which is the horizontal angle of the sun respectively. Calculations were performed based on the readings gotten form the photoresistors with the aid of an arduino nano development board to determine the precise position of the sun. the solar panel is rotated by two servo motors; one in the horizontal direction and the other in the vertical direction. The final product was a system that successfully faced the solar panel to the direction of the sun.

**Keywords:** Solar tracking system, Dual axis, Photoresistors, Arduino.

# COMPARING VISUAL WELDING EFFECTIVENESS: ANALYZING STRAIGHT BEAD WELDING RESULTS BETWEEN 120 AMPS FLUX CORE ARC WELDING AND 100 AMPS ARC WELDING PROCESSES"

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***Abstract*** –
This paper investigates and compares the visual welding effectiveness of straight bead welding between two distinct processes: 120 Amps Flux Core Arc Welding and 100 Amps Arc Welding. The analysis focuses on critical parameters such as bead appearance, penetration depth, and overall weld quality. Through a meticulous examination of uniformity, spatter, and defect presence, this study aims to provide valuable insights into the relative performance of these welding techniques. The findings contribute to enhancing understanding and decision-making in selecting the most suitable welding process for specific applications.
**Keywords** – welding, visual effectiveness, Flux Core Arc Welding, Arc Welding, bead appearance, penetration depth, weld quality, uniformity, spatter, welding processes, comparative analysis

# INVESTIGATION ON THE EFFECT OF WELDING CONSUMABLES ON THE MECHANICAL PROPERTIES OF WELD JOINT IN A WELDED MILD STEEL

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**Abstract**
This work investigates on the effect of welding consumables on the mechanical properties of weld joint in a welded mild steel. Steel is an alloy of iron and carbon and it is usually cast into malleable form. Welding is the process of coalescing materials such as metals or thermoplastic in order to seamlessly join them. The welding processes undertaken in this work were shielded metal arc welding (SMAW) and the electrodes used were E6013 and E7018 and oxy-accetylene was used with mild steel filler metal. Preparation of test samples, parent metal (unaffected) zone, heat affected zone/HAZ) and weld metal zone were looked into. Tensile tests and hardness tests was carried out for the various consumables and the Brinell Hardness number was also calculated for the consumables and shown in the average table of values. The graph of stress and strain curves were also presented in the discussion.

# POTENTIALS OF BLOCKCHAIN TECHNOLOGY FOR CONSTRUCTION ENGINEERING MANAGEMENT

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## ABSTRACT

Construction engineering management in recent past has suffered enormous challenges in terms of trust, information sharing and process automation which has necessitated the quest to study the gap in existing research by exploring the potential of applying blockchain specifically to construction engineering management. Blockchain is a decentralized transaction and data management technology, which has attracted increasing interests from both academic and industrial aspects since 2008. However, most of the existing research and practices are focused on the blockchain itself (i.e. technical challenges and limitations) or its applications in the finance service sector (i.e. Bitcoin). The prospects for blockchain technology in construction engineering management is promising but still developing. All participants can access a single source of truth for documents, contracts, and communication, reducing disputes and litigation. Blockchain's core feature, a secure and tamper-proof record of transactions, can significantly improve trust and transparency in construction projects. Three types of blockchain-enabled applications are proposed to improve the current processes of contract management, supply chain management, and equipment leasing, respectively. While the potential benefits of blockchain are significant, this study also acknowledges the challenges associated with blockchain technology implementation in construction, which are crucial to consider as discussed in this paper. Overall, this paper aims to investigate the promising potential of blockchain technology application in the construction sector by addressing the challenges faced by construction engineering management. However, it emphasizes the need for further research and development to overcome technical and regulatory hurdles and gain broader industry acceptance.

# BUSINESS DIVERSIFICATION AND ECONOMIC SUSUTAINABILITY ON SELECTED MANUFACTURING FIRMS IN PORT HARCOURT RIVERS STATE..

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## Abstract

This investigation reports the result of a study of the major role of diversification in improving business sustainability in this ever dynamic and competitive business environment in Delta State, Nigeria. The study evaluates how businesses in this part of the nation are able to apply strategies to adapt to unfavorable conditions to sustain and improve their productivity. The population of the study comprises of 22 firms. Since the population is less than 100 the census sampling technique was applied, and 2 copies of the questionnaire were given to each firm, which brings the total to 44. The unit of analysis comprises of senior managers, middle managers and junior staff. A structured questionnaire was arranged to together the required data from the respondents. The data collected from respondents were analyzed using descriptive research design and spearman rank correlation coefficient. The finding informs us that there is a positive significant relationship between diversification and economic sustainability of selected businesses in Delta State. It was observed that strategies employed by these firms improved businesses, contributing useful knowledge for business decision makers and researchers seeking to achieve their objectives in a challenging business environments that needs constant monitoring.

**Keywords:** Diversification, sustainability, profitability, innovation, productivity,

# DESIGN AND FEASIBILITY STUDY OF A NOVEL SELF-SUSTAINING HYDRO-POWER PLANT BASED ON COMPENSATED 3-STAGE ENERGY INTERACTION SCHEME

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***Abstract***

Energy interaction model for the production of net electrical power from a hydro-plant with re-circulating kinetic matter is presented. The current research aims at integrating a centrifugal pump with a crossflow turbine to produce a compact hydro-power plant that works, contrary to classic setup, with finite water volume which is continuously recirculated by the pump within a closed circuitry. To implement the model layout, performance characteristics of a chosen rotodynamic pump was evaluated via pump test using established procedure, rational design of a crossflow turbine unit was undertaken and its CAD model developed using SolidWorks® 2020 software. Fluid reservoir, flow discharge, and recirculation systems were designed to insure supply of steady jet through the turbine nozzle. A starting system, power isolation and synchronization unit, speed increasing gearbox, signal compensating and amplifier systems, monitoring and control modules were incorporated into the plant to facilitate automatic and controlled operation of the plant. A mini-plant was fabricated based on designed parameters, and performance of the implemented system evaluated through real-time experimentation. The current work introduced a new design of nozzle position adjusting mechanism for on-line practical determination of combined height ($h$) and attack angle ($\alpha$) positioning for maximum runner speed ($N$) at constant load. Laboratory results from the developed plant reveals that net power output of 2,100 $W$ (220 $V$, 50 $Hz$) could be generated under pump pressure head of about 50 $m$ with nozzle jet inclined at 16° at blade inlet. The current engineering enquiry has led to the production of a penultimate perpetual motion machine that does no other work except continuous production of net power, working in a cycle, from a 3-Stage energy interaction scheme for economic and sustainable electric power generation.

***Key Words:*** *Perpetual motion machine, clean energy, crossflow turbine, hydro-power plant, rotodynamic machines.*

# FOOD FROM ORGANIC WASTES (MUSHROOM), IT'S OPPORTUNITY FOR DEVELOPMENT

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**Abstract**
Mushroom (higher fungi) has been used as human food for centuries. Of more than 45,000 species of fungi technically described, about 2,000 species are known to be edible, of which fewer than 25 species are widely accepted as food while only few have become commercial items. This paper presented a review of the state of the food 'mushroom', in relation to its threat to cultivation and nutritional / medicinal use as well as targets for its improvement in production for food security. Despite lack of exploitation, mushrooms are potential contributors to world's food supply and have the ability to transform valueless wastes into highly acceptable nutritious foods.

**Key words**: Mushroom, food security, wastes, medicinal, nutritional, cultivation.

# PERFORMANCE OF SORGHUM (*Sorghum bicolor* (L.) VARIETIES AS INFLUENCE BY AGROLYSER MICRONUTRIENTS IN SUDAN SAVANNA OF NIGERIA

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## ABSTRACT

Field experiments were carried out at Department of Agronomy Bayero University Kano (BUK), Research farm, Binyaminu Usman Polytechnic (BUPOLY) Research Farm during 2023 raining season. The aim of the study was to evaluate the performance of five Sorghum verities and to assess the effect of different levels of agrolyser micronutrients on growth and yield of Sorghum (*Sorghum bicolor* L. Moench) varieties. The experiment consists of five Sorghum varieties (SAMSORG 45, SAMSORG 47, SAMSORG 49, SAMSORG 53 and SAMSORG 54), and Agrolyser micro nutrient fertilizer (6kg $ha^{-1}$, 4kg $ha^{-1}$ and 2kg $ha^{-1}$). The treatments were laid out in split plot design replicated three times. Soil and meteorological data were collected. Growth and yield parameters such as chlorophyll content, plant height (cm), days to 50% flag leaf, days to maturity and grain yield $ha^{-1}$ were collected, recorded and subjected to analysis of variance (ANOVA) using Genstat 17$^{th}$ Edition. Treatment means were separated using Student-Newman Keuls Test. The result of the study shows that agrolyser micronutrients did not significantly affects chlorophyll content and plant height, at both locations. However, Significant effects of varieties on chlorophyll content and plant height at both locations were observed. Plants treated with 6kg agrolyser produce the heavier biomass (3560-7311$kgha^{-1}$) and higher grain yield (2361-2599 $kgha^{-1}$) than plants treated with 2kg $kgha^{-1}$ agrolyser and control. Samsorg53 and samsorg45 were recorded to have higher grain yield (2560kg-2095$kgha^{-1}$) respectively.

**Keywords**: Sorghum varieties, Agrolyser and Micronutrients.

# EFFECT OF NITROGEN FERTILIZER ON FRUIT YIELD AND YIELD COMPONENTS OF TWENTY ACCESSIONS OF PUMPKIN (*Cucurbita pepo* Linn.)

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## ABSTRACT

A field experiment was carried out for the purpose of evaluating the effect of nitrogen fertilizer on fruit yield and yield parameters of twenty Accessions of pumpkin. The experiment was carried out in 2023 during cropping season at the Teaching and Research Farm, Department of Horticulture and Landscape Technology, Akanu Ibiam Federal Polytechnic, Unwana, Ebonyi State, Nigeria. The farm is located on latitude $06^{0}05$N and longitude $08^{0}03$E at an altitude of 300m above sea level. Accessions of pumpkin were collected from twenty different areas in five south eastern State of Nigeria. Nitrogen fertilizer was applied using ring method at the rates of (0, 60, 120 and 180kg/ha). The experiment was conducted as a 4 x 20 factorial laid out in randomized complete block design (RCBD) with three blocks. Data were taken on yield and yield parameters such as number of fruits, fresh fruit weight, fruit height, fruit girth and fruit yield. The yield of twenty accessions of pumpkin was significantly ($P<0.05$) affected by nitrogen fertilizer. The highest fruit number and yield of pumpkin of 3 fruits and 11t/ha were recorded from Omasi accession, respectively. On the other hand, Umulolo accession gave the least number of fruit and fruit yield of 1 fruit and 8t/ha, respectively. Orlu accession gave the highest fruit height of 25.58cm and fruit girth of 24.16cm while Amokwe accession recorded heaviest fruit of 2.038kg/ha. The productivity of the twenty accessions of pumpkin could be maximized by the application of 60kg/ha of urea fertilizer which gave population mean fruit yield of 10t/ha. Increasing fertilizer above 60kg/ha did not significantly ($P=0.05$) increases the fruit yield nor the number of fruits.

**Keywords:** Accessions, Nitrogen fertilizer. Pumpkin and Yield

# NITROGEN FERTILIZER EFFECT ON THE GROWTH AND YIELD FLUTED PUMPKIN (*Telfairia occidentalis* Hook F.) IN UNWANA-AFIKPO

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## ABSTRACT
Fluted pumpkin is a vegetable crop grown often without fertilizer by farmers but with the increase pressure on land resources, farmers adopted the use of fertilizers to boost crop productivity. The experiments were conducted during 2022 and 2023 rainy season at the teaching, demonstration and research (TDR) farm of Horticulture and Landscape Technology, Akanu Ibiam Federal Polytechnic, Unwana-Afikpo, Ebonyi State, Nigeria for the purpose of evaluating the influence of NPK fertilizer on growth and yield of fluted pumpkin. The treatments consisted of three rates of NPK fertilizer and a control (0, 60, 80 and 100kg/ha) which were laid in a randomized complete block design (RCBD) and replicated four times to form sixteen plots. The parameters assessed were vine length, number of leaves and vines, stem girth, leaf area, leaf yield and fresh weight of leaves. The results show that application of NPK fertilizer had significant (P=0.05) difference on vine length, number of leaves and vines, leaf yield and fresh weight of leaves. However, stem girth and leaf area were statistically non-significant at P=0.05 from the preliminary F-test. The highest leaf yield of the fluted pumpkin of 2.40t/ha and 2.30t/ha were recorded from 80kg/ha of NPK fertilizer in 2022 and 2023 cropping seasons, respectively. On the other hand, control plots gave the least leaf yield of 0.83t/ha and 1.15t/ha in 2022 and 2023 seasons, respectively. The productivity of the fluted pumpkin could be maximized by the application of 80kg/ha of NPK fertilizer and was recommended in the study area.

**Keywords:** Fluted Pumpkin, Growth, NPK Fertilizer and Yield

# RESPONSE OF FINISHER BROILERS FED GRADED LEVELS OF KITCHEN CHARCOAL AS TOXIN BINDER

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## ABSTRACT
This study was conducted at the research and teaching section of the poultry unit of Akanu Ibiam Federal Polytechnic, Unwana, Ebonyi State, Nigeria to evaluate the response of finisher broilers fed graded levels kitchen charcoal as toxin binder. 60 pieces of three week old unsexed broilers were used for this experiment; the birds were grouped into four treatments and replicated thrice at 5 birds per replicate. These birds were placed on four experimental commercial diets which contained inclusion levels of kitchen charcoal at 0%, 1.5%, 3% and 4.5%. The resultant effect of the experiment showed that no significant difference ($P > 0.05$) was observed among all the parameters considered for the performance and carcass characteristics of broiler finisher fed graded levels of kitchen charcoal. However, the values recorded for the gizzard of the birds on T3 was significantly lower ($P < 0.05$) than what was observed for the control and treatment 4. A noticeable decline was observed as the inclusion level of charcoal increased up to 3% but inclined at 4.5% inclusion levels. The finding of this study revealed that inclusion of kitchen charcoals in broilers diets did not have any adverse effects on the performance, carcass and the organs of the experimental birds. However, 3% inclusion level aided digestion and reduced pressure on the gizzard which finally led to better feed conversion and positively affected the final weight. It is therefore recommended that 3% inclusion levels of kitchen charcoal should be incorporated in broiler diets to aid growth and maximize profits in broiler production.

# COMPOSITIONAL CHARACTERISTICS AND INDUSTRIAL ASSESSMENT OF CLAY DEPOSIT IN IKWO AREA, EBONYI STATE SOUTHEASTERN NIGERIA.

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## ABSTRACT

The characterization of clay deposits at Ikwo area in Ebonyi State were carried out to determine their suitability in industrial applications. x-ray fluorescence (XRF) analysis of the clay revealed average oxides of $SiO_2$ (64.89%), $V_2O_5$ (0.05%), $Cr_2O_5$ (0.04%), MnO (0.12%), $Fe_2O_3$ (2.55%), $Co_3O_4$ (0.012%), CuO (0.05%), $Nb_2O_3$ (0.01%), CaO (0.77%), $P_2O_5$ (0.43%), $K_2O$ (7.34%), BaO (0.28%), $Al_2O_3$ (21.73%), $Ta_2O_5$ (0.69%), $TiO_2$ (0.69%), $Ag_2O$ (0.02%), $ZrO_2$ (0.75%) and $SnO_2$(0.11%). x- ray diffraction (XRD) analysis also revealed clays of average mineralogical composition of quartz (45%), kaolinite (37%), Orthoclase (4%), Microcline (9.3%), Osumilite (1.3%), Albite (2.3%), Illite (0.1) and Garnet (0.6%) The physical test of the clays gave average results of apparent porosity (26.3%), bulk density(1.7g/cm$^3$), water absorption(16.1%), apparent specific gravity(2.3), dry shrinkage(1.5%), fired shrinkage(3%) and total shrinkage(4.5%). Having characterized this clay for their suitability, the colour change from milky to dull white after fired revealed that the clays are suitable for porcelain production and good for production of paint. Also, the high Kaolinite content of the clay makes it suitable for use as kaolin clay in ceramic industry for production of bricks, ceramic pipes, tiles, sanitary wares and table wares. The clays are good for production porous refractory bricks from the apparent porosity of 26.3%

**Keywords**: Characterization, X-ray fluorescence analysis, X- ray diffraction analysis, mineralogical composition, industrial applications, Physical test

# COMPARATIVE STUDIES ON PHYSICAL AND PROXIMATE COMPOSITIONS OF BISCUIT FROM AFRICANYAMBEAN, BROWNRICE AND SOYABEAN FLOURS

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## Abstract

This paper presents a comparative study on the physical and proximate composition of biscuits made from different flour sources including wheat, African yam bean, brown rice, and soybeans. The aim of the study was to assess the nutritional value and quality attributes of biscuits derived from alternative flour sources, in comparison to the conventional wheat-based biscuits. Flours of African yam bean, brown rice and soybean were produced using conventional methods. Biscuits were further produced from the flours of African yam bean, soybean and brown rice using the creamy method. The physical characteristics such as weight, thickness, diameter and spread ratio as well as the proximate composition including moisture content, protein, fat, ash, fibre and carbohydrate content of the formulated biscuits as well as the control (wheat flour biscuit) were analyzed and compared among the different biscuit samples. The results on the biscuit samples revealed the following ranges: physical properties: weight 13.31-20.15g, thickness 0.68-0.81cm, diameter 5.03-5.90cm, and spread ratio 7.65-11.15; proximate parameters: moisture 4.70-7.70%, ash 3.50-4.90%, fibre 0.15-7.50%, protein 11.50-30.50%, fat 10.84-22.75% and carbohydrate 40.30-63.50%. The findings suggest that these alternative flour sources offer promising opportunities for the development of nutritious and sustainable biscuit products. The findings of the study further provide valuable insights into the potential of alternative flour sources in biscuit production and their implications for nutrition ad food security.

**Keywords:** Biscuits, physical properties, proximate composition, comparative analysis

# EFFECT OF GREEN GLASS CULLET AND METAL OXIDES ON TERRACOTTA BRICK TILES PRODUCED FROM LOCAL CLAYS.

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## *ABSTRACT*

*Investigation of terracotta brick tiles produced from local raw materials and other additives was carried out. Five clay bodies each, were formulated from Nsu clay, Unwana clay and Enohia clay respectively, by mixing them in different proportions with the additives. X-ray fluorescence analyses was used to determine the major oxides present in the clays. Test pieces measuring 22.5 x 7.6 x 0.8 cm were produced from the samples, using a manual hydraulic tile press machine. The test pieces were dried and fired in a gas kiln at a temperature of 1050°C. All the samples for Nsu clay failed to mature properly at the firing temperature, since it is well below the maturity temperature of kaolinitic clays. All the samples from Unwana clay were well matured at this temperature, with various color effects noticeable with the different additives. None of the samples from Enohia clay matured properly at the temperature reached. The total linear shrinkage results of the Nsu clay samples were 5.0%, 7.0%, 7.0%, 8.0%, and 7.0%, for $A_1$,$A_2$, $A_3$ $A_4$ and $A_5$ respectively. The total linear shrinkage results of the Unwana clay samples were 14%, 11%, 9%,11%, and 13% for $B_1$,$B_2$, $B_3$, $B_4$ and $B_5$ respectively. The total linear shrinkage results for Nsu clay samples were 1.0%, 3.0%, 2.0%, 4.0%, for samples $C_1$, $C_2$, $C_4$and $C_5$ respectively. The apparent porosities of the Nsu clay samples were 33.33%, 14.29%, 38.91%, 9.09% and 33.33% for $A_1$,$A_2$, $A_3$ $A_4$ and $A_5$ respectively. The apparent porosities of the Unwana clay samples were 16.67%, 18.18%, 37.5%, 30.77% and 50.0% for $B_1$,$B_2$, $B_3$, $B_4$ and $B_5$ respectively. The apparent porosities of the Enohia clay samples were 41.18%, 39.13%, 57.67%, 35.37%, 35.25% for $C_1$, $C_2$, $C_3$, $C_4$ and $C_5$ respectively. The bulk densities of the Nsu clay samples were 0.93, 1.14, 0.77, 1.0 and 0.93 for samples $A_1$ to $A_5$ respectively. The bulk densities of the Unwana clay samples were 1.0, 1.09, 0.88, 1.08 and 0.75 for $B_1$ to $B_5$ respectively. The bulk densities of the Enohia clay samples were 1.11, 1.13, 0.65, 1.29, 1.38, for $C_1$ to $C_5$ respectively. The water absorption of the Nsu clay samples were 35.7%,12.5%, 50.0%, 18.18%, 35.7%, for $A_1$ to $A_5$ respectively. The water absorption of the Unwana clay samples were 16%, 16%, 43%, 29% and 67% for samples $B_1$ to $B_5$ respectively. The water absorption of the Enohia clay samples were 35%, 35%, 68%, 27% and23% for $C_1$ to $C_5$ respectively. The modulus of rupture of the Nsu clay samples were 1915.77KN/$M^2$, 1570.50KN/$M^2$, 1583.26KN/$M^2$, 1446.87KN/$M^2$, for $A_1$, $A_2$, $A_4$ and $A_5$respectively. The modulus of rupture of the Unwana clay samples were 3130.32KN/$M^2$, 3001.59KN/$M^2$, 2921.43KN/$M^2$, 3136KN/$M^2$ 2630.27 KN/$M^2$ for $B_1$ to $B_5$ respectively. The modulus of rupture for the Enohia clay samples were 942.46KN/$M^2$, 787.30KN/$M^2$, 866.18KN/$M^2$, for $C_1$, $C_2$ and $C_3$ respectively. A modulus of rupture of 3690KN/$M^2$ is reported in literature for some commercial grade products, as well as water absorption of 10.59%. The various additives produced a mixed effect on the colour of the fired test pieces. From these results, it is clear that Nsu clay and Enohia clay would not be suitable for the production of terracotta brick tiles at the temperature used in this research. However, the results show that Unwana clay is suitable for the production of terracotta brick tiles of commercial grade.*

***KEYWORDS***: *Terracotta, glass cullet, linear shrinkage, modulus of rupture, apparent porosity, bulk density,*

# RE-ENGINEERING TECHNICAL AND VOCATIONAL EDUCATION FOR VIABLE ECONOMIC GROWTH AND DEVELOPMENT IN NIGERIA

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## Abstract

Land/property taxation has become a veritable tool for economic growth and development in all nations and countries of the world today and in the past. An efficient and effective public administration success is based on the availability of funds to run her annual budget. The upkeep of the environment especially sanitation, maintenance of public schools, hospitals, road, drainage systems etc. are compulsory services rendered by all levels of governments. The infrastructural development which is one of the prime motivators for economic development of a nation is particularly provide by government. This paper is aimed at evaluating and assessing the part played by land/property taxation in area of economic growth and development in the world taking Nigeria as a reference nation. The paper highlighted some key problems associated with land/property taxation in Nigeria. It concluded by recommending various ways perceived to be way forward in making land and property taxation a veritable tool for economic development of any nation of the world.

**Keyword**: Land taxation, economic development, economic growth, Infrastructure, Public Administration.

# A CRITICAL REVIEW OF THE HISTORY AND ECONOMIC FOUNDATION OF LAND TAXATION AND ITS IMPACT ON THE NATION'S ECONOMIC GROWTH AND DEVELOPMENT FROM NIGERIA'S PERSPECTIVE

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## Abstract

Land/property taxation has become a veritable tool for economic growth and development in all nations and countries of the world today and in the past. An efficient and effective public administration success is based on the availability of funds to run her annual budget. The upkeep of the environment especially sanitation, maintenance of public schools, hospitals, road, drainage systems etc are compulsory services rendered by all levels of governments. The infrastructural development which is one of the prime motivators for economic development of a nation is particularly provide by government. This paper is aimed at evaluating and assessing the part played by land/property taxation in area of economic growth and development in the world taking Nigeria as a reference nation. The paper highlighted some key problems associated with land/property taxation in Nigeria. It concluded by recommending various ways perceived to be way forward in making land and property taxation a veritable tool for economic development of any nation of the world.

**Keyword**: Land taxation, economic development, economic growth, Infrastructure, Public Administration.

# PHYSICOCHEMICAL AND SENSORY PROPERTIES OF BANANA JAM FORTIFIED WITH GINGER (*Zinginber officinale*) EXTRACTS

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## ABSTRACT

The study was to develop a new product of fruit jam with banana and ginger extract for nutrient diversification, fortification and enhanced satiety. Banana jam was made by boiling quantities of banana pulp and sugar together with other ingredients. The solution was stirred continuously till it boiled and reached the consistency of jam, with a concentration of minimum 61ºBx. The ginger extract was added towards the end of the gelling time. The banana jam samples were: $BJ_{10}$ = Banana jam + 10% Ginger extract; $BJ_6$ = Banana jam + 6% Ginger extract; BJN = Banana jam (control). The physical and proximate composition of the jam samples were analyzed as well as the general consumer's acceptance. The physical properties of all the banana jam samples indicated a range of values that were within the acceptable range. The physical properties of the banana jam samples ranges are: 4.21- 5.05 for pH values; 0.71 – 1.06% titrable acidity; 65.00 – 69.30$^0$Brix for sugar content and SS/TA ratio range of 62.22 – 62.80. The proximate analysis of the samples indicated that sample $BJ_6$ having the highest concentration of ginger extract recorded a higher value of selected proximate parameters than the rest. Sample $BJ_6$ had the highest fiber composition of 13% among others. Present study has indicated that banana jam with 10% ginger ($BJ_{10}$) was the most preferred by consumers by the combination of flavor and aroma constituents with slightly spicy lime flavor of ginger and creamy consistency of banana with an overall acceptability value of 8.00 which was reasonably high.

***Keywords***: jam, banana, ginger, physical, proximate, sensory analysis

# DISEASE SEVERITY IN GROUNDNUT SEEDS SOLD AT THREE MARKETS (EKE MARKET AFIKPO, ORIE AMASIRI AND AFOR UNWANA) IN AFIKPO LOCAL GOVERNMENT AREA, EBONY STATE

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Abstract

This study was aimed at surveying fungal organisms associated with groundnut seeds sold in Afikpo North L.G.A, Ebonyi State of Nigeria. The research was carried out in the Department of Agricultural Technology, Akanu Ibiam Federal Polytechnic, Unwana. Three ground nut vendors were randomly selected from each of the markets and three samples were collected from each of the vendors per market. Groundnut seeds sold in many markets are contaminated in one way or the other. Fungi has been known to affect groundnut production and consumption for centuries. Four fungal species were isolated from ground nut seed samples from three market in Afikpo Local Government, which are *Aspergillus spp.*, *Rhizopus spp.*, *Penicillium spp.* and *Fusarium spp.* The result of the disease sampling in different markets studied showed a high prevalence of diseases on groundnut seeds surveyed. Amasiri had highest disease incidence (26.20%) followed by Afikpo (22.70%) then Unwana (20.11%) having the least disease incidence. Disease severity showed that groundnut seeds sold at Orie market Amasiri was the most severe of the diseases (2.53). This was followed Uwana market which had (2.46) with Afikpo Market (2.45) having the least disease severity on the groundnut seeds sold in the market. The results when analyzed using analysis of variance showed that the diseases are significant at p = 0.5.

# PHYTOCHEMICAL ANALYSIS OF HERBAL TEA PRODUCED FROM UTAZI, MORINGA AND SCENT LEAVES

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## ABSTRACT

Tea is one of the most widely consumed beverages in the world, while herbal tea on the other hand are produced from herbs, roots, plant extracts etc. The study therefore investigated the comparative analysis of the sensory properties and phytochemical content of herbal tea blend made from oven dried and sun dried leaves of 100grams utazi, 100 grams moringa and 100 grams scent leaves using standard analytical methods. The phytochemical contents of the herbal tea sample using two different drying methods such as oven dried and sundried method showed the range of values for tannin (4.75% – 5.25% ), flavonoid (2.46% - 3.37%), alkaloids (2.97%- 4.54%), steroids(4.63%- 6.23%), carotenoids (0.15%- 0.18%) respectively. The results obtained from the phytochemical analysis showed that the sundried blend of herbal tea was significantly higher in all the parameters when compared to the results of that recorded in the oven dried blend of the herbal tea. The sensory evaluation results showed that there was no significant difference in the sensory parameters observed between the herbal tea blend dried using the two different drying methods (oven drying and sun drying). The colour and aroma of the sun dried herbal tea blend was preferred to that of the oven dried tea blend, while the taste of the oven dried tea blend was generally accepted. It was concluded that the herbal tea blend has therapeutic potentials and therefore has the ability to thrive in the tea market.

**Keywords** – Phytochemical, Herbal Tea, Utazi, Moringa, Scent leaves

# EFFECT OF SOIL TYPE AND FERTILIZERS ON THE GROWTH AND YIELD OF THICKHEAD (*Crassocephalum crepidioides*)

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## Abstract

*Crassocephalun crepidioides is neglected and underutilized vegetable capable of treating indigestion in human, hence, this study aimed to evaluate the effect of soil amendment on the growth and yield of thickhead. It is a pot experiment conducted at a locally constructed screen house at Federal College of Agriculture, Akure Ondo state, during the period of June 2023 – October 2023. The objectives were to determine the growth and yield of thickhead as affected by soil type and soil amendments. The experiment was a 2 by 7 factorial laid out in a completely randomized design (CRD) with four (4) replications. The first factor is soil type which are topsoil (S1) and degraded soil (S2), while the second factor are the fertilizer rates which are control (F0), NPK @ 300kg/ha (F1), NPK @150kg/ha (F2), Poultry Manure @10t/ha (F3), Poultry Manure @5t/ha (F4), NPK @ 150kg/ha + Poultry Manure @ 5t/ha, (F5), NPK @ 75kg/ha + Poultry Manure @ 2.5t/ha (F6). Data were collected on both soils (topsoil and degraded soil) with their fertilizer's interactions, the data collected were growth parameters such as, number of leaves, plant height, stem girth, number of branches and days to flowering. The yield parameters taken included, leave fresh and dry weight, stem fresh and dry weight, root fresh and dry weight and branches fresh and dry weight. The data were collected at intervals at transplanting, 2, 4, 6, and 8weeks after treatment applications and was subjected to analysis of variance and differences among treatment means compared at 5% probability level (p = 0.05) using tukey's test. The result shows that soil amendment (fertilizers) had significant effect on the growth and yield parameters of thickhead. Treatment S1F0 had the highest number of plant height, S1F6 recorded highest number of leaves, while treatment S2F2 had highest number of flowering days and S1F6 recorded highest number of branches. Topsoil and combination of organic (poultry manure) and inorganic (NPK) fertilizer types improve the growth performance of the thickhead. Thickhead can be grown both on fertile and degraded soils, NPK- poultry manure and their combinations for soil amendments is recommended for thickhead production for enhanced growth, and yield.*

# FOUNDATIONS OF HUMAN RESOURCE POLICIES AND PRACTICES: CATALYST FOR ORGANIZATIONAL SURVIVAL

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**Abstract**
The paper has tried to elucidate the importance of the foundations of human resources policies and practices. As the human component remains the most vital in the running of an organization, everything about his affairs must be brought to the front burner. The survival of any organization depends on how well articulated and efficient its work force adapt and adhere to good policies and practices. The paper has analyzed relevant concepts like the human resources and policies. Policy can be viewed as a general statement that serve to channel behavior towards objectives. In practical terms the paper has presented most of the areas the human resources policies and practice were showcased, it includes training and development, union-management relations, health and safety administration, wages and salaries administration, annual performance appraisal, providing security to employees, effective communication. Among others, the paper has presented the general objectives of training and development, because the activity will enhance the higher degree of adaptability with the current dynamics by the workforce. It equally presented various stages of training designs. The paper equally presented factors that are influencing human resource policies. The compass to best practices in human resources was presented as the best fit and best practices. Again, considerations towards human resources policies and practices in Africa were presented. The paper equally threw open a new concept in human resources management tagged, International Human Resources Management (IHRM) which is a developing field of enquiry. The papers conclude that as businesses are increasingly global and complex in scope, the best practices in human resources management policies and practices should be upheld. The papers advocates among others well-structured human resource policies and efficient communication to be adopted. The paper recommends among others continuous evaluation of policies and practices, comparative approach in policy formulation and practices etc.

**Keywords:** Human resources, Policies, Practices, Human Resource Policies, Comparative Human Resource Management.

# BACTERIAL EVALUATION OF ZOBO BEVERAGES PEDDLED BY STREET TRADERS.

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## Abstract

A study was conducted to assess the bacteriological quality of zobo drinks sold by street vendors in Oko, Anambra state, Nigeria. Zobo drinks were purchased randomly from a well-known market (Eke oko market) and subjected to standard microbiological tests. The results indicated that the pH of the samples ranged from 2.9 to 3.2. The total coliform count varied from 0.3 x $10^4$ cfu/ml to 5.6 x $10^4$ cfu/ml, while the total aerobic bacterial count ranged from 0.5 x $10^5$ cfu/ml to 6.0 x $10^5$ cfu/ml. The counts represented the average values for each sample. The control sample, which had a total aerobic bacterial count of 1.3 x $10^5$ cfu/ml and a total coliform count of 2.1 x 10$^4$ cfu/ml, also exhibited some degree of contamination. The total aerobic bacterial count for all the samples, including the control sample, exceeded the permissible limit of $10^4$ cfu/ml. It is likely that the ground spices and additives, which are usually added raw, were the source of contamination for the control sample, as the necessary sanitary measures were followed during preparation. Based on the morphological and biochemical features of the bacterial isolates, five different bacterial species were identified, namely *Escherichia coli*, *Bacillus spp*, *Staphylococcus aureus*, *Lactobacillus spp*, and *Pseudomonas spp*. The study suggested that zobo drinks marketed in the area could be potential vectors of food-borne disease, requiring the implementation of good manufacturing practices (GMP) and post-production storage and packaging methods.

**Keywords:** Bacteriological analysis, Hygiene, and *Hibiscus sabdariffa*

# DETERMINATION OF SOME HEAVY METAL POLLUTANTS IN *CONYDORS SEMIAQUILUS* AND *OREOCHROMIS NILOTICUS* SAMPLES FROM ABONYI RIVER, IKWO, EBONYI STATE NIGERIA.

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## ABSTRACT

Heavy metals in our environment have been of great concern because of their toxicity at concentrations above permissible limit. Heavy metals enter the environment through different ways such as industrial activities, agriculture and mining etc. The fish samples, cat fish *(Conydors semiaquicus)* and Tilapia fish *(Oreochromis niloticus)* were collected from Abonyi River in Okwo area of Ebonyi State. The fishes were carefully deselected for digestion and the levels of heavy metals were determined using "GBC sent AA" atomic absorption spectrophotometer. Metals present in the fish samples were analyzed in the order: Cr, Cu, Zn, As, Cd, Hg and Pb. It was observed that Cr, Cu, Zn, Cd and Pb were detected but AS and Hg were not detected. Zinc has the highest concentration of 46.0mg/kg in Tilapia *(Oreohromis niloticus)* and 50.3mg/kg in catfish *(Conydors semiauitus)*. Cr has and 3.20mg/kg in catfish *(Conydors semiauitus)* and concentration of 3.80mg/kg in Tilapia fish *(Oreochromic semiaquilus)*. The howest concentration were detected in Pb which is 1.6mg/kg in Tuapia fish *(Oreochromis niloticus)* and 1.2mg/kg in catfish *(Conydros semiqauilus)*. The concentration range of the heavy metals: Cu > Zn > Cr > Cd > Pd for Tilapia fish while for Cat fish the range is: Cu > Cr > Cd > Pb. The level of the four heavy metals detected were High compared to the W.H.O standard.

**Keywords**: Tilapia fish, Cat fish, Environment, Pollution, heavy metals.

# MICROBIAL ASSESSMENT OF GRILLED ROADSIDE CHICKEN SOLD IN EKWULOBIA AND OKO, ANAMBRA STATE

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## ABSTRACT

This study aimed to assess the microbiological quality of grilled roadside chicken sold in two neighbouring community, Oko and Ekwulobia in Aguata Local Government area, Anambra State, Nigeria. Samples were collected from various vending sites which include Eke Ekwulobia (EKW1), Ekwulobia Urban Mass Park (EKW2), Front of Zenith bank, Ekwulobia (EKW3), Total Junction, Oko ((OKO4), Eke Oko area (OKO5), and Federal Polytechnic Main Gate, Oko (OKO6). These samples served as a representative sample to various vending spots in these communities. Sample collected from these various locations were analyzed for total aerobic bacterial count, fungal contamination, coliform count, and presence of specific pathogens. The results showed that the total aerobic bacterial counts exceeded permissible limits in all samples, indicating a potential health risk. Fungal counts also exceeded limits, suggesting a risk of mycotoxin contamination. While some samples showed coliform contamination, others were free of coliforms. Pathogens such as *Staphylococcus aureus*, *Escherichia coli, Salmonella spp,* and *Bacillus spp* were identified, with *Staphylococcus aureus* and *Bacillus spp* being the predominant microorganisms. The findings indicate poor microbiological quality of grilled chicken, possibly due to inadequate hygiene practices and improper storage conditions. Addressing these issues is crucial to ensure the safety of grilled chicken products and protect public health.

**Keywords:** safety, grilled, microorganisms, coliform, chicken, *salmonella*

# NUTRITIONAL BENEFITS OF WINE FROM BANANA AND SWEET ORANGES

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## Abstract

*Citrus sinesis* or sweet orange and *Musa* spp or Banana is consumed all over the world as an excellent source of vitamin C, a powerful natural antioxidant that builds the body immune system. Important phytochemical like liminoids, sufficient amount of folacin, calcium, potassium, thiamine, hesperidin flavonoid and magnesium are also present. These biologically active compounds prevent arteriosclerosis, cancer, kidney stones, stomach ulcers and reduction in cholesterol level and high blood which promote human health. However, the impact of diverse diseases caused fungi (sweet orange scab, powdery mildew) bacteria (pierce's disease), viruses (citrus tristeza) and a complex of nematodes limits sweet orange production, nutritional value and market qualities. These diseases can be controlled through chemical treatment of fruits, use of biological control agents. Proper packaging and storage facilities and other disease management practices are required to reduce post-harvest damages. Considering its health benefits, there is need for public awareness on the importance of sweet orange especially in the rural areas as the fruit is relatively cheap and common almost all year round.

# THE IMPACT OF INORGANIC FERTILIZERS ON SHALLOW GROUNDWATER RESOURCES: A CRITICAL REVIEW

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## Abstract

Inorganic fertilizers play a crucial role in modern agriculture by enhancing crop yields; however, their widespread use raises concerns about their impact on groundwater quality. This paper critically reviews the literature on the effects of inorganic fertilizers on shallow groundwater, focusing on nitrate and phosphate contamination, aquifer depletion, and associated environmental and health implications. Additionally, it examines mitigation strategies and policy recommendations to address these challenges.

***Key words**; inorganic fertilizer, crop yields, groundwater quality, contamination, aquifer depletion*

# THE IMPACT OF SOCIAL MEDIA USE ON ACADEMIC PERFORMANCE OF STUDENTS IN AKANU IBIAM FEDERAL POLYTECHNIC, UNWANA, EBONYI STATE

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***Abstract.***

The purpose of this study was to begin exploring the possible impact of social media use on the academic performance of students in Akanu Ibiam Federal Polytechnic, Unwana. The study's primary goal is to identify key themes, trends, and/or perceptions that can be used as a foundation for more in-depth empirical research, and can be used to develop policy recommendations to deal with this growing phenomenon. A qualitative research design was used, and three preliminary research questions were formed to guide this study: (1) How common is the use of social media (i.e., Facebook, Whatsapp, Twitter, and Linkedln) among polytechnic students? (2) For those students who do utilize social networking sites, on average how much time do they spend on those sites collectively per day and/or per week? and (3) How does the academic performance of students compare between students who utilize social media sites and students who do not use social media sites? Findings from this study seem to confirm perceptions of high student usage of social media among polytechnic students; however, they also seem to contradict other research literature findings regarding intensity of usage and gender-usage inclinations.
*Keywords: social media, facebook, whatsapp, linkedin, social networking*

# EFFECT OF MG-DOPING ON THE ELECTRICAL PROPERTIES OF $SNO_2$ CERAMIC MATERIALS

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## Abstract

The effect of Mg-doping (magnesium doping) on the electrical properties of tin oxide ($SnO_2$) rutile structure ceramics were investigated. All samples were synthesized by solid state reaction (SSR) method, sintered in air at 1500 °C for 8 h and cooled slowly in the furnace. Additionally, quenched and stepwise cooled samples were also prepared to analyse the effect of different types of cooling. The phase structure of the ceramics was studied using X-ray diffraction. Electrical properties were measured by the impedance spectroscopy. $Sn_{1-x}Mg_xO_{2-\delta}$ (x = 0.01, 0.03) ceramics showed phase pure, while a small amount of second phase appeared in the x = 0.05 ceramic. $Sn_{1-x}Mg_xO_{2-\delta}$ (x = 0.01) ceramic showed an electronic conductivity, while x = 0.03 ceramic exhibited a mixed conductivity (electronic and ionic). However, the different cooling types did not affect the conduction mechanism, hence all ceramics showed n-type conduction.

**Keywords:** Magnesium, rutile, phase structure, impedance spectroscopy, electronic conductivity

# RISK ASSESSMENT MATRIX DEVELOPMENT IN BUILDING CONSTRUCTION INDUSTRY

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## ABSTRACT

This study examines risk assessment matrix in building construction industry with the aim of developing an effective way of assessing risks on construction sites. Risk assessment matrix is a tool that standardizes qualitative risk assessment and facilitates the categorization of all threats to health, safety, environmental and reputation. This research deals on steps by step approach towards the development of risk assessment matrix. The findings of the study reviewed that risk assessment matrix can be developed by identifying different sources of risk on sites, knowing the consequences of each, and likelihood of their occurrence. It was concluded that the development of risk assessment matrix is essential on any building construction site to reduce accidents through measuring the level of risks, ascertaining the consequence/severity and likelihood of injury to a worker after being exposed to a hazard. The study recommended that; construction sites should be made friendly, exciting, and conductive through active and prompt development of efficient risks and hazards assessment matrix by contractors and supervisors before work begins on sites. Supervisors should make sure that control measures are put in place to abate any identified risk and hazards. Workshops and seminar should be organized always by relevant authorities in the construction industry on risk assessment matrix development.

**Keywords:** Risks; Hazard; Risk assessment; and Risk matrix.

# THE COMPARATIVE STUDY OF BACTERIOLOGICAL PROFILE OF ZOBO DRINK AND SOYBEAN MILK

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## ABSTRACT

This study is to evaluated the microbial quality of zobo and soy milk drink hawked in Akanu Ibiam Federal Polytechnic, Unwana in order to ensure their safety for consumption. samples of zzobo and soymilk drinks were purchased from vendors within the polytechnic. A ten-fold serial dilution was performed for each sample and the samples were cultured respectively on maConkey and Nutrient agar. Findings from this study reveals that zobo drinks and soymilk drinks sold in Akanu Ibiam Federal Polytechnic, Unwana are contaminated with bacterial such as *E. coli* and *S. auerus*. This implies that these drinks are unsafe for consumption and contamination can be as a result of food handling and contaminated water used for the preparation

# STATISTICAL ANALYSIS OF THE CONTRIBUTIONS OF GOVERNMENT SPENDING ON INFRASTRUCTURES TO GDP

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## ABSTRACT

This study examined the contributions of government spending on infrastructures (agriculture, industry, construction, public administration and education) to Gross Domestic Product (GDP), and estimating the impact of government expenditure on public utilities on GDP in Nigeria. Data analytical results revealed a significant relationship between government expenditure and GDP. We also had that the explanatory variables in the model explained about 98.6% variation of the response variable. Durbin-Watson test result revealed the absence of autocorrelation in the model. It was recommended that government should increase her budgetary allocation to these sectors because of its importance to the national economy, hoping that with proper monitory of fund; it would contribute more significantly to the economy of the country.

Keywords: Government expenditure, GDP, Multiple regression.

# MICROBIAL QUALITY OF INDOOR AIR OF AKANU IBIAM FEDERAL POLYTECHNIC UNWANA MEDICAL CENTRE

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## ABSTRACT

Air harbours large quantity of bacteria and fungi, and the knowledge of their number and type is very important as an index of hygiene for any particular environment. This study analysed the microbial quality of indoor air of Akanu Ibiam Federal Polytechnic, Unwana Medical Centre to ascertain the level of airborne microbes in the ambient air. The study was carried out in randomly selected locations at the Medical Ward, Medical Reception and Medical Laboratory of the Medical Centre. The assessment was carried out by exposing sterile Petri dishes containing the appropriate culture media for about 30 minutes at a convenient location in each of the three study sites. The results revealed that Medical Reception Hall 2 had the highest bacterial count of 46 cfu/$m^3$, followed by Medical Laboratory 1 with 31 cfu/$m^3$ and Medical Ward 1, 30 cfu/$m^3$ while Medical Reception 1 had 22 cfu/$m^3$, Medical Laboratory 2, 17 cfu/$m^3$ and Medical Ward 2, 14 cfu/$m^3$. The fungal isolates include; *Alternaria altanata* (23.8 %), *Penicillium* spp (19.0 %), *Rhizopus stolonifer* (19.0 %), *Acremonium* spp (14.3 %) *Aspergillus niger* (14.3 %) and *Aspergillus flavus* (9.5 %). The number and type of fungi and bacteria obtained from the study sites have the potential to cause ill health. Proactive measures are needed in the hospital to prevent nosocomial infections.

**Keywords**: Fungi, bacteria, microbial count, *Alternaria altanata*

# ECONOMIC IMPORTANCE OF CANDIES MADE FROM GINGER AND COCONUT

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## Abstract

Candy, also called sweets (British English) or lollies (Australian English, New Zealand English), is a confection that features sugar as a principal ingredient. The category, called *sugar confectionery*, encompasses any sweet confection, including chocolate, chewing gum, and sugar candy. Vegetables, fruit, or nuts which have been glazed and coated with sugar are said to be *candied*. Physically, candy is characterized by the use of a significant amount of sugar or sugar substitutes. Unlike a cake or loaf of bread that would be shared among many people, candies are usually made in smaller pieces. However, the definition of candy also depends upon how people treat the food. Unlike sweet pastries served for a dessert course at the end of a meal, candies are normally eaten casually, often with the fingers, as a snack between meals. Each culture has its own ideas of what constitutes candy rather than dessert. The same food may be a candy in one culture and a dessert in another. This review sought to study the economic importance of candies made from ginger (*Zingiber officinale*) and coconut (*Cocos nucifera*). The review found out that Nigeria's soil types can favour the commercial production of ginger and coconut; which means that engaging in the use of these products for the production of candies would further enhance value chain addition, reduce over dependence on refined sugars, promote healthy living and more so, enhance wealth creation through job creation at different levels. It concludes that the use of ginger and coconuts in the candy making is economically viable venture. The review also recommends that efforts be made to evolve a workable system for the reduction of over dependence on the importation of coconut and the commercialization of ginger production.

**Key words:** candy, culture, dessert, commercialisation, value chain

# EVALUATION OF THE EFFECT OF *Alternanthera brasiliana* ON BROILER MEAT QUALITY AND HEALTH

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## Abstract

Ethanol and aqueous leaf extracts of *Alternanthera brasiliana* were applied to broiler diets to ascertain their effects on broiler meat quality and general health. Two hundred and eighty-eight (288) day-old broilers were bought from a nearby hatchery, weighed, and the mean weight (48±1 g) was ascertained. The birds were distributed into 9 groups of 4 replicate pens (eight broilers per replicate pen) after a complete 7-day acclimatization period. The extracts were added to the drinking water at different concentrations of 0.25g/L of water, 0.50g/L of water, and 0.75g/L of water from Day 8 of the experiment until Day 56, and the birds determined the level of consumption. Also, standard methods were used to study the meat qualities, and hematological indices. Results show that the meat qualities and the hematological parameters of the birds were enhanced by the extracts relative to the control groups. The white blood cell counts were highest in the group fed only the basal diet with a value of 18.5±0.353 x10E$^3$/mm$^3$. The results thus suggest that *A. brasiliana* leaf extracts can be used in place of synthetic additives in broiler production; the aqueous extract being the more favorable option due to its superior effects.

**Keywords:** *Alternanthera brasiliana,* broiler chicken, meat quality, phytobiotics, hematological indices, poultry production.

# PRODUCTION AND SOME CHEMICAL EVALUATION OF INSTANT TUBER FLOURS FROM BOILED TUBER CROPS

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## ABSTRACT

The study evaluates the functional and chemical properties of instant tuber flours made from boiled aerial yam(*Dioscorea bulbifera*),cocoyam(*Xanthosoma maffa*) and water yam (*Dioscorea alata*).The flours were processed into two equal parts (treated and untreated). chemical and functional properties of the instant tuber flours were evaluated. Results obtained showed functional properties of the samples to range thus: Bulk density (0.50%-0.66%),wettability,(0.28%-3.48%) foamcapacity,(3.08%-21.14%),foamstability,(99.18%-109.60%),gelatinization temperature (61.00%-83.00$^{O}$C),gelatinization time(1.43%-3.14min),pH(5.48-6.21),swellingindex(1.24%-1.59%).SampleUA (Untreated cocoyam) and sample UC (Untreated water yam) were outstanding in their functional properties compared to other samples.The result obtained for the chemical properties determination showed that sample TB (treated aerial yam) (13.89%)was remarkably different from all the samples in amylose content but was the least(86.11%)in amylopectin content while sample UA (untreated cocoyam) which had the least value(3.71%) in amylose content was sufficiently high in amylopectin content (96.29%).

**KEYWORDS:** Instant Tuber flours, *Dioscorea species,Xanthosoma maffa,* Chemical and functional properties, Amylose content, Amylo pectin content, Aerial yam, wateryam, cocoyam.

# EFFECT OF PHOSPHORUS LEVELS ON GROWTH AND YIELD OF COWPEA (*Vigna unguiculata* (L.) (Walp.) in Unwana, Nigeria

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**Abstract**

Low soil phosphorus continues to represent huge obstacles to securing the needed harvest in south eastern Nigeria. At the study area, low soil phosphorus is a well-known problem limiting crop productivity. This, study was conducted to determine the effect of phosphorus levels on growth and yield of cowpea (FUAMPEA 1) and to explore the best treatments that can maximize the productivity of cowpea. The treatments consisted of four levels of phosphorus (0, 20, 40 and 60 kgPha-1) in the form of single superphosphate laid out in Completely Randomized Design (CRD) with three replications. The results showed that application of 60 kgPha-1 resulted to highest growth and yield. This rate is therefore recommended for enhancing growth and yield of the cowpea.

**Keywords**: Cowpea, Phosphorus, Growth, Yield

# THE PLACE OF ENGLISH LANGUAGE IN SCHOOL CURRICULUM IN NIGERIA.

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**Abstract:**

In an increasingly competitive global village, the need for innovation in our collective quest for national actualization and continued global relevance through a functional educational system cannot be overemphasized. Language forms the fulcrum around which all other forms of education revolve because language communication is a crucial gateway through which knowledge is acquired. This paper contends that our efforts to redeem the failing standard of education in Nigeria will not yield much result unless we focus first on the issue of the English language education. This paper equally focuses on the problems that bedevil the teaching/learning of English. It also proffers workable solutions towards remedying anomalies in the teaching and learning of the English language in our schools and colleges and again reaffirms its central place in our quest for a functional and innovative educational system in Nigeria.

Keywords: English Language, Veritable tool, Curriculum, Education, and Nigeria

# AN EVALUATION OF THE FACTORS AFFECTING POOR COSTING OF BUILDING MAINTENANCE IN CONSTRUCTION INDUSTRY IN EBONYI STATE.

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## ABSTRACT

In construction industry, poor costing of building maintenance can be a significant challenge faced by construction companies. Factors such as design, materials, construction methods, environmental and climatic factors, building age, technological advancements, skilled labor, and current maintenance practices all play a role in influencing building maintenance costs. The aim of this study is to evaluate the factors affecting cost management of building maintenance in the construction industry in Ebonyi State. The general objectives are to identify the factors that contributes to cost management of building maintenance in the construction industry and to identify possible solutions to reduce the costs and improve maintenance efficiency. Data for the study was collected through self-administered structured questionnaire distributed to project managers and relevant stakeholders involved in construction projects to review of some related literatures from the authors. Data collected were analyzed using percentage of tabulated result; pie charts were also used to illustrate the responses to the research questions. The result of the analyses was revealed that inadequate knowledge about building maintenance best practices effect poor costing of building maintenance. The study concludes that the stakeholders in the construction industry should recognize the importance of addressing these factors to optimize the long term performance and sustainability to build asset. By doing so they can ultimate reduce overall maintenance cost and enhance the value of their investment. This study was recommend that planning and budgeting, regular maintenance schedule, record keeping and documentation, training and skill development can improve the cost effectiveness of building maintenance leading to better long term performance and reduce overall maintenance expenses.

**Keywords:** Building Maintenance, Maintenance Costs, Construction Industry, Poor costs and Stakeholders

# RESPONSE OF FINISHER BRIOLER'S FED *Vernonia amygdalina* (BITTER LEAF) IN PARTIAL REPLACEMENT OF SOYABEAN MEAL.

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**Abstract**

This study was conducted to evaluate response of broiler finisher bird fed Bitter leaf (*Vernonia amygdalina*) in partial replacement for soyabean meal. Sixty (60) finisher broiler birds were used in this study, which lasted for twenty-eight (28) days. The birds were divided into four (4) treatment and replicated thrice with five (5) birds per replicate Four (4) experimented diet were formulated; $T_1$, $T_2$, $T_3$ and $T_4$ which contain $T_1$ (0%), $T_2$ (5%), $T_3$ (10%) and $T_4$ (15%) bitter leaf inclusion levels. The birds were randomly distributed among the four (4) diets. Data obtained were subjected to one way analysis of variances. The highest weight gain were recorded in $T_1$ (916.67$^a$), followed by $T_2$ (510.00$^b$), $T_3$ (400$^b$), $T_4$ (250.00$^b$) respectively, feed intake was higher in $T_1$ (3169.6$^a$), when compared to other treatment groups. Feed conversion ratio was better in $T_1$ (3.62$^b$), followed by $T_2$ (5.49$^b$), $T_3$ (7.42$^{ab}$), $T_4$ (10.75$^a$). The live weight and dress weight were also higher in $T_1$ (1466.67g), (1316.67g), followed by $T_2$ (1366.67g) (1200.00), $T_3$ (1266.67g) (1200.00g) $T_4$ (1183.33g) (1100.00g). Based on gain and carcass evaluate, up to 10% inclusion of bitter leaf meal in broiler finishers diet will also enhance performance.

**KEYWORDS:** RESPONSE, BITTER LEAF, REPLACEMENT, *Vernonia amygdalina*

# TICK PREVALENCE AND ASSOCIATED INFECTION RISK FACTORS IN GOATS IN AFIKPO, EBONYI STATE

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## ABSTRACT

*Ticks pose a significant threat to the health of both animals and humans, acting as nuisance and vectors for various pathogens. Knowledge of ticks and tick-borne disease is short fall in Nigeria and especially in Ebonyi. This research investigated the prevalence of tick infestation in goats and explored associated risk factors in Afikpo, Ebonyi state, Nigeria. A cross-sectional study was conducted involving 413 goats from various locations within Afikpo. Ticks were collected and identified, and data on potential risk factors, including age, sex, and management practices, were recorded and statistical analyzed. Of the goat sampled and examined, 13.1% goats were infested with ticks and 8.5% had varying clinical manifestations of ecto-parasites infestation. Two species of ticks were detected, Amblyomma annulatus and Boophilus decoloratus. There was statistical evidence (P<0.01) associating manifestation of Hyperkeratosis/Dandruff, Abnormal pigmentation, Hypotrichosis alopecia and tick infestation. The research outcomes contributes to the existing knowledge on tick and their association with goats which is valid tool for interventions to enhance the health and productivity of goat herds in the region.*

# INVESTIGATING THE DISSOLUTION BEHAVIOURS OF IRON POLYPHOSPHATE GLASS AS A FERTILIZER FOR FLORA

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## Abstract

Iron polyphosphate glass possesses low viscosity, low melting temperature, excellent chemical stability and good network flexibility, hence a potential matrix for fertilizing active macro- and micro-flora. In this study, glasses of $P_2O_5$-$K_2O$-MgO-CaO-$Fe_2O_3$ system acting as slow release fertilizers were synthesized using melt-quenching technique. The chemical activity of glasses in the 2 mass % citric acid solutions was measured by the inductively coupled plasma atomic emission spectroscopy (ICP-AES) method. It has been found that the formation of domains with structure similar to phosphate with chemically stable P-O-$Fe^{2+}$ and P-O-$Fe^{3+}$ bonds decreased the glass solubility, while $Fe_2O_3$ stabilized the network structure via formation of P-O-Fe bond.

**Keywords:** Polyphosphate, glass, flora, matrix, domain

# MASS MEDIA AND SOCIAL MEDIA MANAGEMENT IN NIGERIA AT 63

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## *ABSTRACT*

*The mass media and social medias X-rays the various dimensions of information communicating process/medium found and used in the media and information centres for the soul aim of informing, educating and passing the rich cultural heritage of our dear country. This article is therefore intended to bring our readers knowledge that libraries and mass media centres are partners in information dissemination to create variety they say that brings spice to life and eliminate monotony that kills interest.*

# ENERGETIC HERBS AND FARMING ACTIVITIES IN NIGERIA

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**Abstract**

Natural herbs are excellent ways for farmers to stay energised. Most farming activities involve expenditure of energy or the doing of some kind of work with power. Apart from the use of medicinal plants for preventing and curing certain illnesses, medicinal plants otherwise known as herbs either singly or mixture can also be used to boost farmers' energy for better agricultural activities performance. Medicinal plants are useful for energetics due to the presence of some essential phytochemical compounds. Energetic herbs can either be Phytostimulants or adaptogens. Phytostimulants are the classes of herbs that speed up the message between the brain and the body. It makes person feel more awake, alert, confident or energetic. It quickens and enlivens the physiological activities of the body. Examples include *Cola nitida, Alligator pepper, Xylopia aethiopica, Dennettia tripetala* and *Nicotiana tobacum.* While Phytoadaptogens are non-toxic plants that help the body resist stressors of all kinds by improving the body ability to respond to stress, increase energy and attention, and fight off fatigue. The plants with adaptogenic potentials include *Garcinia kola, Cola nitida, Curcuma longa* and *Camellia sinensis.* They are cheap and readily available especially in the forest, fringe area and farmlands. Herbal energizers have a lot to offer, but an understanding of how they work is required for safe and effective use. Hence, there is need for sustaining the indigenous knowledge through conservative efforts for the energizer species to ensuring sustainable agricultural production.

**Keywords**: Farming Activities, Energetic Herb, Medicinal Plants

# GREEN BUILDING AND ENVIRONMENTAL SUSTAINABILITY: THE ROLE OF THE ARCHITECT.

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## ABSTRACT:

This study is about Green building and environmental sustainability and the role the Architect plays in harnessing the synergy between the two concepts in addressing the ever increasing distortions in the climatic and environmental balance. The discourse on environmental sustainability remains both a regional and globally-relevant phenomenon especially now that Nigeria and other nations of the world are poised to address the negative consequences of man's unbridled exploitation of the natural resources available to him; hence the adverse effects of climate change. Green Architecture or green buildings or ecological Architecture which are buildings designed and constructed according to energy saving criteria and for the reduction of pollution is now an evolving phenomenon in the struggle for environmental sustainability. The rapid growth in development during the last couple of decades did come with active construction activities which in some instances neglected the impacts on the environment and human health and activities. The concept of organic architecture (green architecture) was the fundamental or guiding concept of great architects like Franklyold Wright (1867 - 1957) but it has now been identified and recognized as a veritable approach towards environmental sustainability. Use of eco-friendly regenerative design approaches such as courtyards, integrative design approach, use of building materials that reduce carbon emissions, energy conservation through recycling and re-use methods to ensure maximum energy efficiency are all part and parcel of the discourse on green architecture and by extension environmental sustainability. The data for this study were collected from both primary and secondary sources, hence the study adopted descriptive design in its investigation. It was discovered that with the right policy in place, Green building practices will help in the efforts towards environmental sustainability; therefore the paper recommends that designers in the built environment should employ more of the concept of green architecture and it should be incorporated into the National Building Code in Nigeria.

**Keywords:** Green building, Environment, Sustainability, Environmental sustainability.

# PACKAGING AND ACCEPTABILITY OF COCOYAM PORRIDGE (EKPANG NKU NKWU) AMONG VISITORS OF OGUTA LAKE RESORT OGUTA, IMO STATE

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## ABSTRACT

The paper evaluated the packaging and acceptability of Cocoyam porridge (Ekpang nku nkwu) among visitors of Oguta Lake Resort, Oguta. Imo State. The objective of the study was to evaluate how to improve the taste, packaging and presentation of Ekpang nkunkwu for acceptability in the hospitality industry. The materials for the preparation were purchased from Eke market in Afikpo and prepared in Hospitality Management &Tourism Demonstration Kitchen. The data was collected through sample questionnaire, sensory evaluation forms and laboratory analysis. 101 panelist comprising of visitors/tourists were used as the respondents. The attributes evaluated were color, taste, aroma, flavor, texture and overall acceptability. Data collected were analyzed using charts, percentages and spearman correlation as descriptive statistics while T-Test and multiple regression were the inferential statistics used. Findings showed slight increases in content as follows-moisture 51.4% to 51.7%,protein 5.9%to 6.1%,carbohydrate 30.2%to30.3%.All these were attributed to conditions such as salt and other spices. The study concluded that Ekpang nkunkwo is a nutritious food that is rich in carbohydrate, protein and vitamins with low fiber. The study therefore recommended that Ekpan nkunkwo should be made available and accessible at tourist sites like other conventional foods to increase its consumption.

*Key words: Packaging, Acceptability, Cocoyam Porridge.*

# FOOD COMMODITY INFLATION IN NIGERIA: AFTERMATH OF DISRUPTED SUPPLY CHAIN SYSTEM BY COVID-19 AND BANDITRY PANDEMIC

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## Abstract

*The Nigerian economy is presently passing through severe food commodity inflation that is believed to have been caused by a mix of factors. However, in this study the search light was on the duo of COVID-19 and Banditry pandemic implications on the disrupted supply chain systems in Nigeria and hence food inflation. The non-empirical study adopted qualitative data collected from various secondary sources and reviewed in line with the study main objectives. The study theoretical model was formulated and hence the operational conceptual framework laid to explain the relationships between the study independent and the dependent variables. The study deductively revealed that; Banditry and COVID-19 pandemic significantly affected supply chain systems in Nigeria thus causing low production and distribution of food commodities, and that the prevalent acute food inflation is a function of the far reaching implications of the duo of Banditry and COVID-19 pandemic on the supply chain systems in Nigeria among other factors. The study also highlighted possible ways out of this situation to include but not limited to the adoption of; Supply-Chain Transparency, Smart Logistics, AI-Driven Supply Chain Management systems by organisations etc.*

**KEYWORDS:** Food Commodity Inflation, Supply Chain System, Covid-19 and Banditry Pandemic

# STUDENTS' PERCEPTION AND UTILIZATION OF SERIAL MATERIALS IN AKANU IBIAM FEDERAL POLYTECHNIC UNWANA LIBRARY

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## ABSTRACT

*A research study was conducted at Akanu Ibiam Federal Polytechnic Unwana (AIFPU) library, focusing on the perception and usage of serial materials among students. The study encompassed the entire student body of the polytechnic as its population. Utilizing a stratified random sampling technique, a sample of 500 students was selected. Participants were asked to complete a questionnaire designed to assess their perceptions and utilization patterns of serial materials. Analysis of the collected data primarily involved frequency counts and simple percentages. The findings revealed that students tend to utilize serial materials occasionally, with a majority expressing a moderate level of satisfaction with the available resources in the library. In conclusion, the study emphasized the importance of ensuring easy accessibility of serial materials to students, as this would likely enhance their inclination towards utilizing these resources.*

Keywords: AIFPU, student perception, utilization, serial materials, library

# COMPARATIVE STUDY ON HOUSEHOLD CONSUMPTION PATTERN OF BEEF AND POULTRY MEAT: A CASE STUDY OF ONDO METROPOLIS

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## Abstract

The study ascertained the socio-economic characteristics, determined the frequency of consumption of beef and poultry meat, determined the preference of urban households for beef and poultry meat, and identified the challenges faced by urban households in the consumption of beef and poultry meat in Ondo metropolis. Data were collected with the aid of a structured questionnaire. A multistage sampling technique was used to select 100 household consumption of meat and data were analyzed using percentage, frequency and mean score. Findings revealed that 50% were male 58.2% were married , 76.6% had formal education, 63.1% falls between the ages of 21- 40 years and 50.9% earned monthly income of between #31,000 and #60,000. Findings also showed the household perception of beef and poultry meat, 3.62 respondents prefer beef more than poultry meat, with index 3.64 it shows that respondents see poultry meat as more tastier than beef meat , with index 3.45 it shows that respondents can afford beef meat than poultry meat, with an index of 2.80 shows that beef is easier to get than poultry meat, ordinary preferring poultry meat to beef has a very low Likert index of 2.05 which shows that respondents prefer buying beef meat than poultry meat, this indicates arbitrary preference is one of the lowest reason for preserving either of the meat, index 2.11 shows that with all above preference trend, household eats beef meat regularly than poultry meat. From the results, the study concluded that beef was found to have the highest index 3.74 because it was highly consumed by the majority of households in the study area. This means it is the most preferred meat type in Ondo West as a whole.

**Keywords: Meat, Beef, Poultry, and Metropolis**

# MORPHOLOGICAL CHARACTERIZATION OF COCOYAM (*Colocasia esculentum* and *Xanthosoma sagittifolium* [L.] Schott) TOWARDS FOOD SECURITY IN NIGERIA

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## ABSTRACT

Nigeria is faced with the problem of food insecurity due to a rise in food inflation and poor utilization of some crops like cocoyam (*Colocasia esculentum* and *Xanthosoma sagittifolium* [L.] Schott), which was once a major article of trade in Nigeria. This study, in an effort to contribute to food security in Nigeria, used 10 morphological descriptors to characterize five varieties of cocoyam. Findings in the study show mean and standard deviation values in the range of 4.20 ± 0.84 to 48.20 ± 7.40 for the morphological descriptors. strong positive correlation between leaf width and leaf length (0.978), leaf margin color and color of petiole to corm insertion point (0.943), leaf width and petiole color (0.856), leaf length and plant height (0.824), petiole color and color of petiole to corm insertion point (0.808), plant height and petiole color (0.729), plant height and leaf margin color (0.719); 100% variation at the 4$^{th}$ principal component; 3 distinct clusters with over 76% similarities between NXS 003 and NXS 002 varieties and 0% similarities between NCE 001 and NCE 002 varieties. The study concluded that a high level of diversity exists among the varieties of cocoyam studied and highlighted the potential of the NCE 001 variety in crossbreeding programs to boast food availability and security in Nigeria.

**Keywords:** Cocoyam, Dendrogram, Food Security, Morphological Characterization, Morphological Descriptors.

# REVOLUTIONALIZING URBAN FEATURES: A COMPREHENSIVE ANALYSIS OF URBANIZATION CHALLENGES IN SOUTHEAST NIGERIA THROUGH THE LENS OF URBAN AND REGIONAL PLANNING

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## Abstract

The rapid urbanization witnessed in Southeast Nigeria presents a myriad of challenges that necessitate a thorough examination through the interdisciplinary framework of urban and regional planning. This paper delves into the multifaceted aspects of urbanization and further identifies key challenges such as traffic congestion, air pollution, diseases, emergence and proliferation of squatter slums (squatter settlement) urban solid waste, urban heat island and urban flooding. Drawing upon different literatures and theoretical perspectives, the study explores innovative strategies for revolutionalizing urban features in the region by integrating principles of sustainable development, community engagement and governance frameworks. This analysis offers actionable insights to address the pressing urbanization challenges in Southeast Nigeria and foster inclusive, resilient, and vibrant urban environment for future generations

**Key Words:** Urban area, Urbanization, Challenges, Sustainability, Migration, Population, Growth.

# CONCRETE COST REDUCTION THROUGH THE APPLICATION OF PAPER ASH AS A PARTIAL REPLACEMENT OF ORDINARY PORTLAND CEMENT IN NIGERIA - A REVIEW

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## Abstract

Concrete has remained one of the major construction materials which plays crucial role in the development of infrastructure and construction projects everywhere in the world. The acceptance of concrete as a major construction material is because of its strength, durability and versatility. Concrete is made of cement, aggregates (fine and Coarse), water and often an additional additives and admixtures to enhance its properties. This paper highlights the current cost of cement for making concrete in Nigeria with a view to reviewing the cost reduction effect of partially replacing cement with paper ash. Reviewed studies has proven the physical and chemical properties of paper ash and percentage replacement level on the compressive strength characteristics of paper ash blended cement concrete. Researches has shown that paper ash has pozzolanic properties and a considerable replacement of 5 to 15 percent of cement with paper ash will give concrete of good strength. Paper ash is generated from paper waste and paper waste has been in abundance from various sources ranging from such places as printing premises, academic institutions, residential homes, hospital environments etc. It is therefore recommended that with the attendant cost of cement in Nigeria, paper waste which are generated in abundance through various means in our country can be better channelled and utilized towards concrete production in the construction sector for concrete cost reduction and sustainability in the housing sector.

**Keywords**: Construction, Concrete, Cement, cost, Paper Ash.

# FISH MARKET ASSOCIATIONS IN EBONYI STATE, NIGERIA: SOCIO-ECONOMIC CHARACTERISTICS, ACTIVITIES AND EFFECTS ON FISH MARKETING.

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## ABSTRACT

The marketing of fish is not complete until it gets to the point of ultimate consumption. The fish market associations are expected to play a vital role in facilitating the distribution and marketing of fish to meet domestic demand hence, this paper explores the activities of market associations on fish marketing in Ebonyi State, Nigeria. Specifically the study described the socio-economic characteristics of fish marketers; identified the activities of market associations in relation to fish marketing and determined the effects of the activities of market associations on fish marketing. Data were collected using structured questionnaire administered in the form of interview schedule to ninety five respondents selected through multistage sampling technique. Data collected were analyzed using descriptive and inferential statistics. Results showed that 56 and 44% of the marketers were female and male; whose average age was 44 years and mean household size of 7 persons**.** Majority of the marketers had formal education and earned an average annual income of ₦240, 421.05 and belonged to fish marketers association. Market association participated in advertisement, storage and measurement standard of products but did not fix prices and did not assist in transportation. The results showed that the activities of market association influenced fish marketing in the area. This was evidenced from the $R^2$ value of 0.651 and significant ($p<0.01$) F-ratio of 5.500. Marginally, advertisement (9.969), storage (2.008), packaging (9.286), financing (2.536), transportation (21.988) and insurance (4.939) activities of fish market association were positively related to fish marketing. It was concluded that the activities of fish market association had significantly influenced fish marketing in the area.

**Keywords:** Marketing, Associations, and Functions.

# EXTRACTION AND PHYSICOCHEMICAL COMPOSITION OF ALMOND SEED OIL

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## ABSTRACT

Tropical almond (*Terminalia Catappa*) is a large spreading tree now distributed throughout the tropics in coastal environments. It grows principally in freely drained, well aerated, sandy soils. It has a spreading fibrous root system and plays a vital role in coast line stabilization. It is widely planted throughout the tropics, especially along sandy see shores, for shades, ornamental purposes and edible nuts. Almond seed is a nutritional seed, rich in fiber, calcium, vitamin E and protein content. Almond oil is highly nutritious with high phytochemical contents. The phytochemical has been reported to treat coronary artery disease. Almond provides a nutrient-dense source or vitamin E, manganese, magnesium, copper, phosphorous, fiber, riboflavin, mono unsaturated fatty acid, folic acid, alpha tocopherol, zinc and vitamin A. The research was carried out to extract and to determine the Physicochemical Analysis of oil from almond fruits. The oil samplewas evaluated for it physicochemical Analysis using standard methods. The result of the physicochemical analysis of almond oil was reported as; pH(4.73), Acid value(9.39mg/KoH), Free fatty acid, FFA(4.66%), Vitamin E(12.27mg/100mil) and Saponification (208.36mgkOH/g) respectively. The analysis showed that the almond oil was acidic having a pH level above 4 on the pH scale. The result further revealed that almond oil is a good source of vitamin E and can be used for the production of cosmetics, soap and some food products because of its good amount of free fatty acid and saponification value. It was therefore recommended that the utilization of almond fruit could reduce post harvest loss especially during it season, importation of foreign almond oil which is usually expensive and should be encouraged in food production.

# EVALUATION OF FLEXIBLE PAVEMENT DETERIORATION IN NIGERIA AND MAINTENANCE OPTIONS.

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## ABSTRACT

In Nigeria, the choice of a suitable and timely road maintenance option is still an issue of concern. The objective of this research work was to investigate the causes leading to the early deterioration of the road pavement and recommend a suitable maintenance option. The research method analysed both the visual road condition survey, alongside the field and laboratory test results of the study road materials. The geotechnical results revealed that the plastic index of the Base course material was about 16% which exceeded the recommended 10%, the California Bearing Ratio (CBR) value of the Base course from the deep cone penetration test was about 67% which is below the recommended 80%, furthermore, the asphalt extraction test revealed that the bitumen or binder content was only 4.9% against the 6.5% that is recommended. The other reasons for the early failure of the study road included insufficient drainage, poor construction methods, and lack of quality control measures. It was concluded that the subgrade soils in Sections B&C should be stabilized (mechanically/chemically) and proof rolled, poor sub-base and base materials should be stabilized or replaced. An adequate drainage should be designed for the whole road section. Hence, a total pavement overlay with traffic load considerations was recommended for the overall road section. This research approach is recommended as a general guide, particularly for junior highway engineers.

**Keywords:** Asphalt, Deterioration, Flexible Pavement, Maintenance

# EFFECT OF HOT WEATHER ON CONCRETE PRODUCTION AND PRACTICES TO MINIMIZE THEM

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## Abstract

Concreting during hot weather requires good planning, and precautionary measures must be taken to alleviate the adverse effects of high temperature on concrete. Like most other materials, concrete expands with increasing temperature and contracts with decreasing temperature. The effects of such volume changes are similar to those caused by shrinkage i.e temperature contraction can lead to objectional cracking particularly when superimposed on shrinkage. In intermediate structure , deformation due to temperature changes can cause large and occasionally harmful stress. Concrete mixed, transported, and placed under conditions of high temperature, low humidity, or high winds, therefore, requires an understanding of the effects such have on concrete properties and constructions. When these factors are understood, measures can be taken to eliminate or minimize their undesirable effects. This paper examines the problems associated with hot weather concreting and presents constructional practices to minimize their undesirable effects.

**Keywords:** Hot weather, Concrete Production, Workability, plastic, Concrete, Shinkage Crack

# ASSESSMENT OF THERMAL COMFORT OF RESIDENTIAL BUILDINGS IN PUBLIC HOUSING ESTATES IN ABAKALIKI, EBONYI STATE

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## ABSTRACT

This research aims to assess the thermal comfort of residential buildings in public housing, estates in Abakaliki, Ebonyi State, Nigeria to identify the thermal perceptions of occupants in their different residential building types (bungalows, block of flats and duplexes) and discern differences between public housing estates in the same climatic zones but different micro-climates. Field measurements, physical observations and a questionnaire survey of 90 occupants of the three selected public housing estates in Abakaliki, Ebonyi State, Nigeria were undertaken. The data were analyzed using Humphrey's neutral temperature formula and descriptive statistics analysis. The results revealed that the neutral temperature for the public housing estates ranges from $28.2^0$c – $29.6^0$C, the thermal condition in the residential buildings failed to meet the ASHRAE standard 55 as only 65% of the occupants said the thermal condition was acceptable. The building designs, orientation, micro-climate, the number and sizes of windows influenced the occupants thermal comfort vote. This study is valuable in enhancing measures of improving thermal comfort in the residential building typologies in the hot-humid tropics of Southeast Nigeria and other regions that share similar climatic conditions. To the best of the authors' knowledge, this is the first study of this nature that offers important response for building professionals in the performance of existing residential buildings in meeting occupants needs in Abakaliki in particular and Southeast Nigeria in general.

**Keywords**: Building typology, micro-climate, neutral temperature, public housing estates, residential buildings, thermal comfort.

# AFFORDABLE HOUSING DELIVERY IN A DISTRESSED ECONOMY, THE ROLE OF THE ARCHITECT.

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**ABSTRACT**.
The houses with live in plays a critical role is our lives, perhaps more than at any other time in history. It does not only protect us from weather and other physical harm but also nurtures our growth and enhances our development. The objectives of this paper are to identify the impart of the architect towards achieving a safe, comfortable and affordable housing. This would elaborate on planning objectives, factors influencing spaces, principles of planning the house and housing standards. The paper relied on the existing literature and interviews interactions with public, building officials, and professionals in the built environment. Some key factors that were critical in affordable housing delivery built were identified and the case for adopting the concepts of cost effective architectural and urban designs in housing delivery was established.
Keywords: Affordable, Architect, Economy, Housing.

# THE IMPACT OF CLIMATE CHANGE ON THE FOREST ECOSYSTEM

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## ABSTRACT

Forests are one of the most biodiversity rich habitats on earth. They are home to a greater percentage of higher plant species in the rainforest which are used for medicinal or cultural purpose. Forests also present a significant global carbon stock. Global forest vegetation stores a great deal of carbon in its biomass, deadwood and in soils. Forests are increasingly threatened as a result of deforestation, fragmentation, desertification, climate change and others, which are linked to anthropogenic activities such as fire, grazing, deforestation and others. Climate change in particular, has impacts on forest biodiversity and its ability to provide soil and water protection, habitats for species and other ecosystem services. It has also made the forest to become less productive, less resistant, and exposed to desertification and associated disastrous ecological, social and economic impacts which on the other hand, result to the emission of carbon dioxide Co2 which enhance the rate of climate change. However, it is imperative that we must make efforts to protect forest wealth, which is the best cover for climate security. This paper examines the possible policies, programs and mitigation strategies and resilience of forest ecosystem and biodiversity to climate change.

Keywords: Climate change, Forest Ecosystem, Environmental Control, Terrestrial Biodiversity.

# SOLID MINERAL DEVELOPMENT FOR SUSTAINABLE ECONOMIC GROWTH.

## THE CASE OF EBONYI STATE

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**ABSTRACT**

The over dependence on oil in Nigeria and the current decline in the world oil market calls for the diversification of the National Economy in the areas of solid minerals exploitation. Solid minerals as natural resource which will help to grow the economy, create jobs, and generate enduring wealth for the people of Nigeria. Effective mining will transform the economy of any nation or state and create a suitable and enabling environment for productive activities to flourish. This paper identifies the solid mineral potentials of Ebonyi State and pin points on the use of solid mineral potentials as a means of diversification of the economy, a means of wealth creation and improvement of the standard of living of the people. This paper also reviewed from different literature the contribution of the solid mineral sector to the development of various countries. The mineral potentials of the state, if adequately exploited, can launch the State into a realm of financial sufficiency and also in the development of indigenous products that can be consumed and exported to generate revenue for the state.

Keywords: Solid Mineral Exploitation, Solid Minerals Potential, Sustainable Economic Development.

# AN IMPACT OF EFFECTIVE COST ESTIMATE IN PREVENTING BUILDING CONSTRUCTION PROJECTS ABANDONMENTS IN EBONYI STATE

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## Abstract

Adverse profitability in the construction industry is associated with the organizational leaders' inability to accurately estimate project costs and manage project schedules. This results to high rateof abandoned project and building, to be able to boost of successful completed projects, effective and efficient cost estimation and planning is the very key. The study investigated the effect of cost estimation on project performance in building construction firms in Abakiliki. The objectives of the study are; To determine the effect of bottom up cost estimating and parametric cost estimating on the realization of work scope / specifications in construction firms in Ebonyi state, To assess the impact of bottom up cost estimating and parametric cost estimating on time / schedule performance in construction firms in Abakiliki, To ascertain the impact of bottom up cost estimating and parametric cost estimating on cost performance in construction firms in Ebonyi state. The researcher adopted the descriptive research design and structured questionnaire was used as instrument for data collection. The purposive sampling technique was adopted in the study. Data analysis was committed to descriptive statistics of mean and percentages as well as inferential statistics of correlation and multiple regression analysis. The results showed that both bottom-up estimation and parametric cost estimating are both positively and significantly influenced by scope/specifications, time/schedule and cost. The study concludes that project managers need to be cognizant of this relationship and focus on developing estimates and schedules using modern project management tools that would project accurate costs and schedules**.** It was recommended that for successful completion of projects, construction project managers should be fully abreast of cost estimating techniques through intensive training awareness and the use of both bottom up and parametric estimating techniques be adopted for construction projects as appropriate.

**Keywords**: Building projects, Cost estimate, Impact, Abandonments, Abakiliki.

# PROXIMATE COMPOSITION AND PERFORMANCE CHARACTERISTICS OF BROILERS FED BLACK PLUM (*VITEX DONIANA*) LEAF MEAL DIETS

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## ABSTRACT

This research was carried out to investigate the proximate composition and the effects of varying inclusion levels of 0, 1.5, 2.5 and 3.5 % of Black plum (*Vitex doniana*) leaf meal on performance characteristics of broiler birds during the finisher phase (5- 8 weeks). Four experimental broiler finisher diets were formulated with 0, 1.5, 2.5 and 3.5 % inclusion levels of *Vitex doniana* leaf meal (VDLM) to serve as four treatments viz: T1, T2, T3, and T4, respectively. One hundred and twenty (120) 4 weeks old broiler birds were used in deep litter system of management. The birds were randomly divided into four (4) treatments with thirty birds each. Each treatment group was further divided into 3 replicates of 10 birds each in a completely randomized design (CRD). Feed and water were provided *ad libitum* throughout the study. The results of the proximate composition showed that VDLM contained 90.44 % dry matter, 18.80 % crude protein, 2.14 % crude fibre, 3.62 % ether extract, 6.93 % ash content, 59.04 % nitrogen free extract and metabolizable energy of 3088.30 MEKcal/kg. The results of the performance characteristics showed no significant ($P > 0.05$) differences across treatment means in all the parameters measured. Based on the results of this study, it was concluded that air- dried Black plum (*Vitex doniana*) contained high nutrients, therefore could be included in broiler finishers diet without any adverse effects on performance characteristics.

**Keywords:** proximate, Performance characteristics, broiler, replicates, Black plum, *Vitex doniana*,

# NIGERIA AT 63: HARNESSING THE POWER OF TECHNOLOGY, HUMAN FLOURISHING AND RESPONSIBILITY

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## Abstract

As Nigeria celebrates its 63rd anniversary, it faces the dual challenge of harnessing the power of technology for development while navigating the ethical complexities associated with its deployment. The paper aims at exploring the intersection of technology, human flourishing, and ethical responsibility in Nigeria's developmental trajectory. This philosophical inquiry employs a multidisciplinary approach, drawing on insights from philosophy of technology and other relevant studies in technology. Our method involves textual analysis of relevant texts in the field. The paper uses the method of textual analysis to offer a comprehensive understanding of the ethical dimensions of technological development in Nigeria. It sheds light on the ethical dilemmas inherent in technology deployment and proposes ethical frameworks for navigating these challenges. The findings highlight the potential of technology to enhance human flourishing in Nigeria, but also underscore the importance of technological responsibility and digital ethics in mitigating ethical risks. It reveals the need for transparency, accountability, and inclusivity in technological decision-making processes. The paper concludes that Nigeria stands at a critical juncture where technological advancement presents opportunities for development, but also poses ethical challenges. Embracing technological responsibility and cultivating a culture of digital ethics are essential for ensuring that technology serves the collective interests of the society. To address these challenges, recommendations include fostering ethical awareness, promoting stakeholder engagement, and implementing robust regulatory frameworks to guide responsible technological development in Nigeria. By prioritizing ethics and responsibility, Nigeria can harness the power of technology to foster human flourishing and advance sustainable development.

**Keywords**: Technology, Responsibility, Human flourishing, Digital Ethics, Nigeria at 63.

# CONSTRUCTION OF A HOUSEHOLD PLASTIC BIOGAS DIGESTER FOR THE PRODUCTION OF BIOGAS FROM COW DUNG

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## ABSTRACT

This work was aimed at constructing a household plastic biogas digester for the production of biogas from cow dung. The size of the plastic used in this work is a $4m^3$ plastic tank. Biogas which is a value-added product of anaerobic digestion of organic compounds, its production depends on different factors including: pH, temperature, substrate, loading rate, hydraulic retention time (HRT), carbon-nitrogen ratio (C/N ratio), and mixing. Household digesters are cheap, easy to handle, and reduce the amount of organic household waste. Biogas is a naturally occurring mixture of 60 to 70% methane and 30 to 40% $CO_2$ with some $H_2S$ (Hydrogen Sulfide) that burns similar to so-called "natural gas", which is actually a fossil fuel. Once generated and stored, biogas is primarily used around the world for cooking and heating at the home scale, but it also has many other important applications both domestically and industrially. Biogas and fertilizer obtained at the end of anaerobic digestion could be used for cooking, lighting, and electricity.

Keywords: biogas, plastic, household digester, anaerobic digestion, methane

# HOUSEHOLD BIOGAS DIGESTER: A POTENTIAL CLIMATE EXPLOSIVE OR AN OPTION TO GLOBAL WARMING MITIGATOR

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## ABSTRACT

There are a number of advantages to household biogas production on farms and settlements, including savings on firewood or fossil fuels and reductions in odour and greenhouse gas emissions. For these reasons and more, the installations of biogas digesters are on the rise. However, biogas digesters are often poorly managed and there is a lack of proper distribution systems for biogas. This results in methane being released inadvertently through leaks in digesters and tubing. As methane has a global warming potential 25 times greater than that of carbon dioxide, this compromises the environmental advantages of digesters. Consequently, the break-even point at which the released methane has as great an impact on global warming as the fuel that has been replaced occurs when between 3% and 51% of the produced biogas is released. The limited information available as regards methane leaking from small-scale biogas digesters in developing countries indicates that emissions may be as high as 40%. Further proliferation of small-scale digesters could therefore contribute significantly to global emissions of methane.

Keywords: biogas digester, greenhouse gas emission, methane, global warming

# INTERNATIONAL MONETARY FUND (IMF) AND ECONOMIC DEVELOPMENT IN AFRICA: FOCUS ON NIGERIA

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## ABSTRACT

*African Communities including Nigeria seem to lack the financial discipline to manage their fiscal policies as related to human capital and infrastructural development, public debt both external and domestic and this continues to pose a big challenge to policy makers. The failure of strategies adopted by various African Leaders to redress Africa's development problems is a thing of great concern. The thinking of most African leaders, Nigeria in particular is that since they cannot formulate workable development programme that could bail the continent from her crisis of poverty, economic backwardness, political immobilism, etc, there was need to rely on the Western imperialists and their financial institution "International Monetary Fund (IMF)". The institution is always promising African leaders that it will bail them from the woods and set them on the part of sustainable development. The paper seeks to examine the vision and objectives of IMF and her relationship with Nigeria and Africa in general. The qualitative and documentary method of data collection was adopted by reference to relevant literature.*

*Key words: Imperialism, development programme, sustainable financial discipline.*

# SOIL ACIDITY: A GRAND CHALLENGE FOR CROP PRODUCTION IN EBONYI STATE

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**Abstract**
Soil acidity is considered a grand challenge to profitable and sustainable crop production in Ebonyi State, Southeastern Nigeria. Addressing the problem of acidity is fundamental to sustainable crop production in Ebonyi State. This review therefore highlights the key causes of soil in Ebonyi State, the impacts of soil acidity on crop production and available soil acidity management strategies. The paper therefore recommended liming, both mineral and organic for profitable and sustainable crop production in Ebonyi State.
**Keyword:** Soil, Acidity, crop, challenges and Ebonyi State

# INVESTIGATION OF THE EFFECT OF DOMESTIC WASTES ON SELECTED SOIL PROPERTIES

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## ABSTRACT
Agriculture is the cornerstone of food production and environmental sustainability, that relies fundamentally on soil health and quality. The interaction between domestic waste and soil properties represents a pivotal concern in contemporary agriculture and environmental science. Three distinct domestic waste types—kitchen waste, garden waste, composted waste, and a control—were applied to field plots (A, B, C, and D) to investigate changes in soil pH, organic matter, nutrients, and microbial activity. Results reveal significant variations in soil pH, nutrient content, trace element concentrations, bulk density, cation exchange capacity (CEC), and hydraulic conductivity. Composted waste demonstrated a substantial increase in nitrogen and phosphorus content, while kitchen waste contributed significantly to potassium enrichment. The study provides valuable insights for tailored waste management strategies to optimize soil fertility and support sustainable agriculture.

Keywords: *Sustainable Agriculture, Domestic waste amendments, Soil properties, waste management, Soil Improvement Strategies.*

# EFFECT OF REVOCATION OF RIGHTS OF OCCUPANCY AT EBONYI STATE UNIVERSITY PERMANENT SITE, EZZANGBO.

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## ABSTRACT

*This study examines the effect of revocation of rights of occupancy at Ebonyi State University permanent site, Ezzangbo. The study was guided by three research questions and one hypothesis tested at 0.05% alpha level. Survey research design was adopted and 208 respondents determined from population of 226 in the selected Communities, Ministries, Property Investors in Ebonyi State. The use of stratified random sampling method was adopted for this study. Questionnaires were formulated and distributed to the respondents. Data collected were presented with tables. The chi-square text and percentage were used to analyze the data. Contingency table was also used in testing the hypothesis. The findings revealed that the alternative accommodations were not provided because the state government found it more convenient to pay compensation in cash than to provide alternative land or accommodation to the land owners. It is recommended that adequate compensation should be paid to those whose parcels of land were revoked, that the omission of interest and haphazard assessment should be addressed, and also the purpose for every revocation must be strictly on overriding public interesting.*

**Key note:** Revocation, Right of Occupancy, Compensation.

# INVESTIGATION OF HEAVY METAL REMOVAL FROM WASTEWATER USING EGGSHELL ABSORBENTS

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## ABSTRACT

Removal of toxic pollutants from the industrial, municipal and other waste solutions is a cause for global concern. The discharge of wastewater with the presence of toxic heavy metals into the environment poses significant environmental hazards, as these pollutants ultimately reach and accumulate in animal and human tissues. This work investigated the treatment of wastewater using waste eggshells. Wastewater samples contaminated with heavy metals were collected from Jezco Plastic Factory, located at Ekwulobia, Aguata local government area, Anambra state for comprehensive analysis & treatment while insitu test for pH and temperature were carried out in. Domestic wastewater sample was also collected from the female student hotel at Federal Polytechnic, Oko by a composite sampling method, and subjected to analysis before and after treatment. The effect of the addition of eggshell absorbent to the wastewaters were determined by comparing the results before and after treatment. The result of the wastewater analysis revealed a reduction in the heavy metal content of the wastewater by the adsorptive process between the eggshell and the wastewater. The heavy metal contents were brought to a reduced level within the maximum permissive level for the safe disposal of the wastewater to the environment. Waste eggshells are therefore a valuable agricultural waste for wastewater treatment.

Keywords: *Agricultural wastes, Wastewater Treatment, Eggshell adsorbents, Heavy metals, Eggshell wastes,*

# EFFECT OF JATROPHA CURCAS ETHANOL LEAVE EXTRACT ON THE BODY WEIGHT AND FASTING BLOOD GLUCOSE LEVEL OF ALLOXAN INDUCED DIABETIC RATS

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## Abstract

The leaves extract of *J. curcas* was investigated in alloxan induced diabetic rats for its effects on body Weight and Fasting Blood Glucose level using standard methods. Diabetes was induced intraperitoneally with a single dose of 140 mg/kg body weight of alloxan solution dissolved in 0.1 M citrate buffer. Twenty male albino rats were divided into five groups of four rats each. Group 3, 4 and 5 were administered with 100, 300 and 500 mg/kg body weight of *J. curcas* ethanol leave weekly for 21 days. Group 1 was the normal control; group 2 was negative untreated diabetic control. The result shows that there was progressive decrease in weight in the diabetic untreated control group compared with the normal control rats that gain weight throughout the study period. The result also shows that the level of glucose was significantly ($P<0.05$) increased in the serum of diabetic untreated rats compared to the normal rats that were not induced. However, the administration of *J. Curcas* leaf extract (group 3-5) for 21 days resulted in significant ($P<0.05$) decrease in blood glucose level which was accompany by increase in body weight except day 7 (group 3) and 21 (group 5) compared to diabetic untreated control (group 2). The ethanol extract of *J. curcas* was found to help in improving the body weight in wista albino rats. The increase in weight and decrease in blood glucose level of the rats following the supplementation of the slime suggested that the slime possesses antidiabetic effects and may be a potent source of anti-diabetic agents.

**Keywords**: Diabetes, Weight, Blood Glucose, *J. curcas*, alloxan

# GROWTH AND YIELD PERFORMANCE OF MAIZE TO DIFFERENT SOIL CONDITIONERS AND CRYSTALIZER FERTILIZERS IN EBONYI STATE

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## Abstract

This study was carried out in three clans (Unwana, Mgbom and Ndibe) of Afikpo North Local Government Area of Ebonyi State to evaluate the yield response of maize to soil conditioners and crystallizer fertilizers. A land area of 25 m x 50 m in each clan was used. These were divided into three blocks with inter-block spacing of 1m. Each block has five plots with inter-plot spacing of 0.75cm. The plots were cleared and land prepared manually using machetes and hoes. The maize was planted 2 seed per hole to achieve plant population of 20000 stands/ha. The experimental design was a randomized complete block design (RCBD). The treatments comprising of the different soil conditioners and crystallizer fertilizers were randomly applied to each plot one month after maize planting. The treatments were as follows: T1 = (control 60kg 20:10: 10), T2 = 60kg Crystallizer Fertilizer),T3 = (60kg Crystallizer fertilizer + 40kgN as urea),T4 = (60Kg Crystallizer fertilizer+ 1tons of farmyard Manure),T5 = (60kg crystallizer fertilizer + 60kg 20:10:10 fertilizer). At 90 days after planting, the maize was harvested and the yield data were collected by measuring the weight of the harvested maize fruits from each plot using a balance. Data on yield of maize were subjected to Analysis of Variance and mean separated according to Obi. The result showed that the mean yield of maize in the various sites under various treatments showed significant effect ($P<0.05$), irrespective of locations. T5 showed superior yield effect and Unwana had the best yield compared to other locations.

**Keywords:** Evaluation, soil conditioners, Crystallizer fertilizer, yield and Maize

# COMBATING THE DRAWBACKS OF SOCIAL MEDIA ON ENGLISH LANGUAGE LEARNING AND NIGERIA AT 63

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***Abstract***
*The purpose of this paper is to explore the drawbacks of social media on English language learning in Nigeria. A conceptual approach through intensive and extensive review of related literature was adopted for this study. The researchers developed conceptual framework to explore the drawbacks of social media on English language learning in Nigeria and how it affects Nigeria at 63. A lot of factors have (positively or negatively) impacted English language learning in recent times. Most scholars have researched and aligned to any medium they feel will enhance learning in the area of interest. Hence, the advent of the social media presented the needed opportunity which saw many people embracing it as both means of communication and learning. Though social media have recorded positive influence in learning, research shows that it still leaves much to be desired in English language learning. At 63 one would expect that learners of English in Nigeria would have mastered the use of English since it was adopted the official language since independence, but the reverse is the case. One major finding of this paper is that social media has adversely influenced English language learning especially in speech, writing and spelling. The researchers discovered a dearth in researches covering the nexus between social media and English language learning in Nigeria. This represents a knowledge gap that needs to be filled, especially since English is Nigeria's official language and it is an essential component of the country's school curricula. This research positions stakeholders such as students, researchers and English language lecturers and successive governments to develop and deploy ways to engender English language learning through the social media. The researchers recommend that teachers should pay more attention to students' writings and be quick to note and as well correct grammar and expression errors imported from social media. Students should also be made to draw the line between informal expressions from the social media and formal language use in speech and writing.*

***Keywords:*** *English learning, social media, dearth, drawback, combat*

# GREEN MANAGEMENT AND THE EFFECTIVENESS OF BEVERAGE FIRMS IN ABA, ABIA STATE.

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## ABSTRACT

The study investigates green management and the effectiveness of beverage firms in Aba, Abia State. The objectives of the study were to evaluate the level of correlation between pollution control and customer satisfaction; pollution control and employee retention; and to examine the level of correlation between waste management and backward integration in beverage firms in Aba. The study was guided by three research objectives, three research questions and three hypotheses. Empirical reviews were used to beef up the study. The researchers employed the survey research design in the research. A five-point Likert Scale structured questionnaire was the major instrument for data collection. The validity of the instrument was done by showing the questionnaire to research experts for their corrections and inputs. Cronbach Alpha statistic was used for obtaining 0.79 as the reliability ratio of the survey instrument. Data analysis was committed to descriptive statistics of mean and standard deviation. Correlation analysis was used to test hypotheses. It was found out that there is a significant level of correlation between pollution control and customer satisfaction; there is significant level of correlation between pollution control and employee retention; there is a significant level of correlation between waste management and backward integration in beverage firms in Aba. It was concluded that green management improved the effectiveness of beverage firms in Aba. The study recommended that management of beverage firms should make more efforts to control all forms of pollution in the enterprises for improved customer satisfaction. Management should always work harder to achieve higher degrees of employee retention with the instrumentality of green management. Waste to wealth strategy should be employed by beverage firms for improved business effectiveness.

**KEYWORDS:** Green management, Effectiveness, Beverage, Pollution control, Waste management.

# NAIRA DEVALUATION AGAINST U.S. DOLLAR AND GROWTH OF EXPORTS IN NIGERIA, 1999-2022: GRANGER CAUSALITY EFFECT

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## Abstract

The study examined the effect of naira devaluation in Nigeria on the country's exports for 1999-2023. Currency devaluation is a strategy adopted by countries to increase their exports and reduce imports. It serves to mitigate deficit balance of trade in a country as well as protect domestic industries. When a domestic currency is devalued, the country's exports become cheaper than those of its foreign counterparts hence, imports for such country become more expensive than the exports. Time series data for annual rate of exports, imports, official naira to US$ exchange rate and external debt stock of Nigeria are used in the study after ascertaining their stationarity using Augmented Dickey Fuller Unit Root test. This is to avoid spurious results and inferences that emanate from the use of non-stationary data in analysis. The Unit Root test shows all the time series as integrated at levels. This means that there is no long run relationship between the variables. Granger Causality test was used to unravel the causality effects of the variables. It is a statistical hypothesis test for determining whether one time series is useful in forecasting another. The results show only one direction causality between the growth rate of Nigeria's debt stock and its imports which also is significant while its exchange rate to US$ does not have any causal effect on its exports and imports. Hence, the study recommends among others, that to reduce imports in Nigeria, the country should reduce its external debt stock.

**Keywords:** Exchange rate, Exports, Imports, External Debt Stock

# BUILDING A GREENER BUILT ENVIRONMENT -THE ROLE OF MICROBES IN SUSTAINABLE CONCRETE.

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## Abstract
Making a right selection of materials right from its design phase is one step towards sustainable building construction. No doubt, concrete is among the frequently used building construction materials. However, concrete has been estimated to be responsible for about eight percent of the world's carbon dioxide emissions owing to its high carbon content. Beside this, concrete is exposed to the environmental weather conditions like rain, sun and unstable climatic conditions; hence cracks occur in the material. Therefore, to achieve durability in concrete within the context of sustainable construction means there is a need to use an environmentally friendly and effective technique of alternative crack removal in the case of damage in the material. No doubt, the use of microorganisms to make building materials such as concrete has been widely acclaimed as a step in the right direction towards building a greener built environment. Concrete made with bacteria is self-healing and this bacteria self-healing concrete can reduce costs in terms of detection of damage and maintenance of concrete structures, thus improving the durability of concrete and ensuring a safe lifetime of the structure. Although this may not currently be used on an industrial scale owing to the high cost of the substrates used, the production costs of concrete can still be reduced through other various means; thus making bacterial concrete an effective alternative to a more sustainable built environment.
**Keywords: S**ustainable; Self- healing concrete; Bacteria concrete, Built environment

# GOVERNMENT POLICY AND POLITICAL ADVANCEMENT: NIGERIAN PERSPECTIVE.

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**Abstract**
*Politics remain a vital activity in the human race as such, it needs to be carefully nurtured so as to better the lot of the citizens, if not controlled or regulated, the spirit of might is wright takes over. This study has tried to showcase the nexus between government policies and political activities. The work was carried out leaning on secondary data. In the main, some vital concepts that have relevance with the study, were discussed. The word politics was analyzed under two perspectives – The liberal framework as influenced by Max Werber and the Marxist framework as influenced by Karl Marx. Three types of government/public policies were showcased – the distributive policy, the re-distributive policy, and the regulatory policy. The paper centered on regulation policy showing the government efforts through policy formulation to regulate and controls activities in various subsectors. These regulatory policies gave birth to bodies that regulate activities in the said sections – the National Board for Technical Education (NBTE), National Universities Commission (NUC), National Agency for Food, Drug Administration and Control (NAFDAC), and the Independent National Electoral Commission (INEC), this body (INEC) is to regulate the activities in the political subsector. As the regulatory bodies set standards and rules to guide the activities of groups in a given society, the INEC has come to stay in this regards. The 2022 Nigerian electoral law as amended and signed into law vividly assists the INEC in its duties. The Electoral act and indeed the 2022 amended version has tried to smoothen our political horizon. Some parts of the said 2022 electoral law as amended were presented. Politics has been seen as a superstructure that controls other structures as such, should be regulated. The paper concludes that the government should continue in making unbiased policies to regulate political activities. The paper further recommended among others that government should sanction any individual or groups who go against the electoral laws.*
***Keywords: Government, Policy, Politics, Typologies of government policies.***

# INNOVATION AS A TOOL FOR ENHANCING SKILLS ACQUISITION AMONG STUDENTS OF TERTIARY INSTITUTIONS IN NIGERIA

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## Abstract

The need for skill acquisition among youths cannot be over-emphasized, moreso given the down turn of economies worldwide. Innovation plays a vital role in skill acquisition these modern days because they spur the younger generation into acquiring skill. In view of the above the work studied how innovation impacts on skill acquisition among students of tertiary institutions in Nigeria. In the course of the study objectives were formed followed by research questions derived from the objectives. Hypotheses were stated and tested using appropriate statistical tools. The study looked at some relevant theories to the work having reviewed some related empirical studies. At the end it was found that there is a significant relationship between innovation and skill acquisition among students of tertiary institutions in Nigeria. Based on the findings, the study recommended an increased budgetary allocation by the federal government to equip entrepreneurship and skill acquisition centres in Nigeria tertiary institutions to motivate the students more into skill acquisition so as to drastically reduce the effects of unemployment which include robbery, kidnapping, terrorism, fraudster and gangsterism, among others.

Keywords: Innovation, skills, tertiary institutions etc.

# THE IMPACT OF EVERY MONDAY SIT- AT HOME ON THE GROWTH OF HOTELS BUSINESS IN AFIKPO LGA.

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**Abstract**
The study focused on the impact of every Monday sit- at home on the growth of hotels business in Afikpo LGA with selected hotels as case study. The main objective of the study is to assess the impact of sit- at home on the growth of hotels business. The survey research design was employed to carry out his research, the sample size was 136, the instrument of data collection were questionnaire and oral interview, the data collected were analyzed using table and simple percentage, one hypothesis formulated and tested using $X^2$ chi square in order to know the significant impact of the every Monday sit- at home on the growth of hotel business. The findings showed that operational challenges, reduce occupant and revenue, cancellation and loss of revenue, economic repercussion, cancellation of event, bad reputation and industry perception, poor employee welfare and job insecurity were the impact of every Monday sit- at home. Based on the findings, the study concluded that the impact is significant on the growth of hotel business and it was recommended that engagement with government authorities, uniformed men, community leaders, IPOB leaders and industry stakeholders is important in addressing the impact of every Monday sit- at home protest on the hotel business in Afikpo LGA.
**Keywords:** Sit- at-home, impact, hotel business.

# SOCIAL MEDIA AND MASS MEDIA MANAGEMENT IN ACTUALIZING DEVELOPMENT PROCESS: CHALLENGES AND PROSPECTS IN NIGERIA

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## ABSTRACT

*The complementary role of the various systems of communication in achieving sustainable developmental goals in the society via information dissemination and awareness creation has never been in doubt. Mass Media as one of the channels include, the print, the electronic media and the digital media (social media) which has brought a paradigm shift in both human life, socio-economic issues, quick access to information and media consumption etc. These mediums are the message as well as a veritable tool for social change and technology been a present force acting all over the globe. Social networks have also become one of the leading platforms in the media industry where majority of the masses depend on as their primary sources of information relating to socio- cultural, political and economic needs. Down to present day Nigeria, these mediums are the most influential aspects of human lives which is also associated with some managerial issues amongst others like disruption brought by technology (industrial development). Cyber-crimess, fake news, media ownership control, government regulations and monitoring activities of the media , imposing restrictions on the media houses, depriving the press of independence , inequality and imbalance of information flow, ownership structures, lack of basic infrastructures, modernization , training, local contents, leadership style, free rider problems, proliferation of private media houses, censorship and so on, but if properly tackled, it will contribute tremendously in bringing all around socio-economic potentials in Nigeria. Adduced from the above, this paper explores: the social media and mass media management in actualizing development process: challenges and prospects in Nigeria. This study is anchored on two vital theories namely; Development Media theory and Technological Determinism theory, made use of secondary data such as books, journals and news reports as an instrument of data collection through qualitative research method. Findings and recommendations were made.*

**Key words:** Social Media, Mass Media Management, Development process, Challenges and Prospects, Nigeria.

# THE IMPACT OF ACTIVITIES OF UNKNOWN GUNMEN ON THE GROWTH OF HOSPITALITY INDUSTRY IN OWERRI

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## ABSTRACT
The study focused on the impacts of the activities of unknown gunmen on the growth of the hospitality industry in Owerri, it explained the concept of unknown gunmen from various authors and reviewed some of the attacks carried out by unknown gunmen in Imo state in 2023. The impact includes a reduction in revenue generation, loss of repeat purchases and guest loyalty, discouraged investment, high labor turnover, and hampered destination marketing and hospitality business promotion. It was concluded that the impacts hampered the growth of the hospitality business and it was recommended that community collaboration and support, public-private partnership, political approach, and continued security assessment evaluation may reduce the activities of unknown gunmen in Owerri, Imo State.
**Keywords:** Unknown gunmen, Insecurity, Hospitality Industry.

# EFFECT OF WORKING CAPITAL MANAGEMENT ON THE SUCCESS OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

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## ABSTRACT

The study examined the effect of working capital management on the success of listed consumer goods firms in Nigeria. The study adopts the ex-post facto research design in the investigation. The population of the study comprises the 20 companies quoted and classified as consumer goods sector on Nigerian Stock Exchange as at 31 December, 2022 while 14 companies were sampled out for the study. The study employs the use of descriptive statistics and correlation in the analysis. The study further adopted the multiple regression analysis to test the study's formulated null hypotheses at 0.05 level of significance. The findings revealed that Cash Conversion Circle, Trade Receivable Period, Trade Payable Period and Inventory Conversion Period has no significant effect on the profitability of listed Consumer Goods firms in Nigeria. Thus, the study concluded that working capital management have no significant effect on the success of listed consumer goods firms in Nigeria. The study therefore, recommended amongst others the need for listed consumer goods firms to continue to work hard to reduce the number of days it takes them to convert raw material into cash to enhance firm success.

# DEMOCRATISATION IN AFRICAN PERSPECTIVES: AN ATTEMPT ON CONCEPTUAL DECOLONIZATION.

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## Abstract

*Like all generalization about complex subjects, it may be pertinent to look at Democratisation in African perspectives from conceptual frameworks embedded in strange philosophical traditions that have had impacts on African life and thought processes. This paper places emphasis on the dire need of exploiting as much as is judicious, the resources of African indigenous conceptual schemes and philosophical traditions in addressing the historical super- imposition of foreign categories of ideas on African thought system which results to cultural imperialism. The paper is thoroughly theoretical, relying basically on historical data, library research and review of relevant literature to assemble most needed information on African Democratic transitions, experiences and conceptual challenges. From the review, the paper found subtle, fundamental, intractable and pervasive circumstances of colonization requiring conceptual decolonization of African post-colonial political culture and social identity. Central to this pre-occupation, the paper adopts a comparative approach to cross-cultural political analysis of conceptual clusters, and by conceptual decolonization, the avoidance through a critical self-awareness, the uncritical assimilation in African political philosophy the colonizers conceptual schemes which is at present responsible for distortions of African world view, lack of self political definition and long flight of African cultural nationalism now accounts in the summary of this paper, the very need of African political philosophers to be cognizant of the structure, texture and tendencies of indigenous conceptual schemes for immediate social reconstruction of the black continent, Africa.*

***Keywords***: *Democratisation, Conceptual Decolonization, African Philosophy, Conceptual Schemes.*

# NIGERIA AT 63: ITS SOCIAL CONTRIBUTION IN ACTING-OUT ENGLISH AS A FIRST LANGUAGE

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**Abstract**
English, a language of communication or a compulsory subject? Questions on the dramatic active stage of conscious disengagement on the Nigeria' National Policy on Education (NPE) has gradually erected English as a compulsory subject. Its implications on the life of the citizens though neglected often had led to the social trending of children throwing away their mother-tongue, and embracing English as their first language. This study took a systematic review of this policy, its negligence, and standardization of English as a compulsory subject, and its psycho-social implication on the life of the citizens including the standard of Education. The study used secondary source of data from the radio and update from literature to effectively gather relevant information. The findings revealed that, contrary to this policy, there were no governmental guideline for the implementation of the mother-tongue language policy. English was thought as a compulsory subject. This in other hand, had created the current social trending of every family allowing their children embracing English as their first language, which theoretically has an attribute base on the psychosocial implication on the society at large. Implications of the study were made and recommendations which includes that; languages (Igbo, Hausa, and Yoruba) should be made compulsory as a means of promoting and entering into higher education in Nigeria rather than English language.

**Key Words**: Nigeria at 63, English, Language, Pyscho-Social.

# APPRAISAL TECHNIQUES AND ORGANISATIONAL EFFECTIVENESS IN THE NIGERIAN CIVIL SERVICE, RIVERS STATE

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***ABSTRACT***
*The research delved into the evaluation methods and organizational effectiveness within the Nigerian Civil Service, specifically focusing on Rivers State. Employing a correlational research design, the study formulated two research questions and two null hypotheses to steer its investigation. The study population encompassed 2,452 employees within the Rivers State Civil Service on GL 07 and above. Utilizing purposive sampling, a sample of 444 respondents on GL 07 was selected for the study. Data collection relied on a self-designed questionnaire titled 'Appraisal Technique Scale (ATS) and Organizational Effectiveness Inventory (OEI)'. The questionnaire underwent face and content validation by the supervisor and other experts in Management Science. Reliability coefficients for both (ATS) and (OEI) were calculated at r=0.83 (83%) and r=0.79 (79%) respectively. Pearson Product Moment Correlation (PPMC) was employed to address the research questions and test the null hypotheses at a significance level of 0.05. The findings of the study demonstrated a strong positive relationship between management by objective, 360-degree/multi-rater appraisal methods, and productivity within the Nigerian Civil Service, Rivers State. Furthermore, it indicated a significant relationship between these appraisal methods and productivity in the same context. Based on these findings, recommendations were made, including the suggestion that the Nigerian Civil Service in Rivers State integrate the costs of appraisal programs into their annual budget to ensure they are not impeded by financial constraints.*

***Keywords***: *Appraisal, Techniques, Organisational Effectiveness, Civil Service*

# RULE OF LAW IN DENMARK: LESSONS FOR NIGERIA AT 63

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**Abstract**:
This article considers the thriving observance of the Rule of Law in Denmark and compares same with Nigerian situation. The prevalence and supremacy of the law over all and sundry is the essence of the Rule of Law. Nigeria obtained her independence from British Government since 1st October 1960 and also adopted the concept of rule of law from the said Colonial Masters, yet the observance of this Rule of Law seems to be a mirage in Nigeria. Many young citizens have got reason to believe that it is normal not to adhere to the supremacy of the rule of law, others wonder whether there exist countries where rule of law is strictly upheld. In this research work, we shall be examining the concept of the rule of law and its principles, the operation of the Rule of Law in a country named Denmark which has been adjudged as the most electoral democratic country in the world. We shall aim at exploring the lessons to learn from this state. At the end of the work, we shall recommend that the Federal government need to adopt and utilize the various measures that our Nigerian Government and leaders need to practically implement inorder to have a positive shift towards adhering to the rule of law in Nigeria.

Keywords: Rule of Law, Citizens, Constitution

# THE IMPACT OF MONEY SUPPLY ON REAL GROSS DOMESTIC PRODUCT (RGDP) OF NIGERIA (2000-2021)

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**Abstract**

The study examined the impact of money supply on economic growth of Nigeria. The specific objective is to find out the impact of money supply on real Gross Domestic Product (GDP) and the relationship between real money supply and real GDP in Nigeria. In the model specified, real gross domestic product is the regress while real money supply, real exchange real rate and real interest rate are the regressors. Secondary data was used and was collected from the CBN statistical bulletin for the period of 2000-2021. The statistical techniques used for the analysis is ordinary least square (OLS) techniques. From the analysis, real money supply and real interest rate are not significantly related to real GDP and exchange rate is statistically significant. The model has 61% explanatory power and the Durbin-Watson statistic does not reveal any autocorrelation among the variables used. 1% increase in real money supply will reduce real GDP with 0.16%, 1% increase in real exchange rate will also reduce real GDP with 0.03% and 1% increase in real interest rate will increase real GDP with 0.05% approximately. The study recommend that government should utilize the contractionary monetary policy to reduce the excess money in circulation for a robust economy.

**Key words**: Real GDP, Real money supply, Real Exchange rate, Real interest rate, Economic growth.

# ECONOMIC HARDSHIP AND INCREASING FINANCIAL CRIMES IN BAYELSA STATE: STUDY OF POS OUTLETS IN YENAGOA.

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## ABSTRACT

The advent of series of financial and economic reforms ( from the CBN cashless policy to Naira redesign and current fuel subsidy removal and exchange rate liberalization i.e. deregulation) from early last year till date has no doubt created a lot of untold economic disorder in all spheres of economic activities in Nigeria which consequently has created a lot of hardship in the life of Nigerian's today. the economic hardship has undoubtedly brought socio-economic woes to Nigerian citizens which became evident by the increasing financial crimes perpetrated by the criminal element today. This paper examined the current economic hardship and its spill over effects on financial crimes carried out with the use of POS. The population considered for the study comprised POS operatives in the major street of the Yenagoa metropolis, bank customers, and the police crime department. A Cluster and random sampling technique were used to obtain primary data on the various financial crimes experienced. The sample population was 120 POS respondents while Yaro-Yamani's formula was used to determine the sample size of 90. A total of 80 questionnaires were filled out and returned by both POS operators and bank customers while 66 responses were received in the police section of the questionnaire. Pie charts, Bar charts, and histograms were used to present and analyse the primary data. The data analysis shows that current economic downturn has caused untold hardship to the citizens and invariably increased the rate of crimes experienced in the use of POS. This paper recommended that quick response to ameliorate and step down the surge of hardship in the country is urgently required. Knowledge of technology is imperative for both Bank customers and POS operators in other outsmart fraudsters. Also, a synergy between Central Bank (CBN).

**K**eywords: Economic hardship, Financial crimes, POS,

# REWARD SYSTEM AND ORGANIZATIONAL PERFORMANCE (A STUDY OF CONSOLIDATED BREWERIES AWOMAMA, IMO STATE AND NIGERIAN BOTTLING COMPANY PLC, OWERRI, IMO STATE)

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***ABSTRACT:*** *This study investigated reward system and its effects on corporate performance using selected beverage manufacturing firms in Owerri, Imo State as case studies. The study adopted a survey approach and it covered a population of seven hundred and forty (740) employees of the organizations. Taro Yamane method was used to select a sample size of two hundred and sixty (260) respondents from the population. Data used in the study were gathered using a five-point Likert scale questionnaire and literary works of past scholars were extensively reviewed in order to have an in-depth knowledge of the topic under discussion. Collected data were presented and analyzed using percentages and tables. The hypotheses stated were subjected to empirical test using the Pearson Product Moment Correlation Coefficient. The critical value from the SPSS output for hypothesis one was 0.898, while that of hypothesis two was 0.968, -0.870 for hypothesis three and -860 for hypothesis four.. Findings from the study showed that financial rewards has no significant effect on the productivity level of both organizations. It was also found that no significant relationship exists between non-financial rewards and the organizational efficiency level of both beverage firms. The study also revealed that no significant relationship exists between intrinsic reward and the organizational growth of both beverage manufacturing firms. The study also revealed that extrinsic reward has no significant effect on corporate image. The study concluded that financial reward has no significant relationship with the productivity level of both firms, non-financial reward has no significant effect on organizational efficiency level; intrinsic reward has no significant effect on organizational growth of both firms; and extrinsic reward has no significant effect on the corporate image of both firms. The study recommended that for beverage manufacturing firms to perform at a higher efficiency level, concerted efforts should be made to ensure that employees are adequately financially rewarded for optimal productivity, organizations should ensure that acceptable non-financial reward system that encourages total employee engagement is provided to the employees which will ensure that organizational efficiency level is optimized; organizations especially those in the beverage sector should embrace the various intrinsic reward packages for enhanced organizational growth; and manufacturing firms should ensure that adequate extrinsic reward package is given to employees for improved corporate image.*

***Keywords:*** *Reward System, Financial Reward, Non-financial Reward, Intrinsic Reward, Extrinsic Reward, Organizational Performance, Efficiency, Productivity, Growth, and Image.*

## GLOBAL ISSUES AND TRENDS IN HIGHER EDUCATION

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Abstract

We witnessed a rapid change in higher education in the 1990's, which has continued with a higher speed into the 2000's. These changes include, but not limited to, internationalization, massification, diversity, ICT revolutions, increased competition and collaboration, marketization, and new teaching and financing methods. This paper aims at reviewing the main trends and policies in higher education, and explores the dimensions of internationalization and the future of higher education. For this purpose, the change in the landscape of higher education and the roles and autonomy of higher education institutions are analyzed. 

*Keywords: Higher education, university, new teaching methods, internationalization, institutional autonomy, Bologna Process;*

## LEVERAGING E-ACCOUNTING SOLUTIONS FOR ENHANCED NGO FINANCIAL MANAGEMENT

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**Abstract**

In the dynamic landscape of nonprofit organizations, effective financial management serves as a pivotal element in driving meaningful impact and advancing social progress. Non-Governmental Organizations (NGOs), guided by their dedication to societal betterment, require robust frameworks for the efficient and transparent management of financial resources. As technology continues to reshape industries, the integration of Electronic Accounting (E-Accounting) solutions emerges as a transformative approach to revolutionize the way NGOs navigate financial management, facilitating operational efficiency and heightened accountability. This study explores the potential of leveraging E-Accounting solutions to bolster NGO financial management practices. As NGOs expand their roles to address diverse societal challenges, the importance of strategic and transparent resource utilization becomes paramount. It also considers potential challenges and factors that NGOs need to address for the effective implementation of E-Accounting solutions. Through the integration of E-Accounting solutions, NGOs can elevate their financial management practices, enabling optimal resource allocation and amplifying the impact of their endeavors.

# EFFECT OF EMPLOYEE DISCIPLINE ON THE ORGANIZATIONAL GROWTH OF SELECTED BREWERY MANUFACTURING FIRMS IN SOUTH EAST, NIGERIA.

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***ABSTRACT:*** *This study examined the effect of employee discipline on organizational growth using selected brewery manufacturing firms in South East, Nigeria as case studies. The study adopted a survey approach and it covered a population of six hundred and forty (640) employees of the organizations. Taro Yamane method was used to select a sample size of two hundred and forty six (246) respondents from the population. Data used in the study were gathered using a five-point Likert scale questionnaire and literary works of past scholars were extensively reviewed in order to have an in-depth knowledge of the topic under discussion. Collected data were presented and analyzed using percentages and tables. The hypotheses stated were subjected to empirical test using the Pearson Product Moment Correlation Coefficient. The critical value from the SPSS output for hypothesis one was 0.893, while that of hypothesis two was 0.947, and -0.891 for hypothesis three. Findings from the study showed that organizations disciplinary policies have significant effect on the efficiency level of both organizations. It was also found that a significant relationship exists between creation of awareness on disciplinary measures and the organizational productivity level of both brewery manufacturing firms. The study also revealed that significant relationship exists between organizational/employee commitment on disciplinary issues and the organizational sustainability rate of both brewery manufacturing firms. The study concludes that the formulation and implementation of disciplinary policies have significant relationship with the efficiency level of both firms, creation of awareness on disciplinary matters has significant effect on organizational productivity level; and organizations/employee commitment on disciplinary issues has significant effect on organizational sustainability rate of both firms. The study recommends that for brewery manufacturing firms to perform at a higher efficiency level, concerted efforts should be made to ensure that adequate disciplinary policies are formulated and implemented; organizations should ensure that adequate awareness are created on disciplinary matters which will ensure that organizational productivity level is optimized; and organizations and employees should be fully committed in ensuring that disciplinary issues are properly handled for the sustainability of the firms.*

***Keywords:*** *Employee discipline, Disciplinary Policy, Creation of Disciplinary awareness, Organization/Employee Commitment on Disciplinary Issues, Organizational Growth, Efficiency Level, Productivity Level, Sustainability Rate.*

# CORPORATE SOCIAL RESPONSIBILITY (CSR) AND ECONOMIC WELL-BEING (A STUDY OF THE IMPACT OF OIL AND GAS COMPANIES IN BONNY ON THE PEOPLE OF BONNY LOCAL GOVERNMENT AREA OF RIVERS STATE)

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**Abstract**
*This study was carried out to investigate the impact of the activities and operations of the oil and gas companies in Bonny, in the form of corporate social responsibility on the economic well-being of the people. This study has become crucial so as to ascertain this impact to aid decision making and build orientations based on empirical studies. The independent variable (CSR) was viewed through two of its dimensions- concern for community and concern for environment, while the independent variable- economic wellbeing was viewed through- employment, inflation and economic sustainability. Ten (10) respondents were drawn from the thirty-four houses thereby making the study sample size to be three hundred and forty. However, only three hundred and thirty-two questionnaires were valid. Pearson correlation was used to test the study hypotheses with the help of Statistical Package for Social Sciences (SPSS) version 21. The study revealed a positive and significant relationship between concern for community and employment; concern for environment and employment, and concern for environment and economic sustainability. Furthermore, the result revealed that, while the relationship between concern for community and inflation is positive, the relationship is not significant. Finally, conclusion was made and the study recommended among others, that, there should be a periodic town hall meeting, comprising the representatives of the companies, the local government, the traditional council, the central youth body and that of the youths of each of the thirty-four houses. This platform will provide the opportunity for questions to be asked and answered, from the party (ies) directly concerned.*

**Key words:** corporate social responsibility, economic wellbeing, environmental concern and economic sustainability

# THE INFLUENCE OF LITERATURE ON DEVELOPMENT: AN ANALYSIS OF AKACHI ADIMORA EZEIGBO'S "*TRAFFICKED*"

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**Abstract**:
People tend to disregard the importance of literature to economic development, this may be because most people perceive literature to be just a source of entertainment and nothing more. Could this be true that literature has nothing to offer towards national development, seeing that it possesses the remarkable ability to shape perspectives and influence societal norms. Using the Reader-Response theory, the paper seeks to afaim that the story told in the "Trafficked" as a literature showcases how literature can influence the growth of the Nigerian economy by offering insights into different Nigerian cultures, societies, and historical period. Through storytelling in "Trafficked", characters experiences are exposed, this in turn encourages empathy and compassion in the mind of the readers. Through the various themes in "Trafficked", individuals will get familiarise with their identity. "Trafficked" also helps to serve as a form of social commentary, highlighting the socio-economic situations of the Nigerian society, such as the high rate of inflation, insecurity, trafficking, injustice and other human rights infringements thereby engaging readers in a debate that will bring a way forward. The study therefore emphasis, that literature influences development by exposing readers to creative thinking, and by challenging conventional thinking, new ideas are explored for the way forward through inspired innovation.
*Keywords:* Literature, Development, Reader, Influence

# INSECURITY AND FOREIGN DIRECT INVESTMENT IN NIGERIA, 1999 – 2022: EMPIRICAL INVESTIGATION

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## Abstract

This paper examined the effect of the insecurity in Nigeria on the rate of Foreign Direct Investment inflows into the country for the period of 1999 – 2022. The insecurity in Nigeria seems to have heightened during the period under study. The insecurity investigated are political insecurity, economic insecurity, and food insecurity. These insecurities are proxied by government corruption rate, unemployment rate and inflation rate. To avoid spurious result and erroneous inference emanating from non-stationarity of time series data, information on the variables are subjected under Augmented Dickey Fuller Unit Root test. The result shows the stationarity of the variables at level. The Least Square method was used to ascertain the correlation between the dependent (FDI) and independent variables. The Short run coefficients do not reveal any significant relationship between Foreign Direct Investment and any of the explanatory variables. Thus the null hypotheses are upheld and alternative rejected in the short run. Nevertheless, in the long run there exists a significant and negative relationship between Foreign Direct Investment and unemployment rate in Nigeria. As the unemployment rate which is proxy for economic insecurity in Nigeria increases, the rate of Foreign Direct Investment decreases. Government corruption has no significant link with FDI. Though the association of inflation rate in Nigeria within the study period is insignificant, the relationship is positive. Thus, the study recommends among others that more jobs be created for the Nigerian populace so as to reduce the economic insecurity that impacts negatively on the Foreign Direct Investment inflows in the country.

**Keywords:** Insecurity, Foreign Direct Investment, Government Corruption Rate, Unemployment Rate and Inflation Rate

# FINANCIAL TECHNOLOGY AND FINANCIAL INCLUSION IN NIGERIA

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## Abstract

Over the years, the banking sector in Nigeria has come up with technologically-driven financial services aimed at increasing the attractiveness of banking services to Nigerians. With the advent of financial technology, it is expected that financial inclusion would be enhanced. Thus, this study examined the nexus between financial technology and financial inclusion in Nigeria for the period 2009-2018. Financial technology was proxied by automated teller machine banking technology, Point of Sale banking technology, web banking technology and mobile banking technology while financial inclusion was proxied by deposit mobilized by rural branches of deposit money banks in Nigeria. Ordinary Least Squares (OLS) simple regression technique was employed to analyze the data in order to determine the 'individual' impacts of the independent variables on the dependent variable. Findings showed that ATM, POS, web and mobile banking technologies had positive and significant impact on financial inclusion in Nigeria. However, the study showed that the 'individual' impacts of POS (t = 10.72) and mobile (t = 10.61) on financial inclusion in Nigeria were more significant than those of ATM (t = 5.11) and web banking (t = 6.51), respectively. The study concluded that financial technology has a significant relationship with financial inclusion in Nigeria. The researcher recommended, that deposit money banks should fashion out ways of making POS and mobile banking more accessible to all categories of businesses and individuals so as to enhance financial inclusion in Nigeria.

***Keywords:*** Financial inclusion, financial technology, deposit mobilized, deposit money banks, rural branches

# CHALLENGES AND PROSPECTS OF KNOWLEDGE MANAGEMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN NIGERIAN TERTIARY INSTITUTIONS

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## Abstract

Recently, Nigerian higher institutions were not among the one thousand institutions adjudged as one of the best in the world. One of the reasons being because of the perceived dearth of proper retrieval and dissemination of information in most Nigerian higher intuitions of learning. The concept of Knowledge Management (KM) and the degree to which its value is outpacing the tangible assets of companies has become an issue of concern for many organizations and managers (Reinhardt, Bornemen, Pawlowsky and Schneider, 2003). Based on the above assertion, the researchers studied the challenges and prospects of KM in the era of Information and Communication Technology (ICT) towards nation building using selected tertiary institutions in Ebonyi and Enugu States, Nigeria as study organizations. Survey method of research design was adopted whereby data were obtained through primary and secondary sources, and analyzed using 4-point likert scale. It was discovered that face-to-face contact is mostly preferred in sharing information other than ICT devices such as e-mails; storage of information is mostly done manually (filing system) than ICT-based; information dissemination is mostly manually done than online, etc. In view of the above, it is recommended that staff should be empowered and encouraged to officially interact mostly using ICT facilities such as e-mails; the mode of information dissemination should as much as possible be done electronically. These recommendations, if aptly applied, should save time, money and human efforts for the organizations thus increasing operational effectives and efficiency thereby adding values to the development of Nigerian nation materially, intellectually and attaining global recognition.

**Keywords**: Knowledge Management, Tangible assets, ICT, Filing system, Outpacing

# THE ROLE OF ACCOUNTING RATIO AND INTERNET REPORTING IN CORPORATE DECISION MAKING

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## Abstract

The study focuses on the importance of accounting ratios and internet reporting corporate decision making in Nigerian. Use of accounting ratio as it relates to internet reporting in corporate decision making is critical to accomplishment of objectives by firms. The study was carried out through the use of questionnaire which were distributed to the management staff and other officers in the firm. The data collected for the study were tabulated, presented and analyzed using simple percentage. The hypotheses were tested using chi-square (x2) at a 5%. It was found that ratios are good at revealing the operational strength of firm and that internet reporting system is useful in all aspects of financial analysis to ensure the overall well-being of the firm by managing resources effectively and efficiently.

# TIME SERIES ANALYSIS OF CONFIRMED CASES OF COVID-19 IN NIGERIA

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## ABSTRACT

The study investigated the Time Series Analysis of confirmed cases of COVID 19 in Nigeria from Feb 2020 –Feb 2023, spanning over a period of 37 months. The data were obtained from Nigeria Centre For Disease Control And Prevention. Akaike Information Criterion. (AIC), Hannan-Quinn Information Criterion ( HQC) and Bayesian Information Criterion (BIC) were used for model selection while The Augmented Dickey Fuller test, and KPSS Test were used to test the stationarity of the dataset. The findings revealed that the data for confirmed were stationary at no differencing with the best models as ARIMA(0,0,1) dataset within the period under investigation. It was recommended among others that casual impact analysis should be done on the data set to quantify the effect of the introduction of vaccines on the time series data.

# THE USEFULNESS OF PUBLISHED FINANCIAL STATEMENT FOR INVESTMENT DECISIONS

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## Abstract

The study focuses on the usefulness of published Financial Statement for investment decisions. published financial statements of the company are the annual reports and account, including the statement of financial position and income statement prepared by the company directors and dully audited by company's external auditors, copies of which are to be presented to the shareholders, tax authorities corporate Affairs Commission (CAC) and other relevant persons and bodies. The major finding made in the course of this study was the usefulness of financial statements to companies and investors. The study also looked at the credibility of financial statements. This depends on their process by which financial statements influence users' behaviour. It is also based on the extent of their apperception of the source. It is recommended that investors should sponsor or conduct research on the published financial statements with a view to encourage the company to give legal backing to it. Published financial statements should be prepared by experts. The usefulness should be reviewed and the short coming amended for proper ground understanding toward the preparation of published account.

# MONETARY POLICY AS A TOOL IN CURBING INFLATIONARY TRENDS IN NIGERIA @63

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## Abstract

The study is on Monetary policy as a tool in curbing inflationary trends in Nigeria. In the model specified, inflation is the independent variable while cash reserved requirement, liquidity ratio, money supply, minimum rediscount rate and interest rate proxy as the dependent variables. Data were sourced from CBN statistical Bulletin. The statistical techniques used for the analysis is the ordinary least square techniques with the aid of E-view 5.0 software package. From the research findings, it indicates that monetary policy adopted in Nigeria within the period under review failed to influence the inflation rate. It has been identified that the major problem militating against the poor performance of monetary policy instruments in curbing inflationary trends in Nigeria is time lags involved which makes any policy employed to take many months to achieve its full effect.

Keywords: Monetary policy, inflationary trends, cash reserves, liquidity ratio, money supply, interest rate.

# BLUE OCEAN STRATEGY: A RELIABLE OPTION FOR BUSINESS SUSTAINABILITY AND GROWTH

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## Abstract

The study on the structural design that allows for the practice of Blue Ocean Strategy (BOS), that has significantly proven to be one of the most reliable option for modern business sustainability and growth in Nigeria was non-empirical. Various secondary sources were used in collecting qualitative data for the study. The submissions of the study were made deductively from the various conceptual and theoretical reviews of the study that; the Blue Ocean Strategy is to create uncontested market spaces that create new demands and make the competition irrelevant; focus is on creating, not competing. And that, the modern organizational designs which includes project organization, matrix design and adhocracy design that are highly dynamic, free form or flexible, adaptive, organized around special problems to be solved by a group consisting of experts with diverse professional skills and organic in nature are best suit for the practice of a Blue Ocean strategy in modern businesses especially in today's highly globalised business world.

**Key words: Organization Structural Design, Blue Ocean Strategy, Modern Business World, Business Sustainability and Growth.**

# POLITICAL LEGITIMACY AND PEACE SUSTAINABILITY IN NIGERIA: A CRITICAL APPRAISAL

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## Abstract
This paper is a critical examination of political legitimacy and peace sustainability in Nigeria. Legitimacy emphasizes the justification of the right to rule or exercise of authority over a social system, political organization, or political society. It refers to the way a government or social system attempts to justify its existence and power. It principally talked about the consent, correct, and justness of any authority as reflected in the results of elections conducted and the constitution. Based on this, legitimacy is a determinant factor for political stability in any society. Giving this position of legitimacy, this paper argues that allowing the consent of the people and the justness of the process and procedures of election to prevail is a road map to peace sustainability in Nigeria. Moving forward the paper will offer normative and prescriptive details arising from the interface of legitimacy and peace sustainability in Nigeria.
**Key Words:** Legitimacy, Peace Sustainability, Political Power

# THE IMPACT OF TRADE OPENNESS ON ECONOMIC GROWTH AND DEVELOPMENT IN NIGERIA: A REVIEW APPROACH

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Abstract:
*A crucial part for economic growth among the nations of the world is trade openness in which Nigeria cannot be left out. This study under a review approach methodology explores the relationship between trade openness and economic growth in Nigeria based on available literatures at the disposal of this work. Outcomes suggest that while trade openness significantly contributed to economic growth, other influential factors like institutional quality, infrastructure, etc., need to be appropriately weighed. Nigeria scenario is of evidence that trade openness positively significant to economic growth with concluding postulation for strategic domestic policies as guide to check the short comings of the trade openness.*

**Keywords**: Trade openness, Economic growth, Import, Export, and Trade agreement.

# BUSINESS EDUCATORS' RATING ACCOUNTING SKILLS NEEDED FOR MANAGING MICRO BUSINESS BY ENTREPRENEURS

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## Abstract

*The study focused on Business Educators' Accounting Skills Needed for Managing Micro Business by Entrepreneurs. The study highlighted some important accounting skills that help for effective management of micro enterprises such as, skills in purchasing, supplies of goods and services, ability to calculate gross and net profits, ability to dictate fraud among others. A survey research design was used, the population of the study comprised 110 Entrepreneurs selected in Yala Local Government Area of Cross River State. The instrument used for data collection was structured questionnaire designed by the researchers after a thorough review of related literature. The questionnaire contained 20 items used to elicited information from the respondence. The instrument was validated by three lecturers from AIFPU. The lecturers vetted the items in terms of sentence structure, spellings, relevance and adequacy of the instrument, their comments, observation and suggestions were used to modify and restructured the work. Mean and Standard deviation were used to answer the research question, A cut of off 2.5 was used as a base line score for accepting and rejecting of the items. The findings showed that Entrepreneurs needed accounting skills for effective management of micro business.*

# INSTITUTIONAL VARIABLES DETERMINANT OF RESEARCH OUTPUTS OF ACADEMIC STAFF IN NIGERIAN POLYTECHNICS

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## Abstract

This paper recognises that institutions, particularly academic institutions are dynamic and vary from one another. The paper notes that certain variables are peculiar to each institution and affect the conduct of research and research output of members of the academia in these institutions. Through a literature review approach, the paper exposes some of these institutional variables such as research culture, tenure and promotion, leadership factor, financial awards, obsolete research facilities, lack of mentorship, institutional repositories among others as they affect research output of academic staff in Nigerian polytechnics. The paper recommends among others a reduction in the conditions associated with access to funds for research, formalisation of mentorship system and establishment of institutional repositories in the Nigerian polytechnics in order to enhance research productivity of academic staff.

***Keywords:*** **Institutional variables, Research outputs, Academic staff, Nigeria, Polytechnics**

# IMPACT OF SOCIAL MEDIA AND MASS MEDIA ON EMPLOYEES COMMITMENT IN SELECTED TERTIARY INSTITUTIONS IN RIVERS STATE.

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## Abstract

In spite of the acknowledged relevance of the use of social media technologies in contemporary world, majority of institutions do not have adequate policies in place to guide the usage of social media by employees in the workplace, while some that have them lack effective implementation of these policies. Therefore, in response to this lacuna, this study examined the relationship between social media and mass media on employees' commitment in selected tertiary institutions in Rivers State with social capital theory and organisational support theory serving as bedrock for the study. The study was descriptive in which a quantitative mode of data collection were engaged. Data was collected through the use of structured questionnaire to Two hundred and sixty (260) respondents which were selected from four divisions of the University. Findings from the study revealed that there is a strong, positive and significant relationship between social media and mass media on employees' commitment in selected tertiary institutions in Rivers State ($r = 0.917$, $p > 0.05$; meaning that social media allows employees' expression of affective commitment to work at tertiary institutions. The study concluded that social media cannot be stopped in the present day, but it can be managed to yield positive results. Therefore, the study recommended that the management of tertiary institutions should take advantage of the youthfulness of its employee population by instituting and encouraging work processes models that will effectively deploy social media for productive activities; also, in engendering affective commitment of the employees, the management should strategically utilize social media as a tool for employee engagement in order to enhance workforce productivity facilitated by social media technologies.

**Keywords:** Tertiary Institutions, Social media, Employee.

# ATTITUDINAL CHANGE AND ENTREPRENEURSHIP DEVELOPMENT AMONG YOUTHS IN AFIKPO NORTH, EBONYI STATE OF NIGERIA

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## ABSTRACT

Attitudinal change is a change in human behavior which can encourage peaceful coexistence and hard work for the purpose of improving man's standard of living. This research work focuses on attitudinal change and entrepreneurship development among youths in Afikpo Local Government Area, Ebonyi State of Nigeria. The researcher applied primary and secondary method of data collection. The Likert-type or grouped data were analysed using the weighted arithmetic mean method. The theoretical framework used for this study is Systematic processing Model and Weberian theory of social change. The sample and sampling techniques adopted is random sampling. Findings reveal that the Nigerian nation is economically and technologically crippling as a result of misplacement of priorities, fanaticism, insecurity, occasioned by militancy/insurgency, tribalism, nepotism, poor orientation, and others. Nigeria has abundant untapped mineral resources capable of extinguishing unemployment, if effectively harnessed. Most Nigerians instead of enhancing their coping capacity have surrendered their fate to religion and superstition. They blame their ancestors for their woes and the resultant effect is constant booting and rebooting with dangerous viruses exterminating all traces of previous achievements, without replacement or modification. The basic ingredients which accelerate entrepreneurship development are pride of craftsmanship, urge for self-reliance, documentation, application, competition, imitation, search, researching, test and retesting. The youths should think positively, create a way, where there is no way, while our elites should imitate the advanced nations by churning out ideas that can elicit a positive attitudinal change, which can arouse the entrepreneurship curiosity in man.

**Key Words:** Youths, Attitude, Entrepreneurship, and Development

# TOWN UNIONS AND COMMUNITY ADMINISTRATION IN AFIKPO LOCAL GOVERNMENT AREA OF EBONYI STATE.

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**Abstract.**
This study assessed Town Unions and Community Administration in Afikpo Local Government Area of Ebonyi State. The broad objective of the research is to ascertain the role played by town unions in community administration. The researcher adopted descriptive research design predicated on method in which a population was determined and sample size was obtained. Structured self-completion questionnaire was used as the primary instrument for data collection. The data collected were presented and analyzed using the frequency distributed table and sample percentages. The hypotheses were tested at 0.05 level of significance using the Chi-square ($X^2$) statistical tool. Findings of the study revealed town unions play a significant role in community administration by engaging in the establishment of health-centres, building of town hall, provision of bore-hole water, award of scholarship to the indigenes of their community and maintenance of peace and order in the community. Based on the findings, it was recommended that local governments should encourage and support town unions both financially and materially, as well as organize leadership training on regular basis to educate and enlighten town union executive members on the global best practices of community administration.

**Key words: Town unions, Community Administration, Local Government, Development, Afikpo.**

# CORRUPTION AND SERVICE DELIVERY IN NIGERIA; A STUDY OF OGBARU LOCAL GOVERNMENT AREA OF ANAMBRA STATE.

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**Abstract**.
The phenomenon of corruption has both direct and indirect impact on service delivery with specific focus to local governments in Nigeria. Local governments as a tier of government were created to bring government closer to the people at the rural communities and for transformation of lives at that level. One of the ways of bringing government closer to the people at the grassroots is through the delivery of social services in a satisfactory, timely, effective and adequate manner. Subsequently, some of the communities across the country still wish to have access to basic services like water, electricity, community halls. It seems impossible for localities to smoothly render such services due to corrupt practices emanating in Ogbaru Local Government area. This theoretical paper was analytical with solid original ideas that can positively induce change within our society. Afrocentricity: a theory of social change has been placed in context with a view that the needs of the society should be placed at the center of the local government area. This article aimed to explore the impact of corruption on service delivery in Ogbaru Local Government. The article fully relied on secondary data as it collects information from newspapers, books, journal articles. To be specific, these needs are but not limited to water and electricity. Looking at the findings of the study, indeed literature can confirm that corruptions have negative impact on the ability of the locality in Nigeria to provide basic services. Because the interest of the public are competing with those of the government officials. Therefore, at the end of the day service delivery is compromised due to unlawful practices.

**Key words:** Corruption, Service Delivery, Afrocentricity, rural community, Ogbaru Local Governemnt.

# EFFECTS OF PLANNING ON ORGANISATIONAL PERFORMANCE: A STUDY OF DEEBEE NIGERIA LTD, OGUN STATE

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## Abstract

The purpose of this paper is to investigate the effects of planning on organizational performance using Deebee Nigerian Ltd, Abeokuta, Ogun State, Nigeria as a study. The analysis is based on theoretical ideas that have been supported by empirical research findings that many businesses are victims of unfortunate and largely unpredictable environmental and competitive occurrences. Many of the unsuccessful businesses fall prey to their managers' lack of foresight and are unable to focus on one prime determinant of business growth and success – Planning. Careful, strategic thinking and growth planning make a difference. Deebee Company Ltd was incorporated in June, 1977 with the sole purpose of manufacturing wine from the local product – kolanuts. This was nothing out of the ordinary small business. The company through careful planning and implementation has become a household name thereby added many other products through good strategic planning. The success story of Deebee Company Ltd clearly shows a positive relationship between planning and organizational performance. This research work depicts an analytical framework based on institutional theory that focusses on three factors: the determinants, the effects, and recommended solutions. Based on the analysis of these factors, the paper provides many significant policy implications on the importance of planning in overcoming business challenges from competitors and other aspects of the competitive landscape.

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**Key Words**: Planning, Organization, Performance, Company, Business, Managers, Environment.

# TOPOGRAPHIC SURVEY; BASES FOR SUSTAINABLE INFRASTRUCTURE IN AKANU IBIAM FEDERAL POLYTECHNIC UNWANA, EBONYI STATE

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## ABSTRACT

This paper is about the topographical survey of part of Academic complex at Akanuibiam Federal polytechnic Unwana Afikpo Ebonyi State. The topographical survey comprises of 12 traverse stations covering an area of 3.021 hectares. The scope of the project is to carry out a perimeter survey of the area, detailing of existing features, and spot heightening to provide spatial information required for future project and designs to help in the location of infrastructural facilities and drainage patter of the area. Therefore, this project was embarked on, to produce the topographic survey of the designated area with a view of aiding planning and development of the site. This project was achieved by following the methodology of topographical survey which involves planning (data search and field reconnaissance), monumentation, perimeter traversing, spot heightening, detailing, Data processing, and final report. Reconnaissance was carried out using handheld Garmin 78s GPS and 30m steel tape, while traversing, detailing and spot-heightening, were done using Leica TSO6 plus total station and accessories. The processing of the field data was done using Survey soft (survey computation software), while the plotting of the perimeter / detail survey plan was done in AutoCAD environment. The contour plan and the digital terrain model were produced using Surfer 8 software. This topographical survey is a third order survey work, and it was carried out in line with the specifications for large scale cadastral surveys.

**Keywords:** Topographic, Survey, and Infrastructure.

# MANAGING ELECTORAL PROCESS OF NIGERIA AT 63 AND SUSTAINABLE ECONOMIC DEVELOPMENT

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## Abstract

*In every democratic government, citizens willfully choose their leaders and representatives to pioneer the affairs in the government through voting. This process should be guarded so that the will of the citizens would not be truncated or jeopardized in any form. Electoral process is all the activities carried out for a credible, free and fair and successful election, which includes pre-election activities, activities on the election day proper and post-election activities. For the past 63 years of this Nation, this crucial process has been faced with many challenges and has been mismanaged by the personnel that are charged with it. The study examined the effect of these activities (electoral process) on the sustainability of economic development. Survey research design was adopted for the study, with a sample size of 915 and questionnaire, which was distributed online was the only instrument used for data collection. Data collected were analyzed using regression analysis, at 5% level of significant, calculated using SPSS. The study revealed that electoral process in Nigeria impacts negatively on the sustainable economic development, because the process lacks credibility and therefore, will always install persons that are not capable to sustain economic growth and development. The study recommends that political tolerance and non violent forms of political expression should be promoted, measures should be implemented to enhance transparency and accountability of political parties and electoral process and an e-voting system should be introduced to the Nation's electoral process, to enhance its credibility and integrity.*

**Key words:** Management, Economy, Electoral process, Development, Nigeria at 63

# IMPACT OF IMPLEMENTATION OF THE POLICIES CONTROLLING THE PRODUCTION OF BUILDINGS IN NIGERIA

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## ABSTRACT

In Nigeria construction sector, implementation of policies that controls building production management have faced a lot of challenges which needed to be properly addressed for effective and efficient production of buildings that will stand the test of time such as lives saving, comfort for the occupants, and reduced high cost of building maintenance. The study aimed at examining the impact of policy implementation in controlling the production of sustainable buildings in Nigeria, in view of constructing buildings that will remain safer and durable in terms of public health and safety, and environmental sustainability. It was observed from the findings of this study that non-implementation of building control policies are as a result of lack of awareness of the existence of such legislations/policies, and nonchalant attitude of the building construction sites supervisors. The findings of the study also revealed that implementation of building control policies improves construction sites performance, and elimination of quackery. It was recommended that relevant authorities should make building construction laws available through adequate and regular organization of workshops for construction professionals. Nigeria institute of building (NIOB) should lobby for the passage of national building code both at the federal and states levels. Taskforce should be inaugurated by NIOB to enforce the implementation of the building construction laws and equally monitor any construction sites ignoring those policies.

**Keywords:** Construction site, Controlling, BuildingPolicies

# SENSORY EVALUATION AND PHYSIOCHEMICAL PROPERTIES OF MIXED JUICE (ORANGE, LIME AND LEMON) USING DATE SYRUP

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## Abstract

The research was carried out to determine the effects of date syrup as sweetener on the sensory characteristics and physicochemical characterization of Mixed citrus fruit juice produced from sweet orange, lime and lemon in their given ratios; (60:30:20)+ 75mil of date syrup, (60:20:30)+ 100mil of sugar syrup, (50:0:50)+ 75mil of sugar syrup, and (80:20:0)+ 100mil of date syrup to obtain four different samples with their code as; ct1, ct2, ct3 and ct4 respectively. Mixed juice samples were evaluated for their Sensory characteristics and their Physicochemical Analysis using standard methods. Sensory evaluation was carried out to assess the acceptability of the juice and the results statistically ($P>0.05$) showed that sample ct4(7.65) was the most accepted amongst all samples followed by ct2(6.90) while sample ct1(6.35) was the least accepted by the panelists. The result of the physicochemical analysis on fruit juices revealed; pH(4.53 – 4.80), Vitamin C(29.64 – 29.54mg/100g), Potassium (418.92 – 463.93mg/100g) and Brix(26.10 – 33.18$^{o}$Bx) for sample ct2 and ct4 respectively. In conclusion, The effect of date syrup as sweetener for mixed citrus fruit juice enhanced their sweetness, flavour and after taste making it generally accepted amongst other samples while it significantly reduced acidity level(pH) and increased the potassium contents in fruit juice, It was therefore recommended that the use of date syrup as sweetener for the production of mixed fruit juice could improve its sensory and nutritional qualities when consumed. It was advised that more research on the effects of date syrup for the nutritional composition of mixed citrus fruit juice be carried out by researchers.

# THE ARCHITECT'S APPROACH TO SUSTAINABLE BUILT ENVIRONMENT

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## ABSTRACT

*Man cannot survive inside the natural environment without modifying it to suit his comfort and safety. Architects have a mandate of bringing man in harmony with his environment, and design is the most critical tool at his disposal to achieving that mandate. The sustainability of a healthy global environment through proper designs and implementation of plans cannot therefore be overemphasized. The focus of this paper is to x-ray how the architect can bring comfort and gain sustainability in his buildings through design and construction. And, how to create awareness on sustainable living practices. The paper is of the opinion that a breakdown of the philosophy that will lead architects to a green world must include critical thinking and ethical practices towards sustainable green world agenda. This will come from architectural products that emanate from design inception and not as after thoughts. The designs must address thermal comfort, and energy efficiency as key factors that will help check global warming, climate change and increasing temperature, and in doing this the research method utilized is the descriptive survey and data collected involved a review of related literatures on green architecture and environment to place the study in its relevant theoretical framework. At the end the paper concludes by charging Architects to employ passive architectural practices in executing this agenda of sustainable Built Environment as well as sticking to building codes and developmental regulations in all projects they execute.*

*Key Words: Architect, Design, Sustainability and Built environment*

# EVALUATION OF FLEXBLE PAVEMENT DETERIORATION IN NIGERIA AND MAINTENANCE OPTIONS.

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## ABSTRACT

In Nigeria, the choice of a suitable and timely road maintenance option is still an issue of concern. The objective of this research work was to investigate the causes leading to the early deterioration of the road pavement and recommend a suitable maintenance option. The research method analysed both the visual road condition survey, alongside the field and laboratory test results of the study road materials. The geotechnical results revealed that the plastic index of the Base course material was about 16% which exceeded the recommended 10%, the California Bearing Ratio (CBR) value of the Base course from the deep cone penetration test was about 67% which is below the recommended 80%, furthermore, the asphalt extraction test revealed that the bitumen or binder content was only 4.9% against the 6.5% that is recommended. The other reasons for the early failure of the study road included insufficient drainage, poor construction methods, and lack of quality control measures. It was concluded that the subgrade soils in Sections B&C should be stabilized (mechanically/chemically) and proof rolled, poor sub-base and base materials should be stabilized or replaced. An adequate drainage should be designed for the whole road section. Hence, a total pavement overlay with traffic load considerations was recommended for the overall road section. This research approach is recommended as a general guide, particularly for junior highway engineers.

**Keywords:** Asphalt, Deterioration, Flexible Pavement, Maintenance

# SUSTAINING ELECTRIC POWER SUPPLY USING DISTRIBUTED GENERATION FOR IMPROVING ENTREPRENEURSHIP DEVELOPMENT IN OUR SOCIETY.

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**ABSTRACT**:
Uninterrupted supply of adequate, safe, stable, affordable and sustainable electricity is the backbone of sustainable entrepreneurship development, industrial and economic growth. However, electricity is the major factor slowing doym entrepreneurship development in Nigeria. Its supply is not only epileptic, but is inadequate with regular and frequent outages, interruptions and load shedding affecting daily business hours and activities in urban and rural areas. Currently, Nigeria relies on centralized power system dominated by thermal power and hydropower plants, which requires power to be supplied from the central power generating stations through the transmission and distribution lines to all the urban and rural communities. While the power generation, transmission and distribution capacity are inadequate, there is also total absent of transmission and distribution lines in many urban and rural areas which has affected daily life and businesses in these areas. The solutions to these involve building additional or expanding existing large power plants, expanding and extending transmission and distribution lines and equipment capacity to supply adequate electricity to areas without access to electricity. This requires huge funds and investment and can take longer time. The consequence is that many entrepreneurs resort to self-generation of power from generators using conventional sources of energy such as petroleum and diesel. This further increases the cost of starting and operating entrepreneurship businesses as well the negative effect on environment. Successive Government over the years, have made power reform policies with very little improvement in electricity supply This paper examines the state of power supply in Nigeria and made recommendations towards improving power supply for a sustainable entrepreneurship development. One very important recommendation is for the country to shift from a centralized power system to a distributed generation with energy mix utilizing renewable energy sources in areas with abundant renewable sources.

Keywords: Nigeria, power supply, Entrepreneurship development, renewable energy resources, distributed generations, sustainable power supply.

# *IMPACT OF ELECTRONIC (E) GOVERNANCE ON SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA*

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***ABSTRACT***

*The study was on the impact of electronic (e) governance on socio-economic development of Nigeria. The objectives of the study were to investigate the impact of e-governance on the socio-economic development of Nigeria; to identify the challenges and prospects of e-government in Nigeria; to make appropriate recommendations based on research findings. The study was theoretical, hence the ex-post-facto research design was employed. Secondary sources of data were used. The study adopted the theory of system change. The findings of the study clearly revealed that the world has become a global village where information can be sent and be received in a matter of seconds. Therefore, any government that fails to exploit the enormous opportunities provided by Information Communication Technology (ICT) would be left behind by other Nation-States of the world. Also, a relationship was established between electronic governance and socio-economic development since it encourages fast, quick, efficient and accurate information dissemination with dispatch. It equally has the capacity to cut down waste, check corruption and eliminate ghost workers from government payroll, ensure better coordination and co-operations between different levels of government, promote effective regulatory framework, accountability, transparency and integrity. The study, therefore, recommended among others, that efforts should be directed at passing a law that makes e-government a cornerstone of the state policy. This would ensure that incoming governments have blueprints to work with.*

***Keywords***: *Electronic Governance, Information, Communication, Technology and Socio-economic Development.*

# EFFECTS OF ELEOPHORBIA DRUPIFERA LEAVES EXTRACT ON SOME BIOCHEMICAL AND HAEMATOLOGICAL PARAMETERS OF ALBINO RATS.

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## ABSTRACT

Water and ethanol-water extracts of Tapinanthus bangwensis and Eleophorbia drupifera leaves were administered orally in graded doses of 0.5ml (147.06mg/kg body weight), 1.0ml (303.3mg/kg body weight) water extract and 0.5ml (157.66mg/kg body weight), 1.0ml (301.72mg/kg body weight) ethanol-water extract on experimental animals for 3 weeks. The effect of the extracts on some biochemical and haematological parameters were evaluated in albino rats. At the end of 21 days, the growth response was higher in the test groups than in the control ($p<0.05$). The AST and ALT levels of the test groups were significantly lower than the control ($p<0.05$) and total bilirubin showed significantly high values in test groups when compared with the control ($p<0.05$). The WBC was significantly increased while the RBC was decreased when compared with the control ($p<0.05$). There were no significant changes in PCV and Hb of the experimental animals ($p<0.05$). There was no significant difference between the effects of the water extract and that of the ethanol-water extract on the albino rats ($p<0.05$). The results suggest that the leaf extract of Eleophorbia drupifera may possess the capacity to stimulate appetite and there may be no adverse effect associated with the use of this extract in phytotherapy.

**Keywords:** Eleophorbia drupifera, biochemical, haematological, albino rats.

# PREVENTING FORGERY OF ACADEMIC CREDENTIALS BY STUDENTS OF AKANU IBIAM FEDERAL POLYTECHNIC, UNWANA.

**BY**

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## ABSTRACT

*Academic credentials; statements of results, certificates and academic transcripts are precious assets which form evidence of their holders' identity, credibility, eligibility and suitability. Fraud in the issuance, submission, uploading and verification of academic credentials has become a pressing issue in Akanu Ibiam Federal Polytechnic, Unwana due to lack of efficient anti-forgery mechanisms to prevent document fraud. In recent times, there has been substantial increase in fraudulent academic credentials. It therefore becomes necessary to fashion out ways of preventing document fraud in our academic institutions. This study intends to find out whether students of AIFPU indulge in forgery and fabrication of academic credentials, identify the academic documents that are mostly forged and fabricated, identify the reasons why students forge and fabricate academic credentials, find out how to identify forged and fabricated documents, discover the consequences of forgery and fabrication of academic credentials and unveil ways of preventing forgery and fabrication of academic credentials in AIFPU. The survey research design was adopted and structured questionnaire used as major instrument for data collection. The population of the study comprised all the 22 staff members of the Records and Verifications Units of AIFPU. Statistical tables and mean were used to analyse data collected from the respondents. Results showed that students of AIFPU indulge in forgery of academic credentials and that the most forged credentials are ND statements of results used for obtaining admissions into HND programmes. Further revelations showed that forgery and fabrication of academic credentials reduces standard of education and indicts the image of the institution. The study recommends mandatory, timely and efficient verification of students credentials before 'actions' are taken on them, adoption of in-house style, and adequate disciplinary measures for culprits, as sure ways of preventing students' forgery and fabrication of academic credentials in our academic communities.*

***Keywords**: Forgery, statements of result, certificates, academic transcripts, Akanu Ibiam Federal Polytechnic Unwana.*

# AN EXAMINATION OF THE EFFECT OF MAINTENANCE COSTS OF HOSUING ON RENTAL VALUES IN ABAKILIKI, EBONYI STATE.

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## ABSTRACT

House, being the basic necessity of life and requires considerable amount of capital for its acquisition and construction, deserved to be properly maintained and preserved. Also for property owners to optimize his ownership motives there is obvious need for routine and periodic maintenance of his property. In light of these reasoning, the research work was conceptualized and carried out to examine the effect of maintenance cost on housing rental value. The methodology adopted includes the review of relevant literatures and use of questionnaire to collect rental data on maintenance expenses and other related outgoings as it affects rental value. The data collected were analyzed using simple statistical tools of simple regression analysis to ascertain the relation between these variables-housing maintenance cost and its rental value.

The study revealed that high maintenance cost often result in higher rental value paid within the study area at the same time satisfied the property ownership motives in maximizing his benefits of having such asset within the study area-Abakiliki.

**KEY WORDS: housing, maintenance, maintenance cost, rental value, depreciation, housing stock and quality**

# FUNDAMENTAL ISSUES, CHALLENGES AND PROSPECTS OF SMALL SCALE BUSINESS IN ISHIAGU, EBONYI STATE

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## Abstract
This paper discussed fundamental issues, challenges and prospects of small scale business enterprises in Ishiagu, Ivo Local Government Area of Ebonyi State. The primary responsibility of Small-Scale industries being the bridge between employment generation and self-reliance has made the study a pivotal focus for the development of our national economy. The study used both primary and secondary data. Primary source was conducted through personal interview and questionnaires. Secondary source came from textbooks, newspapers, magazines, journals etc. The data was analysed using a combination of Statistical calculations and narratives as well as simple Chi-square method. In pursuit of the focus of this paper, it treats numerous issues (an overview inclusive). It also examines the small business management roles and factors affecting its strategic management importance. Furthermore it x-rays in detail the three-skill approach to small business development. These include technical, human and conceptual skills. It analyzes some government interventionist institutions and agencies established to encourage small business/entrepreneurial development in Nigeria. The paper posits that though there is a widespread knowledge of the efficacy of small business development mix, integrated small business development efforts indicates that several of the institutions established by government concentrated on a partial approach to small business development programme. Finally, it concludes and recommends five priorities agenda to enhance the small business / entrepreneurial development in Nigeria.

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**KEY WORDS**: Small Business, Management, Entrepreneurship, Development, Employment

# DESIGN AND PERFORMANCE EVALUATION OF A THERMOSTAT CONTROLLED ELECTRIC DEHYDRATING MACHINE

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## ABSTRACT

*The study, design and performance evaluation of a thermostat controlled electric dehydrating machine was successfully investigated. CAD design approach for the thermostat controlled electric dehydrating machine was adopted and Autodesk Fusion 360 was used to create the solid model. The dehydrator retained a maximum dimension of 700mm× 575mm × 1339mm, with four rectangular heating trays of 50cm× 30cm and 2mm thickness each which gave a heating surface area of 0.15m$^2$. In addition, heating coil was designed to retain the shape of swirl ring OP302 model with maximum heat output of 180kW within 60 minutes. HMI (Delta B03S212) and PLC (Delta-DVP20EX3) were used to control the thermostat set maximum temperature and time to 80℃ and 0.000011sec to retain the quality of Banana, Carrot and Plantain after drying. Banana was found to have the highest percentage wet moisture of 35.42% followed by Plantain 25.27% among the three chosen fruits with the least being that of the Carrot 11.72%, when dehydrated from 0 to 60 minutes. Furthermore, the highest mass loss was found in Banana, 109.1 grams followed by Plantain, 101.6 grams when each was heated for 20minutes. Also, machine efficiency and moisture removal rate of the machine were found to be 37.16% and 2.827g of moisture/sec respectively. These results suggested a considerable increase in machine output and performance. The paper evaluated the rate of product dehydration under steady state heat transfer condition with internal heat generation, electric thermostat was used to avoid overheating and under heating of products.*

***Keywords*** *---- Thermostat, Dehydrating machine, Design, Performance, Efficiency, Product*

# INTEGRATING WETLANDS ECOSYSTEM CONSERVATION INTO LOCAL SMARTH PLANNING FOR SUSTAINABLE DEVELOPMENT IN NIGERIA: A WAY FORWARD.

BY

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## Abstract

The purpose of this paper is to provide practical information to local planners and decision-makers on how to best integrate wetland conservation into the full range of community planning activities. The paper is targets those who are involved with local planning and have interests in wetland protection, restoration, preservation, conservation, planning. It also target those who are managing local planning efforts, particularly for land-use planners, environmental managers, floodplain managers, parks and recreation managers, and water resources managers. Significantly, the paper serves as a reference to improve local wetland conservation efforts and does not impose legally enforceable rights or obligations for any local actions at grassroots. The integration avenue and toolkits help promote the integration of wetland conservation with multiple types of local planning mechanisms and thus maximize the capacity of federal and state wetland conservation mission. Thus, in this paper, the integration avenue and toolkit discussed are the local comprehensive master plan and the best management practice respectively To this end, the paper incorporates a combination of literature review, plan evaluation, case studies, field surveys, and professional conferences relating to wetland conservation topics. Feedback, suggestions, and comments from the stakeholders, including federal, state, regional, local agencies, non-profit organizations, landowners, developers, and researchers, as a methodology.

**Keywords: Wetlands, Conservation, Ecological Integrity, Upland Ecosystems, Environmental Regulations.**

# SOCIAL MEDIA MARKETING STRATEGY AND ECONOMY PERFORMANCE IN THE PHASE OF NIGERIA AT 63

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## Abstract

This study examined the effect of social media marketing strategy on economy performance of selected small and medium-sized enterprises (SMEs) in Warri metropolis of Delta State, Nigeria. The study used a descriptive survey approach. Small and medium-sized enterprises that are operate online made up the study population. Convenience sampling technique was used and sample size of 60 was arrived at. Data was collected from the owner/managers of the selected SMEs. Using online questionnaire as the primary data collection method. The questionnaire was tested for reliability, and the Cronbach alpha coefficient comes with above 0.65. Both descriptive and inferential statistics (SPSS 22) were applied to the data set for analysis. With a 95% level of confidence, the PLS-SEM results showed that entertainment (β= 0.461, t= 9.744) and interaction (β= 0.266, t= 4.783) are statistically significant, while trendiness (β = 0.080, t= 0.730), customization (β= 0.130, t= 1.136), and word of mouth (β= 0.020, t=0.175) are not. The data analysis showed a positive relationship between social media marketing strategies and economy performance in Warri metropolis of Delta State, Nigeria. The study found that SMEs in Warri metropolis of Delta State, Nigeria saw a significant increase in sales after implementing social media marketing strategies, and it is recommended that business owners should build stronger relationships with their customers and produce more engaging content on their social media channels geared towards their brand to improve their economy performance.

***Keywords*:** Entertainment**;** Customization; Trendiness; Economy performance;; Social media marketing; Word-of-mouth.

# THE LEGAL FRAME WORK FOR THE CONTROL OF AIR POLLUTION WITH PARTICULAR REFERENCE TO INDUSTRIAL AND AUTOMOBILE EMISSIONS

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## ABSTRACT

All over the world, Automobile emission and air pollution are grossly responsible for a good number of adverse degradation on the environment,resulting to photo chemical smog, acid rain, human death, plant stunts, lost of nutrients on the soil, lost of aquatic and land wildlife, death of forest, and poor atmospheric visibility.other effects includes; emissionsfrom greenhouse gases, combustion in heavy industrial activities,fossil fuels, gas flaring also contributes seriously to global warming and cause climate change. while air pollutants includes; black carbon, hydrocarbon, carbon dioxide, benzene etc,they are not only contributing to the global warming, but also suspected to have great adverse effect on the climate.Thus, different measures are taken to curb this menace by enacting policies and legal framework that will mitigate this threat to mankind .The work will also discuss the causes and adverse effects of the climate change, and to consider why the effects hits the third world countries,especially the continent of Africa than other region of the world and further examine law as one of the instruments of controlling pollution and emission in Nigeria and the need for drastic reduction emissions will discussed,possible solution and recommendation will be given if necessary.

# IMPACT OF CAPITAL STRUCTURE ON THE FINANCIAL PERFORMANCE OF LISTED PHARMACEUTICAL COMPANIES IN NIGERIA

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## Abstract

*This paper starts off with a brief overview of capital structure and financial performance of companies. It then appraised the influence of short-term debt to total asset on the financial performance of listed pharmaceutical companies in Nigeria. The study employed expo facto research design. It used secondary data. The population for the study comprised all the 7 listed pharmaceutical firms in Nigeria. For the purpose of this study, four (4) of the 7 listed pharmaceutical firms in Nigeria were purposively selected as sample. Data collected were analysed using both descriptive and inferential statistics. This study found that short-term debt to total asset (SDTA), long-term debt to total asset (LDTA) and total debt to total asset (TDTA) have combined effect on the financial performance of listed pharmaceutical firms in Nigeria. Hence, it was concluded that capital structure has significant effect on the financial performance. This means that it was capital mix which made significant contribution to the financial performance of listed pharmaceutical firms in Nigeria. The study recommended that the companies should have excellent debt management system in place in order to ensure that both short term and long term stability of the firm is not threaten with accumulation of huge debt. The companies should also rely on internal source of finance because it is cheaper and easy to access. This can be done by issues of shares to existing shareholders. The risk associated each source of finance must be properly assessed to make sure that there is increase in wealth of the shareholders.*

Keywords: capital structure, financial performance, short-term debt to total asset, long-term debt to total asset, total debt to total asset

# IMPACT OF CLIMATE CHANGE ON CROP PRODUCTION AND FOOD SECURITY: THE NIGERIAN PERSPECTIVE A REVIEW

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## ABSTRACT

Climate change can have a significant impact on food security and the livelihoods of individuals involved in production systems and their value chains. It can directly affect crop productivity, leading to consequences for food availability, accessibility, and other environmental disruptions. The paper review has found that despite government-provided agricultural loans, new innovative agricultural technologies, and the availability of farming products such as improved seedlings, fertilizers, and resistant crop varieties, the productivity levels of crops and food security are hindered by climate change caused by different weather conditions. Although different agricultural schemes have been introduced to alleviate the problem of food security, climate change remains a significant challenge. According to the paper, besides climate change, some government policies have led to increased transportation costs, causing an increase in the prices of goods and commodities. These policies include the immediate removal of petrol subsidies, the move to unify forex rates, insecurity, and ineffective government policies. As a result, food insecurity and agricultural productivity have also been affected. To combat the effects of climate change, the paper suggests supporting smallholder farmers with access to credit and other services to help them become more economically empowered. Additionally, increasing public awareness of the food security challenges caused by climate change is important. One way to do this is by increasing organic carbon in soil, which increases water retention and improves resilience to drought. It's also important to promote education on food preservation techniques, such as refrigeration and dehydration. Develop early warning systems for extreme weather events by leveraging data analytics, predictive AI, and investing in climate-resilient food crops.

**Keywords:** Climate change, crop production, food security, artificial intelligence, government policies, environmental disruptions.

# INVESTIGATION OF CULTURE-CONTEXT COMMUNICATION DEPENDENT PARADIGM ON INTERNATIONAL MANAGEMENT

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Akanu Ibiam Federal Polytechnic Unwana- Afikpo Abstract:

## ABSTRACT

The discussion of culture on international business (IB) literature has gained momentum and how it relates to international management has also gained both theoretical and empirical investigations. Nevertheless, our understanding of the phenomenon is limited by the constraint imposed when cross-cultural dimension of international management that includes the nature of communicative interaction of different people globally. Our review of both conceptual and empirical literature indicate that the inclusion of culture in management process is due largely to differences in perception, activities, diverse workforce and context driven communication. The purpose of this study is to investigate the distinctive pattern of communication and implication to international management paradigm. The study adopted Hall's (1976) high-and low-context communication as a theoretical base to explore literature under the investigation arena. There is clear distinction between high-and low-context communication group in international management and how they impact on business relationship, this is one of the findings of the study. Furthermore, culture- context significantly influences organisational teambuilding and organizational effectiveness. The need for cross cultural and context communication approach to international management was suggested among others.

Key words: Culture-context, communication, international management, diversity, investigation

# GLOBALIZATION AND HUMAN RIGHTS: DISEMBEDDING PERSPECTIVE.

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## Abstract

How realistic is the notion of the world coming together in physical terms to live and transact activities as one community? The difficulties imposed by territorial borders cannot possibly bring this to real situation. Even though, territorial boundaries continue to constitute insurmountable -challenge to one common community, notwithstanding, people all over the world have not given up the effort and struggle for nations all over the world to relate socially, economically, politically and culturally. The reason for this die-hard ambition could be due to the natural, physical and human resources scattered across the globe in which different people of the world benefit from one another. Globalization has gained considerable attention in the academics, business world and governmental bodies. Despite the efforts on boosting goal business, economic transaction and social justice to fair society, injustice, inequalities backwardness, and marginalization continue to manifest at considerable level in many countries. Notwithstanding, one of the most plausible way of achieving one common community among nations is by contextualizing globalization within the concept of disembedding. Disembedding is the movement of physical, concrete and local context of materials to an abstract or virtual state. For example, money can be disembedded by removing its physical and tangible value, with the help of ATM. Disembedding comfortably enables de-territorialization, where business, politics, social interaction, and any form of human activities can be lifted out of its physical location. The aim of this study is to explore the impact of globalization on human rights and global justice. The methodological underpinning of this study is based on secondary data gathered from variety of sources, such as publications, journals, books and approved government websites. In order to materialize the above aim, the study is divided under the following sub-headings, research question, objective of the study, scope of the study, limitation of the study, review of current literature, methodology and recommendation.

**Key words**: Globalization, Disembedding, Human right, Global justice

# MARKETING ETHICS AND SOCIAL RESPONSIBILITIES ON NIGERIAN CONSUMERS: WAYS OF OVERCOME UNETHICAL BEHAVIOR THAT CONTRIBUTES TO THE CHALLENGES ON ECONOMIC DEVELOPMENT

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## Abstract

This study focus on marketing ethics and social responsibilities on Nigerian consumer. Objectives of this study include: to investigate if customer treatment improves social responsibility of Nigeria consumers, to find out if honesty improves customers patronage, to verify if customers approach improves social responsibility and to examine how affordability can help improve customer value of a product The field survey method was use in gathering of information and convenience sampling techniques was used. The population of the study was not known so the researcher used Topman's formula to determine the number of the population sample size determinations of 250 filled questionnaire was used to analysis the data . The data was collected through a questionnaire and the statistical tool used to analysis the data Spearman ranking. It was found that Customer treatment improves social responsibility, Honesty improves customer's patronage. Customers approach affects the progress of a company.

KEYWORDS: customer treatment, honesty, customers approach and affordability

# NUCLEAR ENERGY– A PANACEA FOR SUSTAINABLE DEVELOPMENT IN NIGERIA: A REVIEW

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## ABSTRACT

Energy is one of the primary need of the modern society. Development today depends largely on the supply of reliable and affordable energy and its consequent consumption. Access to energy is crucial not only for the attainment of good health and education but also reducing the cost of doing business and unlocking the economic potentials and creating jobs to the million of the unemployed Nigerians.Despite the progress made in renewable energy development in Nigeria,access to reliable energy is still a meragy, the above coupled with the emission of greenhouse gases from other sources of energy necessitated that Nigeria should look toward nuclear energy to ensure reliable energy supply for rapid development.

# IMPACT OF HUMAN FACTORS ON CONSTRUCTION PRODUCTIVITY AND QUALITY: A CASE STUDY OF A CONSTRUCTION SITE IN AFIKPO LOCAL GOVERNMENT AREA, EBONYI STATE.

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**Abstract**
The construction industry is a complex and dynamic environment where various factors can affect productivity and quality. Human factors, such as worker motivation, communication, and teamwork, are among the most significant factors that can impact construction productivity and quality. This paper presents a case study of a construction site where human factors were analyzed to determine their impact on productivity and quality. The study involved a review of literature on human factors in construction, a site visit, and interviews with workers and project managers. The results of the study showed that human factors had a significant impact on construction productivity and quality. Communication breakdowns, lack of motivation, and poor teamwork were identified as the primary human factors affecting productivity and quality. The study concludes by recommending strategies for addressing these human factors to improve construction productivity and quality.
*Keywords: Human factors, Construction productivity, Quality, Performance, Safety, Communication, Motivation, Training and Leadership*

# *EFFECTS OF MEDIA pH ON THE SENSORY, MICROBIOLOGICAL AND ANTI-NUTRITIONAL PROPERTIES OF FUFU MADE FROM NON-FERMENTED CASSAVA FLOUR (MANIHOT ESCULENTUS)*

**BY**

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## ABSTRACT

Fufu is a popular staple food consumed in many African countries, particularly Nigeria, Ghana, and Cameroon. Traditionally, fufu is made through a fermentation process that involves steeping cassava roots in water for several days, allowing natural microorganisms to breakdown the starches and produce a desired texture, flavor and lower cyanogenic glycosides. The existing fermentation based process for fufu production pose several significant limitations, hence this work was an innovation in the production of fufu from cassava without fermentation. Freshly harvested cassava tubers (*Manihot esculentus*) of the red leaf stalk variety was first processed into cassava flour by peeling, washing, chipping, drying, milling, and sieving the resulting powder. The cassava flour was then reconstituted with water of three different pH range of acidic, alkaline and neutral. The resulting slurry was then cooked. The fufu samples were analysed for their sensory, microbiological and anti-nutritional properties following standard procedures. Results showed that fufu samples made from non-fermented cassava flour compared favorably with the commercial sample used as control in all the sensory parameters evaluated except for the moldability in which the non-fermented samples scored as low as 5.77 whereas the control scored as high as 8.00. Microbial counts on the fufu samples ranged between $2.84x10^5$ and $5.38x10^5$CFU/g with the fufu samples processed in alkaline media having significantly lower($p<0.05$) microbiological counts than other samples. The result on the anti-nutritional properties of the fufu sample showed a cyanide content ranging from 8.70 to 11.41mg/kg with the samples processed in acidic media showing significantly lower($p<0.05$) cyanide content than samples processed in alkaline media. In all, the anti-nutritional properties of the fufu samples made from the non-fermented cassava flour did not vary widely with the commercial sample used as control. This work therefore suggests that acceptable fufu product can be made from the red leaf stalk cassava variety without undergoing fermentation.

Keywords: fufu, non-fermented cassava flour, cyanide content, sensory properties and microbial count.

# CHALLENGES IN THE TRAINING AND DEVELOPMENT OF OFFICE MANAGERS IN A DEPRESSED ECONOMY

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*The study ascertained the challenges in the training and development of office managers in a depressed economy. The major purpose was to find out how office managers' training and development is being challenged in a depressed economy considering that office managers amongst other employees need constant training to keep abreast with continuous innovations/advancement in information and communication technologies. It was carried out in Afikpo Local Government Area. The population was 140 office managers and their supervisors in the different parastatals that employ office managers. A census was taken considering that the population was manageable. The researcher designed and used a set of duly validated questionnaire entitled 'Challenges of Training and Development of Office Managers in a Depressed Economy (CTDOMDE)'. Descriptive statistics was used to answer the research questions. Findings indicated that lack of funds occasioned by low business turnover due to economic depression; epileptic power supply and poor internet access hinder training of office managers by limiting their access to online resources. It was therefore concluded that training and development is always the first hit in terms of opportunity cost as a result of economic down turn, notwithstanding that training is paramount to organizational growth. The recommendation among others is that management of organizations should foster a positive work environment that promotes continuous learning, encourage collaboration, recognize achievements, and create opportunities for skill sharing among office managers to maintain engagement and motivation.*

**Key Words**: Challenges, Depressed Economy, Development, Office Managers, Training.

# MODELLING AND CONTROLLING OF A COUPLED TANK SYSTEM WITH FULL STATE OBSERVER

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## ABSTRACT

This paper presents the state-space approach to controller design, simulation, and analysis for a coupled tank system. Applications for this system include petrochemical plants, wastewater treatment, water desalination, and the pharmaceutical industry. Instead of using the contemporary control approach, many industries still employ the traditional control system approach. Traditional control has a number of shortcomings. For instance, robustness, optimality, and adaptivity may have been disregarded because Proportional Integral derivative (PID) controllers lack these attributes. This study examines a more contemporary method of plant control that should improve the stability and controllability of the system. Understanding process control and state space, grasping the idea of system identification, and becoming proficient with MATLAB and Simulink for controller and observer design and simulation are all necessary for the research as a whole. Bernoulli's law is used to create a mathematical model of the system. Next, the model is simulated in Simulink using the Control System toolbox and in MATLAB using a script file. In order to improve the controller performance, more research was conducted. The simulation's results showed the properties of the Coupled tank with and without the addition of a controller and observer. Apart from that, the construction of the controller and observer using the state space approach has been a successful goal of this research.

**Keywords: Coupled tank, MATLAB and Simulink, PID, Controller, Observer**

# NIGERIA AT 63, ASSESSING NIGERIA'S PURSUIT OF FOOD SECURITY: A COMPREHENSIVE ANALYSIS OF AGRICULTURAL OUTPUT, POPULATION GROWTH, AND POLICY IMPLICATIONS BEYOND VISION 20:2020.

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## Abstract

Achieving food security is the dream of every nation. With Nigeria's population growing at an alarming rate, sustainably increasing agriculture, decreasing food waste, and ending hunger and malnutrition by providing more people with access to wholesome food becomes imperative. Nigeria in her Vision 20:2020 statement came up with goals and objectives, one of them is to achieve food security. But given the level of agricultural output and its geometric population growth rate, Nigeria at 63 is still grappling with food insecurity. The study used the Gross Per Capita Food Production Index as a proxy for food security and population figures. Descriptively, the trend graph showed a stagnant population growth rate, with the growth rate of Gross Per Capita Food Production showing an undulated pattern. Using an Exponential Trend Model, the study reveals the coefficient of the Gross Per Capita Food Production (0.02) falling below the coefficient of the population (0.03) over time. This implies that Nigeria is unlikely to achieve food security by the year 2020. Therefore, the study recommends that programmes and policies geared towards boosting agricultural production be pursued by successive governments and not be jettisoned, and monitoring and evaluation of programmes and projects effectively carried out to ensure effective implementations.

# CHALLENGES AND COPING STRATEGIES WITH CURRENT HARDSHIP AMONG CONSUMERS WELLBEING IN EBONYI STATE

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## Abstract

This work focused on challenges and coping strategies on current hardship on consumers' well-being. The specific objectives of this study is to find out if high cost of food contributes to an Economic hardship on consumers in Ebonyi south senatorial zone, of Ebonyi state, find out if employment with poor/low salary contributes to economic recession and hardship in the economy, find out if economic hardship on consumers contributes to economic depression in Enonyi state and to find out if Support from government can help to minimize economic hardship in the economy. The study adopted a survey research design approach. Topman's formular was used to determine the sample size of consumers with hardship in Ebonyi south senatorial zone. Data was collected from 300 respondents through questionnaire. Data was examined for validity and reliability using Cronbach alpha internal consistency. For inferential analysis, the researcher used the statistical package of social science (SPSS) version 20 using Pearson Coefficient of correlation. The variables used in this study are: high cost of food, Economic hardship, poor/low salary and economic depression. It was found in the study that there was strong and positive significant relationship between high cost of food and Economic hardship on consumers in Ebonyi south senatorial zone, of Ebonyi state, poor/low salary and hardship in the economy, again hardship on consumers and economic depression, poor health, fallen standard of living, and high cost of foods. The high cost of living was especially felt in the area of funding health issues.

# THE EFFECT OF MICROCREDIT ON POVERTY REDUCTION AND AGRIBUSINESS GROWTH AMONG RURAL FARMERS IN EBONYI STATE, NIGERIA

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**Abstract**:
*The study assessed the effect of microcredit on poverty reduction as well agribusiness growth among rural farmers in Ebonyi State. The specific objectives were to analyze the sources and utilization of microcredit by the rural farm households, determine the effect of micro-credit on the agribusiness growth of farm households in the area, and examine the effect of micro-credit on the poverty profile of rural farm households in the study area. Multi-stage random and purposive sampling techniques were employed to select 60 farm households who constituted the sample size. Data were collected primarily using structured questionnaire and analysed with the aid of descriptive and inferential statistics. The results showed informal microcredit as the major source of credit for farm households. The result further indicated that 45.4% of the loan applied for was disbursed, resulting to 47.9% growth in agribusiness. Meanwhile, 72% of farm households surveyed were poor with poverty depth of 0.51 and poverty severity at 0.54. The regression analysis on the effect of microcredit on the agribusiness growth of the farm households revealed that the coefficient of agribusiness growth was positive and statistically significant at 1% probability. The effect of microcredit on the poverty profile of farm households revealed that microcredit exerts negative influence on poverty profile of farm households. The study recommends the implementation of a resilient rural credit scheme in rural regions and the development of a policy framework to facilitate access to funds for agricultural and non-agricultural endeavours by impoverished rural households lacking suitable collateral.*

**Keywords: microcredit, formal institutions, informal institutions; poverty; Agribusiness; .**

# PHYTOCHEMICAL SCREENING, ANTIOXIDANT ACTIVITY AND VITAMIN CONTENT OF *Cucurbita pepo* (SQUASH) LEAF

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Abstract

This work evaluates the phytochemical screening , antioxidant activity and vitamin content of *Cucurbita pepo* using standard methods. The qualitative phytochemical screening revealed the presence of alkaloid, flavonoid, glycoside and saponin in abundance while tannin and phenolics were found to be present. . The quantitative phytochemical determination result is as follows; tannin 2.31±0.05%, alkaloid 1.67±0.02%, saponin 1.26±0.01%, flavonoid 1.26±0.01%, phenolics 0.85±0.02% and glycoside 0.67±0.01%. The antioxidant activity of *Cucurbita pepo* was done using DPPH and FRAP (2,2-Diphenyl-1-Picrylhydrazyl and Ferric Reducing Antioxidant Power respectively. *Cucurbita pepo* showed high antioxidant activity through the two techniques. DPPH gave 72.37% while FRAP gave 68.51%. the result of the antioxidant vitamin content is revealed to be vitamin A 4.68±0.02 ug/g, vitamin C 9.44±0.03mg/100g, vitamin E 2.37±0.01mg/100g. The study revealed that *Cucurbita pepo* leaf has abundance of bioactive compounds with strong antioxidant activity and good nutritional value confirming it to be a nutraceutical plant.

Keywords ; Phytochemical, Antioxidant, DPPH ,FRAP , Cucurbita

# ARCHITECTURE AND ARTIFICIAL INTELLIGENCE: THE NEXUS

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## ABSTRACT

*Artificial intelligence has become a trending topic in the last decade and has permeated all spheres of life and profession and Architecture is no exception. The use of artificial intelligence in architecture is still in its infancy as more research is still being carried out in the application of artificial intelligence in architecture to solve problems ranging from intelligent material design to architectural plan solutions. This article seeks to establish a connection between architecture and artificial intelligence while also presenting a descriptive and analytical review of the work on artificial intelligence application in architecture. The study establishes a strong connection between architecture and artificial intelligence and a heightened appeal in the use of artificial intelligence in architecture and also the role artificial intelligence could play in providing lasting architectural design solutions to human housing problems.*

# GREEN MANAGEMENT AND EFFECTIVENESS OF BEVERAGE FIRMS IN ABA

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## ABSTRACT

The study investigates green management and effectiveness of beverage firms in Aba. The objectives of the study were to evaluate the level of correlation between pollution control and customer satisfaction; pollution control and employee retention; and to examine the level of correlation between waste management and backward integration in beverage firms in Aba. The study was guided by three research objectives, three research questions and three hypotheses. Empirical reviews were used to beef up the study. The researchers employed the survey research design in the research. A five-point Likert Scale structured questionnaire was the major instrument for data collection. The validity of the instrument was done by showing the questionnaire to research experts for their corrections and inputs. Cronbach Alpha statistic was used for obtaining 0.79 as the reliability ratio of the survey instrument. Data analysis was committed to descriptive statistics of mean and standard deviation. Correlation analysis was used to test hypotheses. It was found that there is a significant level of correlation between pollution control and customer satisfaction; there is significant level of correlation between pollution control and employee retention; there is a significant level of correlation between waste management and backward integration in beverage firms in Aba. It was concluded that green management improved the effectiveness of beverage firms in Aba. The study recommended that management of beverage firms should make more efforts to control all forms of pollution in the enterprises for improved customer satisfaction. Management should always work harder to achieve higher degrees of employee retention with the instrumentality of green management. Waste to wealth strategy should be employed by beverage firms for improved business effectiveness.

**KEYWORDS:** Green management, Performance, Beverage, Pollution control, Waste management.

# MITOCHONDRIAL MEDIATION OF INFLAMMATION AND INFLAMMATORY RESPONSES

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Abstract:

Mitochondria, traditionally known as the powerhouses of the cell, have emerged as key players in the regulation of inflammation and inflammatory responses. Beyond their canonical role in ATP production, mitochondria play roles in cellular signaling pathways involved in immune responses, apoptosis, and metabolic regulation. In recent years, accumulating evidence has highlighted the intricate interplay between mitochondrial dysfunction and the initiation and propagation of inflammatory processes. Dysregulated mitochondrial function, characterized by mitochondrial ROS (reactive oxygen species) production, release of mitochondrial DNA (mtDNA), alterations in mitochondrial dynamics, and impaired mitochondrial quality control mechanisms, has been implicated in the pathogenesis of various inflammatory diseases, including autoimmune disorders, neurodegenerative diseases, metabolic syndromes, and cancer. Mitochondria also serve as signaling platforms for the activation of inflammasomes, which are multiprotein complexes that mediate the processing and release of pro-inflammatory cytokines such as interleukin-1β (IL-1β) and interleukin-18 (IL-18). Additionally, mitochondrial-derived DAMPs (damage-associated molecular patterns), released during cellular stress or injury, stimulate innate immune responses through pattern recognition receptors (PRR), further exacerbating inflammation. Conversely, targeted modulation of mitochondrial function and signaling pathways, along with strategies aimed at restoring mitochondrial homeostasis, scavenging mitochondrial ROS and inhibiting the production of DAMPS have shown promising prospects in preclinical studies and clinical trials. Understanding the intricate crosstalk between mitochondria and inflammation is crucial for elucidating disease mechanisms and developing innovative therapeutic approaches to mitigate inflammation-related pathology.

Key words: mitochondria, inflammation, cytokines, mitochondrial dysfunction, inflammasomes

# A DISCOURSE ANALYSIS OF ETHNOGRAPHY OF COMMUNICATION AMONG THE IGBO IN CHINUA ACHEBE'S THINGS FALL APART

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**Abstract**

Most critical works on Achebe's novels have often focused on their literariness, undermining the use of language in the texts and their sociolinguistic and cultural significance. Language and the sociocultural speech community in which it is used are intricately interwoven. This fundamentally accounts for the expediency of the acquisition of adequate communicative competence as well as sufficient sociocultural knowledge of the society in which language operates. Such a knowledge is acquired through exposure to studies on ethnography of communication of a speech community of interest. This paper examines ethnography of communication among the Igbo (of Nigeria) in Chinua Achebe's Thing Fall Apart. The study engages in a discourse analysis of selected relevant speech events in the novel to describe and explicate culture-bound issues that influence and condition speech in Igbo linguistic community as represented in the text. The paper is anchored on Dell Hymes' communicative competence and ethnography of communication frameworks. Findings emanating from the study revealed that effective language use and what is communicated through it is predominantly a culture-bound phenomenon. This, therefore, makes the present study relevant to readers of Thing Fall Apart, especially the non-Igbo speakers, in that the study would provide them with significant insight on the sociocultural issues that influence language use among the Igbo. The paper, thus, advocates that such readers should take cognizance of those culture-bound linguistic issues analyzed as they do a re-reading of the novel for its better appreciation.

**Keywords**: Discourse analysis, Ethnography of communication, communicative competence, speaking grid

# THE JOURNEY SO FAR AT 63: IN THE CASE OF NIGERIA.

**By**

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ABSTRACT

Since independence in 1960, the development efforts and outcomes in Nigeria varied from time to time just as the development paradigms. Although the country is politically independent, it has not been free to galvanize the resources in the interest of the citizens to achieve the desired level of development. In general, the correlation between available resources and development outcomes in Nigeria has been perverse. Nigeria at 63 years has failed. Furthermore, corruption is being vigorously tackled with an intensity never witnessed before now; although it still remains endemic in the country. In this paper the losses experienced in Nigeria are listed, leadership, corruption and effects are discussed. Finally, conclusion and recommendations were added.

# BUILD-OPERATE-TRANSFER IMPROVING ACCOMMODATION CHALLENGES FOR HOSTEL STUDENTS IN ANAMBRA STATE OWNED TERTIARY INSTITUTIONS

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Hostel accommodation is an essential factor in every learning environment. In Nigeria, the government cannot adequately provide a sufficient number of hostels to cater to the ever-increasing demand, due to a greater number of students being admitted to various institutions. Thus, Build-Operate-Transfer (BOT) emerged as one of the essential tools to help address public services and sole reliance on government. BOT is a type of project delivery scheme that involves different parties, each of whom contributes to the success of a project. This study was undertaken in Anambra State to understand the perception and estimation of the effective demand for hostel accommodation under the BOT scheme, which is fundamental for the potential market of the scheme. Sampled Questionnaire was used as a survey tool and was administered to students and some management members of the schools visited. The data were analyzed using percentages in tables to represent various perceptions and opinions. The results show that there is demand for hostel accommodation, and the existing ones are associated with various degrees of problems, while students and their school management are interested in involving the private sector in the provision of hostel accommodation; the state government ministries that govern tertiary institutions are not willing to support the BOT scheme. Therefore, from the research conducted, the development of hostels under the BOT scheme will take time to be implemented in Anambra State. These findings should serve as a good baseline for reviewing maintenance culture and controlling overcrowding in tertiary institutions. In addition, the government should accept its inability to cater to adequate public services; as such, it needs support from the private sector.

KEYWORDS: Build operate transfer, Public private partnerships, Government, Maintenance, management.

# PHYSICAL, GEOCHEMICAL AND MINERALOGICAL ASSESSMENT OF CLAY DEPOSITS UMUOSOSHIE OBOWO SOUTHEASTERN NIGERIA FOR INDUSTRIAL USES.

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## ABSTRACT

This study was carried out to assess clay deposits in Umuososhie Obowo Southeastern Nigeria. The assessment was carried out on the physical, geochemical and mineralogical compositions of the clay deposits to determine their industrial suitability. The analysis carried out in this research work include physical tests, and the tests carried out gave the following average results, dry shrinkage (7.35%), fired shrinkage (6.80%), total shrinkage (13.63%), Apparent porosity (16.08%), water absorption 9.86cm3, loss on ignition (2.68%), bulk density (1.64g/cm3) and apparent specific gravity (1.13%). Geochemical analysis using x-ray fluorescence (XRF) gave the following results SiO2 (60.94 –71.94%), Al2O3 (18.71 – 29.20%), Fe2O3 (3.10 – 5.77%), CaO (0.05 – 0.20%), K2O (0.40 – 0.71%), Na2O (0.08 – 0.42%), Nb2O3 (0%), TiO2 (2.88 – 4.19%) with other minor oxides V2O5 (0.21 – 0.26%), Cr2O3 (0.03 – 0.06%,), MnO (0.03 – 0.05%), Co3O4 (0.01 – 0.02%), Nb2O3 (0.02 – 0.04%), 0.02% P2O5 in sample 3, SO3 (0.21 – 0.64%), ZnO (0.01 – 0.03%).. The mineralogical analysis using x –ray diffraction (XRD) gave the mineral composition results of hematite (0.2% to 0.6%), kaolinite (35.0% to 42.0%), Illite (3.0% to 11.0%), quartz (51.0% to 58.0%), orthoclase (0.5% to 12.0%), albite (1.0% to 2.5%), muscovite (0.8% to 4.0%). The evaluation of the industrial potentials of the clays based on the physical, chemical and mineralogical characteristics revealed that the clays are suitable for the production of ceramic wares, cement, and other industrial products.

# PROGRAMMABLE DISPLAY SYSTEM

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## ABSTRACT

Electronic display system is a display device, which is used to display information that needs to be convey across, which might be in form of a bill board, time table etc. it displays time, Venue, Date of events and goods. This is a replacement to other display system which has always been the problem of uneditability, high cost of regular replacement and pasting and removal by some users. The method used to achieve this display system includes simulation and construction. This employs the functions of microcontrollers EEPROM, Darlinton pairs, dot matrix displays, and shift register. This design has an interface with a computer to enable it to be editable. The display system as designed reduces the strenuous work involved in printing, drafting adjusting as normally used before. The software on the computer services and an interface for putting the content information to be displayed whale the display board outside receives the data and display. The design is made up of columns and rows for various information. Finally this design has been tested and confirmed to bc working in line with its aims and objectives.

# ANTIBACTERIAL PROPERTIES OF LIME JUICE (Citrus aurantifolia) EXTRACTS AGAINST SOME SELECTED BACTERIA

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## ABSTRACT:

The antibacterial properties of lime juice extract (Citrus aurantifolia) was carried out against different bacterial species by agar well diffusion method. The highest inhibition zone of 28 mm was observed in Vibrio cholerae followed by Enterobacter species (9mm), Citrobacter species (8mm) and Escherichia coli (8mm). Shigella, Salmonella and Klebsiella species were found resistant. Different concentrations of the crude extractsuch as 75%, 50%, 25% and 5% were tested to calculate the minimum amount that inhibits the bacteria which showed the zone of inhibition (ZOI) as 31mm, 24mm, 17mm and 9mm respectively. The minimum bactericidal concentration (MBC) ranged from6.25 mg/l to 50 mg/l. This result suggests that citrus fruit like limes are effective in preventing infection with Vibrio species.

Key words: Lime juice extract; Minimum bactericidal concentration; Zone of inhibition; Agar well diffusion.

# HEALTH RISK ASSESSMENT OF CONSUMPTION OF VEGETABLES CULTIVATED IN AKPOHA FARM SETTLEMENT IN AFIKPO NORTH LOCAL GOVERNMENT EBONYI, STATE PRONE TO FLOODING

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## ABSTRACT

Heavy metal contamination is one of the major issues faced throughout the world because heavy metals above their normal ranges become detrimental to plant, animal, and human life. This work was done to evaluate the possible risk in the consumption of vegetable (*Telfairia occidentalis*) crops in a farm settlement prone to flooding in Akpoha town in Afikpo north local government of Ebonyi state. The heavy metal analysis and risk assessment were carried out using standard methods. The heavy metal analysis showed that they were all above the permissible limit except for zinc. Heavy metal analysis done on these arable floodplain samples showed that Iron recorded 7.67 ± 1.08 mg/kg as the highest concentration in samples obtained from Akpoha while the least was seen in mercury (0.73 ± 0.03 mg/kg). The order of concentration of these metals in the leaves obtained from Akpoha is Zn > Fe > Co > Cr > As > Pb > Cd > Hg. The estimated daily intake (EDI) showed that zinc (0.00132 mg/kg/day) was consumed more than other investigated metals in *Telfairia occidentalis*. The toxic hazard quotient and index (THQ and THI) evaluated also showed that they were all < 1. The incremental lifetime cancer risk showed that arsenic had the highest carcinogenic possibility and was evaluated to be $2.14\times 10^{-3}$ while lead had the least carcinogenic possibility. The total cancer risk (TCR) obtained for vegetables from Akpoha soil was given as $1.7\times 10^{-3}$. These findings suggest that cancer may result from consuming these vegetables.

Keywords: Heavy metals, Health, risk assessment, and *Telfairia occidentalis*

# SYNTHESIS AND ANTIMICROBIAL ACTIVITIES OF N, $N^1$-Bis ($4,4^1$-DICARBOXYLATESALICYLIDIENE) ETHYLENEDIIMINE METAL FORMATE.

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## ABSTRACT
The condensation of ethanolic solution of ethylenediamine and two equivalent of 4-Carboxybenzaldehye using standard reflux method yielded a salen ligand, N,,$N^1$.Bis (b,$4^1$dicarboxylatesalicylidiene) ethylenediamme. The interaction of salen ligands with metal salts in coordinator with formic acid under reflux resulted in the formation of metal salen formate complex of composition ML $(HCOO)_2$, $H_2O$ (M-Co, Ni,Cu and Zn). The newly synthesized compounds were carefully examined and tested for the potential to suppress or hinder the activity of certain strains of microorganisms for example *Staphylococcus aureus* and Escherichia coli outside the body system using standard method. The results were as follows; in antimicrobial potential of A with *Staphylococcus aureus,* Cobalt(II) salen formate complex shows zero inhibition diameter zone (0mm), accordingly Copper(II) salen formate complex shows intermediate inhibition diameter zone with (1-20mm), while the salen ligand, Zinc(II) and Nickel(II) salen formate complexes show full inhibition diameter zones within (21-50mm), then for antimicrobial experiment B with *E. coli,* Zinc (II) salen formate complex shows zero inhibition diameter zone (0mm), while Cobalt(II) salen formate complex shows intermediate inhibition diameter zone (1-20mm), finally, salen ligand, also Copper (II) and Nickel(II) salen formate complexes show full inhibition diameter zone within (21-50mm). according to the result findings, it therefore means that salen ligand and salen formate complexes have good antimicrobial potentials at different concentrations, hence, their, activities against the microorganisms increased with increase in concentration.

**Keywords**: Ligand, Pathogen, Topology, Heterogeneous catalysis, Coordination sites.

# AN EFFECTIVE PREDICTION MODEL FOR HEART DISEASE DETECTION USING MACHINE LEARNING TECHNIQUES

**By**

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## ABSTRACT

The situation of Nigeria at 63 has cause many to suffer from cardiovascular diseases (CVD) due to high cost of leaving, trending negative happening and lots more. In the light of this, Machine learning model has been developed to detect the state of people's heart whether they are suffering from cardiovascular disease or not by considering certain attributes which are major symptoms of this disease like chest pain, cholesterol level, age of the person and some other attributes. Classification algorithms based on supervised learning which is a type of machine learning can make diagnoses of cardiovascular diseases easy. Some Machine Learning algorithm were used to classify people who have the CVD or not. Two supervised machine learning algorithms are used in this paper which are, K-Nearest Neighbor (K-NN) and Random Forest. The prediction accuracy obtained by K-Nearest Neighbor (K-NN) is 81.96% and the prediction accuracy obtained by Random Forest algorithm is 90.23%.

**Keywords**: Heart Disease; Machine Learning; K Nearest Neighbor (K-NN); Random Forest

# IMPLEMENTING A COMPREHENSIVE DATA ARCHIVING FRAMEWORK IN GOVERNMENT AGENCIES: LESSONS LEARNED AND BEST PRACTICES.

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## Abstract

*Implementing a comprehensive data archiving framework within Nigerian government agencies is crucial for enhancing transparency, accountability, and informed decision-making. However, past efforts have been hindered by various challenges, including inadequate stakeholder engagement, resource constraints, resistance to change, and a lack of skilled personnel. This paper examines the lessons learned from previous initiatives and outlines best practices for effective data archiving implementation. Key recommendations include developing clear policies and governance structures, adopting appropriate technologies and infrastructure, building capacity through training and cultural change, establishing dedicated task forces, prioritizing initiatives in budgets and strategic plans, collaborating with external experts, and continuously monitoring and evaluating progress. By addressing these critical aspects, Nigerian government agencies can overcome obstacles and establish robust data archiving systems that streamline operations, ensure compliance, and facilitate data-driven governance. Ultimately, a comprehensive data archiving framework is essential for responsible data management, enabling agencies to unlock the full potential of their data assets and drive positive change within the public sector.*

# FOOD COMMODITY INFLATIONIN NIGERIA: AFTERMATH OF DISRUPTED SUPPLY CHAIN SYSTEM BY COVID-19 AND BANDITRY PANDEMIC

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## Abstract

*The Nigerian economy is presently passing through severe food commodity inflation that is believed to have been caused by amix of factors. However, in this study the search light was on the duo of COVID-19 and Banditry pandemic implications on the disrupted supply chain systems in Nigeria and hence food inflation. The non-empirical study adopted qualitative data collected from various secondary sources and reviewed inline with the study main objectives. The study theoretical model was formulated and hence the operational conceptual framework laid to explain the relationships between the study independent and the dependent variables. The study deductively revealed that; Banditry and COVID-19 pandemic significantly affected supply chain systems in Nigeria thus causing low production and distribution of food commodities, and that the prevalent acute food inflation is a function of the far reaching implications of the duo of Banditry and COVID-19 pandemic on the supply chain systems in Nigeria among other factors. The study also highlighted possible ways out of this situation to include but not limited to the adoption of; Supply-Chain Transparency, Smart Logistics, AI-Driven Supply Chain Management systems by organisations etc.*

**KEYWORDS:** Food Commodity Inflation, Supply Chain System, Covid-19 and Banditry Pandemic